





B. S. 163



August 27th, 1898.

THE
GARDENING WORLD.

Illustrated.



*A Weekly paper devoted to all branches of practical
Gardening.*

VOL. XIV.

SEPTEMBER 4, 1897, TO AUGUST 27, 1898.

London :

I, CLEMENT'S INN, STRAND, W.C.

LONDON:

HICKS, WILKINSON & SEARS, General Printers, 4, Dorset Buildings, Salisbury Square, Fleet Street, E.C.

ROTHSCHILD
BEQUEST
1938

CONTENTS OF VOL. XIV.



FOR THE YEAR ENDING AUGUST 27TH, 1898.

A

ABERDEEN, botanic garden for 534
 Abies balsamea, tuber, 135
 Abies bracteata cones, 135
 Acacia celastrifolia, 269; dealbata, 486
 Acalypha Sanderi, 619, 630
 Acantholimon acerosum, 694
 Achillea mongolica, 694; umbellata, 694
 Acineta Barkeri, 37
 Acorn cups malformed, 133
 Adiantum cuneatum, 445
 Adenandra fragrans, 653
 Adonis pyrenaica, 599, 602
 Address, curious, 212
 Aesthetics, English and French, 181
 African Marigolds, 54
 Age of trees, 709
 Ageratum americanum compactum, The Zoo, 54
 Agricultural Rates Act, 550
 Agriculture, a classic legacy of, 677
 Alexandra Palace, 181, 518; summer show at the, 636
 Alpine and rock plants, 667
 Alyssum saxatile, 667; flore pleno, 598
 Amaryllis Beacon, 490; Clonia, 490; Daones, 538; Ideala, 490; Navala, 458; Princess Osra, 458; Tacola, 490
 Amateur v. Professional, 164; woes of an, 344
 Ampelopsis Veitchi, 509
 Anemone coronaria fl. pl. The Bride, 89; japonica Couronne Virginale, 398; ranunculoides, 503, 519
 Anthracite coal, 196
 Anthurium andreanum, hybrids of, 676; Dr. Lawrence, 397; scherzerianum Senateur Montefior Levis, 930; Veitchi, 292
 Anthurium spathe, monstrous, 135
 Apera arundinacea, 71
 Aponogeton distachyon, 237
 Apple Calvill Grossherzog Friedrich von Baden, 550; Cox's Orange Pippin, striped, 215; Directeur Rodigas, 302; James Grieve, 119; Lady Falmouth, 230; Lord Hindlip, 397; Ontario, 630; Royal Snow, 473; the Winter Calville Blanc, 285
 Apple and Rowan Jelly, 60; Blossom Weevil, 567; supplies, our, 275; trees, curious mode of planting, 455; twin, 492
 Apples and drink, 661; and Pears, the flavour of, 755; dessert and cooking, 293; do not keep well, reasons why, 582; from August to May, 517; on grass, 36; storing, 213
 Appointments: Barham, Mr. P., 534; Bone, Mr. David R., 180; Brewer, Mr. F. G., 502; Brown, Mr. Robert, 454; Chisholm, Mr. Donald, 196; Colville, Mr. James, 244; Coomber, Mr. William, 20; Cummins, Mr. G. W., 644; Dobbie & Co., Messrs., 117; Duff, Mr. John, 132; Duncan, Mr. Alexander, 84; Elton, Mr. W., 244; Gibson, Mr. James, 740; Henderson, Mr. Robert, 196; Henderson, Mr. Thomas, 676; Johnson, Mr. William, 308; Lewis, Mr. Robert, 53; Lindley, Lord Justice, 132; Lloyd, Mr. H. B., 325; McDonald, Mr. A., 212; McLelland, Mr. John, 180; Matheson, Mr. Peter, 244; Milne, Mr. William, 406; Minty, Mr. William, 614; Morris, Dr., 788; Nicholson, Mr. Charles, 276; Ogston, Mr. James, 374; Paton, Mr. William, 407; Phillips, Mr. Thomas, 342; Screaton, Mr. Charles, 197; Simpson, Mr. James, 212; Simpson, Mr. W. J., 788; Smith, Mr. J., 84; Stoney, Mr. Joseph, 84; Jannoch, Mr. David,

788; Thompson, Mr. Alexander, 197; Watt, Mr. Joseph, 391; Weller, F.R.H.S., Mr. R., 614; Wilson, Mr. David, 486; Wilson, Mr. James, 260
 Apprentice gardeners, instruction for, 213
 Arabis albida, 584; lucida variegata, 584; procurrens variegata, 584; rosea, 584
 Arancaria excelsa, 316
 Ardarroch, Dundee, 362
 Ardenlee, Dunoon, 217
 Areca Islemanni, 630
 Arenaria, the genus, 438
 Arniston, the lands of, 645
 Arnold Arboretum, Boston, U.S.A., 330
 Arundinaria aristata, 775; metallica, 775; nitida, 774; Veitchi, 775
 Arums, two and three spathed, 492
 Ash tree, a remarkable weeping, 247
 Asparagus, 487; rust, the, 772
 Asparagus Sprengeri, a white, 293
 Asplenium Hillii, 523; Mayi, 523; ornatum, 742
 Aster alpinus, 694; Mrs. W. Peters, 38
 Asters, China: Ball or Jewel Scarlet, 55; Dwarf Chrysanthemum Aster, 54; Dwarf Victoria, 54; Great Chrysanthemum Aster, 54; Imbricate or Pompon Crown, 54; Liliputian Aster, 54; Liliput White and Rose Centre, 54; Mignon Aster, 54
 Asters diseased, 791
 Astronomical Weather Almanac, the British, 181
 Athole Hydropathic, Pitlochry, 59
 Auricula Dean Hole, 598; Firefly, 571; Hiawatha, 571; Mrs. Dranfield, 571; Olympus, 571; Perfection, 598; Snowdrop, 630; Ziza, 538
 Auriculas, border, 614; yellow border, 598
 Australia, land transfer in, 285
 Australian horticulture, 790
 Autumn tints, 153
 Azalea Ami Chas. Vermeire, 599; Ami Victor Cuvelier, 599; grandiflora alba, 458; japonica rubra, 490; Le Printemps, 399; Louise Cuvelier, 599; Mme. Joseph Vervaene, 599; procumbens, 602
 Azaleodendron, 492; Edward André, 571
 Azara microphylla, 509

B

BACTERIA and living plants, 105
 Badanloch, Kinbrace, a visit to, 181
 Bailey, Professor L. H., 788
 Baltet, M., honour to, 724
 Bananas from Madeira, 438
 Bamboo, a seedling, 772; Garden at Kew, 681
 Bamboos at Bicton, 724; at Gunnersbury House, 773; hardy, 698, 731, 741, 757, 793; the economic use of, 778
 Barbarea vulgaris variegata, 653
 Barberry, the, 551
 Bare spaces under trees, 603
 Barr, Mr. G. H., Marriage of, 820
 Battenhall Mount, Crotons at, 133
 Battersea Park, 137; and education, 343
 Bean, dwarf French, Sutton's Perfection, 444; Veitch's Early Favourite, 565
 Bean, Runner, Eclipse, 426
 Beans, butter, 410; climbing French, 457
 Bee, the queen, 580
 Beech hedge, a wonderful, 756
 Beechhill Nursery, Edinburgh, 138
 Bees, leaf-cutting, 519, 614; weight of, 410

Beetle, the fruit tree, 741
 Begonia, Eudoxa, 329; foliosa, 109; Gloire de Lorraine, 229, 317; haageana, 301; Julius, 230; Rex Mrs. F. Sander, 679; Winter Cheer, 263
 Begonia leaves, diseased, 631
 Begonia, tuberous, Commodore Dewey, 679; Countess of Aberdeen, 662; Countess of Dartmoor, 662; Earl of Dartmouth, 599; Florence Nightingale, 710; General Sir Wm. Lockhart, 662; grandiflora erecta cristata, 119; Mr. Dunbar Wood, 630; Thunderer, 711
 Begonias, basket tuberous, 773; tuberous, 615
 Belgian Nurseries: Coppiters, M. Em., Ghent, 586; De Smet, Frères, MM., Ghent, 586; De Smet-Duvivier, M. L., 650; L'horticulture Internationale, 682; Linden & Co., Messrs. Lucien, Moortbeek, 714; Meyer, M. Arthur de, 667; Pynaert-Van Geert, M. Ed., Ghent, 554; Sander & Co., Messrs. F., 762, 794; Van Houtte, Cie, MM. Louis, Ghent, 570; Vincke-Dujardin, M., Bruges, 806
 Benmore Argyllshire, 298
 Berberis stenophylla, 605
 Berry Hill, Maidenhead, 777
 Binrock, Dundee, 347
 Bird, a tame wild, 294; Protection Act, the Wild, 342
 Birds and fruit buds, 398; preservation of useful, 76, 132, 260; the killing of rare, 342
 Birkbeck Building Society, 725
 Blackberries, 742
 Blackberry Mitchell's Seedling, 39
 Blackberry-Raspberry, 807
 Blackbird, a pied or speckled, 277, 292; strange freak of a, 278
 Blechnum Spicant, 550
 Blight and blessing, 570
 Blotter and diary, 455
 Blue and gold, 471
 Boltonia decurrens, 155; latisquama, 138
 Books, Notices of: Aunt Kate's Gardening Book, 444; A Year's Work on a Kentish Fruit Farm, 787; Boron Food Preservatives, 717; British Natural History, 423; British Orchids, 603; Bush Fruits Culture, 491; Carnation Manual, the, 227; Flower Favourites, 582; Fruit Growing, 26, 35; Garden Notes for the Colonies and Abroad, 380; Glasshouse Gardening, 491; Hardy Perennials and Old-fashioned Garden Flowers, 344; Home Gardening, 682; Chrysanthemum a la Grande Fleur, 444; May's Practical Methods to ensure instant relief and permanent cure of diseases, 718; Modern Chrysanthemum Culture for the Million, 380; Mushroom Culture, 491; My Garden Diary, 315; New Walks by the Rhine, 315; Pansies, Violas and Violets, 790; Potato Culture, 717; Practical Hints on the Culture of Cacti, 326; Principles of Fruit-growing, the, 51; Report of the Council of the R.H.S., 326; Souvenir of the N.C.S. Autumn Festival, 245; The Advertiser's A.B.C., 364; The Culture of Vegetables and Flowers from Seeds and Roots, 364; The Culture of Vegetables for Prizes, Pleasure and Profit, 682; The English Tulip, 326; The Flora of Berkshire, 301; The Garden Annual Almanack and Address Book, 326; Toogood's Calendar, 683
 Books dealing with the organs of plants, &c., 526; for R.H.S. Examination, 702; of Natural History, important sale of, 550

Botanical studies, 471
 Botany, economic, 133; how a knowledge of, is a help to gardening, 541, 551, 571, 586; in London parks, 358
 Bougainvillea, glabra, 602, 773
 Bouquet that miscarried, a, 661
 Bouvardia Humboldtii grandiflora, 183
 Bouvardias, specimen, 222
 Bracken, crested, 820
 Brassia lawrenceana longissima, 37
 British grown fruit, exhibition of, 645
 British Orchids, 534
 Broccoli, sprouting, 492
 Brown, the late Mr. James, 300
 Brussels Botanic Garden, tree labels in, 661
 Brussels Sprout, Veitch's Market Favourite, 378
 Bryophyllum calycinum, 458
 Buccleuch Nurseries, Hawick, 57, 251
 Buddleia globosa, 683; variabilis, 775
 Buds and stipules, 259, 358
 Bulb sales, 13; Prospects for 1898, 756
 Bulbophyllum Lobbii Burford var., 678; saltatorium, 678
 Bulbs, amongst the, 5
 Bulwayo, flowers at, 486
 Burford Lodge, Dorking, 67

C

CABBAGE, black rot of, 550; Carter's Model, 443; Early, 407; Monster, 84
 Cactus Journal, the, 470
 Cacti, species of, 564
 Caladium Ami Schwartz, 630; Guaratinguetor, 599, 630; Lord Annesley, 679
 Calanthe burfordiense, 263; Harrisii, 263; Sanguinaria, 263; splendens, 397; Veitchi alba, 183; Veitchi splendens, 263
 Calceolarias, herbaceous, 678
 Californian Oranges, 106
 Calla Lily, a black, 789
 Calliopsis nigra nana, 54
 Calochortus Purdyi, 679
 Caltha palustris as food, 596
 Calystegia pubescens flore pleno, 808
 Cambridge, generous offer to, 423
 Camellia, Boadicea, 523; Duchess of Teck, 538; Mrs. J. Buchanan, 538; Pride of Waltham, 523; Pride of Waltham, 538
 Campanula, G. F. Wilson, 694; isophylla alba, 40; mirabilis, 710; portenschlagiana major, 569
 Campenelle and Spiraea, a bed of, 573
 Canada, the growth of, 725
 Canadian fruit for the British market, 789
 Canna, Mrs. W. Marshall, 679; Mosaic, 679; disease, the, 293
 Cantua buxifolia, 519
 Cape, fruit growing at the, 245
 Cape Verde Islands, vegetation in the, 596
 Carnation, Baldwin, 711; Calypso, 743; Isinglass, 775; Jack Frost, 366; Lady Sophie, 775; Lord Welby, 711; Margot, 711; Maud Dean, 57; Mrs. Martin Smith, 743; Mrs. de Satge, 711; Mrs. Leopold de Rothschild, 699; Nell Gwynne, 743; Nox, 807; Primrose Queen, 662; Sundridge, 743; Veitch's Early Perpetual, 359; Uriah Pike, 646, 653
 Carnation leaves malformed, 183; leaves with horn-like marginal outgrowths, 215
 Carnations at Chelsea, 758; at Edenside, 761; at Kelso-on-Tweed, 21; at the Crystal Palace, 771; from Montague Nursery, 806
 Carnations, bacteriosis of, 503
 Carnations, border, 776; Malmaison, 746; Picotees and Auriculas at

- Edenside, 724; that do not split the calyx, 756
- Cardiff Naturalists, 503
- Cardoons, 410
- Carex helvola* in Britain, 486
- Carrot, Barr's New Intermediate, 408; Robert's Winner, 413
- Catalogue, a full, 69
- Catalogue, the new, 294, 309
- Cattleya, Adela, 710; *bowringiana* Wild's var., 151; Empress Frederick var. *Leonata*, 230; *Euphrasia*, 37; *Fabia*, 183; Ferdinand Denis, 630; *hardyana* Lowae, 70; *bardiana magnifica*, 151; intermediate Fowler's var., 598; *labiata* Lewisii, 183; *labiata* White Queen, 230; *labiata*, sport, 215; *Melpomene*, 150; *Mendelii* Amelia, 630; *Mendelii* Beatrice Ashworth, 571; *Mendelii* Mrs. E. V. Low, 630; *Mendelii* Oakes Ames, 630; *Miranda*, 458; *Mossiae* Madonna, 678; *Mossiae* *magnifica*, 661; *Olivia*, 150; *Schroderae* *amabilis*, 571; *Schroderae* *Harefield* Hall var., 571; *Sedeni*, 571; *Trianaei*, a blue, 458; *Trianaei* *Atalanta*, 347; *Trianaei* Mrs. W. H. Cannon, 439; *Trianaei* *Sanderae*, 326; *Warszewiczii* Pitho, 101
- Cattleya, a three-lipped, 665
- Cattleyas sub-*pelorian*, 183
- Cauliflower malformed, 183; Veitch's early forcing, 653
- Cauliflowers, the Dutch and, 36
- Caution, a, 390
- Ceanothus rigidus*, 491
- Cedrella Toona, fasciated, 135
- Celeriac, 414
- Celery, fertilisers and, 179; *Solid* White, 263
- Celluloid auto-labels for plants, 741
- Cerastium alpinum*, 667
- Certificates, value of, 346
- Charities, gardeners', 635, 646
- Charlock, the destruction of, 692
- Cheiranthus alpinus*, 667; Harpur Crewe, 599; *Marshalli*, 667
- Chelsea, Carnations at, 758; notes from, 328
- Cheltenham Bachelors' Fancy Dress Ball, 374; decorations at the New Club Hall, 343; dinner and presentation at, 309
- Chemistry and horticulture, 221
- Cherry, Peach and Almond slips, 773
- Cheshunt, The Old Nurseries, 155
- Chestnut Sunday, 596
- Chestnut tree, a patriarchal, 692; of the Tuilleries, 455
- Children, gardening for, 604
- China Asters at Mortlake, 117, Grass, 585
- Chinese Primrose, the old, double white, 393; *Primulas* at Reading, 393
- Chiswick, lectures at 650, 676, 692; trials at, 53, 87, 134, 231; annuals, 795; *Canna*, 796; *Carnations*, 795; *Sweet Peas*, 796; *vegetables*, 726; *Violas*, 726, 795
- Chlorophytum elatum variegatum*, 542
- Christmas and Lenten Roses, 429
- Chrysanthemistes, Société des, 212
- Chrysanthemum Beauty, Earlswood, 215; Bevan, Mrs. F. A., 166, 230; Birch, Mr. Chas., 166; Bruant, Mmc. Faul, 119; Cannell, Austin, 167; Cannell, Ernest, 215; Canning, Red L., 246; Carey, Mrs. Charles, 380; Carpenter, Mrs. G., 215; Chamberlain, Joseph, 215; Chezelles, Vicomtesse Roger de, 419; Curtis, Ella, 133, 151; Egan, Mrs., 215; Faure, Mdlle. Lucie, 215; Ferlat, Madame, 201, 215; Filkins, Mrs., the White, 285; Folkes, Mrs. H., 230; Foster, George, 166, 217; Fowler, Miss Phyllis, 246; Hairy Wonder, 165; Hanham, Lady, 133, 151; Harlequin, 252; Hodgson, Matthew, 215; Ito, Admiral, 183; Isabel, Lady, 166; Jubilee, N.C.S., 151; Lady Byron, Lenawee, 166; Lewis, Mrs. J., 169; Madone, Don de la, 215; Mann, Philip, 215; Modesto, 151; Molyneux, Mary, 166, 230; Molyneux, Mrs. N., 166; Mutual Friend, 157; Northcote, Lady, 215; Palmer, Mrs., 166; Pennsylvania, 212, 260; Pitcher, Georgina, 215, 230; Powell, Robert, 151; Pride of the Market, 133; Probyn, Mrs. 133; Ridgeway, Lady, 133, 151; Rivoire, Mme. Philippe, 133, 151; Rose Queen, 199; Scaramanga, Julia, 215, 230; Simplicity, 151; Simpson, Mrs. M., 246; Sunstone, 151; Swanley Giant, 170; Thomas, Ambrose, 119; Tranter, Mrs. J. R., 230; Tucker, Master H., 215; *Violacea*, 230; Warren, G. J., or the Yellow Mme. Carnot, 151, 166; Wingfield, Mrs., 119; York, Duchess of, 168, 169; Zede, Mdlle. Lawrence, 215
- Chrysanthemum, a giant, 422; "At Home," 358; colours of the, 503; controversy, 551, 566, 583; cuttings, 296; history of a, 470; leaves attacked by grubs, 22; Mme. Carnot, florets of, 245
- Chrysanthemum latifolium, 181
- Chrysanthemum notes, 229; Battersea Park, 117, 182; Botanic Gardens, Glasgow, 198; Devonhurst, Chiswick, 182; Earlswood Nurseries, Redhill, 150; Finsbury Park, 167; Framfield, The Vineries, 198; Hale Farm Nurseries, 197; Heaton Gardens, Cheshunt, 182; Highgate Nurseries, the, 197; Royal Exotic Nursery, Chelsea, 134; Ryecroft Nursery, 149; St. John's Nursery, Putney, 134; Syon House, 197; Swanley Nurseries, the, 148; Victoria Park, 166
- Chrysanthemum proliferous, 231; show lessons, 247, 283
- Chrysanthemum Shows, 247; Aberdeen, 220; Arthroath, 244; Ascot, 188; Battersea, 157; Birkenhead, 218; Birmingham, 173, 180; Bolton, 220; Brighton, 173; Bristol, 184d (supt.); Bromley, 188; Bury St. Edmunds, 219; Cardiff, 187; Cheltenham, 189; Cockerburn, 235; Coventry, 186; Devon and Exeter, 187; Dorchester, 157; Dublin, 157; Dundee, 200a and b (supt.), 220; Dunfermline, 235; Evesham, 187; Grassendale and Aigburth, 203; Hull, 219; Ipswich, 234; Kidderminster, 219; Leeds Paxton Society, 202; Leyton, 173; Liverpool Horticultural Association, 188; Londonderry, 235; National Chrysanthemum Society, 44, 108, 170, 235; Orleans, 202; Paris, 202; People's Palace, 196; Scottish Horticultural Association, 184a (supt.), 195, 203; Sevenoaks, 187; Sheffield, 203; Sidmouth, 213; Southampton, 172; Steyning, 141; Swindon, 187; Teignmouth, 173; Torquay, 181; Tushridge Wells, 189; Ulster, 184c (supt.), 197; Ware and District, 218; Waterford, 234; West Kent, 173; West of England, 186; Wisbech, 219; Wrexham, 235
- Chrysanthemum seedlings, 237
- Chrysanthemums, a plebiscite of, 486; at Blackburn Cemetery, 281
- Chrysanthemums, early: Alice Butcher, 87; Anastasia, 54; *Blushing* *Bride*, 54; *Bronze* *Blushing* *Bride*, 54; *Bronze* *Prince*, 87; *Canari*, 54; *Dodo*, 54; *Eadie* *Wright*, 87; *Edith* *Syratt*, 54; *Fiberta*, 87; *Flora*, 54; *G. Wermig*, 54; *Golden* *Fleece*, 54; *Harvest* *Home*, 87; *Ivy* *Stark*, 87; *L'Ami* *Conderchet*, 54; *Lady* *Fitzwigram*, 87, 93, 117; *La* *Vierge*, 87; *Little* *Boh*, 54; *Longfellow*, 54; *Mme. C. Desgranges*, 54; *Madame* *Edouard* *Lefort*, 87; *Mme. Eulalie* *Morel*, 54; *Mme. F. de* *Carieil*, 135; *Mme. Gajac*, 135; *Mme. Gastelier*, 54; *Mme. Jollivart*, 54; *Mme. Louis* *Lionnet*, 54; *Mdlle. Marie* *Masse*, 54, 76, 807; *Mdlle. Guindudeau*, 87; *Mdlle. Sahatier*, 135; *Martinmas*, 87; *Mr. Selly*, 54; *Miss* *Davis*, 54; *Mrs. Burrell*, 54; *Mrs. Cullingford*, 54; *Mrs. Hawkins*, 54; *Mitchett* *White*, 54, 71; *Nanum*, 54; *Orange* *Child*, 87; *Petillant*, 54; *Piercy's* *Seedling*, 54; *Planche* *Colomb*, 87; *Ryecroft* *Glory*, 135; *Salter's* *Early* *Blush*, 54; *Strathmeath*, 54; *Toreador*, 54; *White* *St. Crouts*, 54
- Chrysanthemums, early, from Rotheray, 102; feeding, 708; from Helensburgh, 301; fungus on, 253; in a drapery establishment, 148; Messrs. Cockers', 212; single, 216; sporting of, 281, 301; the 25 best, 580
- Cinchona, the, in India, 493, 508, 521
- Cineraria* hybrids, 631; *stellata*, 582
- Cinerarias*, 445; Messrs. A. W. Young & Co's., 462
- Cirrhopetalum* *Medusae*, 263; refractum, 230
- Clapton Nursery, 59
- Clare Lawn, Orchids at, 569
- Claytonia sibirica*, 602
- Clematis*, a new break of, 648; *Duchess* of *York*, 662; *indivisa*, 551
- Climatic notes and soils, 443
- Clivia* *miniata* *superba*, 745; Mrs. A. Sykes, 523; O. C. Wrigley, 523
- Clumber Gardens, Worksop, 229
- Cockers' Messrs., Spring Catalogue, 343
- Codlin moth, observations on the, 487
- Coffee, the consumption of, 756
- Cold Storage and Ice Trades' Review, 534
- Colchicum* *Parkinsoni*, 93
- Colchicums*, the, 104
- Colt's-foot, 381
- Combination, an affective, 366
- Competition, rules of, 629
- Composition of Haricots, Lentils and Peas, 45
- Continuity in the spring garden, 469
- Co-operation in France, 773
- Copper Plant, the, 231
- Cordonnier, M. Anatole, 358
- Cordylina* *australis* *Russelli*, 71
- Corona* *Broughty* *Ferry*, 265
- Coronilla* *capadoica*, 795
- Coryanthes* *maculata*, 774
- Crassula* *Cooperi*, 71
- Cremorne*, the very last of old, 196
- Creepers on wall plants, a few good, 85
- Cricket, 629, 662; the "Hurst & Son," C.C., 233
- Crippled Children's Christmas, 196
- Crocus* *speciosus*, 120
- Crocuses, autumn-flowering, 284; under deciduous trees, 523
- Crop? should soil get tired of one kind of, 517
- Cryptomeria japonica* as a pot plant, 653
- Cryptophanthus* *dayanus*, 119
- Crystal Palace, the, 309; sale of the, 407
- Cuha, the island of, 565
- Cucumber Everyday, 397, 502; Sensation, 743; *Sutton's* *Pride* of the *Market*, 413; *Veitch's* *Western* *Wonder*, 427
- Culture, petite, 21
- Current Blight, 439
- Cyclamen, Edwards on the, 84; *latifolium*, development of, 491; the Persian, 76; the Neapolitan, 115; triple-flowered, 551; with leafy flower stems, 263
- Cyclamens at Reading, 457
- Cycle race for Carwardine Cup, 660
- Cycles, Juno, at the Crystal Palace, 212
- Cycling Club, Sutton's, 596
- Cymidium canaliculatum*, 571; eburneo-lowianum, 524; traceyanum at Heaton Mersey, 230
- Cypress diseased, 492; the Golden Monterey, 284
- Cypripedium*: *Aeson* *giganteum*, 263; Allen, Mrs. Caroline, 362; Allen, W. A., 362; Beckmani, 230; *Calypso* *Falkland* *Park* var., 277; *Charlesworthii* *Clarke's* var., 85; *Evenor* *Southgate* var., 635; F. S. Roberts, 326; Gahrieli, 229; Gertrude Hollington, Southgate var., 616; *Haynaldo-Chamberlaini*, 151; *I'ansonii*, 710, 726; *kerchovianum* W. H. Young, 583; *leeanum magnificum*, 183; *nitens* *superhum*, 292; *norrisianum*, 148; *Olenus* *Burford* var., 538; *Olivia*, 807; *Plimmer*, Mrs., 245; *radiosum* *Lord* *Pirbright*, 148; *villosum*, 489; W. H. Cannon, 310; *winqzianum*, 791; Young, Mrs. Reginald, 710, 726
- Cypripedium*, monstrous, 231, 279
- Cypripediums* at Falkland Park, 310; with fungus, 439
- Cytisus* *Adami*, 695; *sccparius andreanus*, 653

D

DAFFODIL grower, a Monmouthshire, 518; king, England's, 487; prizes for spring, 454; show at Truro, 475

Dafodils, a feast of, 535; at Regent's Park, 471; Hoop Petticoat, 10; Irish, 12; on the grass, 9

Dahlia, Alfred Vasey, 39; Amher 23; Annie Turner, 39; Arachne, 39, 71; Cannell's Gem, 237; Casilda, 39, 71; Colton beauty, 39;

Dorothy *Seale*, 39; E. J. Deal, 39; *Falka*, 39, 71; F. C. Pawle, 38; *Gipsy*, 39; *Green's* *Gem*, 71; *Haringer*, 39, 71; *Haverstock* *Beauty*, 39, 71; *Hypatia*, 23; *Island* *Queen*, 39, 71; *John* *Tranter*, 39; *Keynes'* *White*, 39, 71; *Maluma*, 71; *Mary* *Service*, 39, 71; *Minie* *Richards*, 71; *Miss* *Finch*, 71; *Mr.* *Moore*, 39, 89; *Mrs. John* *Godard*, 71; *Muriel* *Hohhs*, 71; *Nellie* *Broomhead*, 39, 71; *Night*, 23, 39; *Phryne*, 23; *Salmon* *Queen*, 71; *Thomas* *Anstiss*, 39; *True* *Friend*, 39; *Vesta*, 23

Dahlia and its history, the, 69; culture, 381; hybrid (?) 231; the 487, 757

*Dahlia*s from Bloxham, 60; select list of Cactus, 277

Dalkeith *Palace*, N.B., 794

Daniels *Brothers*, the catalogue of, 343

Daphne *Cneorum*, 697; *indica* *rubra*, 315

Dendrobe and *Odontoglot* from *Fairfield*, 582

Dendrobium *Ainsworthii* *Woodhatch* var., 458; *Aspasia* *langleyensis*, 538; *Astraea* *superhum*, 458; *chryseum*, 597; *dalhouseianum* *salmonium*, 630; *findlayanum* *Thwaites'* var., 509; *formosum* *giganteum*, 377; *nobile* *ashworthianum*, 490; *nobile* *Seegerae*, 458; *pardalinum*, 429; *spectabile*, 487; *taurinum* *amboinense*, 119; *Venus*, 458

Dendrobiums from *Redlands*, 519

Denny, Mr. Harry, 309

Devonhurst, *Chiswick*, 729

Devonshire, the *Narcissus* in, 503

Deutzia *parviflora*, 571

Deverill's seed and plant catalogue, 358

Diamond *Jubilee* *Chrysanthemum* show at Edinburgh, 132; group of plants at Edinburgh, 184, 197; Medal for Sir Trevor Lawrence, Bart., 116; table of vegetables, 506

Dianthus *caesius*, 694; *monspesulanus* *alpestris*, 697

Dickson, Mr. Hugh, compliment to, 261

Dictamnus *Fraxinella*, 381, 725

Dictionnaire *Iconographique* *des* *Orchidées*, 741

Digitalis *ferruginea*, 222; *purpurea* *grandiflora*, 711

Distinction, honourable, 422

Dobbie & Co., Messrs., *Rothesay*, 233

Dobbie, Mr. James, of *Rothesay*, 68

Dodder, *Ivy* attacked by, 215

Doncaster, round, 661

Douglas, Mr., at *Southampton*, 756

Dover flower show, 580

Dover House, fruit and plant houses at, 131

Dracaena *albo-lineata*, 183; *aurea* *striata*, 538; *Emile* *Zola*, 581; *Exquisite*, 490; *indivisa* *Burtoni*, 183; *Rose* *Laing*, 599; *sanderiana*, 789; *Warrenii*, 329

Drug, a mysterious, 725

Drumchapel, a visit to Mr. Peter *Cockburn's* *Vineyard*, 200

Drummer? what is a, 724, 788

Dublin *Botanic* *Gardens*, 811

Dundee *Chrysanthemum* *carnival*, 101, 148

Dunoon, notes from, 102, 133, 150, 164

Dyson's *Lane* *Nurseries*, 747

E

EARNOCK, Hamilton, N.B., 105; conservatory in December, 585

Earthworms, utility of, 331

Earwigs and *Chrysanthemums*, 237

Eastwood *Park* near *Glasgow*, 394

Echinocactus *polyancistrus*, 581

Eckford, Mr. Henry, 486

Edinburgh, our illustrations from, 74; seed trade, 244

Egypt, the gardens of ancient, 36

Edinburgh show, eve of the, 184; features of the, 35, 195; souvenir of, 261; spring show, 506, 525

Elaeagnus *pungens* *variegata*, 474

Elm, a patriarch, 234

Emigrants, hints for, 300, 524

Entomology and *botany*, 25

Epicattleya *radiato-bowringiana*, 678

Epidendrum *elegantulum* *leucochilum*, 538

Epping *Forest*, 454

Eranthis *cilicica*, 440, 694

Eremurus *robustus* *elwesianus*, 630

Erodium *Richardi*, 807

Essex field experiments, 343, 357
 Eulophiella peetersiana, 538, 629
 Euonymus radicans variegata, 462
 Euphorbia corollata, 772; Poinsettia, 249
 Examination in horticulture, 659, 667, 683
 Exeter, parks and open spaces in, 436; public gardens of, 324; successful culture at, 665
 Exhibits, questionable, 364, 375, 396, 428
 Experiments with crops and manures, 563
 Explosive, a new, 756
 Eynsford, seed farm at, 101

F

FAGUS sylvatica pendula, 779
 Falkland Park, South Norwood Hill, 147, 727; Orchids at, 509
 Fall from a tree, fatal, 455
 Features of the N.C.S. great show, 163
 Fern Bulletin, the, 132; factory, a fine, 678
 Ferns, a locality rich in, 772; and surfacing, tree, 621; growing in Chancery Lane, 626
 Fertiliser, a new, 567
 Fertilisers and Celery, 179
 Fever, do pot-plants disseminate? 455
 Ficus radicans variegata, 23
 Fig gardens, public, 53
 Fig, Thomas a'Becket and the, 53
 Fire in Holborn, the great, 390
 Fires in the Forest of Dean, 518
 Flag, the, in plants, 724
 Flood on cultivated land, salt-water, 596
 Floral and botanical demonstration, 710; decorations at Chiselhurst, 708
 Florist's Company Limited, the London, 116; rascal, 342
 Flower and fruit farming in England, 723; boxes, Parisian, 52; competition, winter, 438; fakes, 487; fund, children's, 455; gardening notes, 25; hunter in Queensland, 645; pictures by lady artists, 364
 Flowers and fruit in November, 196, 197, 212; at Peollwe, choice hardy and other, 373; early, in Northumberland, 423; early spring, 394; forced, at Mr. Icton's, 332; in Hyde Park, spring, 553; in mid-winter, 292; in the North, fashionable, 245; in the open, garden, 181; the destruction of alpine, 53; the home of, 773, 789; who sets the fashion in? 293
 Food, artificial, 788
 Forbes, Mr. Archibald, marriage of, 228; Mr. John, at Carlisle, 164
 Forest Hill, Stanstead Park Nurseries, 378; Begonias and Dahlias at, 155
 Forde Abbey, notes from the open from, 214
 Fordhook Farm, U.S.A., 116
 Forester, a royal, 228
 Forest for Scotland, a state model, 772
 Forestry, 314
 Forfarshiremen at the Edinburgh show, 211
 Fossil forest of Atanakerdluk, 650; plant in Hampshire, new, 522
 Foxgloves with a regular top flower, 20
 Freesia bulbs arrested, 631
 Freesias, 246, 792
 French Chrysanthemum Society, 164; Horticultural Society of London, 332; horticulture, loss to, 422; rosarians, 52
 Fritillaria macrophylla, 584
 Fritillarias, 476; early, 440
 Frost in May, 614
 Fruit and vegetables in South Devon, 661; British grown, 83, 89; children and, 660; crops, our, 772; culture at the Cape, progressive, 84; culture extending, 819; culture in Her Majesty's Reign, 1837-1897, 68, 92; culture, profitable, 341; farm, work on a Kentish, 787; prospects, 518, 428; prospects in North Britain, 645; for Christmas, 229; growing and study in Victoria, 805; growing at the Cape, 245; medicinal, 651; other uses for, 52; the preservation of fresh, 36; to grow fine, 581; tree beetle, the, 741
 Fruits, dried, 580; the cooking of, 550
 Fuchsias fulgens, 60; Riccartoni, 36

Fuchsias in tubs, 109
 Fuels, the working value of, 604
 Fungus on Beech, 364; on Chrysanthemums, 253; on Thuyas, 695
 Furcraea watsoniana, 807.

G

GAILLARDIA W. B. Child, 711
 Galanthus Icaria, 366
 Galega officinalis, 789
 Gall on Jessamine, 215, 231
 Galls on roots of Oak, 135, 183
 Gamage, 628
 "Garden and Forest," 324
 Garden, a big, 423; crops in West Lothian, 741; of love, 454; scenery, the Beauty and order of, 811
 Gardener, a royal, 550; the qualifications and duties of a, 266, 282
 Gardeners, a nursery of great, 20; awakening to the needs of the times, 453; on Holiday, 45; wake up young, 541
 Gardeners' Royal Benevolent Institution, 6, 292, 309, 341; annual dinner, 666; annual general meeting, election and friendly supper, 347; lost votes, 342; "Victorian Era Fund," 523
 Gardening for children, 604; practical, 284
 Gardens, roof, 293; and the drought, 803
 Geranium club, children's, 724
 German society of Rose growers, 597
 Germinating Peas, Cress and Barley, 708
 Gesnera amabilis, 151
 Gesneraceous plants at Reading, 649
 Ghent, New Holland plants at, 531; Quinquennial Show, 538; show, a general view of the, 534
 Gishurstine, 180
 Gladioli, early flowering, 11; with double flowers, 276
 Gladiolus, Eunice, 39; Lemoinei Baron J. Hulot, 807; Lemoinei Vesuvius, 807; Oriental, 39; Queen Wilhelmina, 89; Sutton's Queen of Roses, 711; W. B. Child, 807
 Gladstone, William Ewart, 615
 Gladstone's favourite flower, Mr., 660
 Glamis Gardens, Forfar, 57
 Glanbeuno, Carnarvon, 438
 Glasgow Botanic Gardens, 297, 473; Parks and Gardens, 75; public parks, 788
 Glasnevin, practical botany at, 374
 Glastonbury Thorn, 395
 Gloriosa superba, 77
 Gloxinia Galatea, 679
 Golder's Hill estate, 788
 Goodyera Rollisonii, 23
 Gooseberry Pruning, 395
 Goring Hall Gardens, 823
 Grammatophyllum Ellisii v. G. rumphianum, 709, 772; speciosum, 23
 Grandeur and decadence, 36
 Grape Directeur Tisserand, 230; Marchioness of Downshire, 151
 Grape room, the, 380
 Grapes, shanking of, 46
 Grasse and Cannes, flower gardens of, 486
 Green Fly, a plague of, 691
 Green, Mr. Augustus G., 53
 Greenway, Mr., deplorable gun accident to, 260, 343
 Greenwich Park, 565, 601, 614
 Grevillea Fosterii, 649
 Grey Coat School, Westminster, 740
 Ground Ivy, the variegated, 573
 Gun accident to Mr. Greenway, 260, 343
 Gunnera manicata, 526; scabra, 653
 Gunnersbury House, Acton, 99, 820
 Gypsophilla cerastioides, 667

H

HAARLEM, lake of, 471
 Hafton, Hunter's Quay, N.B., 268
 Hail, havoc by, 564
 Hailstorm Insurance Corporation, 508
 Hamamelis arborea, 301
 Hamburg Exhibition, 75
 Harcourt, Sir William, as a gardener, 211
 Hardy herbaceous plants, 602, 651, 677, 698, 725
 Haricots, Lentils and Peas, composition of, 45
 Hartstongue, a fine frilled, 694
 Hawthorns on Hampstead Heath, 628
 Hay making in a wet season, 805
 Heath, green-flowered, cross-leaved, 22

Hedysarum multijugum, 121, 711
 Heinemann's Novelties, 249
 Heiensea, Broughty Ferry, 237
 Helianthemum Fireball, 795
 Hellebores diseased, 279
 Helleborus, niger, 301
 Hemlock, the Western, 361
 Herbaceous border, 441
 Hibiscus Manihot, 38; syriacus, 550
 Holly Golden King, 630; with red and yellow berries, 279
 Home of flowers, the, 778, 789
 Honour to whom honour is due, 52, 68
 Hooker, Sir Joseph, 422
 Hop-tree, the, 89
 Horticultural Club, the, 200
 Horticultural Sundries, 474
 Horticulture, a generous donor to, 597; R.H.S. Examination in, 659, 667
 Hospitality of the Scottish Horticultural Association, 214
 "House, the," 85, 212
 Humphreys, Mr. T., a sad accident to, 622, 708, 788
 Humphries, Ltd., Messrs. Edward, 69
 Hurst & Son Cricket Club, the, 233
 Hurst & Son, Messrs., at the Holborn Restaurant, 267; Clover and grass seed circular, 301
 Huxley and his garden, 342
 Hyacinth Ball of Gold, 523; Cine-raria, 523; City of Haarlem, 490; the Cape, 13; the Roman, 7
 Hyacinths and Evergreen Conifers, 7; Grape, 11; Roman, 269
 Hyde Park, spring flowers in, 553
 Hydrangeas in Co. Down, 297

I

"ICHTHEMIC" at Yarmouth, 77
 Ilott, Mr. Chas., and fruit growing, 53
 Imantophyllum Favourite, 490; Optima, 490
 Income-tax grievances, 277
 Inks, ancient and modern, 565, 580
 Insect miners, 788
 Insects and flowers, 180
 Inula Hookeri, 725
 Iris cristata, 653; juncea numidica, 711; Kaempferi, 333, 349; Kaempferi by the acre, 475; sibirica japonica, 725
 Irish Gardeners' Benevolent Society, 580
 Italian Chrysanthemum Society, 676
 Ivy-sports, 541; stem, large, 492
 Ivy-leaved Toad-flax, to the, 59

J

JADOO Fibre, 439
 Japan, new year's banquets in, 597
 Japanese as flower lovers, the, 724; Mushrooms, 268
 Jeemes and the laird, 342
 Jones, Mr. H. J., serious illness of, 84
 Judging at horticultural exhibitions, 379, 396, 428; flowers, fruits and vegetables, 21
 Juglans regia laciniata, 734
 Juniper Berries, gymnospermous, 135
 Juno Cycles, 470; at the Crystal Palace, 212
 Justicia carnea, 666

K

KAILYARD story, another, 53
 Kale, varieties of: Barr's Exquisite, 231; Brydon's Selected, 231; Chou de Milan, 231; Cottager's Kale, 231; Culzean Castle, 231; Cuthbertson, 231; Dobbie's Selected, 231; Dwarf Purple, 231; Late Hearting, 231; Variegated, 231
 Kales, ornamental, 444
 Kalo-Rochea, 821
 Kay's Annual for 1898, 229
 Kelway's Annual, 325
 Kew, a year's Orchids at, 789; and Chiswick gardeners fraternising, 374, 390; early flowers at, 380; Gardens, the cottage grounds in, 645; Guild, 422; Guild, journal of the, 644; hardy Azaleas at, 645; leguminous trees and shrubs at, 651; Nepenthes house at, 299; Orchid houses at, 645; Palace, the old, 398; rare Orchids at, 791; the Kew pelican, 293
 Kinver specialities in flowers, bulbs and vegetables, 86
 Kirn, notes from, 139

Kittshayes, 725
 Kniphofia longicollis, 724; primulina, 301; Tucki, 662
 Krelage, Mr. J. H., 741

L

LABEL and Holder, the Ideal, 117
 Laburnum seeds, death from eating, 116
 Lachenalias, 325
 Lady crofters, 359
 Laeken, the royal domain of, 661
 Laelia anceps amesiana Crawshayana, 326; anceps from Ravenswood, 229; anceps Mrs. De B. Crawshay, 263; anceps Whiffeni and L. a. crawshayana, 277, 292; anceps schroderiana Rosslyn var., 375; anceps waddoniensis, 396; Briseis, 263; elegans, Mrs. Moojen, 571; elegans Monica, 597; lindleyano-elegans, 263; longipes, 150; Olivia, 230; pumila albens, 151; pumila Gatton Park, var., 70; pumila Lowe's var., 118; pumila magnifica, 150; pumila praestans, 263, 346; pumila praestans, at the Sale Rooms, 180; purpurata, a fine, 597; purpurata Ernestii, 678; purpurata Mrs. R. I. Measures, 150; rubescens, 263
 Laeliocattleya Admiral Dewey, 630; andreana, 23; canhamiana Joyce Wigan, 710; Duke of York, 679; Eudora splendens, 678; Fascinator, 598; Golden Gem, 630; Hippolyta aurantiaca, 678; Hippolyta Dulcote var., 598; Ingrams gigantea, 774; Juno, 23; schilleriana Cambridge Lodge var., 774; Thornton, 571; warnhamensis, 458; wellsiana langleyensis, 571
 Lambton Castle, floral decorations at, 213; Gardens, 70
 Language of fruit and vegetables, 661
 Law notes: Ashworth v Wells, 124, 332, 398; rating of market garden buildings, 462, 487; was it worth the trouble? 391
 Lawes' Chemical Manure Company, Ltd., 180
 Lawton's Patent Pot Suspender, 359
 Leeds Corporation and its gardeners, 486
 Leicester public parks and recreation grounds, 361
 Lemon bath, 692
 Lemons as soap, 412
 Lettuce forcing in the United States, 581; Nansen or North Pole, 412; soil for, 443
 Licuala Jeanenceyi, 630
 Lilac, a new rose-flowered, 724
 Lilies of the Valley, retarding, 24
 Lilies, popular, 41
 Lilium candidum, 41; giganteum, 153; Harrisii in Natal, 293; longiflorum Harrisii, 38; Marbam, 710; rubellum, 630
 Lille, Chrysanthemum show and congress at, 325
 Lily disease, cure for the, 758; fields of Bermuda, 645; of the Valley, the, 10; the sacred, 293
 Lime, a pyramidal, 519
 Linaria alpina, 809; macedonica, 750
 Linden, M. Jean, memorial to the late, 518
 Linnean Society, gold medals from the, 628
 Lismore, Broughty Ferry, 377
 Living things, the simplest, 534
 Lobelia Tupa, 184c (supt.)
 Long Ditton, autumn flowering Crocuses at, 284; Irises at, 693; Michaelmas Daisies at, 107
 Lozier Manufacturing Co., 116
 Lupinus arboreus luteus, 726
 Lupinus polyphyllus Foxii, 726
 Lupinus polyphyllus Somerset, 711
 Lycaste denningsiana, 70
 Lychnis Lagascae, 667
 Lyons, International Horticultural Exhibition, 756

M

McDOUGALL's Insecticide Fumer, 629
 Magnolia parviflora, 699
 Magnolias, 629
 Maida Vale, Orchids at, 155
 Maidstone, Allington Nurseries, 823; grapes for, 180
 Making himself known, 740
 Manchester Whit-week show, 637
 Manure in horticulture, employment of, 805

Manuring, science of, 534
 Maranta picta, 119
 Marattia Burkei, 151
 Margate, new park for, 645
 Marigolds, African, 54; selected striped French, 135
 Market gardening in the Queen's reign, 186, 197, 214
 Masdevallia corniculata, 263; Imogen, 774; ventriculata longicaudata, 538
 Matricaria Parthenium Golden Ball, 54
 Mats, straw, 316
 Maxillaria elegantula, 230
 Maze, the, 756
 Meadowbank Nursery, Rothesay, 314
 Meconopsis cambrica flore pleno, 679
 Medals at Shrewsbury, 6
 Medicinal fruit, 651
 Melon, Cox's Golden Gem, 184c (supt.); Croxteth Jubilee, 119; Diamond Jubilee, 413; Excelsior, 151; Frogmore Scarlet, 23, 408; Mrs. Herrin, 39; Taunton Hero, 411; The Lady, 427
 Melons with new disease, 135; with seeds germinating, 791
 Melville Castle in July, 745
 Metropolitan Public Gardens Association, 407
 Michaelmas Daisies at Long Ditton, 107; exhibiting, 237
 Melchampsia campanuloides, 46
 Microbes on kitchen garden vegetables, pathogenic, 59
 Midland Great Western Railway of Ireland, 628
 Mlkania Sanderi, 679
 Millfield Nursery, Edmonton, 779
 Milne, Lance-Corporal Patrick, 164
 Miltonia bleuana rosea gigantea, 630; peetersiana, 70; vexillaria Empress Victoria Augusta, 630
 Mimetic resemblance, 522
 Mimulus luteus, 52
 Mina lobata, 109
 Miramar, Exmouth, 603
 Mistletoe bough, the, 280; source of, 277, 293
 Moles and their food, 375
 Moneywort, the variegated Cornish, 605
 Monifieth Nursery, 42
 Mora nut, the, 455
 Morchella sp., 631
 Morland Nursery, South Norwood, 587, 636
 Mormodes oenanthum, 571
 Moss and lichen on fruit trees, 36
 Mosses, study of, 375
 Moth, the Gipsy, 292; the Silver Y, 293
 Mummers at dinner, 252
 Mnsa Cavendishii, 137, 395, 458
 Muscari hotryoides album, 709
 Muscat House, a famous Cannon Hall, 713
 Mushroom picking a felony, 85
 Mushrooms and Broccoli, 122; field, 614; Japanese, 268; preservation of, 709
 Mutual Improvement Associations: Birmingham Amateur Gardeners, 116, 277, 343, 374; Bristol Amateur Horticultural Society, 116; Cardiff Naturalists' Society, 503; Caterham Gardeners' outing, 789; Corbridge and District Gardeners', 84; Cork Literary and Scientific Society, 252; Chiswick Gardeners', 308, 422, 439, 470, 502; Ealing Gardeners' Society, 85, 148, 212, 228, 244, 245, 260, 325, 342, 358, 423, 454 (spring show) 476, 503, 518, 631, 788; Devon and Exeter Gardeners, 69, 101, 164, 276, 309, 325, 359, 423, 455, 644; Devon and Exeter gardeners on holiday, 725; Forfar Horticultural Improvement, 581; French Horticultural Society of London, 332; Liverpool Horticultural, 250, 324; Loughborough Gardeners', 324, 596; National Amateur Gardeners', 268, 438, 564, 730; Preston and Fulwood Horticultural Society, 116, 407, 580; Reading and District Gardeners', 276, 331, 349, 362, 395, 428, 439, 471, 519, 542, 597, 677; Renfrew Gardeners', 260; Rye Gardeners', 116, 358; Scottish Horticultural Association, 58, 116, 325, 374, 375, 423, 455, 470, 503, 580, 793, 807; Shirley Gardeners', 68, 117, 197, 325, 422, 486, 534, 677, 804; Torquay Gardeners', 292, 316, 324; Tunbridge Wells, 116, 123, 454, 518; Ware and District Horticultural, 470; West Derby Gardeners' 342; Wolverhampton Gar-

deners' Horticultural Club, 36; Woolton, 100, 132, 164, 229, 260, 309, 343, 375, 439
 Myrobalan Plum, 628

N

NAMES of plants, popular and botanical, 421
 Nandina domestica, 119
 Narcissus: Barrii conspicuus, 521; Bulbocodium citrinus, 10; bicolor grandis, 10; J. B. M. Camm, 524; Johnstons Queen of Spain, 10, 507; Lady Margaret Boscawen, 538; Lucifer, 538; maximus, 558; Mrs. Walter Ware, 524; Oriflamme, 538; poeticus Diadem, 571; poeticus Homer, 538; Victoria, 462; White Lady, 571; White Queen, 538; Will Scarlet, 571; White Wing, 571
 Narcissus, the, in Devonshire, 503
 Nasturtium Queen of Tom Thumb, 710
 National Chrysanthemum Society and the Royal Aquarium, 250, 262, 437; annual outing, 692, 763
 National Co-operative flower show, 804
 Native Guano, 358
 Natural beauty, 789
 Needs of the times, gardeners awakening to the, 453
 Neill Prize, the, 615, 629
 Nelumbium nuciferum speciosum, 807
 Nepenthes, 36, 292; house at Kew, 299; Tiveyl, 37
 Nepeta Glechoma variegata, 576
 Nerine Countess of Bathurst, 151; Lady Bromley, 151; Lady Dorrington, 151; Lady Lawrence, 151; Lady Llewellyn, 151; Lady Lucy Hicks-Beach, 151; Lady Mary Shelly, 151
 New York Botanical Gardens, 534
 Nitragin and alinite, 757; experiments with, 19
 Notebook, notes from my, 133; Monthretias, 247; Phloxes, 262
 Nottingham, floral decorations at, 741
 Novelties in vegetables, 405
 Nursery and Seed Trade Address List, 117
 Nuts, a big bunch of, 52
 Nymphaea, gloriosa, 775; ignea, 807; odorata rosacea, 775

O

OAK, extraordinary, 378, 391
 Oaks, dwarf, 379
 Obituary: Amsy, Mrs. Cornelia Rachel, 148; Baillie, Mr. E. J., 117, 141; Bateman, Mr. James, 237; Brown, Mr. James, 286; Casey, Mr. James, 244; Cocker, Mr. James, 61, 101; Davies, Mr. Isaac, 116; Gibson, Mr., 245; Grey, Mr. William, 270; Linden, M. Jean, 309, 333; Mc Ewen, Mr. David, 245; Marquard, C.M.G., Mr. Leopold, 244; Ormiston, Mr. Thomas, 132; Paterson, Dr. Alexander, 558; Princess Mary Adelaide, Duchess of Teck, 148; Sheasby, Mr. Thomas, 366; Terry, Alderman, Sir Joseph, 333; Tonks, Mr. Edmund, 398; White, Mr. Lynch, 573; Willey, Mr. Frederick E., 366
 Odontoglossum charlesianum, 630; Adrianae venustum, 630; crispum, a yellow, 262; crispum Baroness Schroder, 458; crispum decorum, 630; crispum guttatum pittianum, 311; crispum-harryanum, 630; crispum Lindenii, 538; crispum Mendham House var., 362; crispum norwoodense, 362; crispum Princess Christian, 490; crispum rubellum, 661; crispum Sunlight, 150; crispum zehrinum, 630; dayanum, 230; elegantius Baroness Schroder, 678; grande pittianum, 118; hunewellianum maximum, 571; hybridum ashworthianum, 490; nebulosum pardinum, 458; Pescatorei bellatulum, 630; Pescatorei Duchess of Westminster, 571; rochfordianum, 490; Rossii majus, 229; triumphans intensum, 524; tripudians xanthoglossum, 709; wilckeanum Pittiae, 453; wilckeanum Pitt's var., 538; wilckeanum Rosslyn var., 429; wilckeanum rubiginosum, 429

Odontoglossum crispum, strange behaviour of, 709; Pescatorei, a fine, 724
 Oncidium albo-verrucosum, 742; cucullatum Phalaenopsis Brandt's var., 490; panduratum, 37; Papilio, 71
 Onion show at Banbury, 93
 Onion Ailsa Craig at Edinburgh, 228; Cranston's Excelsior, 237
 Onoclea Struthiopteris, 724
 Ononis rotundifolia, 662
 Orange, a fruitful, 699; flowers in Paris, 789; tree in Guernsey, 646
 Oranges from California, 596
 Orchard, an ancient, 358
 Orchid culture, unprofitable, 596; curiosities of the, 653; display at Highfield, Woolton, 660; roots with fungus, 492, 541
 Orchid Growers Calendar, the, 23, 55, 87, 119, 151, 183, 231, 262, 295, 327, 363, 397, 439, 461, 492, 522, 555, 583, 631, 663, 694, 726, 741, 759, 791, 821
 Orchids at Craigclowan, Perth, 105; Eastwood Park, near Glasgow, 394; Edenside, 774; Messrs. Lewis & Co., Southgate, 597; at the Sale Rooms, 100, 244, 309, 342, 391, 438, 692; British, 534; at Bush Hill Park, 635; hybrid, 684; Messrs. Veitch's, 646
 Ormiston House, 777
 Osterly Park, 246, 757
 Oxlip in Belgium, the, 565

P

PAEONIES decayed, 583
 Paeony, Alton Lock, 662; Cardinal Vaughan, 662; Dorothy Welsh, 662; Duchess of Marlborough, 662; Ella Christine Kelway, 679; James Kelway, 662; Lady Long, 662; Marchioness of Londonderry, 662; Prince of Wales, 662
 Paeony tree, Henry Irving, 630; Juan de Reszke, 630; Julius Caesar, 630
 Palania disease, 695
 Palm leaves discoloured, 541; swindlers, 756; the Doom, 550
 Pandanus Sanderi, 619, 629
 Pannemaeker, Jubilee of M. P. J. de, 213
 Panshanger, 810
 Pansies, raising new, 693
 Papaver, Princess of Wales, 662; Silver Queen, 662
 Paper and parchment, 709
 Papyrus manuscript, 439
 Paris exhibition of 1900
 Paris gardening, notes on, 683, 697
 Park, Yellowstone, National, 407
 Parks, hig, 407, 486
 Parrot Tulips, seeding, 135
 Parsnip, Barr's New White Marrow, 408
 Partridges, white, 231
 Patents for inventions, 132
 Paxton, Sir Joseph, 782
 Pea, American Wonder, 653; Astronomer, 412; Carter's Early Morn, 313, 333; Continuity, 775; Honeydew, 775; Mansfield Show, 775; Prior, 775; Saccharine, 775; Sutton's Continuity, 425; Sutton's Peerless Marrowfat, 164; The Bruce, 775; The Gladstone, 222
 Pea plants, tubercles on the roots of, 295
 Perfumes and essential oils, Australian, 581
 Peach, the everbearing, 325; the pip of a Scottish, 692; Thomas Rivers, 711
 Pear, Beurré Hardy, 36, 93; Directeur Hardy, 119; Passe Crassane, 397; President Barahe, 263, 326
 Peas decayed, 631; edible, 743; for market, 686; market, 53; Scarlet Runners and Strawberries, late, 164; the new race of Marrowfat, 628
 Pelargonium, rise of the zonal, 423
 Pelargoniums decaying, 23
 Pelargoniums, hybrid: C. Jefferies, 54; G. Stevens, 54; H. B. May, J. D. Pawle, 54; R. Dean, 54; William Marshall, 54
 Pelargoniums, zonal: Adolphe Brissson, 54; Adolphe Brissson, 87; Advance, 54; Albion, 54; Boule de Neige, 54; Boule de Neige (Bicolor), 53; Capt. H. Colville, 54; Creed's Seedling, 53; Dolly Varden, 53; Flower of Spring, 53; Golden Harry Hieover, 53;

Henry Jacoby, 54; Iseult, 134; Jules Lemaitre, 87; Le Comte de Lisle, 134; Le Rhone, 134; Lilacina, 134; Lilian, 135; Madame Roehlia, 54; Marechal McMahon, 53; Masterpiece, 53; Miss Joliffe, 134; Miss Kingsbury, 53; Mrs. Barney, 54; Niagara, 135; Raspail Improved, 50; Rev. H. H. D'Omhain, 87; Sir Hamilton, 53; Zenobia, 134; Zulu, 53
 Pelican at Kew, 132
 Pellaea atropurpurea in cultivation, 550
 Peloria of Coelogyne cristata, 487
 Pensioners, an army of, 358
 People's Palace, Glasgow, 343
 People we have met: Airdrie, Mr. David, 101; Ashton, Mr. F. W., 278; Boyd, Mr. Thomas, 22; Carmichael, Mr. William, 566, 580; Davis, Mr. Norman, 200a (supt.); Grieve, Mr. James, 184a (supt.); Haggart, Mr. Alexander, 213; Hartland, Mr. William Baylor, 309; Hunter, Mr. James, 69; Kent, Mr. Joseph, 742; Laird, Mr. James, W., 37; Laird, Mr. William P., 37; Leslie, Mr. John, 22; Melville, Esq., Walker S., 200a (supt.); Moorman, Mr. J. W., 166; Ontram, Mr. Alfred, 200a (supt.); Smith, Mr. J. Fraser, 246; Smith, Mr. W., 184a (supt.); Sydenham, Mr. Robert, 310; Temple, Mr. Mungo, 22; Thomson, Mr. David William, 21; Todd, Mr. M., 184a (supt.); Upstone, Mr. Albert F., 694; Wythes, Mr. George, 597
 Phaiocalanthe grande, 397
 Phaius Norman, 458, 524; Norman aurea, 458; Norman rosea, 458; tuberculosus, 487
 Phalaenopsis, Schrodereae, 538; stuartiano-Mannii, 538
 Pheasant and Black Grouse, hybrid, 231
 Philadelphia, Florists' Club of, 276
 Philadelphus coronarius Mont Blanc, 679; Lemoinei, 710
 Philippine Islands, vegetable products of the, 692
 Phlebodium aureum Mayl, 630
 Phlox coccinea, 60; Miss Pemberton, 71
 Phloxes, second flowering of late, 53
 Phoenix Park, 804
 Phoenix Roebelini, 761
 Phyllocactus Agatha, 630; Epirns, 630; latifrons, 628
 Phyllostachys castillonis, 774; fulva, 775
 Phyllotreta on Cruciferae, 231
 Physalis Franchetti, 311
 Phytopus on Hazel, 492; Ribis, 492
 Picea pnnngens glauca pendula, 742
 Pieris formosa at Bicton, 69
 Pilocereus senilis longisetus, 629
 Pinkhill Nurseries, Edinburgh, 122
 Pitsea, the new colony at, 117
 Plant for dry banks, a, 550
 Planting, town and suburban, 291
 Plants and snakes, 692; for specimens, making up, 653; interesting, 604; interesting wild, in Devon, 565; naturalisation of flowering, 614; penetrate the soil, depth to which, 549; popular and botanical names of, 421; popular and pretty pot, 708; self-irrigation, 740, 804; sleep of, 52; some interesting, 49; the beginnings of, 455; the construction of plants, 390; useful hardy, 741
 Plum, the Myrobalan, 628
 Plum trees, roots of, 301
 Plums under glass, 750
 Poet-gardener, a, 724
 Poetry, spring, 528
 Poisoned by fruits from American Blackberry, 68
 Polar-expedition, Jackson—Harmsworth, 181
 Pollard Willows, 729
 Poolewe, choice hardy and other flowers at, 373
 Polyanthus, a fine strain of, 563
 Polystichum Marshalli, 742
 Pope and the gardener, the, 564
 Postcard, sovran, 534
 Post Office authorities and Pattern Post, 518
 Postmen's Park, the, 614
 Potato Carter's Monarch, 410; Sutton's Ideal, 409; The Dickson, 411
 Potato crop, the Irish, 20; disease, cause of, 471; experiments in Ireland, 323; experiments in Wilts, 389; growing in Scotland, 558; Onions, 556; tops as fodder, 487

Potatos, composition of, 215; eusilage of, 36; outgrowths on, 791; Pat's early, 85
 Pots, paper flower, 708
 Presentations: at Torquay, 519; Cypher, Mrs. and Miss, 309; Davidson, Mr. George, 100; Fraser, Mr. John, 471; Lane, J.P., Mr. F. Q., 228; McInnes, Mr., 164; Richardson, Mr., 101; Rourke, Mr. James, 148
 Praying for the crops, 596
 Primrose, a green, 596; Evelyn Arkwright, 571
 Primula japonica, fasciated, 663; obconica fimbriata, 71; sinensis alba plena, 278; sinensis alba plena, 381; Trailli, 661
 Primulas, British hybrid, 308; Messrs. Jas. Carter & Co's, 365
 Privet, golden, 477
 Proctor & Ryland, Messrs., 180
 Ptelea trifoliata, 89
 Pteris gracilis multiceps, 523; Summersi, 571
 Public Park Nursery, Rothesay, 294
 Putney, Granard Gardens, 332, 345
 Pynaert-Van Geert, M. Ed., 564
 Pyrethrum Cassiope, 662; Lady Kildare, 679; Monarch, 679; flowers arrested, 727
 Pyrethrums, double and single, 677

Q

QUEEN ELM of New England, 805
 Queen's reign, recollections of the, 300
 Queen's seedsman speaks, a, 391
 Queensland, fruit in, 661

R

RABBITS in Australia and New Zealand, 300
 Radish, Carmine Oval, 599; First of All, 599; Scarlet Olive-shaped, 599; Sutton's Forcing, 599; Wood's Frame, 599
 Ramondia pyrenaica, 795
 Raspberries, 328, 344
 Raspberry Golden Queen, 775
 Reading, Calceolarias at, 615; Chinese Primulas at, 393; Cyclamens at, 457; early spring bulbs at, 470; Gesneraceous plants at, 643
 Record for gardeners, a, 374, 390
 Redbraes Nursery, Edinburgh, 118
 Redlands, Glasgow, 330
 Regent's Park, spring flowers in, 572
 Retinospora obtusa sulphurea, 71
 Retinosporas, 378
 Rhodanthe Manglesii, 789
 Rhodes, Mr., and his Orange trees, 260; and the locusts, 390
 Rhododendron, anthopogon, 646; catawbiense, the largest, 455; cinnabarinum, 709; Handsworth White, 571
 Rhododendrons at Edinburgh, greenhouse, 541; two new, 634
 Rhynchostylis coelestis Cambridge Lodge var., 37
 Ribes aureum in fruit, 215; sanguineum, growth of, 583
 Rice crop in the Korea, 53
 Richardia Little Gem, 629; Rhodesia, 571
 Rivina humilis, 381
 Robbery in mid-air, 342
 Romney Coulteri, 542
 Rook, the, and Cape Colony, 628
 Rose Aurora, 630; Charlotte Gillemot, 775; Crimson Rambler, an old acquaintance, 804; Edith Turner, 743; Ever-blooming Prairie Queen, 445; Kaiserin Augusta Victoria, white sport from, 324; Pauline Labonte, 471; Perle des Rouges, 743; Red Maréchal Niel, 333; Rev. Alan Cheales, 711; Souv. de Mme. Levet, 775; The Dawson, 571; Una, 711; White Maman Cochet, 333
 Rose nursery, visit to a famous, 380; the, in history, poetry and commerce, 181; tree, an old, 438
 Rosebery, Lord, at Naples, 390
 Roses at Aberdeen, Tea, 21; at the Crystal Palace, 707; hybrid, 293; why do so many standards die? 693
 Rotherham, horticulture in, 676; Cairnforth Lodge, 810; Oakwood Grange, 779; The Woodlands, 746
 Rothesay, Messrs. Dobbie & Co., 233; social meeting of employees, 277
 Rowan Jelly, 29
 Royal Appointment, 117

Royal Gardeners' Orphan Fund, 148, 228, 324, 443, 549, 554; annual general meeting, 406, 428
 R.H.S. Committees at Chiswick, 709
 Royal Masonic Benevolent Institution, 486
 Royal National Tulip Society, 614
 Royal visit to Messrs. L. Linden & Cie's Establishment at Moortbeek, 692
 Royal Society, evolution committee of the, 438
 Rubber Plants, a forest of, 390
 Russell, Mr. Hamish, W., 438, 805

S

ST. PETERSBURGH international horticultural exhibition, 74
 Salad, a novel, 798
 Salpiglossis, the garden, 21
 Salvia splendens, a new variety of, 518
 Sandhurst Lodge, near Wokingham, 441
 San Francisco, Golden Gate Park, 375
 San Jose Scale, the, 675
 Salt-water flood on cultivated land, 595
 Savoy, Sutton's Perfection, 441
 Saxifraga aizoides, 52, 795; granulata, 614
 Scalarandis, M., 660
 Scent of Roses, 374
 Scilly Islands, 245
 Scotch Fir malformation, 492
 Scottish notes, 359
 Scutellaria mociniana, 43
 Scuticaria Hadweni, 679
 Seakale, Lily-white, 403, 445, 462, 477
 Seasonable notes, 359
 Sedum as a bedding plant, the evergreen, 542; Sieboldii variegatum, 509
 Seed order, 360, 376, 392, 424; sowing machine, a new, 741
 Seeds, low-priced, 346, 364, 375, 396
 Shakespeare, "Plant Lore of," 782
 Shamrock, the, 470
 Sherwood £10 10s. Silver Cup for Annuals and biennials, 398
 Shrubs in season, flowering, 745; that thrive under trees, flowering, 294, 309
 Siam, King of, at the Crystal Palace, 85
 Sidbury Manor, East Devon, 805
 Sieve, pounds of fruit in a, 782, 798, 814
 Silchester, the hurried Romano-British City at, 661
 Silene alpestris, 667; quadrifida, 694
 Silver leaf disease, 695
 Simplest living things, the, 534
 Simplicity Holder and Indicator, 460
 Sleep of Plants, 52
 Slugs and woodlice in conversation, 652
 Smyth, Mr. H. G., new address, 260
 Sobralia sanderiana, 807
 Societies and Shows: Abbey Park, Leicester, 796; Aberdeen, 820—Chrysanthemum, 228; Ashford Cottage Gardeners, 391; Athole Horticultural, 14; Ayr Horticultural, 26; Bath Horticultural, 43; Beddington, Carshalton and Wallington Horticultural, 117, 534, 781; Bingley Horticultural Society, 244; Birmingham Carnation Show, 812; Bishop's Stortford, 813; Blackpool, 821; Blairgowrie and Rattray Horticultural, 26; Bournemouth and District Daffodil, 510; Brighton and Sussex Horticultural, 14; Brookfield Horticultural, 796; Broughty Ferry, 13; Buchlyvie Horticultural, 21; Bute Botanical, 292; Bute National Rose and Horticultural, 6; Cardiff Horticultural, 763; Chester Horticultural, 228; Chesterfield and District Chrysanthemum, 343; Clevedon Chrysanthemum, 277; Colchester Rose and horticultural, 359, 685; Devon and Exeter Horticultural, 825; Dundee, 26; Durham Floral, 52; Durham, Northumberland and Newcastle, 748; Dutch Horticultural and Botanical, 20, 85, 260, 645, 703, 772; Eastbourne Horticultural, 342; East London Horticultural, 503; Eaton, Chester, 812; Exmouth, 164; Falkirk Horticultural, 26, 524; Fell & Co., Messrs., Root show, 293; Glasgow and West of Scotland, 43; Glasgow and West of Scotland Pansy, 731; Gloucester flower show, 764;

Grand Yorkshire Gala, 685; Hanley Fete, 731; Harrow and Roxeth Allotment, 124; Hasting, 812; Haughley and Wesherden Horticultural, 763; Highgate and District Chrysanthemum, 422, 470; Hove Industrial and Horticultural, 101; International Horticultural Exhibition at Ghent, 406, 439; Ipswich, 748; Isle of Wight Horticultural, 525; Jedburgh Amateur Horticultural, 756; Kenilworth Horticultural, 749; Ladywell and Lewisham Horticultural, 133, 820; Leeds flower show, 708; Leith, 820; Lewes Chrysanthemum, 308, 406; Liverpool Farmers' Club, 103; Liverpool Horticultural, 375, 509; Lochee Amateur Horticultural, 13; Loughborough Horticultural, 20; Manchester Horticultural and Botanical, 637; Manchester Rose show, 732; Midland Carnation and Picotee, 438; Mildenhall Horticultural, 749; Nairn, 813; National Auricula and Primula (Southern Section) 454, 558 (Northern Section) 573; National Cactus, 766; National Carnation and Picotee (Southern Section) 454, 703, 780 (Midland Section) 812; National Chrysanthemum, 45, 108, 132, 140, 157, 170, 205, 221, 244, 423—annual dinner, 213—annual general meeting, 423, 476—Mummers at dinner, 252—smoking concert, 358, 374, 391, 502; National Co-operative show, 821; National Dahlia, 27, 644; National Rose Society, 250—at Bath, 699—at the Crystal Palace, 715—at Halifax, 749; National Tulip, 589; National Viola, 715; Netherlands Horticultural and Botanical, 454; Newcastle-on-Tyne flower shows, 342, 486, 556, 660; Newton-Stewart, Minigaff and District, 497, 644, 645, 824; Norfolk and Norwich, 556; Northamptonshire Horticultural, 797; Norwich Rose show, 708; Notts Chrysanthemum, 276; Notts Horticultural, 749; Oxford Cottager's Garden and Allotment, 756; Paisley Horticultural, 43; Perthshire Horticultural, 43; Pollokshields Horticultural, 60; Preston and Fulwood, 343, 451; Reading Horticultural, 748; Richmond Horticultural, 714, 724; Rodmersham Amateur and Cottage Gardeners, 43; Royal Agricultural at Birmingham, 699; Royal Botanic Society, 276, 325, 358, 391, 439, 494, 588, 668, 772; Royal Caledonian Horticultural, 28, 35, 44, 343, 506, 525; Royal Horticultural, 14, 28, 61, 85, 89, 107, 140, 205, 221, 252, 317, 381, 445, 477, 525, 557, 581, 588 (Temple show) 634, 669, 701, 733, 765, 797, 826—Annual general meeting, 382—Dates of meetings and shows, 117—Horticultural Examination, 325; Royal Horticultural Society of Ireland, 260, 423, 524, 715; Royal Horticultural of Southampton, 391, 438; Royal Jersey Agricultural and Horticultural, 43; Royal Oxfordshire Horticultural, 276; Royal Scottish Arboricultural, 20; St. Giles Cottage Garden Show, 796; St. Mary's, Leamington, 781; Sandy and District Floral and Horticultural, 26; Scottish Horticultural Association, 184A (supt.), 195, 209, 214, 261; Sevenoaks Horticultural, 375, 813; Shropshire Horticultural, 406, 814, 824; Smithfield show, 228, 252; Societe des Chrysanthemistes, 212; Southampton Rose show, 708; Southern Counties' Carnation, 53, 764; Suffolk Fat Cattle Club, 269; Swansea, 26; Syndical Chamber of Belgian Horticulturists, 68, 212, 244, 391, 455, 804; Taunton Horticultural and Floricultural, 271; Tibshelf Floral, Horticultural and Rose, 780; Tiverton Horticultural, 764; Tonbridge Gardeners' and Amateurs', 422; Toronto Horticultural, 645; Ulster Horticultural, 343; Woking Horticultural, 359; Wolverhampton floral fête, 747; Woodbridge flower show, 747; Windsor Rose show, 700
 Soil, should it get tired of one kind of crop? 517
 Soils, horticultural, 485
 Sonerila longifolia Lady Burton, 183
 Sophrocattleya George Hardy, 598

Souvenir of the Edinburgh show, 261
 Sparrow again, the, 53; in America, the English, 438; the, 459, 519, 773
 Spathoglottis aureo-Vieillardii, 598
 Speeches, after-dinner, 52
 Spergula pilifera aurea, 653
 Spirantes colorata maculata, 458
 Sporting, an experiment to induce, 537
 Sports, origin of, 290
 Spring flowers in January, 374; garden, continuity in the, 469
 Springtails, the food of the, 663
 Spruce Fir cone, var., 135
 Stanhopea rodigasiana, 710
 Stanley-Mobbs & Ashon, Messrs., 708
 Stanley Park, Liverpool, new Palm house for, 423
 Stanstead Park Nurseries, Forest Hill, 378
 Stapelia gigantea, 345
 Stauntonia latifolia, 646
 Step-ladder, an improved, 550
 Stipules and buds, 259
 Stirling seed establishment burned, 628
 Stoats and weasels in New Zealand, 487
 Stock Princess Alice, 521; Snowflake, 662
 Stock, the name explained, 228
 Stocks, &c., attacked by beetles, 215
 Stoke Bruerne Park, 649
 Stourbridge, coming of age festivities at, 693
 Strawberries, 760; at Chiswick, 69; forcing, at Cornell University, 243; in Britain, French, 621; in fancy-handle baskets, 628; in the Clyde Valley, 343; Leader and Monarch, 713; cultivation of the, 665
 Strawberry, the, 487; Veitch's Prolific, 743
 Streptocarpus hybrids, 650, 662
 Student in a far land, a successful, 438
 Stylophorum diphyllum, 602
 Suburban garden, work in the, 328, 652
 Sunflower growing, 252
 Sunshine, recorded, 644
 Sutton & Sons', Messrs., annual excursion, 660
 Sutton's Amateur's Guide, 246; bulbs for 1898, 789; Farmer's Year Book, 391
 Sutton, will of the late Mr. Alfred, 100
 Swan, Mr. W., of Bystock, 100
 Swanley, Chinese Primulas at, 459; College, 407, 759; nurseries, notes from the, 537; Pelargoniums at, 282
 Sweetbrier Lady Penzance, 709
 Sweet Gale and Lungwort in the New Forest, 534
 Sweet Pea Aurora, 743; Golden Gate, 743; Sensation, 526
 Sweet Peas, double, 343; from Worton Hall, 758; quality in, 307
 Sweet-scented leaves v. fragrant flowers, 572
 Symblypharis, a genus of mosses, 663
 Symmetry in a garden, 374
 Syon House, 269
 Syringa Senateur Volland, 550

T

TAMARIX KASHGARICA, 135
 Tanacetum argenteum, 694
 Tasmanian fruit, 486, 489
 Tatties, stealin' a pickle, 518
 Taxodium, an old, 292
 Tea Roses at Aberdeen, 21
 Technical education in Essex, 550
 Temple Show of 1898, 613, 616, 627, 634
 Thalictum aquilegifolium atropurpureum, 662, 677
 Thunderstorm, severe, 84
 Thysanacanthus rutilans, 519, 586
 Tipton, new public park at, 676
 Tobacco plant, perennial, 84
 Tomato, Clibran's, 137; First and Last, 412; Hackwood Park, 717; Laird's Supreme, 25; The Cropper, 428; The Polegate Improved, 407; Veitch's Golden Jubilee, 426
 Tomatos and early vegetables, 565; and sleepy disease, 791; stripping the leaves of, 222; the monkey and the, 294
 Tomtits in a letter box, 614, 692
 Tottenham, early spring flowers at, 444
 Tour, scientific and sporting, 422
 Trachelospermum jasminoides angustifolium, 46

Trafalgar Day, 132
 Trapa natans, fruit, 135
 Tree, the oldest in Europe, 691
 Trees and the tides, 244; in strange places, 101, 117, 181, 293
 Tresco Abbey, the grounds of, 757
 Trichopilia brevis, 263
 Tritolium resupinatum, 756
 Trinity Road Nurseries, Wands-
 worth, 266
 Tropaeolum speciosum, 6, 21, 23, 317,
 332, 347
 Tropical summers of 1896-97, the:
 their effects on the fruit trees and
 fruit crops, 331
 Truro, Daffodil show at, 475
 Tsuga mertensiana, 361
 Tubercles on the roots of Pea plants,
 295
 Tulip Glow, 599; Parisian Yellow,
 653; Picotee, 653; Salmon King,
 599; the florists' show, 489
 Tulipa biflora, 584; Leichtlini, 584;
 undulatifolia Boissieri, 584; vio-
 lacea, 440
 Tulips, early single, 8; English ama-
 teur, 11; vagaries of, 662, 695
 Turnip, Golden Ball, 151; Model
 White, 151; Sutton's Criterion,
 443
 Tyburn snuff box, 470
 Tyneside, Orchidists at, 487

U

UNITED Horticultural Benefit and
 Provident Society, 121, 460

V

VALERIANA Phu aurea, 440
 Vallota purpurea, 535
 Vanda amoena, 70; caerulea rochford-
 iana, 119; Moorei, 119; (Stauroopsis)
 Batemanii, 807; teres, successful
 culture of, 579
 Vegetable Calendar, 23, 55, 87, 119,
 151, 183, 231, 262, 295, 327, 363, 397,
 429, 461, 492, 522, 555, 583, 631,
 647, 679, 711, 775, 807
 Vegetable cultivation during Queen
 Victoria's Reign, the progress in,
 106, 123, 139, 155
 Vegetables at Edinburgh, staging,
 644, 660; Diamond Jubilee, table of,
 506; in the North, 774; late, 636;
 novelties in, 405; the cooking of, 408
 Vegetation, primeval, 804
 Veitch Memorial Trust, 342
 Veitch, Mr., P. C. M., 423
 Verhascum pannosum, 662
 Veronica Teucrium rupestris, 694;
 Silver Star, 119
 Victoria and Paradise Nurseries, 490
 Victoria Jubilee Championship, 84;
 Medal of Honour, 116, 260, 324
 Victoria Park, 74
 Victoria regia at Kew, 772; at
 Regent's Park, 740; Trickeri, 445,
 730
 Victorian Era Exhibition and Messrs.
 J. Laing & Sons, 116; and Mr. T.
 S. Ware, 164; Medals of Honour,
 141
 Viola Marchioness, 60; True Blue,
 605; the 647

Violas from Hawick, 757
 Violet and the Tulip, the, 762; cul-
 ture in Germany, 614; the modest,
 596
 Vine-browning, 541; leaves defective,
 22; leaves with gummy exudation,
 583; leaves, twin, 663; mildew, 581
 Vines, pruning and dressing, 366;
 tuberous growths on, 279
 Vineyards, 474
 Voles, water, and an Apple tree, 567

W

WAHLENBERGIA SERPYLLIFOLIA, 667
 Wallflower Harpur Crewe, 599, 605;
 Parisian Early, 183
 Walton Grange, Stone, sale of Orchids
 at, 597
 Ware, Mr. T. S., at Hamburgh, 85
 Watercress, packing, 581
 Water Lilies, hardy, at Gunnersbury
 House, 771, 820; Voles and an Apple
 tree, 567
 Weather and the crops, 780; in the
 north, wintry, 21; phenomenal
 366
 Weathers, Mr. John, resigns, 84
 Wehh & Sons, Messrs., at Birming-
 ham, 677; Barley competition, 132;
 root competition, 181
 Weeds, 60; eradication of, 446
 Weeks & Co., Messrs. J., 164
 Wenn, gardener, Petersham, 309
 Westmount, Glasgow, 316
 West Wickham Nurseries, 85
 West's patents, 443

Widnes, public park for, 789, 804
 Williams & Son, Messrs. B. S., 580
 Williamswood, near Glasgow, Orchids
 at, 441
 Willow, the weeping, 471
 Willows, pollard, 729
 Window boxes, 182
 Vines, staked, coiled, 260
 Wireworm beetle, 60
 Witch-hazel, the, 381
 Woburn experimental farm, 65, 739;
 Abbey, visitors at, 740
 Wood, Mr. J. M., Durhan, 245
 Wood & Son, Ltd., Messrs. Wm., 651
 Woodman, the widow of the late Dr.,
 692
 Woodpecker, Great Black, 231
 Woods, marquey in natural, 579
 Woodthorpe, Southend Road, Beck-
 enham, 724
 Working men gardeners, an associa-
 tion of, 359
 Worton Hall, Isleworth, 773

Y

YEAST Plant, the, 629, 644
 Yew, the Brahourne, in Kent, 503
 Yorkshire Gala, Grand, 315, 685;
 lecture, a, 596
 Wren's nest in a Brussels Sprout, 550

Z

ZYGOPETALUM JORISIANUM, 118;
 Perrenoudi, 524

ILLUSTRATIONS.

A

ACALYPHA Sanderi, 615
 Achimenes Rosy Queen, 649
 Airdrie, Mr. David, 101
 Anemone Coronaria fl. pl., The Bride, 89
 Apple Royal Snow, 473
 Ashton, Mr. F. W., 278

B

BAMBOO garden at Kew, view in the, 681
 Bean, Eclipse, Wehhs' Runner, 426
 Bean, dwarf French, Sutton's Perfection, 444
 Begonia Eudoxa, 329
 Brown, the late Mr. James, 300

C

CABBAGE Carters' Model, 443
 Campanula portenschlagiana major, 569
 Carnation Maud Dean, 57
 Carrot, Barr's New Intermediate, 408; Roberts'
 Winner, 413
 Cattleya Mossiae, a three-lipped, 665
 Chrysanthemum, Cannell, Austin, 167; Ferlat,
 Madame, 201; Foster, George, 217; Hairy Won-
 der, 165; Lewis, Mrs. James, 169; Rose Queen,
 199; Swanley Giant, 171; York, Duchess of, 168
 Chrysanthemums at Blackburn, 281; grafted, 537
 Clivia miniata superba, 745
 Colchester's Octagon Group, 73
 Corona, Broughty Ferry, a snowy morn at, 265
 Cricket Club, the "Hurst & Son," 233
 Crocuses at Potternewton House, 523
 Cucumber Sutton's Prioe of the Market, 413;
 Veitch's Western Wonder, 427
 Cyclamens at Reading, 457
 Cypress, the Golden Monterey, 284
 Cypripedium Evenor Southgate var., 635; Gertrude
 Hollington Southgate var., 616; villosum, 489

D

DAVIS, Mr. Norman, 200a (supt.)
 Dendrobium formosum giganteum, 377
 Diamond Jubilee group of plants at Edinburgh, 185;
 table of vegetables, 505
 Dianthus monspessulanus alpestris, 697
 Dracaena Warrenii, 329

E

EARNOCK conservatory in December, 585

F

FRITILLARIA pluriflora, 475

G

GLADIOLI, early flowering, 11
 Gladiolus Colvillei alba, 11; early, Queen Wilhel-
 mina, 89

Galtonia candicans, 11
 Goring Hall Gardens, 823
 Grieve, Mr. James, 184a (supt.)
 Greenwich Park, Redoubt made by H.R.H. the
 Duke of Connaught, 601; The Dell, 601

H

HAGGART, Mr. Alexander, 213
 Hartland, Mr. William Baylor, 809
 Hedysarum multijugum, 121
 Hemlock, the Western (Tsuga mertensiana), 361
 Hunter, Mr. James, 69
 "Hurst & Son" Cricket Club, 233
 Hyacinths, early white Roman, 8; Sutton's Inimi-
 table Bedding, 7
 Hydrangeas in Co. Down, 297

J

JONES, Mr. H. J., 261

K

KENT, Mr. Joseph, 742

L

LABEL and Holder, the Ideal, 117
 Laird, Mr. James W., 37; Mr. William P., 37
 Lawton's Patent Pot Suspender, 359
 Lettuce Nansen or North Pole, 412
 Liliium candidum, 41; giganteum, 153; longiflorum
 Harrisii in the Bermudas, 38
 Lily of the Valley, forced, 9

M

MELON Diamond Jubilee, 413; Frogmore Scarlet
 408; Taunton Hero, 410; The Lady, 427
 Melville, Esq., Walker, S., 200a (supt.)
 Moorman, Mr. J. W., 166
 Moslev, Bart., Sir Oswald, 666
 Musa Cavendishii, 137, 458
 Muscari conicum, on the grass, 11
 Muscat House, a famous Canon Hall, 713
 Myosotis alpestris stricta coelestina, 249

N

NARCISSI or Daffodils suitable for massing, Sutton's, 9
 Narcissus Ard-Righ or Irish King, 12; Barrii con-
 spicuous, a field of, 521; Bicolor grandis, 10;
 Bishop Mann, 13; Bulbocodium citrinus, 10;
 Butterfly, 12; Countess of Annesley, 12; John-
 ston Queen of Spain, 10, 507; Primrose Dame, 12

O

ONCIDIUM macranthum, 105
 Orange tree in Guernsey, 646
 Outram, Mr. Alfred, 200a (supt.)

P

PANDANUS Sanderi, 617
 Parsnip, Barr's New White Marrow, 408
 Pea Astronomer, 412; Carter's Early Morn, 313;
 Sutton's Continuity, 425
 Petunia hybrida Snowhall, 249
 Phoenix Roebelini, 761
 Phyllostachys aurea, 793
 Pollard Willows, 729
 Pot Suspender, Lawton's Patent, 359
 Potato Carter's Monarch, 410; Sutton's Ideal, 409;
 The Dickson, 411
 Primula sinensis alba plena, 393; Lady Emily
 Dyke, 459; Carter's Prince of Wales, 365; Car-
 ters' Princess May, 365
 Ptelea trifoliata, 89

R

RHODODENDRONS, hybrid, 633

S

SAVOY Sutton's Perfection, 441
 Simplicity Holder and Indicator, 460
 Smith, Mr. J. Fraser, 246
 Smith, Mr. W., 184a (supt.)
 Stapelia gigantea, 345
 Stubbs, Mr. A. E., 261
 Sutton, Mr. Arthur W., 348
 Sydenham, Mr. Robert, 310

T

TAGETES, patula nana Gold Ring, 249
 Terry, Alderman Sir Joseph, 333
 Todd, Mr. M., 184a (supt.), 261
 Tomato First and Last, 412; Laird's Supreme, 25;
 The Cropper, 427; The Polegate Improved, 407;
 Veitch's Golden Jubilee, 426
 Tulip White Pottehacker, Keizer Kroon and Proser-
 pine, 8
 Tulips and Hyacinths in Hyde Park, 553; types of
 English, 10
 Turnip, Sutton's Criterion, 442

U

UPSTONE, Mr. Albert F., 694

V

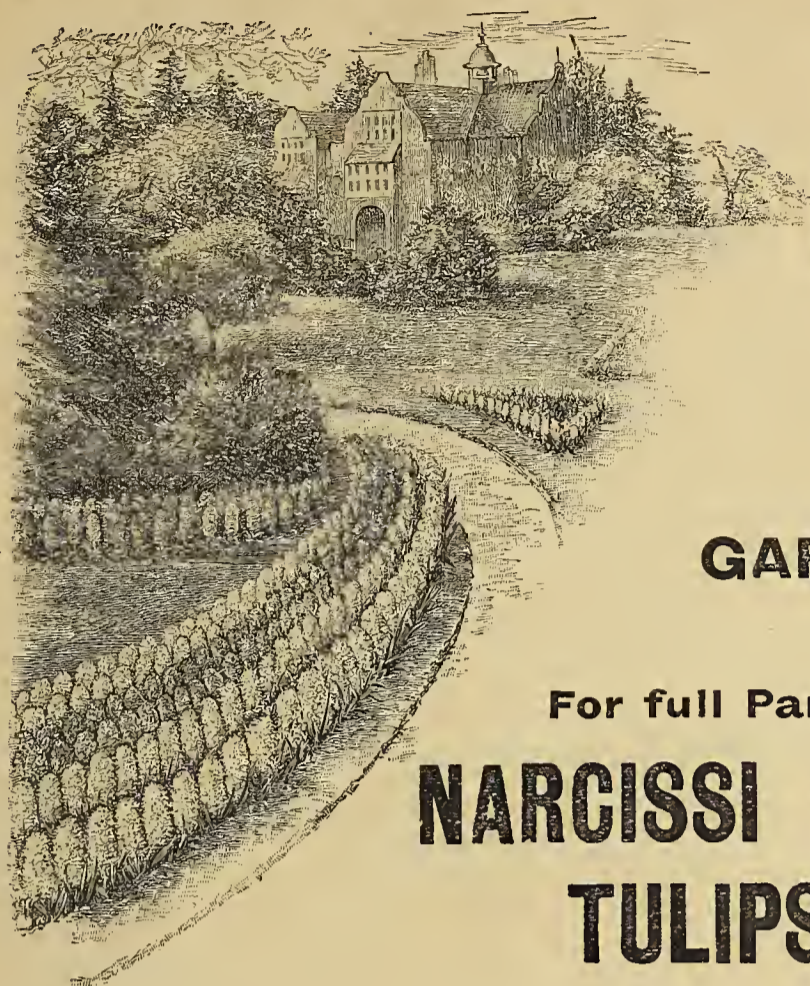
VEGETABLES, Diamond Jubilee table of, 505

W

WEST'S Patents, 442, 443
 Williams, Mr. A., 261
 Wythes, Mr. George, 460, 597

Y

YEW at Ormiston House, ancient, 777



SUTTON'S FLOWERING BULBS

FOR THE
GARDEN and CONSERVATORY.

For full Particulars and Descriptions of the best
NARCISSI OR DAFFODILS,
TULIPS, HYACINTHS, CROCUSES,
ETC., ETC.,

See Sutton's Bulb Catalogue for 1897.

SUTTON'S BULBS genuine only direct from SUTTON & SONS, READING.

VEITCH'S GENUINE BULBS.

Veitch's Hyacinths,
FOR ALL PURPOSES.

Veitch's Tulips,
FOR POTS OR BEDS.

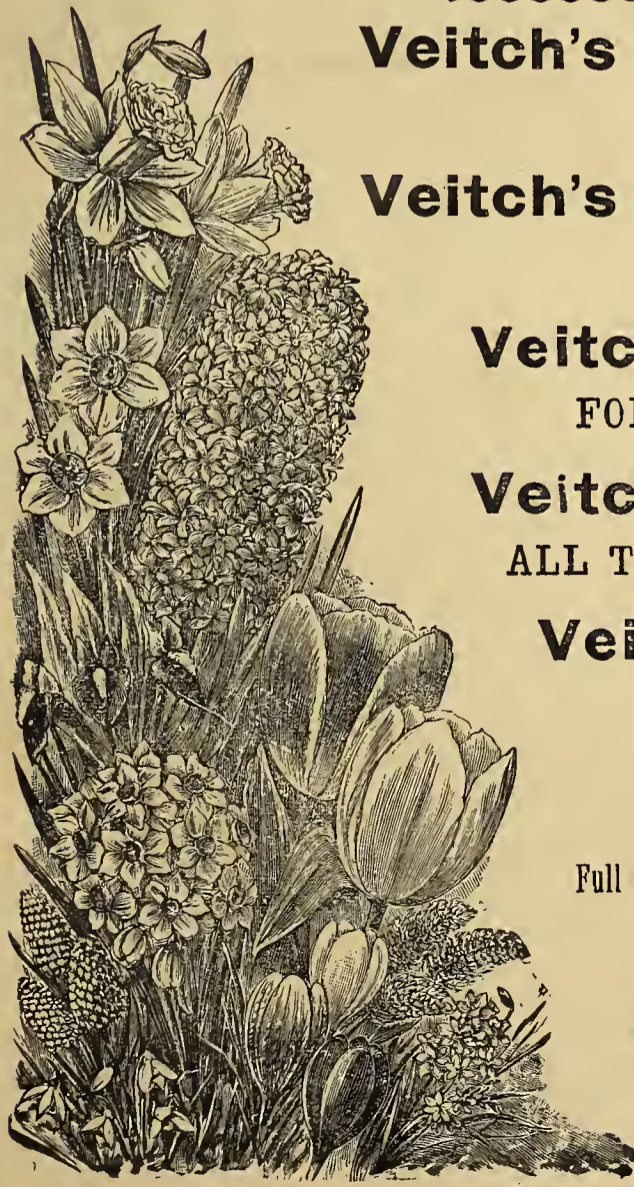
Veitch's Crocus,
FOR MASSING AND EDGING.

Veitch's Narcissi,
ALL THE LEADING VARIETIES.

Veitch's Collections,
FOR POT CULTURE AND
PLANTING TO SUIT
ALL REQUIREMENTS.

Full Descriptions, see Bulb Catalogue, Post Free
on Application.

JAMES VEITCH & SONS,
LTD.,
Royal Exotic Nursery,
CHELSEA.



"Gardening is the purest of human pleasures, and the greatest
refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, SEPTEMBER 4th, 1897.

NEXT WEEK'S ENGAGEMENTS.

- MONDAY, September 6th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
- TUESDAY, September 7th.—Royal Horticultural Society; meeting of committees at 12 o'clock. National Chrysanthemum Society's early autumn show at the Royal Aquarium (3 days). Sale of Dutch bulbs by Messrs. Protheroe & Morris. Clearance Sale at Mr. G. B. Fischer's Nursery, Clapham, by Messrs. Protheroe & Morris.
- WEDNESDAY, September 8th.—Royal Caledonian Society's Show at Edinburgh (2 days). Sale of Dutch bulbs by Messrs. Protheroe & Morris. Trade Sale at The Longlands Nursery, Sidcup, by Messrs. Protheroe & Morris.
- THURSDAY, September 9th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris. Trade Sale at the Kew Nursery, Richmond, by Messrs. Protheroe & Morris.
- FRIDAY, September 10th.—Sales of Dutch bulbs and Orchids by Messrs. Protheroe & Morris. Trade Sale at The Mill Lane Nursery, Cheshunt, by Messrs. Protheroe & Morris.

AMONGST THE BULBS.—While passing in review some of the many fine bulbs now at the command of the cultivator, we have not attempted to give select general lists for several reasons. There would be little alteration in those put forward last year. No list, however carefully made, would be followed absolutely by cultivators generally, even if the result of a plebiscite. Many gardeners have, of course, their favourites, to which they cling; and so long as individual tastes vary so long will a large number of varieties find their admirers, even though they can in no sense be termed popular sorts. Many bulbs, like

other plants, vary more or less from year to year, according to the character of the season, so that if a selection is made from results, it could only apply to that particular season. This fact has been well illustrated by the lists of Roses which annually turn out to be the best during any one season.

Our attention has been directed more particularly to varieties for some given purpose, or to some particular phases of gardening in which bulbs are employed, and their culture extended with advantage to all concerned. Space compels us to omit many beautiful bulbous plants at the command of the cultivator, which are requirements of modern establishments, more or less. Some things succeed admirably in most gardens, while others flower indifferently in any part of the British Isles. This would apply more particularly to half-hardy or tender subjects; but there is a deal of romance, and sometimes delightful surprise, in discovering what bulbs will succeed in the open garden in certain localities, especially in the case of those which prove refractory, or altogether fail in most gardens. Juno or Spanish Irises are easily grown in certain soils, whereas in other gardens they flower well as a rule the first year and afterwards degenerate till they cease to exist. In cold clay soils this is particularly the case, whereas in warmer and lighter soils we have seen what was a single row of bulbs, when planted, grow into practically a broad band of plants in the course of two or three years. This is a point for every gardener to solve for himself, either in the case of Spanish Irises, or any other subject which may happen to be his own or his employer's favourites. We have seen English Irises behave in the same way, yet the old-fashioned blue or typical form was a common perennial in cottage gardens thirty or forty years ago. The question arises whether modern varieties are weaker in constitution owing to much artificial crossing in order to obtain variety, or whether the constitution has become altered through long continued cultivation in the sandy soils of Holland. From the latter point of view it might be worth while giving their cultivation in this country a good trial in different soils with the object of supplying the demand with home-grown bulbs. There has been an immense increase in the demand for Spanish and English Irises during the past few years, but particularly for the former. There is little room for surprise at this, seeing how many exquisitely beautiful varieties there are amongst them, and the ease with which they may be grown in pots for decoration or boxes for cut flowers in the early part of summer. Those who grow for market even go further, and having placed soil on the benches of some of their glasshouses plant Spanish Irises and urge them into bloom in a gentle heat for the purpose of getting cut flowers in advance of those in the open air.

New varieties of bulbs there have been since last year, and some of them announced for sale are already several years old. It is astonishing how many years it takes to get a good stock of a new bulb, sufficient to enable the same to be sold at a rate within reach of the general public. Even some of those which have been in commerce for several years are yet comparatively rare. The Daffodils Madame de Graaf, Glory of Leiden, Monarch, and Weardale Perfection are instances of what we mean. How many years will elapse before it will be practicable to naturalise these on grass, as well as Hodsock's Pride, Golden Bell, and Ellen Willmott? Novelties amongst Hyacinths include several of

various colours. A real yellow is yet a desideratum, as it is amongst Sweet Peas and Stocks. A Dutch variety named Citroenboom is said to be a first-rate improvement amongst yellow Hyacinths. We hope it will prove to be so when it finds its way into British gardens. The translation of the name means Lemon Tree. Trilby is described as a new orange-yellow coloured variety. Both are single. The pure white La Grandesse is well known. Now a double sport from it has arisen, which, retaining all the good qualities of its parent, is declared to be the best pure white, double Hyacinth ever introduced. Several Tulips are also offered as novelties which will have to be seen and tried before any definite conclusions concerning them can be come to. Amongst single early varieties Grace Darling is a promising large scarlet one. Golden King is said to be the best double yellow Tulip, and Prins van Oranje (Prince of Orange) is dark orange. *Lilium elegans citrinum* (verum) is said to be one of the very best of the Thunbergianum type, with nankeen, unspotted flowers. A new name has been given to *Lilium roseum*, namely, *Fritillaria macrophylla*, and it may in the near future come before the Royal Horticultural Society seeking for fresh favour.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, September 7th, in the Drill Hall, James Street, Victoria Street, Westminster, 1 to 5 p.m. A lecture on "Pitcher plants" will be given by Mr. H. J. Veitch, F.L.S., at 3 o'clock.

Flower Show at Candie, Guernsey.—At the Summer Exhibition held here on August 11th, Mr. W. J. Taylor was awarded first for six Begonias, and also for Ferns. Colonel Carey contributed the best Black Hamburg Grapes, and Mr. F. Le Poidevin the best dish of dessert Apples. Mr. William Colchester, Ipswich, had a stand of Ichthemic Guano and agricultural manures.

Tropaeolum speciosum.—This plant may be grown from seed or from its fleshy rhizomes. If from seed it probably will not flower till the third year, but from a rhizome bloom may be expected in the year of planting. I have never seen it growing more luxuriantly than at Kingsteignton on the slope to the River Teign in Devon, twining among the Rhododendrons and the shrubs in a garden there, with a full south aspect. It grows very well also in Mr. Shaw's garden at New Place, Lingfield, on a southern wall, though he thinks that it may be grown as well with an eastern or western aspect. Put plenty of manure around, mixed with coconut fibre, that its roots may run into, is his rule for growing it. It seems, however, to exhaust the soil, and to run year after year along the wall, not coming up again where it has already blossomed.—*J. C. Stogdon.*

Medals at Shrewsbury.—At this great commemorative exhibition and fete on the 18th and 19th ult. Gold Medals were awarded to Mr. James Cypher for the most meritorious plant not in commerce, who showed *Bougainvillea Cypheri*; to Messrs. Dobbie & Co., Rothesay, for Dahlias; Mr. R. B. Davis, Yeovil, for Begonias; Messrs. J. Carter & Co., London, for Gloxinias, and other plants and flowers; Messrs. J. Veitch & Sons, Chelsea, for a magnificent group of plants; they also had a set of china; Mr. James Hudson, Gunnersbury House, for Water Lilies; Messrs. R. P. Ker & Sons, for flowers; Messrs. Cowan, Liverpool, for plants; Mr. T. S. Ware, for Begonias and cut flowers; and Messrs. Smith & Co., Worcester, for plants and flowers. Silver Medals were awarded to Messrs. Webb & Sons, Stourbridge, for cut flowers; Mr. A. Myers, Shrewsbury, for plants and flowers; Messrs. Dicksons, Chester, for plants and flowers; Messrs. W. & J. Birkenhead, Sale, Manchester, for Ferns; Mr. Murrell, Shrewsbury, for Roses; Messrs. White & Sons, Worcester, for cut flowers; Messrs. Wallace & Co., Colchester, for Lilies, &c.; Mr. W. F. Gunn, for cut flowers; Messrs. Balchin & Sons, Hassocks, for alpine plants; Mr. S. Mortimer, Farnham, Surrey, for Dahlias; and Messrs. Wallace & Co. also received a certificate.

Correction.—By some means or other we were led into error concerning the Grape classes at Aberdeen on the 19th, 20th, and 21st ult. Mr. Andrew Hutton, The Gardens, Usan House, Montrose, N.B., took the first award for Muscat of Alexandria and Hamburg in the single entries. Mr. Steward, Eden House, Banff, took the second place, not the first as stated last week. Mr. Andrew Hutton also secured the premier honours for four bunches of Grapes, distinct.

Bute National Rose and Horticultural Society.—This society held a most successful show on the 26th and 27th August, at the new public hall. The opening ceremony was performed by Ex Provost Millory in the absence of the President, The Most Hon. The Marquess of Bute. The classes for competition numbered 126, and for these 500 entries were made. Messrs. Dobbie & Co., showed a fine display of Dahlia blooms interspersed with blooms of herbaceous flowers, for which the judges awarded them a Gold Medal. Mr. M. Cuthbertson of Rothesay, a well known figure at this show, staged a splendid array of pot plants, consisting of Coleus, Cockscombs, Fuchsias, Geraniums, and various other foliage plants. Mr. Cuthbertson's name is usually associated with herbaceous flowers, for which he has a wide reputation, but recent shows had taken up his herbaceous blooms. Mr. Cuthbertson also staged an exhibit of Pure Ichthemic Guano, a very widely known fertiliser which has attained great success in the Land o' Cakes.

Resignation of Mr. G. W. Cummins.—We regret to learn that Mr. Cummins, gardener to A. H. Smee, Esq., "My Garden," The Grange, Carshalton, Surrey, has found it necessary to resign his position as head gardener, after having seen sixteen years of faithful service. From what we can gather he is suffering from pressure of work and ill-health. Nor do we forget the loss he sustained by the death of his wife about fourteen months ago. The garden in which he has laboured for the last sixteen years consists of a shallow layer of soil beneath which comes water, the garden being bounded on one side by the River Wandle, and traversed by a stream. The difficulty in cultivating fruit trees has been great on this account. Besides his home work Mr. Cummins has had a deal to do in connection with various societies, and has done it cheerfully, without hope of reward, as we have had ample opportunity of witnessing for many years past. We hope he will soon find another situation more congenial to health, for he should still have many years of useful life before him.

Gardeners' Royal Benevolent Institution.—The committee, treasurer, and trustees, acting on behalf of the members and subscribers of the above institution, with the concurrence of its president, the Duke of Westminster, recently forwarded through the Home Secretary a loyal and dutiful address to the Queen, for forty-six years the gracious Patroness of the Charity, congratulating her Majesty on the completion of the sixtieth year of her beneficent reign, and the undermentioned reply has been received from the Right Hon. Sir Matthew White Ridley, M.P., which may interest our readers, especially those of them who are identified with the Institution.

Secretary of State,
Home Department.

Whitehall, S.W.

August 24th, 1897.

SIR,—I have had the honour to lay before the Queen the loyal and dutiful address of the Gardeners' Royal Benevolent Institution, congratulating her Majesty on the completion of the sixtieth year of her reign, and I have to inform you that her Majesty was pleased to receive the same very graciously. With reference to the application for permission to make use of the words: "Victorian Era," in connection with the title of a fund now being raised by the Institution, I have to acquaint you that her Majesty graciously approves of the desired permission being granted.

I am, Sir,

Your obedient servant,

(signed) M. W. RIDLEY.

G. J. Ingram, Esq., Secretary to the Gardeners' Royal Benevolent Institution, 50, Parliament Street, S.W.



SUTTON'S INIMITABLE BEDDING HYACINTHS.

HYACINTHS AND EVERGREEN CONIFERS.

In spring gardening, as in bedding out at any other season, the successful gardener studies how he may produce the most effective picture. His work, however, is limited to filling in the details, and giving colour and brightness to the surroundings which the landscape gardener and the planter have already mapped out for him. This does not imply that his is the simplest or least important art in the making of a striking or attractive picture. On a large scale a landscape gardener is generally employed to arrange or create the more important features of a place; but not infrequently the gardener does this himself and the planting as well.

A flower garden that is well furnished with evergreen Conifers as a background to any particular view may be made to suggest a summer scene rather than that of spring. Conifers, indeed, are most appreciated in winter and spring by reason of their being clothed, by their contrast with deciduous subjects, and the shelter they suggest. The accompanying illustration placed at our disposal by Messrs. Sutton & Sons, Reading, serves well to elucidate our remarks on this aspect of spring gardening, so that details are unnecessary. Araucarias, Cedars, Douglas Firs, Thuyas, Cupressus, Pines, and ornamental Spruces in their various shades of green form the background of this picture, against which the Hyacinths are seen to best advantage.

What we wish to say here is that the simpler the design the better. The large bed in front may consist of one or not more than three colours that will blend and harmonise with one another. For hedging purposes a great number of named kinds would not only be superfluous but incapable of producing any

pleasing or desirable effect, because the mixture of many colours would neutralise and nullify the whole. Sutton's Inimitable Scarlet, Inimitable Pink, and Inimitable Light Rose, indicate that the best bedding varieties of those colours have been selected for the purpose of producing effective pictures in the spring garden. Blue, and white Hyacinths have been selected in the same way. A line of Crocuses may be used as an edging to give an indication of reviving nature, as they flower early, and their foliage would form a fringe to the Hyacinths when they come into bloom later on. Large beds of simple design arrest the eye at once by reason of their effect.

THE ROMAN HYACINTH.

Most of us admire the larger-flowered Hyacinths with their large bells, huge imposing spikes, and rich and varied hues; but the early Roman, although of less stately presence, is, if anything, more in request from its great usefulness. This is more particularly true of the common white form, which is grown year by year in its hundreds of thousands in pots, boxes, and other receptacles, and under all sorts of conditions.

The popular Roman Hyacinth is a variety of *Hyacinthus orientalis* named *alulus*. Southern France is its native place, and it is cultivated there very extensively at the present time for export to this country, especially in the district around Ollioules, Toulon. The true Roman Hyacinth, on the other hand, is the offspring of *H. romanus*, which was figured at an early date in the *Botanical Magazine* under the name of *Scilla romana*. This plant has pale blue flowers fading to blue white or white at the margins of the segments. This is a

native of Greece and is not to be confounded with the so-called Roman Hyacinths under notice.

The number of plants that take kindly to early forcing is unfortunately all too few, but the white Roman Hyacinth occupies a very high position among them. The flower spikes and the individual bells are smaller as compared with those of the other forms, but this instead of being a disadvantage is in its favour, as it enables the "Roman" to fill the need for white cut flowers that is never more urgent than during the months of November, December, and January. Moreover, the larger-flowered Hyacinths do not take kindly to too early forcing, and here the Roman undoubtedly scores.

The bulbs are cheap to buy and easy to grow, hence there is no difficulty in the way of growing large quantities. They should be obtained as early in August as possible, for the consignments, which arrive during that month are invariably composed of finer bulbs than are those which reach our shores later. The soil employed should be light but rich, and may be composed of half good mellow loam, and the remaining half of leaf soil, and dried cow manure or horse droppings in equal quantities, with a good addition of coarse river sand.

Five-inch pots constitute a handy size for use, and as the plants are comparatively dwarf and do not make a great deal of foliage, five medium-sized bulbs will go to a pot of this size. Pot with fair firmness, and bury the bases of the bulbs, leaving the necks exposed. After potting, the bulbs will need to be covered with ashes or cocoanut fibre refuse in order to induce root action. Water will not be required during the period of plunging. After roots have been freely made and the young leaves are just making their appearance from the crown of the bulb, which



EARLY WHITE ROMAN HYACINTHS.

will be after the lapse of about six weeks, the plants may be taken from the plunging bed, placed in a cold frame, and gradually inured to the light. They may then be shifted into heat as they are required. If plunged in a bottom heat of from 65° to 75° Fahr., the flowers will be fit for use in a week or ten days. The illustration, kindly lent us by Messrs. Jas. Veitch & Sons, Ltd., Chelsea, depicts a batch of Roman Hyacinths in full flower, each bulb throwing up two or three spikes of bloom. At this stage the plants may, if desired, be gently shaken out of the soil and transferred to ornamental pots or baskets for service on the dinner table or in other ways. The operation does not injure the flowers, and the bulbs, of course, would in any case be of no further use after going through the ordeal of early forcing.

The single white, and the double rose Italian Hyacinths are about a fortnight or three weeks later than the Romans, but they are not so free-flowering and useful. The blue Roman, however, is well worth growing; and the straw-coloured French

EARLY SINGLE TULIPS.

EARLY and single are epithets applied to those which succeed the Duc Van Thol Tulips in the open ground, and come before the species of Tulips such as *T. elegans*, *T. fulgens*, *T. retroflexa*, and others of that class. The true florists' and the Darwin Tulips are the latest of all. The early single Tulips commenced blooming about the middle of April of this year in the open ground, but of course vary in time according to the nature of the season. They are amongst the most generally useful of all the sections of Tulip, and those which we select here are amongst the most suitable and useful either for forcing, pot culture, exhibition, or for bedding out. Thus, therefore, they are everybody's Tulips. Tastes vary in the selection to be made, but the undermentioned can hardly fail to give satisfaction for every purpose if properly treated.

In the open ground that grand Tulip, Keizer Kroon is amongst the first to open, making a fine display while the Hyacinths are still in bloom. The

open air in several successive years. Proserpine is a massive and magnificent dark rose variety which no exhibitor omits from his collection. To these may be added Pottebakker Scarlet, and White, the latter being a stronger grower than the former. Joost Van Vondel and Joost van Vondel White form another pair that may be bracketed together, the former being rosy-crimson and the latter a choice exhibition plant of fine form. Thomas Moore is an easily-managed orange flower; and Duchesse de Parma is orange red, with a yellow margin. It is a showy flower and quite distinct from Keizer Kroon, but for bedding purposes they had better not be placed in close proximity. Large and handsome also is Empress of India, with rich dark orange flowers.

Besides Proserpine a number of other shades of rose and purple are useful and indispensable for bedding and pot work. Rose Gris de Lin is rose shading off to white, dwarf and charming. Almost the same might be said of Cottage Maid, having rosy-pink flowers shading into white. La Reine is



TULIPS: WHITE POTTEBAKKER.

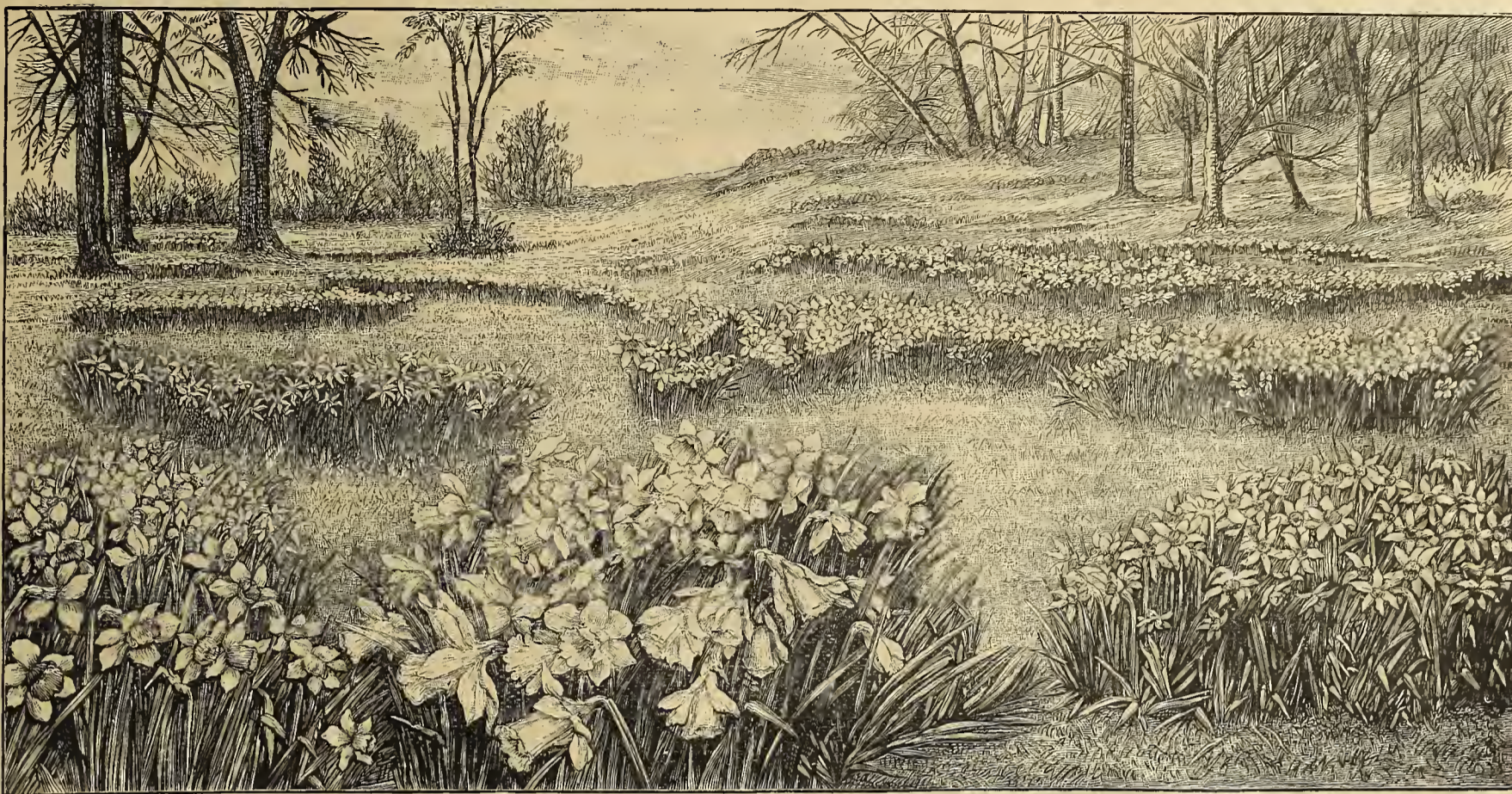
KEIZER KROON.

PROSERPINE.

Hyacinths may be placed in the same category. The latter are to be seen in the market, but are not so often seen in private establishments as they ought to be, for they exhibit a pretty shade of yellow that is difficult to obtain elsewhere, more especially during the months of late autumn.

large blooms are crimson-scarlet, edged with clear yellow. The bright yellow and large-flowered Yellow Prince is sweetly scented. The best of all yellows is Ophir d'Or, a variety of very dwarf habit with large golden-yellow flowers. It is certain for pot work, and we have seen it in grand condition in the

white suffused with a rosy tint, delicate and charming as a bedder amongst light varieties. Koh-i-noor is a rich scarlet which is much in request for exhibition purposes on account of its size and brilliancy. To complete this list of useful varieties we may add a couple of violet flowers namely Queen



SUTTON'S NARCISSE OR DAFFODILS SUITABLE FOR MASSING.

of the Violets and Van der Neer, the former being light violet and the latter dark purplish-violet or what would generally be described as dark purple. This does by no means exhaust the list of fine things, but they should certainly be included in all collections of any extent. The accompanying illustration of White Pottbakker, Keizer Kroon, and Proserpine was placed at our disposal by Messrs. James Veitch & Sons, Ltd.

DAFFODILS ON THE GRASS.

OF recent years much attention has been given to this delightful phase of outdoor gardening. It is well illustrated in some of the London parks, particularly at Regent's Park and in Kew Gardens. The charms of massing Daffodils upon the grass are due to several coincidences. When massed upon the grass in a careless manner, yet according to a certain

a glimpse of fresh colonies of Daffodils from different coigns of vantage. If in association with water so much the better, for they delight in moisture, and the planter should always study the beauty of appropriateness. The nature poet spoke truly when in his wonderings he beheld—

"A host of golden Daffodils,
Beside the lake, beneath the trees,
Fluttering and dancing in the breeze."



FORCED LILY OF THE VALLEY.

Any Japanese Farmer possessed of ten acres of land is looked upon as a monopolist.

Damsons are very plentiful in many orchards, though the larger varieties of Plums are a very thin crop in most parts of the country.

plan, they have a natural appearance and prove most effective, even at a distance, when they are made to occupy rising ground. Should they pass amongst and beneath deciduous trees the effect is even heightened, especially when the eye can catch

Being yet spring, the deciduous trees are leafless, so that the Daffodils are practically able to complete their growth before the shade becomes too dense. Daffodils beneath evergreen subjects could only degenerate year by year owing to the relative lack of



NARCISSUS JOHNSTONI QUEEN OF SPAIN.

sunlight; hence Daffodils should be planted in full exposure when in association with evergreen trees and shrubs. The accompanying illustration (see p. 9) of Daffodils on the grass and under deciduous trees serves to give an idea of what we mean, and was lent us by Messrs. Sutton & Sons, who give special attention to this delightful form of gardening.

The number of varieties suitable for this style of gardening is very great, but many of them are yet too rare for extensive planting. Many of the most effective, however, are both plentiful and well adapted for naturalising. Almost the sole attention they require is to see that the foliage is not mowed down before it is fairly mature. The wild Daffodil, or Lent Lily, is the only admitted British species, but strange to say it has not been much employed by planters. Other species which have become naturalised in various parts of the country are *N. poeticus*, *N. biflorus*, and *N. incomparabilis*, which may be utilised by the planter with every hope of success. *N. scoticus* is a variety of *N. Pseudo-Narcissus* which grows wild in great abundance in Scotland, and finds its way to the South in considerable quantity. *N. poeticus ornatus* is suitable for and highly effective on the grass. The same may be said of *N. Telamonius plenus*, *N. maximus*, *N. nanus*, *N. incomparabilis*, *N. i. Sir Watkin* (the Giant Welsh Daffodil), *N. i. flore pleno*, *N. i. Cynosure*, *N. obvallaris* (the Tenby Daffodil), *N. Leedsii*, *N. muticus*, and many others. All these should be planted in clumps, groups, and plantations of irregular outline to resemble Nature's method of arrangement or disposal.



NARCISSUS BICOLOR GRANDIS.

THE LILY OF THE VALLEY.

CONVALLARIA is a monotypic genus, and its solitary species, *C. majalis*, popularly known by the time-honoured name of Lily of the Valley, has thus no near relatives to share its glory. The plant is distributed naturally over Europe, including England, and Russian Asia from the Mediterranean nearly to the Arctic circle. It is safe to say that there is none of our indigenous plants that is more widely cultivated and more universally admired. In the months of April and May it scents our hardy flower gardens with its delicious fragrance, and, being so amenable to forcing, our plant houses know it well during the winter months. Millions of crowns are forced annually both by the trade for supplying the market, and by gardeners to meet the requirements of their respective establishments. Half a century ago Lilies of the Valley were largely grown for forcing purposes in the neighbourhood of Hamburg, and since that time great strides have been made. Even now the value of the Berlin crowns is recognised as being very high, but continental growers have by no means the monopoly of the market, for English growers are giving an excellent account of themselves. Of these the name of Mr. T. Jannoch will be familiar to all of our readers. At his huge establishment at Dersingham, King's Lynn, Norfolk, many acres are devoted to this charming flower.

A crown is a single rootlet bearing a bud, whilst a clump is a mass of roots bearing a number of buds. Clumps are to be preferred for the making of beds in the open air, whilst for forcing purposes selected crowns are to be desired. Crowns usually require three full seasons of growth before they bloom, but occasionally they may be induced to flower in two years by high cultivation, and under ordinary circumstances will bloom every alternate year afterwards.

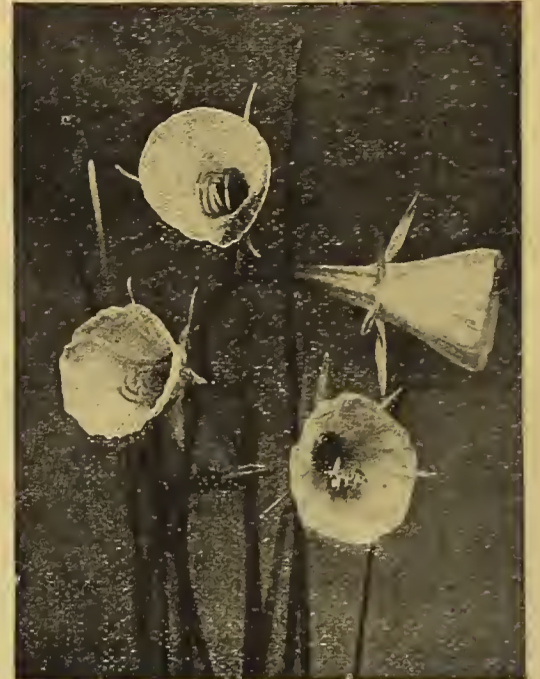
The method of forcing is simple. When the crowns come to hand in October and November they are potted up at once. Twelve good crowns will do for a 5-in. pot, although those who force on a large scale employ boxes, allowing 1 in. of space between the crowns. After this the pots or boxes should be plunged in cocoanut fibre in a house having a brisk bottom heat, and an atmospheric temperature of not less than 80° Fahr. Cover the crowns with moss, and keep this gently sprinkled or syringed with tepid water. The temperature may be increased to 90° or even 95° after the lapse of a fortnight, and subsequently should never be allowed to rise above 100° or sink below 80°. As soon as the growths are 2 in. in height, the moss must be taken away, and when the lower bells begin to open the plants should be removed to a cooler house, and syringing discontinued. Crowns treated thus will bloom in four or five weeks from the date of potting.

The accompanying illustration, (see p. 9) for which we are indebted to Messrs. John Peed & Sons, Roupell Park Nurseries, West Norwood, S.E., shows a box of crowns forced in this way. When the plants are in flower they may, if desired, be taken out of the boxes, and put into ornamental receptacles for table or dwelling room decoration. The change does not hurt them, as root action is not very strong.

In addition to the ordinary white form there is a variety with double flowers. Another form has prettily marked leaves, whilst the variety with pale rose-coloured flowers is also very handsome.

NARCISSUS BICOLOR GRANDIS.

WHEN the yellow and golden-yellow trumpet Daffodils from *N. maximus* to *N. minimus* have passed across the scene and disappeared for another year, *N. bicolor Grandis* keeps up the succession for some weeks longer. It is the latest to flower of the bicolor Daffodils, and practically comes into bloom about ten to fourteen days later than *N. Empress*, *N. bicolor Horsfieldi*, and others belonging to that section. It is a robust Daffodil with very broad strap-shaped leaves recalling those of a *Clivia*, yet it is amongst the dwarfiest of the trumpet Daffodils. The segments are pure white and the long trumpet of a full rich yellow. Its distinction from the *Empress* type consists chiefly in its broader leaves, dwarfer habit and later flowering, all of which render it valuable for beds in the spring garden. *Grandee* is often used as the name of this variety. The accompanying figure was lent us by Messrs. Barr & Sons, and shows two flowers very much reduced



NARCISSUS BULBOCODIUM CITRINUS.

NARCISSUS JOHNSTONI QUEEN OF SPAIN.

THIS is one of the most graceful of all the Trumpet Daffodils. The flowers are nowhere by comparison with *Glory of Leiden* and *Madame de Graaff*, but in that we think lies their special charm. Both the truncate trumpet and the reflexed and slightly twisted segments are lemon or clear delicate yellow, of a shade that few, if any other Daffodil, could exactly match. It may be grown in beds, or naturalised on grass, either in the open or under deciduous trees, where it appears to great advantage. The flowers are carried just clear above the foliage, and swing gracefully in the lightest breeze. In Scotland it is generally most liked as a pot plant for greenhouse or conservatory decoration. The discovery of this Daffodil in Spain by Mr. Peter Barr, was one of his greatest triumphs while hunting for his favourite flowers. Many thousands of it we have seen at Long Ditton, with Messrs. Barr & Sons, who supplied the illustration.

HOOP PETTICOAT DAFFODILS.

THERE are numerous forms of these charming dwarf Daffodils, but all belong to one species, namely, *Narcissus Bulbocodium*, so named by Linnaeus. The segments of the flower are always small and relatively inconspicuous, while the trumpet is short but very much inflated, thus suggesting the popular name. Many varieties of the type differing in the size of the flowers or their earliness have been intro-



TYPES OF ENGLISH TULIPS.



EARLY FLOWERING GLADIOLI.

mon, though not the finest. There is a pretty white form of it, namely, *M. b. album*. This species is often found as an escape from gardens, so easy is it to grow; and *M. racemosum* is a British plant often cultivated. We must not overlook the Feather Hyacinth (*M. comosum monstrosum*), which forms a bright blue batch with its feathery or plummy flower heads.

We consider *M. conicum* (see figure), the finest of all for producing a brilliant blue mass when planted in beds or on the grass. Small beds planted with a standard Rose or Rhododendron might be carpeted with the species, the long conical spikes of which produce a splendid effect in spring, whether viewed from a distance or close at hand. It grows and blooms with increased vigour year after year until the bulbs get crowded, and when more generally known will be more extensively planted. We speak from personal observation. To Messrs. Barr & Sons, King Street, Covent Garden, we owe the picture. To those interested we may say that *Muscari* comes from the Greek *moschos* or Latin *muscus*, meaning musk, in allusion to the smell.

EARLY FLOWERING GLADIOLI.

THESE are of mixed pedigree, belonging to several species, such as *G. cardinalis*, *G. ramosus*, *G. sagittalis*, *G. Colvillei*, &c. They all agree in flowering early compared with the *G. gandavensis*, *G. Lemoinei* and *G. nanceianus* types, and in having much smaller but charming flowers gracefully poised on slender stems. On the Continent they are planted 4 in. deep in autumn, and covered with 3 in. of some protecting material. In this country their cultivation is mostly confined to pots and used for conservatory decoration. The corms should be planted rather thickly in 48-or 32-size pots in light, rich, sandy soil. When allowed to come on slowly with the natural heat of the sun they bloom in June and July; but if gently forced in a night temperature of 55° they bloom in April and May, thus affording a succession.

G. Colvillei has rosy-purple flowers, but *G. Colvillei alba*, better known as The Bride, has pure white flowers. We have seen a fine plantation of this in the open ground in Middlesex, but a much more extensive one in Guernsey, where it proves perfectly hardy. It is invaluable for cut flowers, and the others are more or less employed for the same purpose. A great number of varieties belonging to other species have received special names, and a large proportion of them have pale flowers with a beautiful almond-shaped blotch on the three lower segments. Very often the blotch is edged with another colour, the groundwork forming a third hue. A charming novelty for last year was *Queen Wilhelmina*, named in honour of the young Queen of the Netherlands. The segments are delicate rosy-pink, with a yellow blotch on the three lower segments, surrounded by a rosy-carmine band. Very choice also is *G. delicatissima*, with white flowers and a rosy-crimson blotch on the lower petals. More highly coloured are *G. cardinalis*, bright scarlet; *Duke of Albany*, purplish-scarlet, with rosy-purple blotches; *Alfred Tennyson*, rosy-salmon; *Formosissima*, salmon; *Ardens* or *Fire King*, red; *Blushing Bride*, white, with rosy-crimson blotches on the lower petals; and *Non Plus Ultra*, red, flaked white. The accompanying illustrations of *G. Colvillei alba*, and early-flowering varieties were furnished by Messrs. Wm. Cutbush & Sons, Highgate, London.



GLADIOLUS COLVILLEI ALBUS.

If the flower is all of one colour (disregarding the base for the moment) the flower is termed a breeder (see illustration p. 10, uppermost flower). After a number of years these breeders usually break, or become rectified, as the florists term it. If a broad, jagged band of colour goes along the centre, with or without a dark margin the sport is termed flamed (see the middle flower of illustration). If the dark colour is confined to the margin the flower is said to be feathered (see lowest flower). The ground colour is the same as the base in all cases in rectified flowers. These terms apply to all of the sections. Thus we have bizarre breeders, bizarre flamed, and bizarre feathered, and so on with bybloemen and rose. Those who do not care to remember these terms might say bizarre breeder for the selfs, and bizarre rectified for the other two types. Anyone having a small collection of all the types, which could be represented by nine varieties, could get up to these terms while his Tulips are in bloom in May; for the florist's Tulip is amongst the latest to flower.

The variations of colour are endlessly diversified in this old and beautiful race of Tulips. The under-mentioned notes were made from a small collection in a suburban garden. Several of the bizarres were extremely handsome. The flamed form of *Dr. Hardy* is glowing-scarlet on an orange-yellow ground, and is one of the finest in cultivation. Next to this, perhaps, we would place *Sir Joseph Paxton*, flamed with maroon on a yellow ground. *Colbert* is heavily flamed with chocolate on a golden yellow ground, and is a charming Tulip of dwarf habit. The bloom is small, but we do not regard that as any blemish. *George Hayward* is flamed with crimson-maroon on

GRAPE HYACINTHS.

OF all bulbs the Grape Hyacinths (*Muscari*) are most closely allied to the true Hyacinth (*Hyacinthus*), the chief distinction being that the mouth of the flower of the latter is open, while that of *Muscari* is contracted. A species often grown under the name of *M. azureum* is really *Hyacinthus azureus*, a small flowered but early and very pretty bulbous plant. Something like forty species of Grape Hyacinths are admitted by botanists, but in gardens the names of forms have been much more multiplied. In practice very few are extensively cultivated in gardens, and *M. botryoides* is by far the most com-



MUSCARI CONICUM ON THE GRASS.

ENGLISH AMATEUR TULIPS.

THE above epithet is applied to the Tulips of the florist in order to distinguish them from the Continental strains which are not quite the same. For the purpose of classification they are divided into three sections, namely, bizarre, bybloemen and rose. The varieties belonging to the first are distinguished by their yellow base. A bybloemen has a purple body colour and a white base. A rose is of some shade of rose, red or scarlet with a white base. Now, each of these is again divided into three groups.



GALTONIA CANDICANS.



NARCISSUS ARD-RIGH OR IRISH KING.



NARCISSUS PRIMROSE DAME.

gold. Lord Stanley is flamed with mahogany-crimson on yellow, and is a short, cup-shaped, well formed flower. Excelsior is flamed with chocolate on a yellow ground. A good bizarre breeder is John Heap, of a bright orange-scarlet edged with gold. We would also mention both the flamed and breeder forms of Sulphur, the flowers of which, though not very bright, have a strong and delightful scent of Primroses.

Bybloemen varieties were not very numerous and we shall only mention two of them. Pick-Me-Out was the first to expand in the collection, opening on the 1st of May last. The variety was flamed with chocolate-crimson on a clear or shining white ground. Agnes is a magnificent self of large size and rich purple. The purple ground colour is the

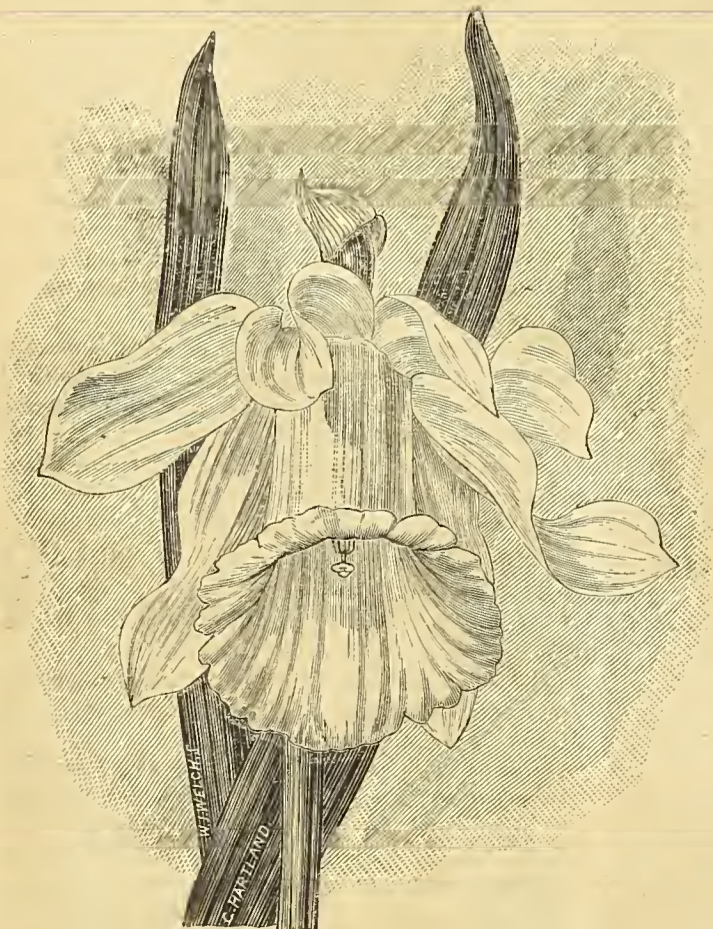
only distinction between the bybloemen and rose sections.

The most charming of the rose section in this collection was the breeder form of Annie McGregor, which is rich rosy-scarlet. One of the rectified forms is flamed with brilliant rose-scarlet on white. Both forms last in perfection a long time. Mabel is a large and beautiful rose flower in the breeder stage, and the rectified flower is flamed with rose on white. Quite of another style is Lord Derby in the flamed stage, the flame being rose-scarlet. Of the above, Mabel, Lord Derby, John Heap, Excelsior, George

Hayward, Sir Joseph Paxton, Masterpiece, Agnes, and Pick-Me-Out, are all very large flowers. Choice and very handsome are Dr. Hardy (very durable), Sir Joseph Paxton, Colbert, Annie McGregor, Agnes, Mabel, Lord Stanley, George Hayward, and Pick-Me-Out, the first four, in our opinion, being the choicest of all. The illustration was lent by Messrs. Barr & Sons.

IRISH DAFFODILS.

MANY parts of the British Isles are well-adapted for



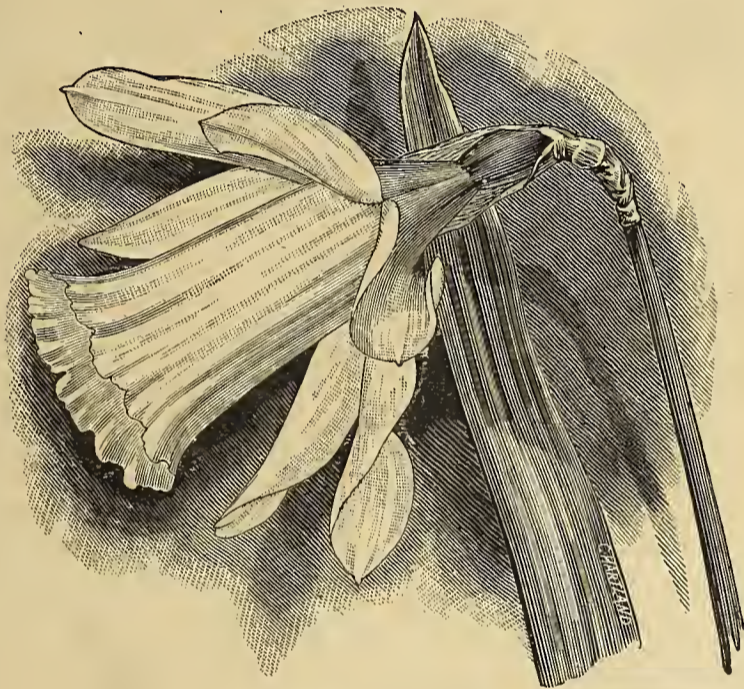
NARCISSUS BUTTERFLY.



NARCISSUS COUNTESS OF ANNESLEY.

the cultivation not merely of Daffodils but of several other hardy bulbs. We see additional proof of this every year in various parts of the country. Bulbs of various kinds are grown in considerable quantity in Lincolnshire, the Midlands, the Thames Valley, and Ireland. Addressing an assembly of gardeners at Birmingham recently, Mr. F. W. Burbidge, of Dublin, said, "As to the comparative merits of Continental *v.* English bulbs, I may say that while Holland produces the best Hyacinths, and, perhaps, also some early Tulips, we in England and Ireland can grow by far the best Narcissi, late Tulips, Snowdrops, and Crocus of all kinds. So far as Narcissi are concerned, we can defy the world, both in rearing new and in growing all other varieties to the greatest perfection of luxuriant health and beauty."

While England, Scotland, and Wales each have their respective and peculiar varieties of Daffodil, Ireland is also responsible for the placing of many fine sorts at the disposal of the cultivator, and to some of these we wish to refer. Amongst bright yellow, trumpet Daffodils no one will deny the bold and telling appearance of Ard-Righ or Irish King (see figure). It is useful alike for cut flowers, market, forcing, pot culture and bedding purposes. Countess of Annesley (see illustration) is well-known in this country for the large size of its flowers, and rich yellow, widely expanded, fringed and plaited trumpet. John Ridd and Lorna Doone, are light yellow varieties of great size, and the latter being



NARCISSUS BISHOP MANN.

raised between Emperor and *Narcissus muticus*, is a late bloomer. Primrose Dame (see figure) is primrose or soft yellow, as the name would imply, and remarkable for the plaited and inflated character of its trumpet. A more important feature is that the flowers are deliciously scented—a rare occurrence amongst trumpet Daffodils. It is therefore very choice for pot culture in the conservatory. A tall and beautiful variety of the Irish *N. moschatum cernuum* is that named Butterfly (see illustration). The pale, nearly white, flowers are characterised by their widely expanded trumpet, twisted segments, and the pendent habit of the blooms. Bishop Mann belongs to the same type and is the tallest, earliest, and hardiest of the section. Colleen Bawn or The Fair Maid of Erin is considered to be the purest white trumpet Daffodil in cultivation. Others might be named, but the above serve to show that Ireland can raise as well as grow Daffodils. The illustrations of Ard-Righ, Countess of Annesley, Primrose Dame, Bishop Mann, and Butterfly were lent us by Mr. William B. Hartland, Cork, Ireland, who has done so much for the cause in the Sister Isle. They are some of the woodcuts from his beautifully executed book on "Conference Daffodils." Mr. Hartland also keeps alive the reputation of Tulips, of which he cultivates a large and representative collection of bedding species.

Potatoes in Co. Limerick have been very badly attacked with disease, and prices are now three or four times higher than last year.

BULB SALES.

WHEN the poet Tennyson wrote that "the thoughts of men are widened by the process of the suns" he was undoubtedly right in a general sense, but the words may also be specially applied, and in no direction more truly than in that of horticulture, for the dreams of yesterday are but the facts of to-day. The love for gardens and gardening has grown to tremendous proportions, and is still growing. With the increased facilities for transport, horticultural commodities are brought within the reach of everyone possessing a garden. Having regard not only to the cheapness of bulbs, but the ease with which they may be grown, as well as their beauty, it is manifest that they must be prime favourites with all, and the autumn months remind us that we must lay in our stock, modest or otherwise, of the floral treasures.

The machine, whereby the private grower is supplied with the needful material, is an intricate and far-reaching one, but its mechanism is, perhaps, most interesting at the centre of distribution—the public auction room. At 67 & 68, Cheapside, under the shade of "Bennett's" clock, lies one of the most important of these centres, for here Messrs. Protheroe & Morris have for many years held sales of the bulb treasures which Southern France, Holland and Japan pour in. The quantity disposed of, both to the trade and directly to amateur cultiva-

red Gertrude, and Norma, which are evidently favourites. Narcissi, Tulips, Crocuses, Scillas, Ixias, and bulbous Irises were all in great quantity, made up in parcels of a size to suit all sorts of growers. Porters were busy at work bustling up the bags, and opening them for buyers to see. Curiously enough, however, the buyers did not want to see, and this called down a mild rebuke from the rostrum. Gentlemen, said Mr. T. A. Morris, "you ought sometimes to look at the bulbs you are buying." The trust reposed in the firm is evidently unlimited, fair dealing the motto, and—this is as it ought to be. We had a look at a number of the samples, and in all cases found fine, well-ripened, and heavy bulbs of medium size, which all experienced cultivators know are what is wanted to insure success.

On the day of our visit the "trade" element was not so strongly represented as we expected to see it, but amateurs were in strong force, and in a buying humour. Prices all round were, moreover, wonderfully reasonable, and we found ourselves wondering whether, after all, the cheapest way to make a garden beautiful was not to plant it with bulbs.

THE CAPE HYACINTH.

THIS noble Liliaceous plant is often met with under the name of *Hyacinthus candicans*, but its correct name is *Galtonia candicans*. It differs from a true Hyacinth by having angled and compressed or almost flat seeds, whereas those of *Hyacinthus* are globular. There are two species of *Galtonia*, both natives of South Africa, and that under notice is by far the finer of the two. From a bold, radical tuft of leaves, the flower scapes rise to a height of 2½ ft. to 4 ft. according to vigour. The bell-shaped, drooping flowers are pure white, of great substance, and, individually, not unlike those of a Snowdrop. It gives most satisfaction as a garden plant owing to its great size and vigour, which militate against it for pot work. It is often planted in the herbaceous border and in mixtures of bedding plants. Very effective is a large bed of it mixed with an equal number of scarlet or other highly coloured *Gladioli*, with which it forms a fine contrast. The bulbs are perfectly hardy and may be left in the open ground, unprotected all the winter. Under any of these conditions it is a bold and telling plant during July, August, and part of September. The accompanying illustration (p. 11), lent us by Messrs. William Cutbush & Sons, Highgate, gives a good idea of the plant very much reduced.

SOCIETIES.

LOCHEE AMATEUR HORTICULTURAL.—

August 20th & 21st.

THIS two days' fixture was opened in Ancrum Public School by the Rev. Stewart Galloway in presence of a fair attendance. In the course of his remarks the reverend gentleman referred to the benefits to be derived from good gardening, and concluded by expressing a hope that Lochee people would not withhold from the show the support it deserved.

This season the exhibits were very satisfactory, pot plants being specially fine. The cut blooms showed a falling off, but this was well compensated for by the improvement in fruit and vegetables.

Mr. J. Beocher was one of the most successful exhibitors, winning first awards for four specimen stove and greenhouse plants, *Petunias* and *Gloxinias*. Mr. Young and Mr. James Warden had the best *Asters*, while the *Dahlias* sent by Mr. John Lamond were placed at the top of the list.

BROUGHTY FERRY.—August 20th & 21st.

IN the unavoidable absence of Provost Orchar, Mr. R. M. Brodie opened this show, which was held in the Volunteer Drill Shed, Broughty Ferry.

A lengthy schedule of prizes had been arranged, and the committee are to be congratulated upon the success of the undertaking.

Roses were a special feature, and some excellent blooms were shown in the various classes. Messrs. D. & W. Croll, Dundee, staged the premier forty-eight. In the class for twelve blooms of *Teas* or *Noisettes*, open to gardeners only, Mr. D. Keillor, Seabourne, was first. Mr. Keillor also had the best twelve blooms of *H.P.'s*. In the amateurs' class for

tors on such occasions, is immense. Two years ago when only two sales were held in each week, over twenty tons of bulbs were sold, on the average, by the firm during each week from September till Christmas. The business has grown, as healthy businesses have a knack of doing, and sales of bulbs are now held each week-day excepting Saturday, so that a substantial increase in the turnover is inevitable.

Situated thus in one of the busiest of London thoroughfares, the attendance at the rooms is good, although but a small proportion of those who go to make up the thronging crowds of Cheapside reck of the quiet passage that leads to them. Messrs. Protheroe & Morris make a feature of executing orders for gentlemen who cannot attend, this department receiving careful and personal attention. The firm requests that a remittance should accompany all such commissions. A statement of account is then rendered by the firm, the balance refunded to the client, and everybody is satisfied.

We recently paid a visit to one of these sales, and were most favourably impressed with the manner in which they were conducted. Mr. T. A. Morris occupied the rostrum, and the frequent click, click, of his hammer bespoke the fact that buyers were present in plenty, and that business was brisk. As between two thousand and three thousand lots were catalogued for that day's sale, it was evident that the auctioneer's task was by no means a sinecure.

Hyacinths were there in plenty, made up in lots of named varieties. Blues seemed to always command their price, and the same may be said of the single

six blooms of H.P.'s Mr. James Coutts secured the leading award.

In addition to the Roses, cut flowers, both hardy and otherwise, were very numerous. Mr. John Mathers, Taymount, Dundee, sent the first prize lot of twelve tuberous Begonia blooms, a similar honour falling to Messrs. Laird & Sinclair for eighteen bunches of cut hardy herbaceous flowers. A smaller class for twelve bunches of similar material had Mr. James Kydd, Forthill House, placed at the head of it.

There were numerous small classes for pot plants, and some good samples of cultivation turned up in consequence.

In the classes for fruit and vegetables the following exhibitors were credited with first awards in their respective classes:—Mr. D. Saunders, for one bunch of black Grapes; Mr. James Joss, for one bunch of white Grapes; Mr. Peter Petrie, for Strawberries; Mr. John Ednie, Carnoustie, for Gooseberries; Mr. John Machar, for Peas; and Mr. J. McDougall, for Potatos.

ROYAL HORTICULTURAL.—August 24th.

At a meeting of the fruit and vegetable committee, Mr. A. H. Rickwood, gardener to the Dowager Lady Freake, Fulwell Park, was awarded a Silver Banksian Medal for a collection of fruit. Mr. Rickwood had good dishes of Morello Cherries, Peaches of several varieties, Nectarines, Plums, and small plants.

Messrs. Rivers & Sons, Sawbridgeworth, sent boxes of Plums, Late Transparent Gage, Golden Transparent Gage, and Monarch, also bunches of Grapes, Gradiska and Directeur Tisserand.

Nineteen dishes of nuts were exhibited by Messrs. Geo. Bunyard & Co., Maidstone, including amongst others good samples of the Purple Filbert and the Kentish Cob.

Mr. Geo. Wythes, gardener to Earl Percy, Syon House, Brentford, sent thirty fruits of Melon Middlesex Hero. Mr. Owen Thomas, The Royal Gardens, Frogmore, had half a dozen large fruits of Melon, Frogmore Scarlet.

Four dishes of Apples were presented in the flavour competition. The first prize was awarded to Mr. G. Wythes, for Irish Peach, and the second to Mr. C. Herrin, Dropmore, for Lady Sudeley.

A Silver Banksian Medal was awarded to Mr. T. Robinson, gardener to W. Lawrence, Esq., Elsfield House, Hollingbourne, for a very nice collection of vegetables. Capital Beet, Runner Beans, Onions, Carrots, and Potatos, were the best dishes. Mr. W. Kemp, Barnes, had a dozen and a half samples of Cucumber Covent Garden Favourite.

A Silver Knightian Medal went to Mr. G. Elliott, gardener to Captain Macdonald, Hurstside, West Molesey, Surrey, for a dozen fine bunches of Grapes—six each of Gros Maroc, and Madresfield Court.

BRIGHTON AND SUSSEX HORTICULTURAL.—

August 24th and 25th.

THE sixth annual show of the Brighton and Sussex Horticultural Society was held on Tuesday and Wednesday, August 24th and 25th, in the Corn Exchange and Dome at the Royal Pavilion. The groups and specimen plants were arranged in tents on the lawn, and some very pretty effects were obtained in some of them. Mr. W. C. Holland, of Tunbridge Wells, succeeded in winning the Corporation Challenge Cup, together with the Society's Silver Medal, and £5, for the best group of flowering and foliage plants arranged for effect. Mr. George Miles, Victorian Nursery, Brighton; Mr. E. Meachen and Mr. Bonson Lister receiving second and third prizes respectively.

For a group of Ferns Mr. G. Mills was first, followed by Mr. James Adams, Lewes; Messrs. W. Mills & Co., and Mr. Bonson Lister.

For a table of flowering plants, Mr. Lawrence, Horsham, gained the first prize. Mr. W. C. Holland was second, and Mr. G. Miles third.

Mr. J. Warren, Handcross Park, Crawley, gained first prizes for a specimen Croton, specimen Palm, six Ferns, one specimen stove and greenhouse plant in bloom, and second for six stove and greenhouse plants; Mr. Alfred Gibson, Sevenoaks, being first in the latter class. For a box of cut stove and greenhouse flowers Mr. W. Archer, Mill House, Saffron Walden, gained first prize, followed by Mr. Alfred Gibson and Mr. S. Osman, Chertsey.

For twenty-four Roses, distinct, only two collections were staged, the first prize going to Mr. William Taylor, Hampton, and the second to Mr. T. Durrant Young, Eastbourne. For the ten Roses, Mr. W. Harris, Denne Park, Horsham, gained first, Mr. T. Durrant Young, second, and Mr. W. Taylor, third.

Forty-eight Dahlias, distinct, were shown in very fine style by Mr. S. Mortimer, of Farnham, who gained first prize. Messrs. Keynes Williams & Co., of Salisbury, were awarded second, but unfortunately it was found that by an oversight their collection contained two flowers of one sort, and it had to be disqualified. Mrs. Seale, of Sevenoaks, then received second, and Mr. James Stredwick, St. Leonards, third.

Mrs. Seale gained first prizes for single and pompon Dahlias; and Messrs. Keynes Williams & Co. first for Cactus Dahlias.

Mr. W. Manton, Pickwell, Bolney, received the first prize for a collection of hardy perennials and bulbous flowers. Mr. J. Charlton, obtained first prizes for a bride's bouquet, a ball bouquet, a wreath, and other devices of flowers. He was followed by Mrs. Seale, Sevenoaks, who gained third for the bridal bouquet, and second for device, and Mr. Cyril Kevell, who gained second for bride's and ball bouquet. Mrs. F. W. Seale gained first for table decoration. Mr. E. Meachen was second, and Mr. S. S. Williams, third.

Fruit was rather smaller in quantity this year than formerly, but several very creditable exhibits were shown. Mr. J. Gore, Polegate, gained first for a collection of fruit, Mr. Goldsmith, Leonardslee, being second, Mr. D. Gibson, Kingston-on-Thames, third, and Mr. George Fennell, Tonbridge, fourth. For three bunches of black Grapes, Mr. Dancy gained first, and for three bunches of any other black variety and three bunches of white Mr. W. Spencer, Burgess Hill, and Mr. J. Gore, Polegate, gained first and second respectively. Mr. Lawrence and Mr. S. Mortimer gained first and second for Melons. Mr. F. Potter was first and Mr. W. Spencer second for Peaches. Mr. W. Manton gained the Society's Bronze Medal and first prize for collection of nine vegetables.

Messrs. Cheal and Sons, Crawley, had a varied and interesting collection of Dahlias, including several new varieties, among which a very handsome dark crimson, with a purple tinge at the edges and base of the petals, was awarded a first-class certificate. Mrs. Quentin, salmon, Mrs. Gilleat, crimson maroon, and Mrs. John Goddard, purplish pink, were also very striking flowers.

Messrs. Jarman & Co., Chard, showed a large collection of fruit and vegetables, including some magnificent specimens of their Somersetshire Hero Onion and some very fine specimens of "King of the West" and "Magnificent" Potatos. Messrs. Tilley Bros., and Messrs. Balchin & Son, Hassocks, Brighton, had collections of bulbs in great variety. Messrs. J. Veitch & Son, Limited, Chelsea, had a very interesting collection of new and rare plants, which merited all the interest that was taken in it.

Messrs. J. Laing & Sons, Forest Hill, had a fine collection of Begonias and foliage plants.

ATHOLE HORTICULTURAL.

THE tenth annual flower show took place recently at Pitlochry, in the schoolroom. The opening ceremony was performed by Mrs. R. W. Barbour, of Bonskeid, who, in a very interesting speech, spoke of the work performed by their and similar societies in promoting the cultivation of all sorts of flowers, fruits and vegetables.

Considering the season the show was a very creditable one. Mr. R. Pearson, of Fisher's Hotel, staged the most effective group of plants occupying 60 sq. ft. of space. Mr. D. McHardy, Faskally, made a close second. In a smaller group occupying 30 sq. ft. Mr. John Campbell, Union Bank, scored; Mr. P. Ward was second.

In the amateurs' and cottagers' section the exhibits were very praiseworthy, window plants being evidently well looked after in the neighbourhood of Pitlochry.

In a fine stand of Roses contributed by Messrs. W. & D. Croll, of Dundee, which found a place among the non-competitive exhibits, such varieties as Mrs. John Laing, Countess of Oxford, and Captain Hayward were represented by capital samples.

HINTS FOR AMATEURS.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Peaches.—Your trees are evidently in a weakened condition, *Reader*, through some cause or other, hence the stones of the fruit being bad. You do not say to what extent the stones are faulty, whether the shells are all right and the kernel bad or not. We assume, however, that this is the case, and that the fruits have ripened all right. Are the trees old? because many varieties first show signs that age is telling on them by behaving in this way. If this is the case, the best thing will be to root them out and plant young ones. If the trees are young, and have got into a bad condition by improper treatment you may pull them round. Remove as much of the surface soil as you can without disturbing the roots, and give a dressing of mellow loam to which add a nice sprinkling of old mortar rubbish. The lack of lime in the soil is probably a cause of the failure.

Vine Border.—What is the best way to make a Vine border? and what is the best time?—*Reader*.

Dealing with the latter question first, any time during late autumn, winter, or early spring will do. As to the best way to make it, the border should, if possible, be inside the house rather than outside, more particularly if the Vines are to be forced pretty early. As to size, the border should be of the same width as the house. With regard to depth, 3 ft. will answer well, and is what we should generally recommend. After making the necessary excavations place in the bottom from a foot to 18 in. of broken bricks, first putting in a drain to carry off the water. On the top of the broken bricks put a layer of freshly cut turves with the grassy side downwards. After this may come the soil. This should consist mainly of good fibrous loam such as that obtained from the top spit of an old pasture. To five cubic yards of this add one yard of old mortar rubbish, a sprinkling of charcoal, and from one and a half to two cwt. of half inch bones. Well mix all these ingredients together by turning several times. The soil may be got in readiness as soon as convenient, but should be kept in a shed out of the way of rain until it is required.

Plumbago capensis.—*S. R. L.*: The blue *Plumbago* makes a capital pillar rafter, or wall plant for a greenhouse, and is also employed to a fair extent for sub-tropical bedding in the flower garden. *Plumbago rosea*, on the other hand, needs the temperature of an intermediate stove during the winter months. It may be grown in a cold frame through the summer, and such a position suits it well, as it helps to retard the flowering season. This is a matter of some consideration, as the flowers are naturally of more value in the dull months.

Lobelia pumila magnifica.—Would it be possible for me to strike a few cuttings of this *Lobelia*, and keep them through the winter. I have only a greenhouse, and should like to know if the cuttings would strike if the pots were placed on a shelf in it.—*G. Entwistle*.

In order to root the cuttings of the *Lobelias*, you will need a closer and warmer house than the greenhouse. If you can build a hot-bed and root the cuttings you may manage to keep them through the winter in the greenhouse. Another plan is to lift the old plants before the frost has cut them back, and cut away the old growths which have flowered, subsequently potting them up. If these are kept dry at the root a fair proportion of them will winter safely in the greenhouse, and may be propagated from in the spring. Damp, however, is the greatest enemy. The best plan of all for you will be not to attempt to obtain a stock for next year from this year's plants, but to sow seed in heat in the spring. It will save you a good deal of trouble, and as seedlings come pretty true, and bloom freely, the effect will be the same.

QUESTIONS AND ANSWERS

* * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Trenching Herbaceous Border.—G. Sangster; It would be advisable to wait till the plants have finished flowering, so that the stems might be cut down before you commence lifting them. Many of them have already reached that condition. Another and very important point to observe is to wait till the autumn rains have moistened the ground, because the plants will then lift with good balls of soil. After that you may commence when you like, say towards the end of September and during October. That would be the best time, as the plants would get more or less established before winter. We should not advise you to lift the whole of the plants at once. A better plan would be to lift a portion at one end, trench and manure the ground, and re-plant directly. Then you may lift another portion, and so on till you complete the whole.

Propagating Rosa rugosa.—A. Walters; The species and its varieties may, of course, be propagated by budding in the usual way. You can more rapidly get up a stock by collecting the large hips, rubbing out the seeds and sowing them at once in a cold frame in soil, or you may sow them in boxes in cold frames. Then, if you cared to, you could put the boxes in heat in spring, thereby securing more rapid germination.

Vine leaves changing colour.—W. J., G.; We have examined the leaves you sent us, and think there is no cause whatever for alarm. We are of opinion that the leaves on the main stems of the young Vines have fulfilled their functions and are changing colour previous to falling. There is certainly no fungus in or upon them; and if anything is materially wrong with them, it is the roots, and we can hardly imagine that to be the case with Vines planted last May. The treatment you are giving them now is perfectly correct; but we are of opinion that during the growing period you kept the vinery rather close, with the object of encouraging and hastening rapid growth. The result of that has produced the small green warts to be seen all over the under surface. The warts are not altogether the cause of the leaves falling, but the close atmosphere has made them rather thin in tissue, though otherwise well developed. The abundance of air you have lately been giving them, and the cooler atmosphere outside is causing them to ripen or mature early. They seemed to us to belong chiefly to the variety Gros Colman, which often becomes coloured in this way before other kinds. Another year you should let the atmosphere of the house get dry once in every twenty-four hours, say about mid-day, to harden the tissues.

Everlasting Peas.—J. W.; The best way to increase this plant is by seeds. It is the only practical method to pursue, for the plant divides very badly owing to the great depth to which the roots penetrate, and the difficulty of separating crowns with good fibrous roots attached. Sow the seeds as soon as they are ripe, in boxes which may be placed in a cold frame. The seedlings seldom flower the first year, at least when sown in the open ground, but they will the second year.

Drying Everlastings.—H. M.; The process is very simple indeed. Select a dry day for gathering the flowers; cut them with long stalks, and remove

most or all of the leaves, particularly of such things as Helichrysums. All the different kinds should be gathered when in their most ornamental state, that is, neither too young, nor too expanded by old age. Tie them in bunches of moderate size, and hang them up in some shed or other convenient place where the sun cannot shine directly upon them, and where rain cannot wet them. They should be hung up so that the heads hang straight down. In this position the stems will not get bent and twisted while the drying process is taking place. They may remain here till perfectly dry. Grasses may be treated in the same way, but we are afraid most or all of them are too old by this time to keep. When they lose their green colour they are practically useless for drying, and would gradually crumble to pieces. They should be cut when in flower or soon after.

Names of Fruits.—D. E.; Apples: 1, a worthless seedling not better than a Crab; 2, Red Astrachan.

Names of Plants.—A weekly reader: 1, Browallia speciosa major; 2, Tradescantia virginica alba; 3, Tradescantia virginica; 4, Herniaria glabra.—E. R.: 1, Heracleum Sphondylium; 2, Centaurea nigra; 3, Senecio Jacobaea; 4, Chaerophyllum sylvestre.—G. C.: Escallonia macrantha, a native of Chiloe.—J. S.: Ornithogalum longibracteatum.—F. Brewer; The stove flower is Schuertia grandiflora; the hardy shrub is Rhus Cotinus.—R. G.: 1, Cornus alba; 2, Coronilla Emerus; 3, Jasminum revolutum; 4, Spiraea Douglasii; 5, Hibiscus syriacus; 6, Aristolochia sipo; 7, Spiraea salicifolia.—W. S.: 1, Impatiens fulva; 2, Aster diffusus, not a native.—R. T.: 1, Pelargonium Radula; 2, P. tomentosum; 3, P. denticulatum; 4, Oxalis floribunda.—W. F.: 1, Pteris scaberula; 2, Nephrodium decompositum glabellum; 3, Asplenium flaccidum; 4, Asplenium Filix-foemina var.; 5, Onoclea sensihilis.

Communications Received.—M. T.—D. P. Laird.—George Potts.—W. K.—A. P.—Mrs. Keane.—Laing & Mather.—J. Forbes.—W. Cuthbertson.—R. Veitch & Son.—R. D.—Uriah Heep.—M. F.—J. R. Johns.—W.—Anxious.—O. A.—F. N. O.—Chas. Osmond.—Geo. W.

TRADE CATALOGUES RECEIVED.

FRANK DICKS & Co., 66, Deansgate, Manchester.—Autumn Catalogue of Dutch Bulbs, and other Flowering Roots.

WEBB & SONS, Wordsley, Stourbridge.—Webb's Selected Bulbs.

FOTHERINGHAM & KING, Corn Exchange, White-sands, Dumfries.—Selected Hyacinths, Tulips, Narcissi, Liliums, and other Spring Flowering Bulbs.

DOBBIE & Co, Rothesay, N.B., also at Orpington, Kent.—Catalogue of Bulbs and Plants for Autumn Planting.

BENJN. SODDY, 243, Walworth Road, London, S.E.—Soddy's Bulbous Flower Roots.

The Gardening World.

ESTABLISHED 1884.

Price One Penny; Post Free, Three-halfpence

Subscription (including postage): 3 months, 1s. 8d. 6 months, 3s. 3d.; 12 months, 6s. 6d., prepaid.

Foreign Subscriptions to all countries in the Postal Union, 8s. 8d. per annum, prepaid.

Published every Thursday morning, and can be obtained through all Newsagents and Booksellers, and from all Railway Bookstalls.

SCALE OF CHARGES FOR ADVERTISEMENTS

Small Advertisements, sold type, 6d. per line of about nine words. Displayed Advertisements, per Inch, 6s.; per column (12 ins. long), £3 5s.; per halfpage, £5; per page, £9. Special quotations given for a series. Gardeners and others Wanting Situations thirty words for 1s. 6d., prepaid.

Telegraphic Address: "BAMBUSA, LONDON."

1, CLEMENT'S INN STRAND, LONDON, W.C.

TROOD'S VINE & PLANT FOOD
FOR FLOWERS, FRUIT & VEGETABLES.
HIGH QUALITY, DOUBLE QUANTITY, STIMULATING & NOURISHING. Sold by most Seedsmen or sent direct Carriage Paid, 14lbs. 9d., 34lbs. 1/4, 7lbs. 2/6, 14lbs. 3/6, 28lbs. 6/-, 56lbs. 10/6, 112lbs. 18/- TAMAR CHEMICAL WORKS, TAVISTOCK. Agents wanted

Received from MR. YOLE, proprietor of the Tavistock Nurseries: "Have made many trials of your Vine and Plant Food on Flowers of every kind, Vines, Potatos, Tomatos and Cucumbers, with most excellent results. It is quick and lasting in its effects, and produces no fungus. I consider it to be the cheapest and best all purposes manure I have ever used. In future shall use no other."

THE MOST NUTRITIOUS COCOA.

EPPS'S
GRATEFUL—COMFORTING.
COCOA
FOR BREAKFAST AND SUPPER.

SANKEYS' famous GARDEN POTS
Bulwell Potteries, Nottingham.

Messrs. Dicksons, Limited, Chester, write: "The Flower Pots you have so largely supplied us with are light, strong and well made, and in every respect highly satisfactory."
Messrs. Richard Smith & Co., Worcester, write: "We beg to say that we are highly satisfied with your Garden Pots. They are well made, light, yet strong, and we like them better than any other we have ever used."
Mr. William Bull, 586, King's Road, Chelsea, London, writes: "For nearly thirty years I have been using your Garden Pots, and still find them the best and cheapest."
Largest Manufacturers in the World. No Waiting. Millions in Stock. Carriage and Breakage Free on £10 Orders. Half Carriage on £5 Orders. Samples Free.

Agents for London, Messrs J. H. SANKEY & SON, Iron Bridge & Essex Wharves, Canning Town, London, E.

W. COOPER, Ltd., Horticultural Providers, 755, Old Kent Road, London, S.E.

COOPER'S CYCLES



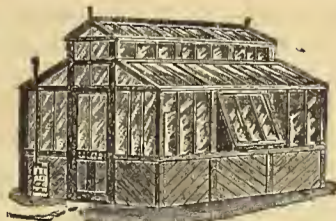
FROM £4 15s.

Latest Humber design Frame, Large Weldless Steel Tubes, Ball Bearings, Tangent Wheels, and Brake and Mudguards, Cushion Tyres, £4 15s. Standard Pneumatic, £6 15s. Ladies, with Dress and Gear Guards, from £5 15s. Twelve months warranty. List free. Largest Cycle Works in London.

COOPER'S "Beat-All" LAWN MOWER
THE WORLD'S BEST.



Grass Catcher to fit any machine, 5/- each. Packed free on rail, London. Best value ever offered.



Latest Designs in Conservatories Estimates Free.

Picturesque Rustic House.
Our leading feature.



Size 5 ft. by 3 ft. 6 in. £4.

Garden Chairs.

Having bought up the whole of a manufacturer's stock of 5,000 Folding Garden Chairs, we are enabled to sell at a ridiculously low price. Special Job Line 3/- each, 33/- doz.



Everything Complete and Ready for Erecting, from 50/-

Special Value in Garden Hose.

| | |
|-----------------------------------|------|
| Hose 60 ft., Rose Jet, and Union. | |
| Special Value. | 12/6 |
| Stout. | 16/- |
| Extra Stout. | 19/6 |
| | 16/- |
| | 20/- |
| | 23/6 |
| | 21/- |
| | 25/- |
| | 30/- |



Every description of Iron Buildings at lowest Figure.



7 ft. long, 5 ft. wide, 56/- complete. For other sizes see List.



Cucumber Frames, 17/- See List.

ILLUSTRATED CATALOGUE POST FREE. LARGE LIST CONTAINING 364 PAGES, SIX STAMPS.

PLANT NOW BARR'S **PLANT NOW**
BEAUTIFUL "GOLD MEDAL" **DAFFODILS.**

Send for BARR'S DESCRIPTIVE CATALOGUE containing photograph illustrations of 18 fine Distinct Daffodils.

Barr's Popular 21/- Collection of High-Class Daffodils for Amateurs.

Consisting of the following fine distinct varieties, suitable either for pot-culture or for the flower border. All strong Bulbs.

| | | | |
|--|--|--|---|
| 3 Golden Spur 3 Johnstoni Queen of Spain 3 Obvallaris 3 P. R. Barr 3 Shirley Hibberd 3 Bicolor Empress 3 " grandis | 3 Princeps 3 Marchioness of Lorne 3 Tortuosus 3 W. P. Milner 3 Incomparabilis Frank Miles 3 " Gwyther 3 " Sir Watkin | 3 Incomparabilis Queen Bess 3 " Double, "Egg; and " Bacon." 3 " Double, "Codlins and Cream." 3 Barrii conspicuus 3 Barrii Maurice Vilmorin | 3 Leedsii Mrs. Langtry 3 " Minnie Hume 3 Nelsoni William Backhouse 3 Burbidgei John Bain 3 " Falstaff 3 " Baroness Heath |
|--|--|--|---|

Cheap Decorative Daffodils for Woodlands, Shrubbery Borders, &c.

To Plant in Grass, Orchards, Woodlands, Shrubberies, and by Streams and Lakes, &c., and for Cutting.

Barr's Popular "Woodland" Collection of Daffodils, 21/-.

Consisting of good showy distinct varieties, suitable for naturalisation in woodlands, meadows, on grassy slopes, and by the sides of rivulets and streams, etc.

| | | | |
|---|---|---|--|
| 20 Abscissus 20 Johnstoni Queen of Spain 20 Obvallaris 20 Rugilobus 20 Thomas Moore | 20 Princeps 20 Moschatus 20 Pallidus praecox 20 Telamonius plenus 20 Incomparabilis Leedsii | 20 Incomparabilis Cynosure 20 " Double, "Butter and Eggs" 20 Barrii General Murray 20 Leedsii Duchess of Brabant 20 Odorus Rugulosus | 20 Burbidgei Vanessa 20 Poeticus ornatus 20 " of gardens 20 " Double Gardenia- flowered 20 Biflorus |
|---|---|---|--|

CHOICE MIXED DAFFODILS OF MANY SORTS, of great value for naturalising in grass, shrubberies, and for cutting, per 1,000, 30/-; per 100, 4/6.
 FINE MIXED DAFFODILS OF MANY SORTS, per 1,000, 21/-; per 100, 3/6.

Send for FULL DESCRIPTIVE CATALOGUE of BARR'S GOLD MEDAL DAFFODILS containing illustrations of 18 fine Distinct Daffodils.

Barr's Famous "Covent Garden" Collections of Bulbs

Sent Carriage paid. Box and Packing free on receipt of remittance.

Barr's "Covent Garden" 21/- Collection of Bulbs for Early Forcing,

CONTAINS 350 BULBS OF FINE QUALITY, AS FOLLOWS:—

| | | | |
|--|--|--|---|
| 12 Choice named Hyacinths 12 Early White Roman Hyacinths 3 " Blush " " 3 " Blue " " 6 Double Roman Narcissus 6 Narcissus Paper White " Early Snowflake " 3 " Polyanthus Gloriosus | 3 Narcissus Polyanthus " Grand Soleil d'Or " 25 Sweet-scented Single Jonquils 3 Narcissus (Daffodils) obvallaris 3 " Pallidus praecox 3 " Telamonius plenus 3 " Princeps 3 " Poeticus ornatus | 12 Single Early Scarlet Tulips "Duc Van Thol " 6 Single Tulip Chrysolora 6 " " Cottage Maid 6 " " Pottebakker Scarlet 6 Double Tulip Tournesol 100 Splendid (named) Crocuses 25 Scilla sibirica | 50 Elwes Giant Snowdrop 12 Chionodoxa Luciliae 12 " sardensis 12 Allium neapolitanum 1 White Bermuda Lily 2 Violet-scented Iris reticulata 12 Freesia mixed hybrids |
|--|--|--|---|

Barr's "Covent Garden" 21/- Collection of Bulbs

FOR THE GREENHOUSE, SITTING-ROOM, &c., CONTAINING 300 BULBS OF FINE QUALITY.

Arranged for those who prefer a few sorts only of easily cultivated Winter and Spring-flowering Bulbs.

| | | | |
|---|--|---|---|
| 20 Choice named Hyacinths 6 Early White Roman 3 Polyanthus Narcissus Gloriosus 3 " " Scilly Isles " White 3 " " Grand Soleil d'Or " 25 Sweet-scented Single Jonquils | 6 Narcissus Golden Spur 6 " bicolor Empress 6 Narcissus Telamonius plenus 6 " Poeticus ornatus 6 Single Tulip Chrysolora 6 " " Dusart | 6 Single Tulip Princess Marianne 6 " " Van Vondel 6 Double Tulip Tournesol 100 Splendid named Crocuses 12 Scilla sibirica 12 Chionodoxa Luciliae | 12 Chionodoxa sardensis 25 Elwes Giant Snowdrop 6 Puschkinia libanotica compacta 6 Sweet-scented Iris persica 1 White Bermuda Lily 12 Milla uniflora |
|---|--|---|---|

Barr's "Covent Garden" 21/- Collection of Bulbs

FOR THE FLOWER GARDEN, CONTAINING 700 BULBS OF FINE QUALITY, MOST SUITABLE FOR OUT-DOOR DECORATION.

| | | | |
|---|--|---|--|
| 30 Hyacinths, Barr's Rainbow Mix- ture, large-flowered 6 Polyanthus Narcissi 5 Daffodils, Queen of Spain 5 " Obvallaris 5 " Princeps 5 " Pallidus praecox 5 " Incomparabilis Queen Bess 5 " Leedsii amabilis 5 " Poeticus ornatus | 12 Jonquil-like Daffodil " Regulosus " 25 Single Tulips, Barr's Rainbow mixture 25 Double Tulips, Barr's Rainbow mixture 50 Crocus, large yellow 50 " striped 50 " blue 50 " white 50 Snowdrops | 12 Scilla sibirica 20 Chionodoxa Luciliae 20 " sardensis 24 Winter Aconites 12 Blue Grave Hyacinth 12 Allium Moly, yellow 25 Star of Bethlehem 25 Wood Hyacinths, mixed 10 Milla uniflora 25 Summer Snowflakes | 12 Fritillaria, mixed 2 Crown Imperials, in two vars. 2 Lilium candidum 2 " Tigrinum splendens 2 " Thumbergianum, mixed 25 Barr's Giant Ranunculus, mixed 25 Spanish Irises, mixed 12 English Irises, mixed 50 Anemone, large-flowered, single, mixed |
|---|--|---|--|

Barr's "Woodland" 21/- Collection of Bulbs

For naturalizing in Woodlands, Orchards, Wild Gardens, etc., Containing 1,112 suitable Bulbs of fine quality.

| | | | |
|---|--|--|---|
| 200 Daffodils mixed of all kinds 100 Winter Aconites 100 Star of Bethlehem, white 50 Blue Starch Hyacinths 200 Crocuses, mixed 100 Wood Hyacinths, mixed | 100 Elwes Giant Snowdrops, small bulbs 25 Summer Snowflakes 25 Dogs' Tooth Violets, mixed 25 Anemone, Single, mixed 12 " apennina | 12 Anemone fulgens 50 Milla uniflora 25 Allium Moly, yellow 25 Lily of the Valley, crowns 12 Snakeshead Fritillarias 6 Crown Imperials, mixed | 3 Lilium davuricum, mixed 3 " pyrenaicum, yellow 3 " candidum 12 Gladiolus Colvillei 12 " " The Bride 12 " byzantium |
|---|--|--|---|

Barr's 42/-, 63/-, 84/-, & 105/- Collections of Bulbs as above

Contain an equally liberal assortment of suitable Bulbs of high quality, as in the 21/- Collections.

12/6 Collections of Bulbs also supplied. See Catalogue.

Send for Barr's full descriptive Catalogue of the best HYACINTHS for glasses, pots or exhibition; the best TULIPS for pots, for forcing, or for beds out doors, the best Anemones, Chionodoxas, Crocuses, Dog-tooth Violets, Fritillarias, Gladioli, Irises, Ixias, Meadow Saffrons, Scillas, Snowdrops, and many other beautiful bulbs for Autumn planting.

BARR'S DESCRIPTIVE CATALOGUES ALL FREE ON APPLICATION TO

BARR & SONS, 12 & 13 King St., Covent Garden, London.
 Nurseries, LONG DITTON, SURREY (SURBITON STATION, L. S. W. Ry.).

A NEW FERTILISER.

LAIRDS' "DEMOTIC."

THE "RECORD" FERTILISER.

IT is with the greatest confidence we bring this New Fertiliser under the notice of our Customers. It is specially and carefully manufactured, and will be found a decided improvement upon all other Artificial Manures, whether for Vines, Stove and Greenhouse Plants, and all Fruits, Flowers and Vegetables. FOR THE VINE BORDER it will be found of the greatest service, not only enriching the colour of the leaf, but adding size and colour to the fruit.

FOR THE STOVE AND GREENHOUSE its fertilising qualities cannot be surpassed.

FOR CHRYSANTHEMUMS it will be especially welcomed for its colouring properties.

FOR GENERAL GARDEN CROPS its qualities have been proved in a most satisfactory manner, this Fertiliser being found beyond doubt to be more efficacious in every way, and less trouble in its application, than ordinary Manures.

Prices—Per cwt., 17/6; $\frac{1}{2}$ cwt., 9/-; $\frac{1}{4}$ cwt., 5/-; 14 lbs., 3/-.

Carriage Paid on Orders for 1 cwt. and over.

This being a perfectly safe Manure, supplies a long felt want.

R. B. LAIRD & SONS,
Pinkhill Nurseries, Murrayfield, Midlothian.

W. P. LAIRD & SINCLAIR,
73, Nethergate, Dundee.

FOREST TREES (Seedling & Transplanted) in immense quantity, and of quality that cannot be surpassed. Samples free to any part, and special quotations for large quantities. Write for Catalogue, containing valuable information for planters.

Telegraphic Address: "LAIRD," DUNDEE.

Telephone: Seed Warehouse, 673; Nurseries, 5, Monifieth.

DAVID W. THOMSON'S
Selected First-Size Bulbs.

HYACINTHS for pots.

HYACINTHS for beds and borders.

TULIPS for pots.

TULIPS for beds and borders.

NARCISSUS for pots.

NARCISSUS for beds and borders.

LILIUMS, CROCUS, SNOWDROPS, SCILLAS, ANEMONES, &c.

Illustrated Catalogue of all the best varieties post free.

Seed & Bulb Warehouse: 24, Frederick St., Edinburgh.

Nurseries: GRANTON ROAD.

SPECIALITIES—

BEGONIAS.

JOHN DOWNIE CRAB APPLE
(Pyramid and Standard).

ORNAMENTAL TREES AND SHRUBS.

STOVE AND GREENHOUSE PLANTS.

ROSES. FRUIT TREES. ETC.

Catalogues on Application.

JOHN DOWNIE, Edinburgh.



"Gardening is the purest of human pleasures, and the greatest retreatment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, SEPTEMBER 11th, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, September 13th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.

TUESDAY, September 14th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.

WEDNESDAY, September 15th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.

THURSDAY, September 16th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.

FRIDAY, September 17th.—Sales of Dutch bulbs and Orchids by Messrs. Protheroe & Morris.

EXPERIMENTS WITH NITRAGIN.—We have on several previous occasions referred to this matter, and are pleased to note that progress is still being made, in fact, rapidly advancing, in this branch of science. Our readers may remember that the term "nitragin" is applied to those microscopical organisms, known as bacteria, which are found in the nodules of Clover, Beans, Peas, and all other leguminous plants. The application is made collectively, for each plant or species has its own peculiar organism; or possibly it may be that science will yet reveal that many of them are but forms or stages of the same thing. These bacteria and their host plants live in a sort of symbiosis, or mutual interdependence. Both are vegetable organisms and mutually of primary advantage to the other for their continued existence. Nitragin must not be confused with the chemical element nitrogen. The German

name for the latter is "stickstoff," consequently the great chemical firm of Meister, Lucius and Brüning, who are responsible for the term, may look at the possible confusion of names in this country with great unconcern.

In the September number of *Knowledge* Mr. C. F. Townsend, F.C.S., gives an interesting article on the subject of Nitragin, commenting generally upon the interdependence of the higher animals and microscopical animal parasites for their mutual well-being as well as upon the higher and lower vegetable organisms from the same point of view. At one time the parasites were believed to be harmful, but are now known to be "absolutely essential to the lives of their hosts." In proceeding to explain the use of the nodules on the roots of Peas, Beans, Vetches, &c., Mr. Townsend mentions the fact that many farmers, especially on the Continent, grow a crop of some leguminous subject in order to prepare the land for wheat or other grain. They were well aware of the advantage of so doing, but of the reason they were ignorant. The practice is very ancient, for we read that Virgil while speaking of fallowing and other methods of renovating the soil for grain, according to Dryden's translation, says:—

"At least where vetches, pulse, and tares have stood,

And stalks of lupines grew (a stubborn wood),
The ensuing season, in return may bear,
The bearded product of the golded year."

Within the last few years it has been discovered that Peas, Beans, Vetches, &c., have the power of fixing and utilising the free nitrogen of the air, and that the nodules on the roots are the channels through which this all important operation is effected. A thimbleful of soil contains millions of the bacteria, some of which invade the substance of the root hairs, stimulating them to intense action, with the result that they develop into the complicated growths termed nodules, in which the fixation of nitrogen, under the influence of the bacteria, takes place. If the plants are well supplied with nitrogenous food by artificial means, the nodules do not take nitrogen from the air, so that, as they still continue to be formed, they must have some other function to perform in the economy of the plant, but which remains to be discovered.

It has been found possible to isolate the organisms that form the nodules, by cultivation and selection. Dr. J. A. Voelcker has been making experiments and recently delivered an instructive lecture, with illustrations and micro-photographs of the organisms, at a meeting of the Society of Chemical Industry. Red, white, and other species of Clover patronise eight different forms, or possibly stages of the same individual, the final shape being a three-pointed star. The organism of the Broad Bean is similar in shape but two of the arms are branched, while all three arms are again branched in that of the Vetch. The Bacterium of the Broom is like a well-formed comma; that of the Gorse a badly formed comma; and that of Lucerne like a point of exclamation.

Meister, Lucius and Brüning, and other enterprising Germans have begun to cultivate these organisms, collectively termed nitragin, and to offer them for sale commercially. Many experiments have also been carried out in England, on the land of Mr. Howard Ryling, as well as that of Messrs. Sutton and Sons, Reading, with whom nearly the whole of the trials have given favourable indications of the utility of seeding the land with these organisms. The experiments are to be repeated. The ground must be inoculated before sowing, or the seed itself must be inoculated and then sown, because the

nodules are formed in the early stages of the host plant. To complete this form of manuring, phosphates and potash must also be supplied. Something very important will have been gained if nitragin enable the farmer and gardener to grow leguminous crops in many successive years upon the same land. Cultivated plants of themselves are unable to utilise the free nitrogen of the air; and its combination can only be effected by electricity either during thunderstorms, or by artificial means. These organisms (nitragin) can accomplish it at the ordinary temperature of the soil; the study of how to turn them to practical account should, therefore, be fostered and encouraged.

Lilies of the Valley are much in request for forming bridal wreaths.

Monifieth Nurseries.—No 681 of THE GARDENING WORLD will contain an illustrated article dealing with these nurseries.

Our Bulb Number.—By a printer's error our last issue was marked No. 1, instead of 679. Subscribers will kindly note this.

Oranges to the extent of 1,000 cases are to be sent to Europe by way of experiment by the New South Wales Board of Export. They want to test whether they can be sent as ordinary cargo.

Dr. R. Hamilton Ramsay entertained the members of the Torquay District Gardeners' Association to dinner at his residence, Duncan House, on the evening of Wednesday, September 1st. Between fifty and sixty attended.

Little Johnny's Essay on the "Fall."—"Adam and Eve lived in a big garden. Eve left Adam one day, and ate an Apple, and then gave some Apples to Adam, and Adam 'ad 'em! But the Apples were bad ones, for they made Eve ill; and through this eve-ill the human family has lived unbappily ever since."—*Scraps*.

Mr. William Coomber.—We are pleased to learn that Mr. William Coomber, who for so many years acted as Superintendent of the Royal Botanic Society's Gardens at Regent's Park, has been appointed gardener to Lord Grey de Wilton at Houghton Hall, Swaffham, Norfolk, and we hope that Mr. Coomber's great knowledge and skill will there receive the recognition it deserves.

National Chrysanthemum Society.—The early autumn three days' exhibition of this society was held, as usual, at the Royal Aquarium, on September 7th, 8th, and 9th. There was a good gathering, the greater part of the body of the hall being filled with the various exhibits. Early Chrysanthemums were well-represented, and Dahlias were present in great numbers. Gladioli were also good. The pressure on our space, due to the number of shows which have taken place in various parts of the country during the past ten days, prevents a full report appearing in this week's issue. This, however, will find a place in next week's number.

Dutch Horticultural and Botanical Society.—At the meeting of the floral committee of this society on August 14th, First-class Certificates were awarded to Mr. C. G. Van Tubergen, Jun., of Haarlem, for Cactus Dahlias Bridesmaid, Cycle, Fantasy, and Starfish; to Messrs. E. H. Krelage & Son, of Haarlem, for Gladiolus *gandavensis* Weisse Dame, G. Lemonei Henriette Renan, G. nancieanus Colonel Gillon, and Lygodium japonicum; and Mr. K. Wezelenburg, of Hazerswoude, for Glyceria spectabilis fol. var. Certificates of Merit fell to the lot of Mr. C. G. Van Tubergen, Jun., for Canna Ami Jules Chrétien, C. Vice-President Luizet, Cactus Dahlia Cinderella, and Kniphofia Surprise, *Nov. hyb.*; to Mr. Phil Henkel, of Hilversum, for Heliotropium Madame René André; and to Mr. K. Wezelenburg for Tamarix Odessana. A botanical Certificate was awarded to Mr. J. H. Schrober, of Pulten, for Oenothera tetraptera. Messrs. M. Van Waveren & Son, of Hillegom, showed a collection of seedlings of Gladiolus *gandavensis*, which received honourable mention.

Cobnuts and Filberts present a fine appearance this season, and nut-growers are expecting to harvest the largest crop known for years.

Apples and Pears promise to be an exceptionally good crop in Kent, as far as quality is concerned, but the trees are not very heavily laden, and Pears are even scarce in some of the orchards. The season for soft fruits has been good but short, owing to the hot weather. Strawberries did not command high prices, but other crops were satisfactory in this respect.

The Irish Potato Crop.—A Skibbereen correspondent says that the Potato crop in West Cork is in a bad way; also, in consequence of the continuous spell of damp weather, the grain crop has been seriously injured. From Mitchelstown come reports that Potato disease has appeared extensively in north Cork, and adjacent parts of County Limerick. It is likewise stated that there is a prevalence of Potato disease in County Donegal, so that, altogether, the outlook for the Irish cultivator is not very promising.

Foxgloves with a Regular Top Flower.—In reference to a note on this subject on p. 819 of last volume a correspondent writes from Tivoli, Coppoquin, Co. Waterford:—Mrs. Keane has had Foxgloves with the pot bloom of every plant bell-shaped for many years. Plants always come true to seed. She received the seed from a friend at Macon, in France, but it probably came originally from America, as the plant grows wild in some parts of California. The late Dr. Moore, of Glasnevin, when on a visit to Lismore, was much pleased with it and asked for some seed, which Mrs. Keane sent. The Foxgloves vary in colour from deep purple to pure white, and are large and very handsome.

The Royal Scottish Arboricultural Society.—The members of this association paid a visit to the woodlands and pleasure grounds of the Right Hon. Earl Fitzwilliam, at Coollatin, Co. Wicklow, on August 19th. The run by rail to Shillelagh, through a country of great natural beauty and historical interest was much enjoyed by the party. The visitors were piloted over the earl's estate by the agent, Mr. F. Brooke, the gardener, Mr. Whytock, and the forester, Mr. Jobstone. They were entertained to lunch by his lordship in the Town Hall, Shillelagh. A balt was called at Ballybeg, where is much fine timber of Oak, Beech, Silver Fir, and Larch, and also a fine park, the property of Major G. G. Newton, J.P. On the following day the party visited St. Stephen's Green, Merrion Square, the University, and Botanic Gardens at Dublin, and Carton, Co. Kildare.

Loughborough Horticultural Society held its fortieth annual exhibition at Elms Park, on August 21st. The cut flowers were in distinct advance of last year, and vegetables were of high quality. A new feature of the show was the competition in which Messrs. H. Cannell & Sons, of Swanley, Kent, presented £6 in prizes and a championship belt. This was to be competed for by horticultural societies in Leicestershire and Derbyshire. The exhibits were to consist of ten kinds of vegetables, six distinct varieties of bardy fruit, and a stand of annuals or other outdoor grown flowers arranged for effect. Only three societies entered, Loughborough being first, Hugglescote second, and Sibley third. The fine specimens of Cauliflowers, Potatoes, and Carrots, staged by the Loughborough Society, went a great way towards deciding the awards of the judges.

A Nursery of great Gardeners.—On Saturday, August 28th, Mr. Asquith, M.P., opened a flower show at Tayport. In an interesting speech, he said he believed that it was a truism that the love of flowers both in their wild and cultivated states was as intense, and as common in Great Britain as in any other country in the world. It was certain, moreover, that in no part of Great Britain had the taste been more remarkably developed than in Scotland, which had been and still is training ground and nursery of many of the great gardeners of the world. An exhibition such as he was about to open, continued Mr. Asquith, did not represent merely the endeavour of a comparatively restricted body of experts who surpassed one another in technical processes or in a particular trade, but was rather the outcome of the expression of an instinct spontaneous in its nature, and universal in its diffusion throughout the length and breadth of Scotland.

A weed indeed.—An American contemporary recently described *Plantago major* as foremost among those pests which encourage backache, and foster ill temper and profanity.

Mr. Chas. Hott gave a practical demonstration of the summer management of fruit at St. Agnes on Thursday, August 26th. Several gardens were visited by the party, and the lecturer very clearly explained the manner in which the trees should be pruned. A lengthy list of the best dessert and cooking Apples was given. A goodly number of gardeners attended.

Tropaeolum speciosum.—At Brucklay, Aberdeenshire, this showy climber does not seem to have moved a foot from where it was growing ten or twelve years ago. Nor has it been liberally fed with manure, as in the case mentioned by Mr. J. C. Stogdon last week. It was planted against the wall of a house, and a gravelled walk comes close up to it, thus preventing all escape from its well-trodden root-run. It is still in full bloom and apparently happy.

Tea Roses at Aberdeen. — Recently we stated that Messrs. Adam & Craigmyle, Aberdeen, secured the premier award for Tea Roses at the annual show there. They had some very noteworthy blooms in their stand, including the pure white *Souvenir de S. A. Prince*, the deep yellow *Amazone*, and that beautifully formed white Rose, *The Bride*. Very good in every respect were *Madame Charles*, apricot-yellow; and *Madame Hoste*, white. All these were very creditable after the wild season experienced in Scotland during the past summer.

Wintry weather in the North.—Ben Nevis is already mantled with 6 in. of snow. In the inland districts of Aberdeenshire, between Ellon and Auchnagat, many of the fields of Potatoes were blackened with frost on the morning of the 4th inst. Though the morning opened fine, it began to rain heavily about mid-day, and continued for two days, after which there was a cessation, to be renewed about mid-day on Monday last. The breeze on Saturday soon rose to a gale, putting a stop to harvesting operations, and making locomotion difficult. Low-lying fields of Potatoes at Inverkeillor, south of Montrose, also show how general the frost has been.

Buchlyvie Gardeners.—The thirteenth annual exhibition of the Buchlyvie Horticultural Society was held in the Public Hall, Buchlyvie, on Saturday, 28th ult. The show, although not so large as last year, was considered very good, taking into consideration the cold spring and backward season. Pot plants were very good; cut flowers were a feature of the show, and compared favourably with other local shows in the neighbourhood. Vegetables were good, especially Onions and Leeks. The African Marigolds, Comet Asters, and Carnations exhibited by Mr. Cross were good; also the Dahlias exhibited by Mr. McPhail. A feature of this show was a neat exhibition stand of Ichthemic Guano, manufactured by Mr. William Colchester, Ipswich, England, and exhibited by the local agent, Mr. Alex. Cross, and hopes are entertained that its use as a fertiliser will be proved in the district next year.

Petite Culture.—It is now a number of years ago since Mr. Gladstone advised farmers to grow fruit and flowers, and his advice has been proved good by a letter recently received by him from Mr. R. H. Bath, of Wisbeach, Cambridgeshire. The letter is as follows:—

"Dear Sir,—Some years ago, in a speech made at Hawarden, you suggested that under certain conditions farmers should devote a part of their land to the culture of fruit and flowers. I am pleased to say that I took your advice, especially with regard to flowers, and that for the past three years, although I have largely increased my growth, I have received many more orders than I have been able to supply. You will, I am sure, be pleased to hear that I send cut flowers to dwellers in our large towns at a cost to them of something like fifty per cent. under what they formerly had to give; also that I am able to pay my workpeople twenty per cent. higher wages than they used to receive when the land was worked for purely agricultural purposes. In addition to this I put by a very substantial profit for myself."

THE GARDEN SALPIGLOSSIS.

As an annual for sunny sites there is, perhaps, nothing much more showy—when well grown—than the new and beautiful varieties of *Salpiglossis*

sinuata. It is, therefore, only in such seasons as we are passing through, that this brilliant South American subject can fulfil its highest floral mission. Sunshine, and sunshine accompanied by a high temperature, it must have; it is a *sine qua non*; and if, in addition, the soil be light, rich and warm, and the culture adequate, there is no reason why the result should not be of surpassing brilliance. But this can only be brought about by massing; as, in itself, the plant is of a slender habit, if not positively weak and weedy, so that to produce the desired effect a large bed must be in request.

Such a bed came under my notice the other day at Brook House, Chigwell, the residence of Mrs. Mildred, which the gardener, Mr. C. Skingsley, had well conceived. The colours were of the most glowing description and were variously mixed and blended. Moreover, these colours ranged from pale yellow to dark purple with many intermediate shades, while others affected stripes or lines, or were beautifully crossed or reticulated. The flowers are also of a soft metallic lustre, funnel-shaped, or campanulate in character, with five lobes and a long tongue-like style; hence its common name—which is merely a translation of its Latin one—viz., "*Scalloped Tubetongue*." Many other showy annuals are approved at Brook House, but here I must give the Palm to the large-flowered modern forms of *S. sinuata*.—*C. B. G. Acton, W.*

CARNATIONS AT KELSO-ON-TWEED.

IN the south and midlands the time of Carnations is now past and gone, but in the north good blooms are still being cut out-of-doors. A boxful of very bright flowers reached us on the last day of August from Messrs. Laing & Mather, Kelso-on-Tweed. A number of varieties was included, all of which do well across the Tweed, and some of them this side of it. Of these is *Haye's Scarlet*, still one of the best scarlet selfs in cultivation. *Duchess of Fife* bears a resemblance to *Ketton Rose*, but is slightly deeper in colour, and the petals are more fimbriated. *Mary Morris* is a rich rose, and a large flower with a stout calyx. *Lady Nina Balfour* is almost as large as a *Malmaison*, and has a large substantial petal. The colour is deep flesh pink. *Dundas Scarlet* is a grand free-flowering variety with flowers of large size, bright scarlet in colour, and invested with a stout non-splitting calyx. *Viscountess Hill* resembles the last-named variety in build, but is of deeper hue, and approaching crimson. It may be described as dull crimson-scarlet. *Queen of Bedders* is a very vigorous sort with deep scarlet flowers and petals having fimbriated edges. It should prove valuable as a hedder and thus bear out its title. A scarlet seedling that was also enclosed was rather a fuller flower, but not so good, the petals being small and too much inclined to curl. The colour, however, was very good. An old, and at one time, largely cultivated fancy variety was represented by *Terra Cotta*. The flowers exhibit a curious mixture of orange-yellow, rosy-red, and magenta. *Kelso Abbey*, another pretty fancy, is orange-yellow, thickly striated with heavy markings of rose-magenta. *Primrose League* was the best yellow ground submitted. The deep rose markings are very numerous, and give the flower a mottled appearance. Such a boxful of blooms as were these would delight any southern grower at this time of year.

JUDGING FLOWERS, FRUITS, AND VEGETABLES.

It is hardly possible to find two judges holding the same opinion on this subject! When more than one judge is appointed to each section of a show, the one that sticks most persistently to his opinion, and has the freest delivery in his conversation, generally gets the decision given in accordance with his ideas.

The opinions of the competitors vary just as much as the opinions of the judges. After a show is declared open, it is very amusing to go round the exhibits and hear them all judged over again by the competitors and their friends; in fact it is one of the attractions of the show. A gardener with three under him in the garden (only a woman and two boys) is quite indignant if his opinion is not accepted in preference to a gardener who has only one man under him. Another will give his opinion in that "decision-

shall-be-final" tone, and then goes away without hearing the opinions of others. This is the gardener from the great big place who has nothing to learn from anybody. Another who has no opinion of his own is always asking anyone he knows, how he was not first in this or that competition. Another will buttonhole you to hear him judge something all over again to his satisfaction but contrary to the decision of the judges.

All this misunderstanding amongst competitors and judges arises from the want of a few first principles in judging, and a standard of excellence for each competition being embodied in the schedule. For instance it might be stated that the nearer a vegetable stood to perfection for culinary purposes, the greater would be the competitor's chance of success, and judges would be expected to keep this principle in view in giving their decision. This is a fundamental principle often forgotten. The same principle should be stated for fruits, adding the words "and dessert" after culinary. The most beautiful should be the principle guiding the competitors and judges in plants and cut flowers; this principle is also forgotten at times. A standard of excellence should be stated for each of the competitions in flowers, fruits, and vegetables.

There is nothing that has given rise to more discussion than how to judge one miscellaneous group against another. For example, in the case of a collection of vegetables of any twelve kinds, you are told on every hand it can only be done by point judging. Let us examine what this point judging means. It simply means that a judge takes a certain number, say five, to represent high water mark in his estimation, and he goes over the collection and gives each dish of vegetables five points, or a less number, according to the position it holds in his estimation; he then adds them up and the total is the estimate of the collection as a whole. He then passes on to the next collection and it may total the same number of points, but he is not done yet. This collection contains two or three vegetables of a different kind from the other collection, so he examines them on what he calls their "relative value," and he says something like this. "An Onion goes before a Leek" or a "Beetroot before a Carrot" or a "Cauliflower before a Cabbage," and gives additional points to one or other of the collections, and so places one or other of them first. The anomaly of judging one variety against another is great enough, but when we have subjects not even belonging to the same natural order competing against each other it is an absurdity. The only condition in which miscellaneous groups can compete against each other is "for effect." Some schedules put it "for quality and effect," but the term "quality" in this sense is quite as absurd as the term "relative value"; in fact, it comes to the same thing. For instance one group of plants may contain a large percentage of *Crotons*; another a large percentage of *Pancreatiums*; and according to the predilection of the judge for *Crotons* or *Pancreatiums* the decision may depend. Who can say a *Croton* is better than a *Pancreatium*, a *Gooseberry* than a *Strawberry*, or a *Leek* than a *Savoy*? They are all good in their way, and should not be compared the one against the other, as it leads to no useful end. But a *Croton* against a *Croton*, a *Strawberry* against a *Strawberry*, and a *Leek* against a *Leek*, leads to the highest development of these respective subjects; and it is the only form of competition that should be encouraged.—*W.K.*

PEOPLE WE HAVE MET.

MR. DAVID WILLIAM THOMSON.

We have frequently had the opportunity of meeting this gentleman, and therefore have much pleasure in presenting our readers with his portrait. Mr. Thomson is the only son of Mr. David Thomson, late of Dumlanrig, and a nephew of the late Mr. William Thomson, of Clovenfords. He was born at Durhan Park, Herts, where his father then resided, and commenced his gardening career with him at Dumlanrig, where he stayed four years. His knowledge of nursery work was gained with Messrs. James Veitch & Sons, Chelsea, with whom he served for four years, making a practical study of the various departments of a nursery business.

The subject of our notice has now been in business for 21 years, and carries it on under the style and title of Mr. David William Thomson, at 24, Frederick Street, Edinburgh. He has been closely identified

with the Royal Caledonian Horticultural Society for the last 20 years, being now senior member of the council. His attention to the arrangements for the shows is unremitting, and such is his faculty of making himself respected amongst his neighbours, and all with whom he comes in contact, that he is popular wherever known. During his long career he has been a very active and very successful exhibitor, though latterly he has given less attention to it. His nursery is situated at Windlestrawlee, Granton Road, and is most extensively devoted to the cultivation of forest trees.

MR. JOHN LESLIE.

IN Mr. Leslie, gardener to A. Coates, Esq., Pitcullen House, Perth, we have a most successful competitor at several of the most important shows in Scotland. Time prevents us from entering into a detailed history of Mr. Leslie's career, so for the present we must be content to record some of his last year's successes as an exhibitor.

At the September show of the Royal Caledonian Horticultural Society last year he took the leading honours for six and four bunches of Grapes; and had the special prize for a bunch of Black Alicante, weighing 13 lbs. 6 ozs. Later on, at the Chrysanthemum Show, held under the auspices of the Scottish Horticultural Association, he secured four leading prizes for Grapes. He again scored well at the September show of the Dundee Horticultural Society last year, taking the first position for four



MR. DAVID W. THOMSON.

though then under twenty years of age. He stayed for three-and-a-half years, and after leaving was extensively engaged in London, and elsewhere, in landscape work for four years.

After that time he was engaged to go as landscape gardener to Balbirnie, Fifeshire, the beautiful seat of John Balfour, Esq. Here he remained for ten years; and during that time competed extensively with collections of fruits and vegetables in the leading classes at the shows of the Royal Caledonian Society, where he won 170 prizes at the spring, summer and autumn shows.

He was then asked by the then Duke of Marlborough to undertake the management of the gardens at Blenheim, Woodstock.

After some years of active service there, he was engaged to lay out the park, ornamental grounds, and gardens at Impney Hall. While here he was under the supervision of the late Mr. Marnock, who gave him a special certificate. After he had completed his engagement of seven years active service at Impney Hall, Droitwich, he was engaged to form the pleasure grounds, plantations, and extensive glass erections for the late Sir T. D. Brodie, Bart., Carron House, where he has been for the last fifteen years. He has had twenty years experience as an exhibitor in England and Scotland, but has not entered the field since he came to Carron House. As a judge at flower shows he is in great request, and owing to pressure for time, has to refuse many invitations.



MR. JOHN LESLIE.

Park, Falkirk, Stirlingshire, for nearly twenty years, with credit to himself, and much satisfaction to his employer, W. Forbes, Esq.

MR. M. TEMPLE.

Mr. M. Temple (see portrait), gardener at Carron House, Falkirk, Stirlingshire, is well known to readers of THE GARDENING WORLD as a contributor to our pages of notes relating to Scottish gardens and various other matters of horticultural interest.

He is a native of Fifeshire; and after serving an apprenticeship to gardening and forestry, was sent as a journeyman (at sixteen years of age) to a well-known garden near Dublin. The following year he went to London, where he was employed in the Orchid houses and plant stoves, in the nurseries of Messrs. Hugh Low & Co., Clapton. He spent a season in the glass department of an extensive market garden establishment, after which he was employed at Wrotham Park, near Barnet, under the late Mr. W. Thomson (late of Clovenfords), who sent him to Rood Ashton, Wilts, as general foreman,



MR. MUNGO TEMPLE.

and one bunches of Grapes. At the Glasgow September show of last year he carried off the leading prizes in four classes for black and white Grapes, the latter including Muscats. This feat he practically repeated at the Glasgow Chrysanthemum Show. Mr. Leslie's *forte* would seem to be as a Grape cultivator.

MR. THOMAS BOYD.

IN Mr. Boyd (see portrait) we have an exhibitor of long standing, who has not yet given up the contest to his younger rivals. He has been an exhibitor of fruits for over thirty years at the shows of the Royal Caledonian Horticultural Society. In the Grape classes, and with collections of fruits, he has been a most successful prize-taker. Valuable cups and other high-class awards have been amongst Mr. Boyd's victories. The Veitch Memorial prize was taken by him at the International Exhibitions held at Dundee and Carlisle.

The Grapes with which he has been most successful are Muscat Hamburg, Lady Downe's Seedling, Alicante, and Black Hamburg. These Grapes in Mr. Boyd's exhibits have always been noted for their excellent colour and the fine form of the bunch. He has only competed once during his long career without receiving at least one first prize.

He has managed the fine gardens at Callendar



MR THOMAS BOYD.

Gleanings from the World of Science.

THE undermentioned subjects were brought before the Scientific Committee of the Royal Horticultural Society on the 10th ult.

Vine Leaves Defective.—Mr. Ch. Pearson, of Chilwell, Notts, sent some Vine leaves, which appeared to have decayed prematurely. No fungus was present, and their defective appearance was attributable to too high cultivation, guano being freely used with great heat, and too much water, such being quite consistent with their appearance.

Chrysanthemum Leaves Attacked by Grubs.—These were received from Mr. Jenkins and were forwarded to Mr. McLachlan, who reports "that the grubs are very young larvae of the 'Silver Y Moth' (*Plusia Gamma*). It will attack almost anything. They should be destroyed by hand-picking." The caterpillars are doing considerable damage to the Chrysanthemums.

Green-flowered Cross-leaved Heath.—Dr. Masters showed specimens from Kew of this unusual condition. It resembles the "wheat-eared" Carna-

tions sent to the last meeting, and consists of an abnormal repetition of ciliated bracts; the flower in the centre having been arrested in consequence of an attack by some grub.

Pelargoniums Decaying.—Examples of the varieties "Vesuvius" and "West Brighton" were shown, which had decayed from the collar upwards. It was attributed to too deep planting. They had large roots, and had been apparently quite healthy when planted, some being over two-year-old plants.

PLANTS RECENTLY CERTIFICATED.

THE awards mentioned hereunder were made by the Royal Horticultural Society on the 24th ult.

Orchid Committee.

GRAMMATOPHYLLUM SPECIOSUM.—The magnificent spike of this plant exhibited by Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White, Burford Lodge, Dorking), measured $7\frac{1}{2}$ ft. in length. There were two flowers near the base of the peduncle consisting of four segments each, arranged cross-wise, with a straight column and an aborted lip in addition. These were followed by three bracts having aborted flowers in their axils. Higher up were twenty-seven fully expanded flowers and about twenty-four or more buds. The sepals and petals are thickly blotched with brownish-crimson on a yellow ground. The lip is always small. It had not flowered in Britain for many years previously. The two lowest flowers had already been expanded for twenty days previous to the 24th August. First-class Certificate.

LAELIOCATTLEYA ANDREANA. *Nov. hyb. bigen.*—The seed parent of this bigeneric hybrid was Cattleya bicolor, and the pollen bearer Laeliocattleya elegans. The sepals and petals are of the faintest blush-lilac, deepening to purple at the very base. The side lobes of the lip are white externally and blush internally, while the terminal lobe is transverse, narrowing downwards into a long, broad claw, and of an intense crimson purple, with a white edge. Award of Merit. R. I. Measures, Esq. (gardener, Mr. H. J. Chapman), Cambridge Lodge, Camberwell.

LAELIOCATTLEYA JUNO. *Nov. hyb. bigen.*—This originated from Cattleya Mossiae, crossed with Laelia majalis. The sepals are of a soft purple, tinted with apricot. The petals are broader, oblong, and of a deeper purple, tinted with apricot towards the base. The lamina of the lip is intense purple, deepening to crimson towards the base; the throat is pale orange, lined with purple, and having a triangular-shaped purple band running down the tube where the arms join. The hybrid is intermediate between the parents and very distinct. Award of Merit. Norman C. Cookson, Esq. (gardener, Mr. Murray), Oakwood, Wylam-on-Tyne.

GOODYERA ROLLISSONII.—Like the rest of its congeners this is a fine foliage plant. The leaves are ovate and dark velvety-olive, with yellow or old gold edges of irregular width, and sometimes striped along the centre. Award of Merit. Mr. Wm. Bull, 536, King's Road, Chelsea.

Floral Committee.

FICUS RADICANS.—Some weeks ago this received an Award of Merit, and when again brought up on the above date was accorded a First-class Certificate. The leaves are silvery-white with a central green blotch of irregular size. Plants established in small pots produce long, slender, and gracefully drooping lateral shoots. It will make a useful plant for groups and other decorative purposes. Mr. Wm. Bull.

DAHLIA AMBER.—Choice and striking is this Cactus variety, having long pointed florets of a yellow hue, and tinted with pale orange-red, suggesting an amber tint. Award of Merit. Mr. James Stredwick, Silver Hill Park, St. Leonards.

DAHLIA NIGHT.—As the name would suggest, this is very dark, being of an intense blackish-maroon and velvety. It belongs to the Cactus section. Award of Merit. Mr. James Stredwick.

DAHLIA HYPATIA.—Here we have a very small and neat pompon of a salmon colour, with a yellow centre, due to the tips of the unopened florets being of that hue. Award of Merit. Mr. C. Turner, Slough.

DAHLIA VESTA.—The blooms of this pompon are

also very small, neat, and pure white. Award of Merit. Mr. C. Turner.

DAHLIA PHRYNE.—The small and pretty blooms of this pompon are yellow, with broad orange-scarlet edges to the florets. Award of Merit. Mr. C. Turner.

Fruit and Vegetable Committee.

MELON FROGMORE SCARLET.—The fruits of this Melon are oval, pale yellow, netted with gray, and vary from 6 lbs. to 8 lbs. in weight. The flesh is of great depth, very juicy and of a deep red. The variety has a clean and handsome appearance. Award of Merit. Her Majesty The Queen (gardener, Mr. Owen Thomas), Windsor.

TROPAEOLUM SPECIOSUM.

IT was my privilege to behold a few days ago in a garden in Surrey, several very fine specimens of this lovely Flame Flower in full bloom; and gorgeous and lovely they were. It was doubly interesting to me because I know that for several years efforts have been made, and not always with success, to establish this fickle subject in this particular garden. One nook formed by the projecting porch over the front door was particular gay, and my friend informed me that the roots were never disturbed; and the fact that the plants in this corner I mention were planted twelve years ago, at the time I was employed there, bears out, I think, the opinion of my friend that once established they are best left alone. I hardly know whether I admired those trained to the wall most, or others planted in a Rhododendron bed, which were making a gay patch of colour here and there upon the green foliage of their supporters. Being allowed to grow as they please, the slender growths had rambled up through the Rhododendrons, and in graceful trails or carelessly disposed bunches showed a profusion of bloom artistically displayed.—A. P.

The Orchid Grower's Calendar.

THE advice given in these notes a fortnight ago respecting the probable necessity of using fire beat rather earlier than usual, even in the cool houses, has unfortunately proved true; for more cheerless weather could hardly be imagined than what we have experienced this last few days.

VANDAS.—Just now the species of Vandas have gone completely out of fashion; why it is I suppose no one could tell, unless it is that they are rather tall growers and take up more room than do Cattleyas and the like. A well grown specimen, however, is an object not easily beaten. We have grown a good number now for some years with the Cattleyas, and while it is somewhat difficult to keep the foliage on down to the pot, there is no doubt of their floriferousness, for they are nearly always in flower. The summer spikes have now been cut, and the plants immediately show their appreciation at being relieved by pushing out numerous roots all up the stems.

As some of them have become a little leggy we shall cut them down forthwith. Most of our plants of *V. suavis* have several young breaks at the base, which will be left to make—as they will do—fine specimens. The bare stem of the centre piece is then shortened, so that when potted the bottom leaves will be just above the rim of the pot and as nearly as possible resting on the moss. I should mention that for at least a month the plants should be put in crocks alone. This admits of plenty of moisture being afforded, which, of course, promotes quicker root action. When it is seen that this has taken place, a layer of moss may be placed over the crocks, which should be almost level with the top of the pots. A gentle sprinkling through a fine rose pot will keep the moss alive and prevent any loss of the lower leaves.

ANGRAECUMS.—These we treat in a similar manner to the Vandas, but only in cases where they have got very unsightly it is necessary to have recourse to this system with *A. sesquipedale*. The smaller growing kinds, however, do not mind being lowered if it is done with proper care. So much depends on the after treatment of plants so disturbed whether you are to succeed or not.

Those plants that have been operated on should, if possible, be placed together in the shadiest part of the house, where they can be properly looked after,

as leaving anything to chance will almost certainly result in failure.

CATTLEYA HOUSE.—We have just now in flower the shy-blooming *C. speciosissima*. Our plants have been growing up close to the glass at one end of the house where the blind does not quite cover. The glass was whitewashed over, but the storms have washed it almost quite clean, so that the plants have been for some time almost fully exposed to the sun. The result has been short leaves and thick ones with broad sheaths and brilliant flowers.—G.

VEGETABLE CALENDAR.

CABBAGES.—These are one of the most important crops for autumn planting, and one that can be forwarded considerably by making a good start at the present time. The first thing to aim at is the securing of strong, stocky plants capable of resisting the storms and changes of temperature during the winter months. This can only be obtained by pricking out the young plants as soon as they are fit to handle, 4 to 6 ins. apart, in a well-prepared bed in a sunny position. Here they will soon gain strength, both in stock and leaf, while at the same time they form a mass of feeding roots close at home, and may be transferred to the permanent bed without much check, as every plant may be lifted with a nice ball. Where transplanting has not been done it will be necessary to thin the plants in the seed bed, taking out the weakest to help in the development of the best plants.

The next, and an equally important point in the production of an early crop, is the preparation of the permanent bed. Where the land is of a heavy nature a thorough dressing of rather long, but well-saturated, manure should be well-worked into the ground to keep it open and prevent too great cohesiveness during the winter season. With lighter land well-rotted manure will be preferable. In each case the ground should be "bastard" trenched to let free superfluous rains and give a good root run, for the heat of early summer often proves trying to this crop. A small bed on a south border, or under a fence, selecting a few of the strongest plants, would give a few heads a week or two in advance of the main crop.

DWARF BEANS.—Crops of these sown in frames, as advised, should now be well-advanced, and it will be advisable to cover them during cold nights to prevent the plants getting a chill. A slight top dressing would assist in pushing on the plants, and a few supports should be put to them to prevent them from rocking at the collar. Another crop may be sown in boxes at once, and the plants, as soon as up, potted singly into 60 sized pots. These will come in useful, either for potting on or planting out in heated pits and frames as soon as they are cleared of Melons, or Cucumbers, and will carry on the supply well into December.

LETTUCES.—It will be necessary to carefully watch any now nearly full-grown, and a tie should be placed around them to prevent injury from high winds. Where strong plants are in hand in seed beds, a good planting may be made in frames, orcbard houses, and other positions where they will get protection from storms. Borders should also now be prepared for planting out the hardier kinds of Bath Cos and some of the best winter kinds of Cabbage Lettuce. The latter may also be largely planted in groups of from 3 to 5, and when well-established can be covered with bell glasses or other protectors.

CELERY.—As this is not likely to suffer from drought again this season, every favourable opportunity should be taken to advance the earthing up. A good watering with nitrate of soda before earthing would give greater vigour and add materially to the weight of the heads, as the plants will keep growing for some time yet.

ROOT CROPS.—It will be advisable to lift all Potatoes that are ripened before they have time to superterate after the heavy rains. Turnips full grown will last longer stored than in the beds during this weather, as they rapidly outgrow a useful size. Onions must be got under cover to secure the final ripening process. These should be frequently turned, but where the time can be given they may be roped at once, and in this way a quantity can be stored in positions above other crops. It is important to store the Onions in a cool airy place.—J. R.

HINTS FOR AMATEURS.

Retarding Lilies of the Valley.—Most amateur gardeners know of the practice so commonly put in force of forcing Lilies of the Valley for the purpose of supplying cut flowers at various seasons of the year, but to many of them the idea of retarding the plants with a view to the more easy timing of the period of blooming comes as a surprise. Two or three amateurs to whom we have mentioned the fact received it in this way, and the return question invariably was "how long is it since such a system was invented." For the benefit of our readers who are of the same mind it may be stated that the idea is not a new one, although it is only of late years that it has been put into extensive practice. Even now it is not at all common, and, to quote the words of an eminent grower, is not generally understood, and less believed in by the amateur gardener.

The whole subject is a most interesting and important one—interesting because it is a break away from the methods of culture usually employed, and important because the results thus obtained are brilliant successes. An article on the forcing of Lily of the Valley that appeared in the last issue of THE GARDENING WORLD gave the method of quick forcing, but did not deal with the question of retarded crowns. Now a very little thought will convince one that under ordinary conditions it would not be possible to have Lilies of the Valley in bloom all through the year, for while the crowns or clumps would remain dormant through the winter and early spring, if placed in cold frames, just as their relatives out-of-doors do, they would break into growth with the advent of the warm weather, and no amount of shading or of keeping cool in the ordinary way would prevent the flowers from opening. By placing the plants in a frame having a north aspect, airing them freely, and keeping them shaded from all the sun's direct rays an extension of a few weeks in the flowering period may be obtained. The remainder of the summer would thus be a blank. In September and October again it would not be possible to get ordinary crowns in bloom, for they would not have completed their growth in time.

Here it is that the retarding process proves itself to be of such value, and it is by taking advantage of it that modern cultivators have been able to do such great things with the popular Lily. Writing on the subject quite recently, Mr. T. Jannoch, of King's Lynn, Dersingham, Norfolk, our largest, and one of our most successful cultivators, said:—"As in most things connected with horticulture, Nature has here taught us a lesson. I, for one, took Nature as my guide, and yet, 25 years ago, when I mentioned to an eminent horticulturist that horticulture was quite in its infancy, and that what we accomplished by heat then would one day be done by cold, I was laughed at. My words have already come true to a certain extent, but this is only the commencement. Every plant that has a natural period of rest may be retarded, and already we are treating in this way Liliums, Spiraeas, Lilacs, Gladioli, and hosts of other things, besides Lily of the Valley."

Mr. Jannoch grows an enormous quantity of Lilies of the Valley, and retards the crowns by placing them in a huge refrigerator, from whence they are taken as they are required. The refrigerator is opened as seldom as possible for obvious reasons, the 1st and the 15th of each month being the days set apart for so doing. In the summer and autumn months there is absolutely no skill needed to obtain bloom from these crowns. All that is required is to pot or box them up as soon as they have arrived at their destination. No artificial heat of any kind should be given, particularly bottom heat. Do not keep them in the dark, but expose them to the full light at once, no matter whether they are placed in a frame, in the greenhouse, or in an ordinary dwelling room. In a space of two or three weeks, under ordinary conditions, they will have opened their flowers, and developed fine vigorous foliage, and this without practically any trouble at all, whilst the expense is not a very formidable matter.

In late autumn, winter, and early spring, when temperatures all round are very low, artificial heat will be a necessity, but even then it will be found that crowns which have been frozen for a time start away better than others which have not been subjected to the low temperature.

Very few amateur growers have the proper conveniences for freezing the crowns themselves. Those who can boast of the possession of an icehouse may easily do it, however, by potting up the crowns in the usual way, and simply storing them away in the icehouse, on the top of the ice. In their natural condition all Lilies of the Valley growing outside must be frozen through and through during periods of frosty weather, and the degree of cold which they are called upon to bear must in the majority of cases be much greater than they would be subjected to in the icehouse, for the clumps lie close to the surface of the soil—a fact which any amateur may easily verify for himself. When the ground is covered by a coating of snow, on the other hand, a sort of blanket is spread over the plants which shields them from a good deal of the rigour of the cold.

In a few words, therefore, the system of retarding may be summed up. It is but taking advantage of the fact that the plants need an annual rest, which is given to them in the course of nature during the winter time, when low temperatures prevail. During this stage in their life's history the plants are capable of withstanding easily enough a degree of cold that would kill them at any other time. The skilful gardener steps in, and simply lengthens the resting period, by extending the conditions that are associated with it, and which in reality have caused it. While it would not be possible to keep the crowns in a dormant state for an indefinite period in the same way as the fabulous mummy wheat, still no evil results accrue from a moderate extension of the resting period such as Mr Jannoch and other growers induce in the cases of the Lily of the Valley, and the other plants which have been mentioned.

Before leaving the subject of the discussion we may with advantage speak of the value of the plants for decorative purposes after they have been forced into bloom. At this stage they may be easily transferred from the pots or boxes in which they have been forced, and employed to fill ornamental receptacles of all kinds. They should be gently shaken out of the soil and replanted in cocoanut fibre. In this way the dinner table may be made to look magnificent. A capital plan that we have seen adopted with marked success is to procure cone-shaped wire cages of about a foot in height. These may be lined with moss and filled with cocoanut fibre. The bottom should consist of a piece of board cut to fit so that the rim of the cone at the bottom rests on and is supported by the board. In such a contrivance the dormant crowns may be placed if desired, and forced thus. This plan, however, has the disadvantage that the plants all draw up straight, and thus we prefer to force the crowns in the ordinary way and furnish the wire frames with them afterwards. This idea may furnish individual taste with hints for other contrivances for dwelling room or table decoration. Hanging baskets, similarly furnished, will at once suggest themselves to some of our readers as likely to be effective. We remember only to have seen one of these, but it was at least a marked success, and the wonder is that the idea has not been extensively copied. Probably it arises from the fact that not a few think that Lilies of the Valley, Hyacinths, and other forced flowers of that class will not transplant. We trust that such persons have by this time found out their mistake.—*Rex*.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Lilium auratum.—A bulb of *Lilium auratum* that is growing in a border along with a miscellaneous collection of plants has this year produced a large head of rather small blooms, there being no fewer than ninety-three flowers on the one head. Is this a common occurrence? The bulb when purchased was a large one, but not larger than some others which have borne only five or six flowers.—*Uriah Heep*.

Fasciation of the flower stem, such as has occurred in this case, is comparatively common in *Lilium auratum*, for scarcely a season passes but we hear of several instances. Ninety-three flowers seem a lot to have on one head, but it is not by any means the record, as we occasionally hear of heads carrying well into the second hundred of flowers.

Solanum jasminoides is a native of South America, *Quercist*, having been introduced from thence in or about the year 1838. It will make a capital rafter or pillar plant for your greenhouse.

Lifting Chrysanthemums.—*F. N. O.*: You may, if you wish, lift Madame des Granges Chrysanthemums from the open and pot them up for the greenhouse with perfect safety. Keep the plants closely shaded for at least a week after lifting. All early-flowering Chrysanthemums may be treated in the same way, but it rarely pays to treat the later flowering ones thus.

Celsia Arcturus is the name of the plant, a specimen of which you send, *Geo. W.* It is a very pretty and easily grown greenhouse plant, and a native of Candia. Propagation is easy enough. Seed sown in heat in spring will produce plants which will flower the following autumn. Cuttings of the young growths also strike freely. These may be taken now. Put four or five of them in a thumb pot, and plunge in a gentle hotbed. When rooted, pot the little plants off singly into thumb pots, which size will carry them through the winter until spring, when a further shift may be given. Use a mixture of equal parts of loam and peat with sand. Small flowering specimens in 60-sized pots are better and more useful than larger ones.

Freesias.—*M. F.*: If the leaves of the Freesias are beginning to show above the fibre it is quite time they were uncovered. An inch of fibre was too shallow a covering; we should have given at least 2 in. or 3 in.

Ardisia crenulata alba is not so frequently grown as the type, *S. Hardy*, but you may give it the same treatment. For our own part we think the red berries of the species more handsome than the white ones of the variety, but tastes differ.

Chinese Primulas.—Please tell me why my Chinese Primulas are looking yellow. They are standing in a cold frame facing to the south, and on a bottom of ashes. The plants appear healthy but for the yellowness of the foliage.—*Charles Osmond*.

We think the plants have been too much exposed to the sunlight, and that this is the cause of the yellow foliage. You must keep them lightly shaded on bright days until the end of the month. You do not say anything about manures, but we assume you are not giving any to them yet. The soil will be quite rich enough for the present.

Tomatos.—*James C.*: Cut off the tops of the plants, and remove portions of the leaves where they are shading the fruit. In the two or three weeks of September during which we hope to be free from frost the fruit should make considerable progress. Outdoor Tomatos are at the mercy of the weather, and you must do everything both by stopping the growths, and by feeding to hurry the fruit along.

Plums.—*Marrow*: We consider it a waste of valuable wall space to plant Victoria Plums against a south wall. The site is too hot and dry, and we are not surprised that you complain of the fruit being mealy.

Stacking Loam.—*Nathan*: The turves should be stacked with the grassy side downwards. If desired a layer of fresh cow manure may be placed at intervals. When the stack is completed put over it some cover calculated to throw off the rain. Loam thus stacked will be fit for use in a year.

Berried Solanums.—I purchased a number of seedlings of the common berried Solanum and planted them out of doors at the beginning of the summer. They have flowered, but there are no berries on them. Will it be any use lifting them in the hope that they will produce berries after they have been potted up.—*Anxious*.

You may lift the plants about the middle of the month if you choose, but if they have not set berries already it is rather problematical as to whether they will do so this year. Both *Solanum Capsicastrum* and *S. Pseudo-capicum* may be raised from seed easily enough, but such seedlings do not all fruit equally well, and hence when you depend upon seedlings to furnish a stock of berried plants, it is advisable to plant enough of them in order that you may be able to select those most freely berried.

FLOWER GARDENING NOTES.

For years I have perused with interest and enlightenment, the notes from the pen of Mr. M. Temple. I quite agree with his remarks on the above (p. 741). Years ago it was all scarlet, purple, and yellow in the flower garden, something glaring; nothing quiet and subdued. Then that abomination, carpet bedding, came to the fore. It was rightly named, but it was anything but a "velvet pile" for those gardeners that were expected to carry it out with a limited staff and glass accommodation. The plants it required was enormous; thousands in one bed, and a constant labour of trimming to keep the pattern; and the result was as though the bed was covered with a rug from Maple & Co. Happily, that has had its day.

I can quite see those combinations mentioned by Mr. Temple at Dalkeith, Archerfield, and Dysart; they were quiet and beautiful, not loud and glaring. About twenty years ago I saw a large bed at Sundridge Park, Bromley, which I thought was very pretty. It consisted of *Pelargonium Manglesi*, and a good dark *Heliotrope* planted alternately.

After I had penned the above, I saw Mr. J. Mayne's "Flower Garden Notes," and have no doubt that his combinations look very effective, but perhaps he will pardon me for saying that I think

TOMATO LAIRD'S SUPREME.

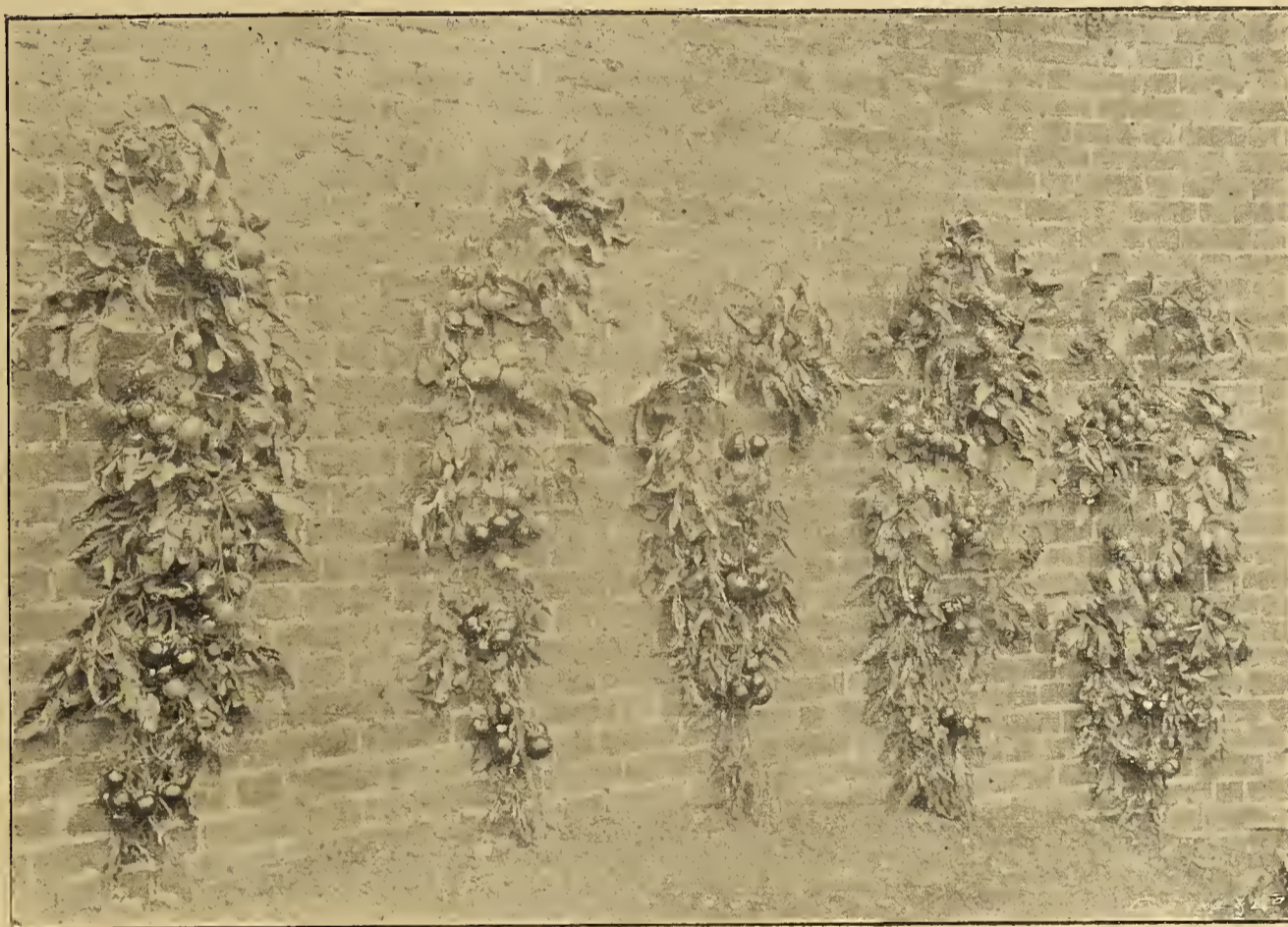
The accompanying illustration will serve to give an idea of the fruitfulness of this grand new Tomato. The parents were Stirling Castle and Trophy. As the latter has been well known and largely cultivated for many years description is unnecessary; but Laird's Stirling Castle may not be so well known to some of our readers, and we here mention its leading features. The fruit is of medium and uniform size, excellent flavour, solid, and of a beautiful, glossy, crimson-red colour. As a cropper, it has already given abundant satisfaction, as the clusters are large and freely produced. Quantity and quality are features that cannot be ignored, whether the fruits are grown for private use or for market.

Laird's Supreme possesses many of the good features of Stirling Castle, but takes more after Trophy in size, though not equalling it in that respect. In numerous trials by different people it has proved to be a free setting and extremely heavy cropping variety. Cultivators both in England and Scotland have spoken of it in terms of high praise. Everyone who has seen it has expressed wonder and surprise at the magnitude of the crop. The fruit is of great depth, a great desideratum in a Tomato; and the flesh being solid, it weighs well. Another recom-

destroy some of their best friends from want of proper knowledge.

I have met with scores of good practical men, with the merest smatter of the knowledge of systematic botany, who, so far as their cultural skill is concerned, would not have made better practitioners by being made most proficient botanists, who have at times cause to regret their deficiency in entomological knowledge, a little of which at times would be of immense service to them.

Some of the so-called entomological societies appear to confine their researches to the discovery of the rare and beautiful till, alas, they are in some districts becoming very rare indeed. Their members can tell you much about moths and butterflies, but just ask some of them the life history of an earwig, and you will soon be able to judge how far these societies are of service in matters horticultural. Young men engaged in gardening pursuits should in their own interest take this subject up, and make a study of those insects especially which are known as enemies, in order that they may be the better able to cope with them. Those insects, which from their flesh-eating instincts become friends by preying on those which are destructive to vegetable life, should also be carefully studied.



TOMATO LAIRD'S SUPREME.

the edging of *Pyrethrum* would have been more effective if replaced by a good *Blue Lobelia*. We have a large bed, which, I think, looks very well. It has ground work of Ivy-leaf *Pelargonium Galilee*, and dot plants of *Iresine Lindenii* allowed to run up without stopping. Another bed is composed of *Calceolaria amplexicaulis*, as ground work, with *Lobelia cardinalis* as dot plants, edged with *Koenigia variegata*. *Blue Lobelia* would have made a better edging, but it occupied that position in the adjoining bed. Another very good all-foliage bed is composed of a centre row of *Acacia lophantha*, flanked on each side by a row of *Abutilon Switzii*. The ground-work is composed of red *Alternanthera*, edged with golden *Alternanthera*. The last-named is a combination not affected by wind or rain. We have two large beds of tuberous *Begonias*, edged with *Poa trivialis variegata*, which look well now that the weather is cooler. They are now at their best. Two round beds of *Coleus Verschaffeltii* edged with *Mesembryanthemum cordifolium variegatum*, which would have been greatly improved by a good plant of *Centaurea candidissima* being in the centre instead of the standard *Rose* that occupies that position.—*Geo. Potts, August 31st.*

mendation is that the very juicy flesh is of a fine bright scarlet colour, while the flavour leaves nothing to be desired. Those who have seen it consider that it is invincible for market purposes. Moderate sized fruits of uniform size, together with quality, are desiderata both with grower and consumer. The variety was raised and is being put into commerce by Messrs. R. B. Laird & Sons, 17a, South Frederick Street, Edinburgh.

ENTOMOLOGY AND BOTANY.

THE too generally prevailing ignorance respecting the natural history of the many insects we are constantly meeting with in the course of our daily labour among plants and flowers is often a source of regret and sometimes of annoyance. A most essential equipment for those who take part in the battle of life is the ability to readily distinguish between friend and foe, and it is most unfortunate that so large a percentage of those engaged in the pursuits of horticulture and agriculture are almost profoundly ignorant, respecting the life history of the various insects they are constantly meeting with, and should frequently

One cannot help wondering at times what useful purpose many living things serve in the economy of Nature. A very familiar idea respecting insects in general is that they are a natural provision for the food of birds. This to a great extent is undoubtedly true, but what about slugs and snails? When will some great naturalist take this subject in hand, and clear it up for us in the same way as the work of the earthworm has been? Why are snails almost conspicuous by their absence in some localities, and at the same time found in large numbers within a stone's throw, without any apparent difference in the surroundings to account for it? Having had a closer personal acquaintance with them recently than I wish for, it seems to me that they prefer decaying matter to that which is fresh and green. Is it that they were designed to eat up such, and that man, having destroyed the balance of nature, has driven them to extremities, and so by preying upon the produce he rears for his own use they become his enemies? If this and some other allied subjects had been taught in our public elementary schools in the past in place of much of the so-called religious teaching, many of us would have been better prepared for the battle of life when we left them than we were.—*W. B. G.*

NOTICE OF BOOK.

FRUIT GROWING. By B. Wells, F.R.H.S., R.A.S.E., the Fruit Nurseries, Crawley. Price 1s.

Mr. Wells, the well-known fruit grower of Crawley, fearlessly runs the gauntlet of the critics again with a second edition of his book on "Fruit Growing." THE GARDENING WORLD was somewhat freely lectured last year for making some remarks on his punctuation and style. He now admits that the criticisms were deserved; and thanks his reviewers for everything they said. As the work is in stereotype he has not attempted to revise the mistakes, especially as the subject matter is still quite up to date, and no special discovery has been made since last year, when the first edition was sent out.

The practical details of his book constitute its most valuable feature. He dwells at greatest length upon the Apple, which is, indeed, the "king" of British hardy fruits, as the Strawberry may be termed the "queen." Where Oaks or Elms grow well, there the Apple may be relied upon to give satisfaction. In the matter of stocks he is a great believer in the Crab for orchard trees; but being unable to get the true Crab in sufficient quantities he took to raising his own stocks from the pips of the wild Crab. It would be interesting to know where he can get pips of the wild Crab in sufficient quantity to meet his requirements; but no doubt that is his own secret. The produce of a single old patriarch would, however, give a great number of seeds annually if in a position to develop to the best advantage. We have seen isolated specimens in Kent and Berks considered to be the wild Crab, but nobody seemed to consider them of value except boys. The pips of cider Apples, now so much in use for the purpose of raising stocks, Mr. Wells terms the free stock, and we agree with him that they must vary greatly in character, and therefore must to some extent be unreliable. The same might be said of the free stocks of the Plum and Pear, which cannot be otherwise than a mixed lot.

The author is not very favourable on the whole to mixed orchards, except in the case of the more temporary subjects to form an undergrowth till the permanent trees profitably occupy the ground. He agrees with some other writers that of trees alone the Apple would be the most profitable; and of mixtures, the Apple and Black Currants would pay best, the latter to be removed after a time. Pears, he says, are very valuable when scarce, but otherwise when plentiful, and that is practically his opinion concerning Plums. Good crops of Plums are not worth gathering, unless the grower can bottle them—an expensive operation in the case of tons. We consider, however, that there should be special provision for the preservation of these and all other soft fruits, in districts where such are grown in quantity, so that bottling and jam-making could be carried on upon a large scale by efficient machinery and skilled labour. The fruit grower should not be expected to undertake this work. He gives less countenance to the culture of Cherries. Morellos are liable to destruction by late spring frost, and the Bigarreau Cherries are so devoured by birds as to be worthless. Nevertheless he favours the preservation of birds, and surely it would be possible to preserve the Cherries for a few weeks during the ripening period by means of boys.

SOCIETIES.

AYR HORTICULTURAL.—August 26th.

THE Artillery Hall, Ayr, was the scene of this annual fixture. A large schedule, containing upwards of 170 classes, had been drawn up, so that both gardeners and amateurs were well provided for.

In the open classes Mr. H. Stewart, gardener to R. Goudie, Esq., Alloway Place, was placed first for six stove and greenhouse plants. Mr. A. H. Scott, gardener to Mrs. Baird, Cambusdoon, was second. A collection of six dishes of fruit was best shown by Mr. D. Murray, Culzean Castle, Maybole. Mr. John Walters, Carbieston, took a similar position for a collection of vegetables.

Amateurs competed briskly, and showed some capital pot plants and cut flowers, including Dahlias and Gladioli.

SANDY AND DISTRICT FLORAL AND HORTICULTURAL.—August 26th.

THE twenty-ninth annual exhibition held at Sandy was a conspicuous success, the entries being equal in number to those of last year. The attendance was larger than at any time since the formation of the society, the takings at the gate being £342 as against £311 13s. 4d. last year. In the open division Mr. J. Cypher of Cheltenham was an easy winner of the prize for ten stove and greenhouse plants in full flower. Mr. W. J. Empson, gardener to Mrs. Wingfield, Ampthill, was the most successful exhibitor in the whole of the show. He took first in a brisk competition for a group of plants arranged for effect, the glory of his collection being some capital Orchids, Crotons, and Pancratiums. Mr. Empson had no fewer than 53 entries and took many firsts.

Dahlias were splendidly shown by Messrs. Keynes, Williams & Co., Salisbury; Mr. S. Mortimer, Farnham; and Mr. J. Walker, Thame. Cut Gladioli and China Asters, as in previous years, were bright and good.

Coming to the fruit classes Mr. Empson had matters nearly all his own way and was easily first for, black, white, and Muscat Grapes, as well as a fine collection of eight kinds of fruit. Mr. C. R. Allis, Old Warden, showed admirable Grapes and other fruit, and Mr. T. Stone, Mr. C. Moore, and Mrs. Foster, also figured prominently in the list of prize winners.

SWANSEA.—August 26th.

A VERY successful show was held in the new covered market at Swansea on Thursday, August 26th, and resulted in about £172 being taken at the gates. With subscriptions yet to come in addition to the gate money the energetic secretary, Mr. A. R. Drummond, expects to have a surplus of £30 to £40 to hand over to the local charities. The fact of this being the first show of this society to yield such a result must be very gratifying to the committee, and it is to be hoped the society will now be constituted on a permanent basis and shows held yearly.

Messrs. Kelway, of Langport, made an exhibit of Gladioli which was very much admired and attracted a great deal of attention.

Messrs. Clibran & Son, of Manchester, and Messrs. Dicksons, Ltd., Chester, had choice collections of hardy herbaceous and bulbous flowers. Mr. W. Tresider, Cardiff, had a fine and varied collection of Dahlias, among which some of the Cactus varieties were particularly attractive. Mr. Taplin, Newton Abbot, showed a miscellaneous collection of cut blooms, comprising Carnations, Dahlias, and hardy herbaceous flowers. Mr. J. Harris, Bracypill, Swansea, had a fine collection of fruit trees in pots, and Messrs. Parsons & Co., of Swansea, a collection of Potatoes.

FALKIRK HORTICULTURAL.—August 26th.

THE autumn flower and fruit show promoted by the Falkirk Horticultural Society took place on this date in the Town Hall, Falkirk. Although the entries were fewer than those of last year the interest showed no sign of abatement, although the competition in the various classes fluctuated considerably.

Mr. John McLaren, Millfield, Polmont; Mr. John Ogilvie, Broomage Park, Larbert; Mr. Robert Starrat, gardener, Wallside; and Mr. W. Robertson, Bainsford, were some of the most successful exhibitors of pot plants.

A collection of fruit, composed of six distinct varieties, sent by Mr. John McLaren, was adjudged the first, and the same cultivator scored for a Melon, and a dish of Peaches.

Mr. John Ogilvie, and Mr. Matthew Karrigan, Gargunock, were each awarded a first for a collection of six varieties of vegetables. Mr. John Ogilvie was likewise credited with the first awards for Leeks, Vegetable Marrow, Parsnips, and Celery. Amateurs also showed strongly.

Mr. John Downie, Princes Street, Edinburgh, had a tastefully arranged table of pot plants, and cut flowers, the latter including double tuberous Begonias, and Dahlias. Mr. Dow had a stand of Ichthemic Guano, and there was also an attractive bee and honey exhibit.

Great praise is due to Mr. Fleming, the secretary, for the manner in which he has carried out the arrangements.

BLAIRGOWRIE AND RATRAY HORTICULTURAL.

THIS old-standing society lately held its twentieth annual exhibition in the Public School, Blairgowrie. In opening the exhibition Mr. Allan Proctor remarked the fact that Scotch gardeners had for centuries been celebrated all over the world.

The schedule included classes for pot plants, cut flowers, fruit and vegetables, the greater part of the produce being contributed by the industrial section of the population.

Non-competitive exhibits came from Messrs. D. & W. Croll, Dundee, who showed cut Roses; and from Messrs. J. Russell, Coupar Angus, and J. J. Gellatly, Blairgowrie, who had groups of plants.

DUNDEE.—September 2nd, 3rd, and 4th.

THE annual show of the Dundee Horticultural Society was held on Magdalen Green on the above dates. The horticultural exhibits were arranged in three large marquees, while there were several side shows or accessories. Plants occupied one, cut flowers another, and vegetables a third. The show on the whole was much finer than last year, the plants in the nurserymen's classes being in grand form. The tables arranged for effect were as good as at mostly any show in the county, particularly the three first ones. The American Consul made an excellent speech at the opening ceremony on the first day. The first day was rather wet, but the second was very fine. During the three days over £500 was taken at the gate.

The premier award for six stove and greenhouse plants was taken by Mr. Peter Marshall, Balmore, Newport. He had a magnificent specimen of *Coprosma baueriana variegata* about 10 ft. to 12 ft. high, specimens of *Croton* and *Asparagus plumosus* scarcely dwarfed, and flowering plants represented by *Anthurium andreaeanum*, *Clerodendron Balfourii*, and *Lapageria alba*. The second prize was taken by Mr. Thos. Butchart, gardener to Jno. Robertson, Esq., Elmslea, with much dwarfed plants. He had a neat plant of *Elaeodendron orientale*, 6 ft. high. Mr. R. W. Saunders, Lismore, Broughty Ferry, was third. There were five tables (10 ft. by 6 ft.) in the competitive list, and the first award was taken by Mr. George Masson, St. Fort Gardens, Newport. Lilies, Crotons, Palms, *Dracaenas*, *Celosias*, and Maidenhair Ferns made a graceful arrangement. Mr. Geo. Ruckbie, Linfield, West Ferry, was a good second, but with a slightly heavier arrangement. Mr. Thos. Butchart was third.

Mr. Peter Marshall had the best four fine foliage plants, with grand specimens of *Cycas revoluta*, *Phormium tenax variegata*, &c. Mr. J. Baird, Kincaid, West Ferry, was second, and Mr. E. Cameron, Binrock, Dundee, was third. Mr. Geo. Masson had the best three *Crotons*. Mr. R. W. Saunders had the best two *Liliums*; he also had the best three *Dracaenas*. Mr. P. Marshall was first for *Lilium auratum*. Mr. Jas. Bethel, Westwood, Newport, had the best *Vallota purpurea*.

Mr. Peter Marshall again came to the front for six stove and greenhouse plants in another class. His plant of *Statice brassicaefolia* was fine. Mr. Jas. Bethel had the best *Coleus*. The leading award for a Palm was taken by Mr. W. R. P. Saunders, Tay Park, Broughty Ferry, with a magnificent specimen. Mr. J. Baird exhibited the best tree Fern. Mr. A. Cameron showed the best six exotic Ferns, in large well-furnished specimens grown in tubs, pans, and baskets. Mr. Alex. Duncan, gardener to Captain G. D. Clayhills, Invergowrie, took the lead in the class for six British Ferns with well-grown specimens.

NURSERYMEN AND FLORISTS.—The leading award for twelve plants for table decoration was taken by Messrs. Laird & Sinclair, Dundee, who had dwarf and very graceful specimens. Mr. R. Grossart, Clarendon Park Nurseries, Dundee, took the second place. In the cut flower section the first prize for twenty-four Roses, distinct, was taken by Messrs. D. & W. Croll, Dundee. They had fine blooms of Madame de Bonnaire, Her Majesty, Mrs. John Laing, and La France. They also led the way for Tea or Noisette Roses, and were followed by Messrs. Adam & Craigmyle, Aberdeen, who were a very good second. Messrs. Laird & Sinclair took the lead for twenty-four Dahlias, which were beautifully fresh. Messrs. D. & W. Croll, were second. Messrs. Laird & Sinclair were the only exhibitors in the competitive class for herbaceous cut flowers and

were accorded the first prize. They were also an easy first for Cactus Dahlias.

A large number of classes was set apart for amateurs, who exhibited Lilies, Ferns, Pelargoniums, cut flowers, and various other things in fine condition. In the open classes for amateurs and gardeners, the Sweet Peas were very fine, Mr. A. Cameron taking first for twelve of Mr. Eckford's varieties. Other classes for Sweet Peas were well represented.

FRUIT.—The first prize for a collection of twelve kinds was taken by Mr. James Beisant, gardener to Mrs. George Armitstead, Castle Huntly, who had grand Grapes, Peaches, Nectarines, &c. He also led the way for six dishes of hardy fruits, and for four varieties of Grapes, the black sorts being finely finished. Mr. A. Hutton, gardener to G. Keith, Esq., Usan House, Montrose, was a good second, his hunches being large but not so well formed. Mr. Alex. Duncan was first for Black Hamburgh. Mr. John Laing, gardener to Sir J. C. Rattray, Craighall, Blairgowrie, had the best Lady Downes. Mr. John Leslie, Pitcullen Gardens, Perth, staged the best Muscats. There were five competitors. Grapes were abundant as were Apples, Peaches, Apricots, Plums, Pears, Gooseberries, Black, White, and Red Currants.

Vegetables generally were abundant and good. There were six collections of vegetables of twelve kinds each, and the leading award was taken by Mr. A. Cameron, gardener to W. L. Boase, Esq., Binkrock, Dundee, who had grand Onions, Potatos, Carrots, Leeks, Peas, Cauliflower, and Celery. Mr. James Joss, gardener to the Lord Provost, Dundee, was second; and Mr. William Harper, Tullielton, Bankfoot, came in third. Mr. Alexander Paterson, Ruthrieston, Aberdeen, was deservedly first for a collection of twelve varieties of Potatos, which were handsome; Mr. Thomas Johnston and Mr. James Bethel, were second and third respectively. Potatos, Onions, Cabhages, Beet, Peas, Dwarf Beans, Celery, Longpod Beans, Golden Ball Turnips, Leeks, and Parsley were abundant and in wonderful form.

TRADE EXHIBITS.—Messrs. Laird & Sinclair, Dundee, set up an attractive exhibit of Dahlias, Gladioli, hardy herbaceous cut flowers, shower bouquets, and Sweet Peas, all neatly arranged with other subjects.

Messrs. James Cocker & Sons, Aberdeen, had the best display in the show, for which they had the Gold Medal of the society. The exhibit was made up of cut flowers of bardy herbaceous plants and Roses, very fine being the Montbretias, Gladioli, Phloxes, Chrysanthemum Princess May (of hybrid origin), and C. Mrs. Head, the latter receiving an Award of Merit. The Roses Mrs. John Laing and Cbas. Lefebvre were grand.

Mr. Robert Grossart, Clarendon Park Nursery, Perth Road, Dundee, had a collection of bouquets, baskets, shower bouquets, wreaths, &c.

Messrs. Storrie & Storrie, Dundee, staged a collection of herbaceous plants, Begonias, Carnations, Celosias, Pelargoniums, &c.

Messrs. D. & W. Croll had an elaborate arrangement of Roses, Dahlias, Sweet Peas, Iceland Poppies, shower bouquets, and other flowers arranged with cork, moss, wire arches, &c.

Mr. John Forbes, Hawick, Scotland, staged a choice collection of Cactus Dahlias, Carnations, Pentstemons, Phloxes, Hollyhocks, Delphiniums and other flowers all carefully named and displayed for comparison. The Carnations included a large number of varieties chiefly for border culture.

Mr. Wm. Colchester, Ipswich, occupied a tent between two large ones with a fine display of plants grown with their speciality, pure Ichthemic Guano. The plants and samples were arranged on a high conically built stand.

Messrs. Tbyne & Paton, 18, Union Street, Dundee, had a very extensive collection of Lilies, Gladioli, and herbaceous plants. Messrs. Harley & Sons, Reform Street, Dundee, had a collection of wreaths, baskets, bouquets and other devices (Gold Medal).

A large party sat down to luncheon at the Royal Hotel, under the presidency of Bailie McDonald, who was supported by the Hon. Mr. Higgins (United States Consul), Mr. Sanage (United States Consul), Sir John Leng, M.P., Mrs. McGrady, Mrs. Higgins, Captain Dewar, Bailie Doig, Mr. J. S. Gray, Mr. John Robertson Colonel Smith, Mr. Walker Inerville and Mr. W. F. Hill.

After the usual loyal toasts, Bailie McDonald

proposed the "National Artillery Volunteer Forces," which was responded to by Colonel Smith. Mr. Gray then proposed "The Judges," and thought they discharged a disagreeable, diligent, and difficult task. As there were important speakers to his left and they were all so well-known, his audience would pardon him for not saying more. Mr. Malcolm Dunn, in responding, said that he was highly pleased to be amongst them all once more. He was amazed at the fine exhibition both for its quantity and quality. It was better than it was four years ago—the abominable weather excepted. The quantity of herbaceous plants had greatly increased. The fruit was very creditable. Exhibitors had also shown great skill in cultivation. Two Gold Medals were recommended for two exhibits so nearly alike in artistic display and value that it was impossible to differentiate between them.

Sir John Leng proposed the "Lord Provost and Magistrates of Dundee" for their thoroughly intelligent municipal life, etc. They had taken up the work of their predecessors and continued it. The Council have supported horticulture, and the society does well to recognise it. Bailie Doig responded with thanks to the previous speaker in the names of his fellow-men. The more he studied it the more he recognised and understood why they supported the cultivation of flowers, and their sweetening influence on amateur gardeners in the higher walks of life, as well as on allotment holders, who were men of humbler opportunities. He desired to see more of this.

Mr. Higgins, United States Consul, proposed the "Dundee Horticultural Society, with the City Fathers." This was a municipal function part and parcel. This special work made Dundee well known in America, for things were not done in America so successfully as there. He was pleased to associate the "City Fathers" of Dundee with their show. Nature is lavish everywhere. Marks of skill were evidently the heirloom of our children in the humblest walks of life. Our duty to their well-being is plainly to spend half an hour a week on practical subjects, such as the study of plants. To this the chairman responded with thanks.

Mr. Watts proposed the "Successful Competitors," and said that the show was a considerable advance on previous ones. Mr. Mason and Mr. Roberts responded.

NATIONAL DAHLIA.—September 3rd and 4th.

DAHLIAS were admirably shown at the annual grand exhibition of this society which took place, as usual, at the Crystal Palace, on Friday and Saturday, September 3rd and 4th. The competitive exhibits and the numerous miscellaneous ones were staged in the centre of the building, the eastern and western ends being otherwise occupied. All sections of Dahlias were well-represented, and Cactus varieties in particular were in first-class condition. There was a brisk competition in all the important classes.

A very interesting feature was the V.R. Commemoration Class, consisting of a decorative exhibit of Dahlia blooms, set up with Palms, sprays of foliage, etc., and occupying 108 sq. feet of area. The idea was to display the development of the Dahlia during the 60 years of Her Majesty's reign. There were only two entries, the first prize being awarded to Mrs. M. V. Seale, Sevenoaks, who had an imposing, although a somewhat stiff, exhibit. The groundwork was composed of bunches of Cactus, pompon and single Dahlias, set up with Asparagus. At the back were five tall decorated pillars, the central one of which bore a floral crown. Four similar, but shorter, uprights, formed the front rank, the pillars in each row being connected with each other by arches dressed with Smilax. On the white screen, which hung from the edge of the table in the front the letters V.R., and the dates 1837 and 1897, were worked in crimson and scarlet Dahlias.

Messrs. J. Cheal & Sons, Crawley, made a close second. The ground work in this case was much prettier than in the first prize lot, but the central pyramid was not tall enough, and the group thus lacked the imposing effect it would otherwise have had.

In the nurserymen's classes for cut blooms, Messrs. Keynes, Williams & Co., Salisbury, took premier honours for the sixty show and fancy blooms, distinct. William Rawlings, Emin Pacha, Harrison, Weir, J. T. West, Mathew Campbell, Mrs. Langtry, Miss Cannell, Mrs. W. Slack, Mrs. C. Noyes, Mrs.

Saunders, Geo. Barnes, Duke of Fife, Dorothy, Alice Emily, Hon. P. Wyndham, and Goldsmith were some of the strongest blooms. Mr. C. Turner, Slough, was second with a very even lot; Mr. J. Walker, Thame, Oxon, was third; and Mr. S. Mortimer, fourth. There were five entries in this class.

There were also five entries in the class for forty-eight blooms of the same sections. Here Mr. J. Walker led the way, showing Maud Fellowes, Miss Cannell, Earl of Ravensworth, Dorothy (self), Henry Walton, Duke of Fife, John Standish, John Hickling, Mrs. Gladstone, Victor, Perfection, Eclipse, Mrs. Langtry, and Peacock in capital condition. Mr. C. Turner was second, and Mr. S. Mortimer, third.

Three entries only appeared in the competition for thirty-six blooms, distinct. Mr. G. Humphries, Kington Langley, was placed first with an even and well coloured lot, whilst Mr. J. T. West, Tower Hill, Brentwood, was accorded the second award.

Mr. G. Humphries scored another success for twenty-four show and fancy blooms, and was again followed in the second place by Mr. J. T. West. Mr. J. R. Tranter, Henley-on-Thames, had the best twelve.

Cactus varieties made a brave show, and the competition in the premier class for eighteen bunches of six blooms each was especially keen. Messrs. J. Burrell & Co., Howe House Nurseries, Cambridge, staged a grand lot, and headed the list of competitors. They had Regulus, Starfish, Mrs. Kingsley Foster, Fantasy, Gloriosa, Mrs. Francis Fell, and Mrs. A. Beck in excellent order. The second prize fell to the lot of Messrs. Keynes, Williams & Co., Salisbury; and the third to Messrs. J. Cheal & Sons. There were six exhibits staged.

In the smaller class for 12 bunches of Cactus varieties in similarly sized blooms Mr. J. T. West was first, and Mr. G. W. Humphries second.

For twelve varieties of decorative Dahlias in bunches of six blooms each Mrs. M. V. Seale was first. Kyneutb, Countess of Radnor, and J. H. Roach, were three of the best sorts shown. Messrs. J. Cheal & Sons were second.

Twenty four varieties of pompons in bunches of ten blooms each were best shown by Messrs Keynes, Williams & Co., who had a grand lot. Messrs. J. Cheal & Sons were second. In the smaller class for twelve bunches composed of the same number of blooms Messrs. J. Burrell & Co., were first.

Mr. J. Walker exhibited the premier twelve bunches of singles, while the first award in the larger class for twenty four bunches fell to the lot of Messrs. J. Cheal & Sons.

In the classes for six blooms each of varieties of show and fancy Dahlias of special colour, the first prizes went to the following exhibitors for the varieties shown respectively by them:—Mrs. M. V. Seale, for dark, with Prince of Denmark; Mr. J. Walker for a light, not yellow, with Mr. Gladstone; Mr. S. Mortimer, for yellow, with John Hickling; and also for red with Mrs. J. Downie (self); Mr. Walker, for white, with John Walker; Mr. G. W. Humphries for a tipped variety, with Mrs. Saunders; and Mrs. M. V. Seale, for a striped variety, with Mrs. John Downie, and Mr. G. Walker, for an edged Dahlia, with Miss Cannell.

In the amateur classes the following exhibitors received first awards in their respective classes:—T. Hobbs, Esq., Easton, Bristol, for twenty-four show and fancy blooms; S. Cooper, Esq., Chippenham, for twelve show blooms; C. Keep, Esq., Streatham, for six show blooms; S. Cooper, Esq., for twelve fancies; H. H. Raphael, Esq., Rosecourt, Havering, for six fancies; W. Mist, Esq., Ightham, for twelve bunches of six blooms each of Cactus varieties; Edward Mawley, Esq., Rosehank, Berkampstead, for six bunches of similar material, three blooms to each bunch; E. C. Wilkins, Esq., Swanley Junction, for nine bunches of Cactus blooms, three going to a bunch; W. C. Pagram, Esq., Weybridge, for six bunches, ten blooms in each, of pompons; E. Jefferies, Esq., Langley Burrell, for six bunches, six blooms in each, of pompons; T. W. Girdlestone, Esq., Sunningdale, Berks, for six bunches of singles; E. Mawley, Esq., for six smaller bunches of singles; Miss L. Hudson, Gunnersbury, Acton, W., for the best epergne; and R. Edwards, Esq., Beeby Lees, Sevenoaks, for the best vase of Dahlias.

MISCELLANEOUS.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., had a nice group of pompon and Cactus

Dahlias. The blooms were arranged in flat pyramidal bunches with their own foliage, the stiffness of the group being relieved by Palms, Araucarias, and other elegant foliage plants. Of the Cactus varieties Fusilier, Blanche Keith, Lady Penzance, Robert Cannell, and Mrs. Montefiore were very noticeable, and the credit of the pompons was well-sustained by such forms as, Janet, Lady Blanche, Rosea, Eva, Flora, Lilian, Darkness, Ariel, and Admiration.

Mr. John Charlton, Summervale and High Brooms Nurseries, Tunbridge Wells, showed a nice group of hardy flowers arranged in imposing bunches, and including *Crinum Powelli*, *Aster acris*, and *Solidago altissima*.

The Dahlias submitted by Messrs. H. Cannell & Son, Swanley, were unsurpassed by anything in the show. The exhibit consisted chiefly of Cactus varieties, all of them in superb condition, such varieties as Mrs. Turner, Bertha Mawley, Matchless, Cycle, and Blanche Keith, being especially fine. The bunches were made up in the pyramidal form, with sprays of *Asparagus*. Pieces of *Gypsophila paniculata* inserted here and there were very elegant. A row of bunches of blooms of pompons formed the front rank.

China Asters in considerable variety were sent by Messrs. A. W. Young & Co., Stevenage, Herts. Cut blooms of *Liliums* and *Gladioli* were also shown by this firm.

A brilliant although somewhat garish bank of Dahlias was sent by Messrs. Carter Page & Co., 52 & 53, London Wall. Cactus sorts were again prominent, and were arranged in vertical rows of each variety. Many leading sorts were on view, and all the flowers were fresh and good.

An excellent display of cut Roses was contributed by Messrs. Wm. Paul & Son, Waltham Cross. The blooms were in most cases cut with long stalks and were artistically arranged in large imposing bunches.

A group of tuberous *Begonias*, *Caladiums*, and *Gloxinias*, with Palms and Ferns, sent by Messrs. John Laing & Sons, Forest Hill, S.E., filled the right hand corner beneath the gallery and the organ.

Messrs. John Peed & Sons, Roupell Park Nurseries, S.E., had a very pretty group of cut hardy flowers including a considerable quantity of Dahlias.

ROYAL HORTICULTURAL.—September 7th.

Despite the counter attractions of Dahlias and *Chrysanthemums* at the Royal Aquarium, there was a good deal of material at the Drill Hall on this occasion. There were a few *Orchids* and *Nepenthes*, Dahlias, and cut hardy flowers were prominent features.

Messrs. James Veitch & Sons, Ltd., Chelsea, had a bright and showy group of *Orchids*, for which a Silver Flora Medal was voted. It included well flowered pieces of *Oncidium varicosum*, and *O. concolor*. The pretty little *O. pumilum* was very noticeable. There was also a grand piece of *O. incurvum* carrying six large spikes of flower. A painful of *Cypripedium Charlesworthii*, and a very finely flowered plant of *Odontoglossum grande* were very bright. *Laelio-Cattleya Nysa* and *L.-C. Clonia* were also shown.

Mr. T. Stafford, gardener to F. Hardy, Esq., Tyntesfield, Ashton-on-Mersey, Cheshire, showed *Laelia elegans Turneri*, a splendid piece of *Cattleya hardyana*, *C. minucia*, and *Cypripedium Alfred Hollington*. A Silver Flora Medal was awarded. Messrs. F. Sander & Co., St. Albans, had *Miltonia moreliana*, *Maxillaria striata*, and several hybrid *Cypripediums*. Mr. Chapman, gardener to R. I. Measures, Esq., Cambridge Lodge, Camberwell, S.E., sent flowering specimens of *Rhynchostylis coelestis*, Cambridge Lodge var., and *Cattleya schofieldiana superba*.

In the centre of the hall, upon the floor was a splendid display of *Crotons*. These were sent by Mr. Farr, gardener to A. Pears, Esq., Springrove House, Isleworth. The group took the form of three mounds with an undulating outline, the centre one being the most massive. All the plants were well grown and beautifully coloured, many of the leading varieties being shown. (Silver Flora Medal.)

Ten large and healthy plants of *Eucharis amazonica* were shown by Mr. F. Knight Eames, Fulwell Nursery, Twickenham. The plants were well furnished with flower spikes, and the individual blooms were of great size and substance. (Silver Flora Medal.)

Messrs. J. Cheal & Sons, Crawley, Sussex, sent a representative collection of cut Dahlias. The show,

fancy, Cactus, pompon, and single flowered sections were represented by first-class samples. The Cactus, single, and pompon flowers were in showy pyramidal bunches. (Silver Flora Medal.)

Messrs. Wm. Cutbush & Son, Highgate, N., showed a fine group of *Nerine Fothergillia major*. The flower umbels were conspicuously large.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., was again to the fore for cut hardy flowers. These were arranged in large and handsome bunches, and formed an extensive collection. Perennial Asters and *Liliums* were shown in variety. *Helianthus Miss Mellish* was very bright, and the same may be said of *Kniphofia (Tritoma) grandiflora* (Bronze Banksian Medal).

Mr. Eric F. Such, Royal Berkshire Nursery, Maidenhead, sent four stands of capital blooms of Cactus Dahlias.

Messrs. Dobbie & Co., Orpington, Kent, showed bunches of striped French Marigolds. These are showy flowers, and the Messrs. Dobbie have a good strain of them.

Mr. Robert Owen, Castle Hill, Maidenhead, showed a small collection of cut spikes of *Cannas*.

The cut hardy flowers contributed by Messrs. Barr & Son, King Street, Covent Garden, were first-class. *Pentstemons*, *Phloxes* and *Coreopses* were in variety, and bunches of *Solidago serotina* and *Eryngium caeruleum* were specially noteworthy. (Bronze Banksian Medal.)

Mr. J. Walker, Thame, Oxon, sent some grand show and Cactus Dahlias for which he received a Bronze Banksian Medal. Messrs. J. Veitch & Sons had samples of ornamental shrubs that included *Acer palmatum sanguineum*, *Hibiscus totus albus* and *Robinia hispida*. Mr. W. J. Godfrey, Exmouth, sent blooms of the early *Chrysanthemums* *Barbara Forbes* and *Queen of the Earlies*. Mr. Bain, gardener to Sir Trevor Lawrence, Burford Lodge, Dorking, showed a group of cut hardy flowers of which the bulk was *Pentstemons* and *Lobelia Carmine Gem*.

A Silver Gilt Flora Medal was voted to R. I. Measures, Esq., for a collection of *Pitcher* plants. These included some vigorous specimens of *Cephalotus follicularis*, *Sarracenia Courtii*, *S. Chelsonii*, *S. Atkinsoni*, and other forms of *Sarracenia*.

Messrs. Jas. Veitch & Sons made an imposing exhibit of *Nepenthes*, of which they make a speciality. The group was of great height, being backed up by some tall specimens of *Cocos plumosa*. The *Nepenthes* in their several baskets were scattered about, being stood on stands of varying height. *N. mixta*, *N. Burkei excellens*, *N. Morganiæ*, *N. hookeriana*, *N. mastersiana* red var. and *N. dicksoniana* were some of the most striking forms on view. (Silver Gilt Flora Medal.)

At a meeting of the fruit and vegetable committee a Silver Gilt Knightian Medal was awarded to Mr. Owen Thomas, gardener to Her Majesty the Queen, Frogmore, for upwards of three dozen dishes of Peaches and Nectarines in a number of varieties. The fruit throughout was well finished and of medium to large size.

Mr. W. Kemp, The Gunyah, Barnes, received a Silver Banksian Medal for twenty-four well finished Melons.

A Cultural Commendation went to Mr. W. Howe, gardener to Henry Tate, Esq., Streatham Common, for two good dishes of Peach Sterling Castle grown out of doors.

Mr. G. Wythes, gardener to Earl Percy, Syon House, Brentford, staged an extensive collection of fifty dishes of hardy fruit that comprised Pears, Apples, Peaches, Nectarines, Plums, and Damsons. The fruit was set up on autumn foliage of different kinds upon a white cloth (Silver Knightian Medal).

A Bronze Knightian Medal went to Mr. J. Miller, gardener to Lord Foley, Ruxley Lodge, Esher, for fifteen large and handsome fruits of Peach Princess of Wales.

There was a keen competition for the Veitch prizes for the best flavoured Apple and Pear. Nine dishes of Apples were shown. Mr. J. Mayne, Bicton Gardens, Devon, was placed first with Kerry Pippin. Second came Mr. Geo. Wythes with Gravenstein. Seven dishes of Pears competed. Mr. C. Herrin, Dropmore, was first with Williams' Bon Chrétien, and Mr. Geo. Wythes second with the same variety.

Mr. John Russell, Richmond, showed well-fruited plants of *Tomato Campbell's Trial*. Mr. W. Taylor,

gardener to C. Bayer, Esq., Forest Hill, sent three good bunches of Grape Madresfield Court.

BY TELEGRAPH.

ROYAL CALEDONIAN.—September 8th.

The September show of the Royal Caledonian Horticultural Society opened under very favourable auspices as to weather, and everything else at time of telegraphing promises splendidly. The show is a magnificent one, and larger than on any previous occasion, there being 2,300 entries, greatly exceeding that of last year, when they scarcely totalled 2,000. The Victoria Diamond Jubilee Prizes offered by the society has been the means of exciting a great amount of enthusiasm and rivalry amongst the competitors. There are six tables for cut flowers open to all. There were four groups of plants of various shapes, but not exceeding 300 sq. ft., for the Diamond Jubilee Prizes. There were four classes of sixteen dishes of fruit and vegetables, which are represented by numerous exhibits all round the sides of the market.

Mr. J. Hunter, gardener to the Earl of Durham, Lambton Castle, secured the premier honours in the Victoria Diamond Jubilee Class for twelve dishes of fruit. He had magnificent bunches of Gros Maroc, Chasselas, Neapolitan, and Barbarossa Grapes, hybrid Melons, Golden Eagle, and Pavi de Pompone, Peaches, River's Victoria Nectarine, Gascoigne's Scarlet Apple, Beurre de l'Assomption Pear, Magnum Bonum Plum, Brown Turkey Figs, and Moor Park Apricot. Mr. F. Harris, gardener to Lady H. Somerset, was a good second, his Gros Colman Grapes and Barrington and Royal George Peaches being grand. Mr. J. McHattie, gardener to the Duke of Wellington, Strathfieldsaye, Hants, took the third position with well-shaped, large bunches of Grapes.

Mr. J. G. Wood, gardener to J. Buchanan, Esq., Oswald Road, Edinburgh, took the lead for a table of plants, consisting of Palms, *Crotons*, *Eulalia japonica variegata*, *Lilium speciosum*, *L. s. Kraetzeri*, and a wealth of drooping flowering and foliage plants along the front. The whole is most tastefully arranged and wonderfully brightened up with long arching sprays of *Oncidium incurvum*. Mr. J. McIntyre, gardener to Mrs. Gurney Pease, Darlington, is placed second with a group of Palms and *Crotons*, but is lacking in flowering plants. Mr. Thos. Lunt, gardener to A. Stirling, Esq., Dunblane, takes the leading award for six foliage plants, staging huge and grandly grown specimens of *Anthurium crystallinum*, *Campylobotrys refulgens*, *Cissus discolor*, *Asparagus plumosus nanus*, a *Croton*, and a dark-leaved *Dracaena*. Mr. James McCartney, gardener to Messrs. Croall, Southfield, Liberton, Edinburgh, came second with fine specimens of *Calathea zebrina*, a *Croton*, and a *Dasy-lirion*. Mr. Thomas Lunt also takes the lead for two *Crotons*, showing grand specimens of *C. Chelsoni*, and *C. Aigburthense*. The *Fuchsias* were numerous, grandly grown, and profusely flowered. Mr. A. Thomson, gardener to W. Urquhart, Esq., Dalkeith, takes the leading award for three *Fuchsias*, showing columnar specimens of great neatness and beauty. Mr. W. Aitken, Balerno, is second. Mr. John Cumming, gardener to J. Wilson, Esq., Gren Park, Liberton, leads off for one *Fuchsia* with a large conical specimen. He is followed by Mr. Aitken. Mr. Thos. Gibb, gardener to Mrs. Edmonson, Kilgraston Road, secures the first place for two *Fuchsias*, and is followed by Mr. W. Aitken, whose plants were unequal in size, but good. Mr. R. J. Shillington, gardener to C. W. Cowan, Esq., leads off in the class for six tuberous *Begonias*, showing profusely flowered plants of medium height. Mr. J. Pearson, gardener to Lady Lucy Dundas, Beechwood, is a good second, though his varieties are not quite so good. Mr. D. Henderleith, gardener to J. Low, Esq., Spylaw Road, takes the lead for three tuberous *Begonias* which are particularly fine, beating Mr. John Argent, gardener to John Harrison, Esq., Rockville, Napier Road, Merchiston. Mr. P. Dempster, Blackwood, is first for three double tuberous *Begonias*, but the flowers are small. Mr. James, gardener to P. Neill Fraser Esq., Rockville, Murrayfield, secures the first prize for four large and well grown *Adiantums*, beating Mr. G. Wood, who is second with much smaller plants. He also heads the list for four British Ferns, showing a grand plant of the Welsh *Polypody*, *Aspidium angulare*, etc. Mr. William Muir, Birchbank, Car-

luke, N.B., is second with smaller but choice varieties. Mr. G. Chaplin, gardener to Mr. T. Nelson, St. Leonards, is first for six Lycopods.

Mr. David Wilson, gardener to H. Steven, Esq., Westmount, Glasgow, secures the leading award for three Cypripediums, showing fine pieces of *C. Morganiae*, etc. He is followed by Mr. W. Sharp, gardener to C. L. Wood, Esq., Forgandenny, who takes first prize for four Orchids, showing *Cattleya gigas* and *Odontoglossums* well. Messrs. D. & W. Croll, Dundee, lead off in the Nurserymen's class for thirty-six Roses, showing handsome blooms of Madame J. Bonnaire, Ulrich Brunner, Maman Cochet, Her Majesty, Gustave Piganeau, etc. Messrs. Jas. Cocker & Sons, Aberdeen, take the second prize with beautifully fresh stands of Roses. Messrs. D. & W. Croll again score for eighteen Roses, quite equal to their previous lot. Messrs. James Cocker are again second. Messrs. Croll are first, and Messrs. Thos. Smith & Sons, Stranraer, second for twelve Roses. Messrs. Croll lead, and Messrs. Adam & Craigmile follow in the class for twenty-four Tea Roses, amongst which are many grand blooms for the season; Messrs. J. Cocker & Sons have the best twelve Alfred Colomb Roses. Messrs. D. & W. Croll are first for twelve scarlet and twelve La France Roses. The twelve Roses of Madame Joseph Bonnaire, shown by Messrs. D. & W. Croll, are magnificent, taking first prize. Mr. F. Harris comes to the front in the class for eight dishes of fruit, showing Grapes, Peaches, Pears, and Figs well. He is followed by Mr. D. Kidd, gardener to Lord Elphinstone, Musselburgh, and Mr. Richard Cairns, gardener to James Martin White, Esq., Balruddery, Dundee, respectively. Mr. J. Hunter again scores in the class for twelve dishes of fruit grown in an orchard house, showing grand samples. Mr. James Gibson, gardener to E. H. Watts, Esq., Devonhurst, Chiswick, is second with grand samples of Apples, Figs, Pears, Peaches, etc.

Mr. T. Lunt carries off the leading award for six bunches of Grapes, Gros Maroc, Black Hamburgh, and Muscat of Alexandria being shapely bunches and well finished. Mr. Richard Cairns is a good second, but his bunches are less mature. Mr. J. Leslie, gardener to A. Coates, Esq., Pitcullen House, Perth, makes a very good third. There is grand competition in the class for four bunches of Grapes, Mr. D. Kidd taking first. Messrs. D. & W. Buchanan, Forth Vineyard, Kippen, are second. Mr. D. Kidd leads in the class for two bunches of Muscat of Alexandria. Mr. James Gibson takes first prizes for a collection of Apples, and for eleven dishes in as many classes.

In the special Victoria Diamond Jubilee classes, Mr. J. Hunter carries off the premier honours for the collection of fruit most tastefully and artistically arranged on a table, with Orchids, Carnations, *Bougainvilleas*, *Panocratiums*, and other flowers. Mr. R. Cairns makes a very good second, though distinctly behind Mr. Hunter. Mr. Alex. Kirk, gardener to J. Thomson Paton, Esq., Norwood, Alloa, takes the third place with grand samples of Grapes, Pears, Peaches, etc.

For a group of plants, not exceeding 300 sq. ft. in area, the leading prize is taken by Mr. J. McIntyre, gardener to Mrs. Gurney Pease, Darlington, who has a novel and artistically displayed group of Palms, Crotons, Lilies, Ferns, etc. Cork pedestals and arches are largely used to support the plants. Mr. Malcolm McIntyre, gardener to Sir James Tennant, The Glen, Innerleithen, is a good second, with a grand arrangement of Lilies, Crotons, Palms, Ferns, etc. It is a wavy eight cornered group. Mr. John Downie, 144, Princes Street, Edinburgh, takes the third place with an admirable arrangement of *Dracenas*, Lilies, Crotons, and other flowering plants. A tall, four-sided arch occupies the centre.

Messrs. Harkness & Sons, Bedale, Yorks, take the lead in the class for a collection of cut flowers of hardy herbaceous plants and annuals. They have a gorgeous display of *Gladioli*, *Montbretias*, etc. Messrs. James Cocker & Sons take the second place with an even more complicated arrangement of the best hardy flowers in season. Mr. John Forbes, Buccleuch Nurseries, Hawick, makes a very good third, the *Hollyhocks* and *Phloxes* being very gorgeous, as are the three winning stands.

Mr. James Gibson is an easy first for the table of vegetables, his Leeks, Cauliflowers, and Onions being unexcelled, and very hard to beat. Mr. Robert T. Rae, gardener to Major Scott Kerr, Sunlaws, Roxburgh, is second with an artistic display; Mr. W.

Harper, gardener to J. R. S. Richardson, Esq., Perth, is third.

Money and Victoria Diamond Jubilee Silver Gilt, silver and bronze medals, as well as Veitch memorial medals are awarded respectively to the above special classes.

TRADE EXHIBITS.

Messrs. Dobbie and Co., Rothsay have a collection of two hundred varieties of Dahlias, including Cactus, decorative, pompon, and single varieties in a charmingly fresh condition. Amongst the Cactus varieties are J. C. Frewer, Earl Pembroke, Leonora, John Welch, Lady Penzance, Mrs. A. Beck, Starfish, Miss Webster, Fantasy, Iona, Harry Stredwick, Cycle, Aurora, and Valkyrie, most of which are new. Herbaceous plants, Palms, and small Ferns were distributed through the collection to lighten it. Single Cactus varieties, including the newest, were staged along the front of the group, which is undulated with two banks to break the straight line.

Messrs. Kerr Bros., Dumfries, exhibit a collection of new varieties of Dahlias and herbaceous plants. The Dahlias consisted of show, fancy, and Cactus varieties. Mr. James Rowatt, Glassford, by Strathaven, staged *Pentstemons*, *Phloxes*, and China Asters in variety. Mr. John Phillips, Granton Road Nurseries, Edinburgh, had a table of *Araucaria excelsa* in plants of various sizes, interspersed and brightened with Lilies and Carnations, Ferns, *Selaginellas*, and other plants. Messrs. Laing & Mather, Kelso-on-Tweed, had a table of the new hybrid continuous flowering *Chrysanthemum Princess May*. They have also a fine lot of their popular Carnations, including the new crushed Strawberry self *Viscountess Melville*. This *Chrysanthemum* is quite hardy and has been flowering outside and inside for eighteen months. Mr. A. Findlay, Markinch, Fifeshire, showed a table of new hybrid Potatos, including *Klondyke*, the earliest variety in cultivation. He can dig it eight weeks from its planting. It produces 6½ lbs. to the root, and the quality is good. In an early district two crops can be obtained in a season by early and late planting. He has thirty new varieties.

Messrs. Scarlett Bros., Musselburgh, have a fine table of vegetables and herbs, including Vegetable Marrows, Cabbages, Cauliflowers, Scarlet Runners, etc. Mr. Michael Cuthbertson, Rothesay, N.B., has a table of Alpine plants in pots, including about seventy species and varieties of *Saxifragas*; also a collection of *Sedums* and *Sempervivums*. He also has cut flowers of herbaceous plants, conspicuous amongst which is the very complete collection of *Monthretias*, new *Phloxes*, Lemoine's hardy *Gladioli*, and the new *Rudbeckia Golden Glow*.

Mr. Hugh Hanan, 9, Bank Street, Edinburgh, has a fine collection of Sweet Peas in seventy varieties. On his table are long flowering stems of *Tropaeolum speciosum* and *Smilax*. Mr. Alexander Lister, Florist, Rothesay, N.B., has a collection of Sweet Peas, Carnations, *Pentstemons*, Dahlias, herbaceous plants and Pansies elevated to a high ridge along the centre of the table, making a very pleasing and effective exhibit. A new Dahlia named Jeannie Alister is a single Cactus variety of a new shade, and a new Cactus sort named Lister, purple with pointed petals.

On further looking into the exhibit of the Ichthemic Guano Co., after it was finished, we were better pleased with it than in the early morning. The company is specially indebted to Messrs. M. Todd & Co. for the cultivation of the plants by means of the noted fertiliser. *Hydrangea paniculata*, *Gladioli*, *Lilium Harrisii* and other flowering plants lightened up the Palms, Ferns, and *Araucaria excelsa*, all of which are arranged in tiers one above the other. We believe it is the finest group they have ever set up here. Messrs. Alex. Shanks & Son, Arbroath and London, have a nice collection of lawn mowers, including the Caledonia with fluted rollers and patent axle springs; also the Britannia, the Britisher, and the Pony machine with delivery apparatus.

Messrs. R. B. Laird & Sons, Frederick Street, Edinburgh, have a large exhibit of various subjects arranged for effect, the one to help the other. Cut flowers of herbaceous plants are in great variety, forming an important feature of the group. They are still plentiful and good in the open under the influence of a cool and moist northern atmosphere. Dahlias are extensively represented in their various sections of show, fancy, Cactus, decorative and

pompon. Messrs. Laird have long been noted for their collection of Dahlias. The group is backed up with choice Coniferae in great variety, and the variegated *Hedera madeiriensis*.

Messrs. Ford & Co., glass manufacturers to Her Majesty The Queen, 39, Princes Street, Edinburgh, have an exhibit of the latest table decorations, rustic glass, tastefully arranged *en suite*, in tubes, flower stands, and bowl centres. The vases used for the cut flower exhibits at this and other Edinburgh shows, the shape and colour being highly suitable for the purpose, give a pleasing effect to the flowers and foliage they contain.

Messrs. Thos. Methven & Sons, 15, Princes Street, Edinburgh, have a table of *Liliums*, double tuberous *Begonias*, *Crotons*, *Caladiums*, *Crozy's Cannas* in variety, *Panocratiums*, Palms and Ferns, the latter including *Pteris* and *Adiantum*, arranged as a groundwork to the group, which is most artistically arranged. The whole is interspersed and brightened with Lilies in fresh condition, including such as *Lilium auratum*, *L. a. rubro vittatum*, *L. a. platyphyllum* and *L. lancifolium*.

Messrs. Dicksons & Co., 1, Waterloo Place, Edinburgh, have a large and bold table at the east end of the Waverley Market. Along the centre of the table very good young Vines as well as fruiting Vines and Peaches in pots, are arranged in place of Palms. The fruiting Vines consist of Lady Hutt and Appley Towers. *Violas*, new *Picotees* and Carnations, the latter including Dowager Duchess of Athole (a white perpetual flowering variety), Duchess of Fife (shell pink), and others are shown. Hardy shrubs are represented by *Colutea sanguinea*, *Prunus Pissardi*, *Hypericum moserianum tricolor*, *Spiraea Bumalda*, *Abies pungens glauca Kosteri*, and the Japanese Wineberry.

Mr. Henry Eckford, Wem, Shropshire, stages a collection of Sweet Peas in many of the more interesting and newer varieties, which always create a considerable amount of interest.

Messrs. Dickson & Sons, 32, Hanover St., Edinburgh have a group of the more interesting and useful conifers arranged round the sides of the band stand. Some of the more showy and popular were the Golden Cypress, Golden Juniper, Golden Thuya, and *Abies parryama glauca*, Golden *Retinospora*, tuberous *Begonias* &c.

Messrs. James Grieve & Sons, Redbraes Nursery, Edinburgh, have a table of choice Palms, *Aspidistras*, *Dracaenas*, *Panicum variegatum*, bronze and ticolor *Pelargoniums*, and New Zealand shrubby *Veronicas* in great variety for pot work. All these are brightened with such flowering plants as tuberous *Begonias*, single and double, also choice Sweet Peas, Carnations, *Violas* and choice herbaceous flowers. They also have a beautiful anchor of flowers.

The Ichthemic Guano Company, Ipswich, seemingly undaunted at the clashing of date between the National Chrysanthemum Society's show in London, and the date of the Royal Caledonian, have graced the centre of the hall with their now famous Octagon group. A departure has been made in a wealth of cut blooms of *Hydrangeas* and *Gladioli*. Delicate and fragrant *Stephanotis* and graceful sprays of *Odontoglossum* add a delicate finish to a masterly piece of grouping, and we congratulate the company on a thoroughly representative exhibit.

ROWAN JELLY.

THOSE who like preserves having a slight acidity would do well to try a jelly made from the berries of the Mountain Ash or Rowan. Any expert matron, or even her daughters, can make it with a minimum of care and painstaking. First get the Rowan berries, as the cook said about the hare. The berries should be perfectly ripe. Pick them off the stalks and put them into a clean, white enamelled saucepan, just covering them with water. Take the pan off the fire just before the water boils, and mash the berries with a wooden spoon or pestle. When thoroughly broken, strain the mass through a jelly bag. To every pint of juice add one pound of the best loaf sugar, and boil slowly until the juice settles in the form of a firm jelly after cooling. This can be tested by taking a little of the juice now and again and cooling it on a plate. If it becomes firm enough after a few minutes it may be put in glass or stoneware jars and left to cool, after which the jelly should be firmly tied down and stored away until required for use.

QUESTIONS AND ANSWERS

Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Hardy Perennials.—*Begonia*: To name a dozen hardy perennials for market work is rather a difficult task, as there are so many fine subjects from which to pick and choose. You do not state any particular time of the year when you require them to be in flower. The following are well worthy of cultivation, and you may add very many more subjects to the list of which the same may be said, viz.: Delphiniums and double Pyrethrums of sorts, Lupinus polyphyllus, Gypsophila paniculata, Spiraea Aruncus, Heuchera sanguinea, Achillea Ptarmica flore pleno, Galega officinalis albiflora compacta, Doronicum austriacum, Eryngium alpinum, Lychnis Viscaria splendens plena, Helenium autumnale, Aster acris, A. Amellus bessarabicus, A. diffusus horizontalis, and Coreopsis grandiflora. There are many more perennial Asters (Michaelmas Daisies) you might well invest in, and you will observe that we have made no mention of Irises, of which there is a lot to pick and choose from, or of such bulbous subjects as Lilliums, which would be most valuable for supplying cut flowers.

Tuberous Begonias.—*Begonia*: If you have a good strain of these popular plants you should find a ready sale for them in Scotland. Most, if not all, of the best firms there buy in each year to a considerable extent. Amongst Edinburgh firms you may apply to Mr. John Downie, 144, Princes Street, and Messrs. R. B. Laird & Sons, 17, South Frederick Street. In Glasgow you may apply to Messrs. Austin and McAslan, 89, Mitchell Street, and Messrs. J. R. Thyne, 83, St. Vincent Street. You are mistaken, however, in thinking that the best forms of the tuberous Begonia have not yet got into Scotland.

Steel blue Eryngium.—*A. J.*: The term steel blue would apply to several species. The specimen you sent is Eryngium planum, and should be obtained from growers of hardy herbaceous plants under that name, though we are not certain you would get it. It is often grown under the erroneous name of E. amethystinum, and you would probably obtain it by asking for that. The name is wrong all the same. E. planum has oval, flat, and crenate, but otherwise undivided, leaves. The lower leaves of E. amethystinum are deeply three-lobed, and the upper ones are more or less cut. The heads of the latter are also larger than those of the former. You might possibly be able to get seeds from some of the seed merchants, otherwise you could ask for plants.

Origin of the Sweet Pea.—*T. Anderson*: There can be little doubt that all the garden forms of the Sweet Pea both ancient and modern have originated from Lathyrus odoratus, which grew, and probably still grows, wild in Sicily. Whoever first originated the idea that a species or variety was native of Ceylon, must have made a mistake. The variety coming from that island must have been taken there, or possibly the original from which the variety arose in gardens and got perpetuated on account of its distinctness.

Preserving old plants of Lobelia.—*A. S.*: Some of the plants should have all the flowering stems cut pretty close back at once, so as to induce them to develop flowerless shoots before winter comes on. Select those that are brightest in colour, and dwarfest, for your next year's stock. They should be potted up in 60-size pots, in light sandy soil as soon as they commence to grow, so that the pots may be well filled with roots before winter.

Names of Plants.—*Filices*: 1, Selaginella uncinata; 2, Nephrodium decompositum; 3, Aspidium Lonchitis (the Holly Fern).—*A. O.*: 1, Aster acris; 2, Celsia Arcturus.—*E. Morris*: Xylophylla frutescens.—*S. Fordham*: 1, Anemone japonica alba; 2, Helianthus Miss Mellish (both will do well in a London garden).

Communications Received—W. B. G.—Inquirer.—S. O.—R. S.—John Saville.—C. C.—F. L. Ames.—Old Boy.—C. C. L.—M. N.—G. Maynard.—Q.—B. Entwhistle.—Alex. Lambourne.—R. Craig.

TRADE CATALOGUES RECEIVED.

W. P. LAIRD & SINCLAIR, Dundee, and Cupar Fife—Catalogue of Bulbs and Roots for Spring and Summer Flowering.

ROBERT VEITCH & Sons, Exeter.—Catalogue of Dutch Bulbs.

H. CANNELL & SONS, Swanley, Kent.—Catalogue of Bulbs, Strawberries, and Small Fruits.

THOMAS DAVIS & Co., Wavertree, near Liverpool—Select Bulbs.

R. B. LAIRD & SONS, Edinburgh—Select Bulbs.

FRANCIS G. E. BONNETT, Heathfield, Sussex—Bulbous Roots.

ISAAC WITHERINGTON, Ribbleton, Preston—Catalogue of Bulbous Flowering Roots, Roses, Fruit Trees, &c.

FIXTURES FOR 1897.

SEPTEMBER.

- 21.—R.H.S. at Drill Hall.
- 28.—Radcliffe-on-Trent Potato Show.
- 30, 1, and 2, Oct.—R.H.S. Fruit Show at Crystal Palace.

OCTOBER.

- 12.—R.H.S. Committees and Lecture.
- 12, 13, 14.—N.C.S. at Royal Aquarium.
- 26.—R.H.S. Committees and Lecture.

NOVEMBER.

- 2, 3.—Watford Chrysanthemum Show.
- 2, 3.—Coventry Show.
- 2, 3.—Brighton Chrysanthemum Show.
- 2, 3.—Borough of Croydon Chrysanthemum Show.
- 2, 3.—Southampton Chrysanthemum Show.
- 2, 3.—West of England Chrysanthemum Show at Plymouth.
- 3.—Ealing Show.
- 3, 4.—R.H.S. of Ireland Chrysanthemum Show.
- 3, 4.—Ascot, Sunninghill, Sunningdale and District Chrysanthemum Show.
- 3, 4.—Isle of Thanet Chrysanthemum Show.
- 3, 4, 5, 6.—North Peckham Chrysanthemum Show.
- 3.—Teignmouth Chrysanthemum Show.
- 4.—Colchester Show.
- 4, 5.—Highgate Chrysanthemum Show.
- 4, 5.—Devon and Exeter Fruit and Chrysanthemum Show.
- 9, 10, 11.—N.C.S. at Royal Aquarium
- 9, 10, 11.—Birmingham Chrysanthemum and Fruit Show.
- 9, 10.—Kingston and Surbiton Chrysanthemum Show.
- 9, 10.—Leeds Paxton Chrysanthemum Show.
- 9.—R.H.S. Committees and Lecture.
- 9.—Croydon Chrysanthemum Show.
- 10.—Bodmin Chrysanthemum Show.
- 10, 11.—Liverpool Chrysanthemum Show.
- 10, 11.—Birmingham Chrysanthemum Show.
- 10.—Brixton Chrysanthemum Show.
- 11.—Reigate Show.
- 11.—Spalding Chrysanthemum Show.
- 11, 12.—Putney Show.
- 12, 13.—Bradford Chrysanthemum Show.
- 12, 13.—Hanley Chrysanthemum Show.
- 12, 13.—Sheffield Chrysanthemum Show.
- 12, 13.—Nottingham Show.
- 16, 17.—Ipswich Chrysanthemum Show.
- 16, 17.—Manchester Chrysanthemum Show.
- 16, 17.—Belfast Chrysanthemum Show.
- 16, 17.—Chester Paxton Chrysanthemum Show
- 16, 17.—Folkestone Show.
- 17, 18.—Hull Chrysanthemum Show.
- 17, 18, 19.—York Chrysanthemum Show.
- 17, 18.—South Shields and Northern Counties Chrysanthemum Show.
- 17, 18.—Bristol Chrysanthemum Show.
- 17.—Rugby Chrysanthemum Society.
- 18, 19, 20.—Edinburgh Chrysanthemum Show.
- 19, 20.—Stockport Chrysanthemum Show.
- 23.—R.H.S. Committees and Lecture.
- 25, 26, 27.—Dundee Chrysanthemum Carnival.

"AMERICAN GARDENING."

An illustrated Journal of Horticulture, published in the interests of the amateur in the Garden, the Conservatory, the House, the Fruit and Vegetable Grower, Trees, Shrubs, and Flowers.

The Leading American Horticultural Authority.

Issued weekly, and mailed, postage paid, to English subscribers for a 6s. money order.

Address, "AMERICAN GARDENING," 170, Fulton Street New York, U.S.A.

READERS OF ADVERTISEMENTS

in these pages will greatly oblige and assist us-by always mentioning

THE GARDENING WORLD

RUBBER STAMPS

WITH A MOVEABLE LINE.

SPECIALLY DESIGNED OUTFIT

FOR

Seedsman and Florists.

COMPLETE FOR 7/6.

The Outfit consists of Rubber Die (any wording) mounted on Special Air Cushion Rubber (1/4 inch thick) so as to neutralise any inequalities of surface in Seed Bags, &c.; a Font of Solid Rubber Type, containing 74 Letters, Points, and Ornaments. These are simply pressed into designs, and can be altered at will. In addition a Type Holder is enclosed for marking single lines of moveable type only. For 1/6 extra we include 21 figures, so that it can also be used as a dating stamp.

THE PUBLISHER,

F. A. COBBOLD,

1, Clement's Inn, Strand, London, W.C.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Malda Vale, London W.

RETARDED

Lily of the Valley Crowns NOW FROM ICE.

A LADY writes:—"These 'retarded' Crowns are the most delightful, inexpensive floral invention of the age, and Mr. Jannoch deserves the universal gratitude of all lovers of flowers.

WRITE FOR LIST.

T. JANNOCH,

Lily of the Valley Grower to H.R.H. the Prince of Wales.

DERSINGHAM, KING'S LYNN, NORFOLK.

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue

JAMES CYPHER,

Exotic Nurseries, CHELTENHAM.

BEEES! BEEES!! BEEES!!!

And Bee-keeping Appliances of every description.

Large stock on hand for delivery at a minute's notice. Send for Catalogue of 160 Illustrations, 80 pages; also my new Horticultural and Poultry Catalogue; post free.

T. B. BLOW, Welwyn, HERTS.

EPPS'S COCOAINE.

COCOA-NIB EXTRACT. (TEA-LIKE.)

The choicest roasted nibs (broken-up beans) of the natural Cocoa on being subjected to powerful hydraulic pressure, give forth their excess of oil, leaving for use a finely-flavoured powder—"Cocaine," a product which, when prepared with boiling water, has the consistence of tea, of which it is now, with many, beneficially taking the place. Its active principle being a gentle nerve stimulant, supplies the needed energy without unduly exciting the system. Sold only in labelled tins.

The Gardening World.

ESTABLISHED 1884.

Price One Penny; Post Free, Three-halfpence

Subscription (including postage): 3 months, 1s. 8d. 6 months, 3s. 3d.; 12 months, 6s. 6d., prepaid.

Foreign Subscriptions to all countries in the Postal Union, 8s. 8d. per annum, prepaid.

Published every Thursday morning, and can be obtained through all Newsagents and Booksellers, and from all Railway Bookstalls.

SUBSCRIPTION FORM.

Please send me "THE GARDENING WORLD,"

for _____ months, commencing on _____

for which I enclose _____

Name _____

Address _____

SCALE OF CHARGES FOR ADVERTISEMENTS

Small Advertisements, solid type, 6d. per line of about nine words. Displayed Advertisements, per inch, 6s.; per column (12 ins. long), £3 5s.; per halfpage, £5; per page, £9. Special quotations given for a series. Gardeners and others Wanting Situations thirty words for 1s. 6d., prepaid.

Telegraphic Address: "BAMBUSA, LONDON."

1, CLEMENT'S INN

STRAND, LONDON, W.C.

BEAUTIFUL FLOWERS

IN

WINTER and SPRING.

Barter's

Bulbs are the pick of the World.

PLANT NOW

FOR MASSING IN BEDS & BORDERS.

| | Per 1,000 | Per 100 |
|--|-----------|---------|
| | £ s. d. | s. d. |
| Hyacinths , mixed reds .. | 6 5 0 | 14 0 |
| " mixed blues .. | 6 5 0 | 14 0 |
| " mixed whites .. | 6 5 0 | 14 0 |
| " mixed, all colours .. | 6 0 0 | 13 6 |
| Tulips , mixed, double .. | 1 10 0 | 3 6 |
| " " single .. | 1 10 0 | 3 6 |
| Crocus , blue .. | 0 12 6 | 1 6 |
| " striped .. | 0 12 6 | 1 6 |
| " white .. | 0 12 6 | 1 6 |
| " yellow .. | 0 16 0 | 2 0 |
| " mixed .. | 0 10 6 | 1 6 |
| Narcissus , biflorus .. | 1 5 0 | 3 0 |
| " incomparable double .. | 1 17 6 | 4 0 |
| " " single .. | 1 17 6 | 4 0 |
| " " Cynosure .. | 1 17 6 | 4 0 |
| " " Stella .. | 1 5 0 | 3 0 |
| " Nanus, very dwarf.. | 3 5 0 | 7 6 |
| " pallidus praecox .. | 2 15 0 | 6 6 |
| " Pheasant-eye .. | 1 1 0 | 3 0 |
| " poeticus ornatus .. | 3 5 0 | 7 6 |
| " rugilobus .. | 2 15 0 | 6 6 |
| " mixed, Polyanthus.. | 2 0 0 | 5 0 |
| Anemones , good double, mixed .. | 1 10 0 | 3 6 |
| " good single .. | 1 1 0 | 2 6 |
| Daffodils , double yellow .. | 2 10 0 | 5 6 |
| " single (Lent Lilies) .. | 1 5 0 | 3 0 |
| " mixed .. | 1 5 0 | 3 0 |
| Iris , English, mixed .. | 2 5 0 | 5 0 |
| " Spanish, mixed .. | 0 17 6 | 2 0 |
| Jonquils , Campenel .. | 1 15 0 | 4 0 |
| " single sweet .. | 1 10 0 | 3 6 |
| Ranunculus , mixed Persian .. | 1 0 0 | 2 6 |
| " " Turban .. | 1 0 0 | 2 6 |
| Scilla sibirica (Squills) .. | 1 10 0 | 3 6 |
| " white .. | 1 10 0 | 3 6 |
| " rose .. | 2 10 0 | 5 6 |
| Snowdrops , double or single .. | 1 1 0 | 2 6 |
| Aconites (Winter), extra large .. | 1 1 0 | 2 6 |
| Blue Bells .. | 1 1 0 | 2 6 |
| Star of Bethlehem .. | 1 0 0 | 2 6 |
| Triteleia , white.. | 1 10 0 | 3 6 |
| Chionodoxa .. | 2 0 0 | 4 6 |

Illustrated Catalogue Post Free.

Barter's

THE QUEEN'S SEEDSMEN,

237, 238, & 97, High Holborn, London.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, SEPTEMBER 18th, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, September 20th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 TUESDAY, September 21st.—Royal Horticultural Society: Meeting of Committees at 12 o'clock.
 Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 WEDNESDAY, September 22nd.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 THURSDAY, September 23rd.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 FRIDAY, September 24th.—Sales of Dutch bulbs and imported and established Orchids by Messrs. Protheroe & Morris.

FEATURES OF THE EDINBURGH SHOW.—

There will always be considerable diversity of opinion about the respective merits of the larger shows held in various parts of Great Britain, but, in our opinion, the difficulty experienced in comparing two large shows lies in their individual characteristics due largely to environment, to the period of the year at which they are held, and the latitude from which the exhibits are drawn. The autumn flower show of the Royal Caledonian Horticultural Society, held on the 8th and 9th inst., was noticeable, perhaps, as much for the quality and quantity of its Grapes as for anything. In saying so we do not mean to imply that the recent exhibition was a record-breaking one in this respect. On the other hand we may state that Grapes were shown in similar quantity at most of the autumn competitions held during the last ten years at least. But that the standard should have been maintained for so long a period of time we consider very creditable to the gardeners and growers, both north and south of the Cheviots, who have patronised the Edinburgh show. The soil, the favourable atmosphere, the enthusiasm and the rivalry of the growers to maintain their reputation, must all contribute to the realisation of the net result. Young exhibitors rub shoulders with the old, and in their efforts to climb the ladder of success, they serve to buoy up the exhibition as a whole.

The special prizes and medals offered for fruits, plants, flowers, and vegetables, by way of commemorating the Diamond Jubilee Year of Her Majesty the Queen, infused a considerable amount of fresh enthusiasm amongst exhibitors between Inverness and London at least; and we hope that the society will repeat the experiment in some form or other, though necessarily under a different name on future occasions; for the exhibits brought forward constituted no mean feature of the show. The rivalry brought into existence and the efforts put forward to secure the leading honours could not be otherwise than productive of good, both in the interests of the society and the community at large. The inducements to compete were great, but the requirements were equally so, and only those with ample resources as well as skill, both in cultivation and in arranging the exhibits, could hope to excel. On future occasions the requirements in some cases might be made less exacting in order to induce even a greater number of competitors to take the field. Under such circumstances the chances of success must necessarily be greatly reduced, but gardeners seldom grumble at being beaten in good company.

"He either fears his fate too much,
Or his deserts are small,
Who dare not put it to the touch,
To win or lose it all."

In all of the four classes strong efforts to secure the premier positions were visible; but those who fell behind this mark took defeat with good grace.

The exhibits in the special class for a group of plants arranged for effect were much more varied in outline than is usual at flower shows generally. The competition was limited to 300 square feet, while the form of the groups was left to the originality or otherwise of the exhibitors. The result was that no two were exactly alike, thereby adding greatly to the variety of arrangement in the Waverley Market. In the class for cut flowers of hardy plants the competitors were nurserymen, though we see no reason why a private establishment might not aspire to enter the competitive lists. The destruction of herbaceous borders to make room for bedding plants some years ago is no doubt largely responsible for the result. Herbaceous plants of all suitable and useful kinds might be more largely grown in private establishments, and no doubt they will be in the near future.

Stove plants were well represented by huge specimens of Crotons, Campylobotrys refulgens, Calatheas, Dracaenas, Anthuriums and others, testifying that the art of cultivating such things has not been lost, but that they would be forthcoming in plenty provided that glass accommodation was at command. Of greenhouse plants Fuchsias and single tuberous Begonias were best represented. Only at a few shows can so many well-grown and flowered specimens be seen. Few things are more effective and durable in greenhouses during the summer months than floriferous and pyramidally trained specimens of Fuchsias. Vegetables were amply represented by Potatos, Tomatos, Leeks, Onions, Cauliflowers, Carrots, Parsnips, and Beet. None of these, perhaps, excited more attention on the part of gardeners and visitors generally than the marvellous specimens of Leeks; particularly in two or three of the exhibits. Their enormous length and size generally made them objects of curiosity to not a few. The past season has not been particularly favourable to vegetables and other outdoor crops in the north, yet skill can accomplish a good deal in spite of the elements.

Notice of Book.—I thank you very much for your notice of my book in yours of 11th inst. I think it needs special attention, especially in reference to the Crabs, as you say "It would be interesting to know where I get the pips of the wild Crabs in sufficient quantity to meet requirements." This, as it indicates, that it is scarcely credible that they can be got, seems to me to require an answer. I therefore, with pleasure, give it, and will feel greatly obliged to you if you will kindly insert it in your excellent paper, as it may remove what may be implied, that my Crab story has but little foundation in fact, which would be somewhat serious to me. It is this, there are spots in the country where the soil seems specially adapted to the natural growth of the wild Crab; there is such a spot not many miles from here; in that district there are many trees which bear abundance for my use; these I pay the labourers to collect, and they are pleased to get the money for so doing. I also often hear persons whom I meet at the shows tell me they also have plenty of Crabs in the hedges, but that they go waste, because they are not wanted. There are none others who gather them around here that I know of. So that it is plain by this that nurserymen generally rely on another source from whence to get their stocks. It is not necessary to go into this matter here. It is sufficient to tell you how I get them. As regards the criticisms of which you speak, kindly let me say I met with this in the *Cable* on same day as yours came out:—

"A DEFINITION"—

Harry: "Papa, what is a critic?"

Harry's Papa: "A critic my boy, is a man who gets paid for telling other people how they ought to do things that he could not possibly do himself."

—B. Wells, Crawley.

Francoa sonchifolia is flowering freely as a herbaceous plant in the open border in the grounds of the Glenburn Hydropathic, Rothesay, N.B.

A Big Cabbage.—Mr. Wylie, M.P., was recently told by a clergyman that a Cabbage weighing 47 lbs. was shown at one of the Condorrat flower shows. It required the whole of his friend's eloquence to make Mr. Wylie digest it—that is, the story.—*Snaggs*.

The Duchess of York, it is rumoured, is about to make an appeal on behalf of the Irish, who are threatened with famine on account of the failure of the Potato crop. The appeal will be on the same lines as that issued by the Princess of Wales for the poor of London.

Mr. Alexander Lister, Rothesay, secured the special prize for the best exhibit at Larbert on Saturday last, on the occasion of the flower show there. He also won the first awards for twenty-four Dahlias and twenty-four Carnations. He had ten entries and took five first and five second prizes.

Fuchsia Riccartoni, which originated at Riccarton, near Edinburgh, the seat of Sir James Gihson-Craig, Bart., is a common shrubby border plant in almost every villa garden of Rothesay, Scotland, descending the slopes all round the bay to the high road running along the shores of the Firth of Clyde. Some of the plants cover a considerable area of ground, particularly at the gates leading to the residence of Lord Bute. On the steep slopes of Glenburn Hydropathic, facing the north and west, the plants run up to 8 ft. or 10 ft. in height, the stems being stout and corky in appearance.

Messrs. Barr & Sons' Bulb Catalogues for the autumn are to hand. One of them is devoted to Daffodils, in the cultivation and improvement of which the firm has taken, and is taking, so great a part. Several fine novelties are included, and will doubtless be eagerly snapped up. We observe that the general bulb catalogue, which runs to sixty pages, exclusive of the covers, is arranged in a purely alphabetical manner, which must facilitate easy reference on the part of intending buyers. Moreover this catalogue contains much useful information, especially with regard to Tulips, which are classified in such a manner as to inform amateurs and all others in need of such information what sorts to plant together.

The Preservation of Fresh Fruit has been the subject of a number of experiments in France. Apples and Pears were found to keep in first-rate condition when each fruit was wrapped separately in tissue paper. Wood wool was also tried, but the results were not at all satisfactory. Hay and sawdust packing gave had results. It was discovered, however, that the fruits packed in sand came out the best of all, but even in this case each fruit was separately wrapped in tissue paper before being covered with the sand. The colour, plumpness, and flavour were well maintained, and the expenses of storing were not great. This would suggest to fruit growers a new method of storing their best fruit. It might be tried by them on a small scale, and if found satisfactory could subsequently be practised extensively. The sand, of course, should be dry and clean.

Gardens of Ancient Egypt.—Gardening in all branches suitable to the country seems to have been well understood in ancient Egypt. The garden was generally of large size and surrounded by a battlemented wall, with the principal entrance through a lofty ornamented doorway which served as lodges for the keepers and gardeners or labourers. Inside of these lodges was a vineyard surrounded by rows of Palm trees. Irrigation was well understood and tanks and reservoirs held the water conveyed by canals from the river. Summer houses were situated where they overlooked the flower beds. The Egyptians also conducted experiments. Sycamores (*Ficus Sycomorus*) and Palms shaded the reservoirs. The vines were trained on horizontal wooden poles or bars supported by columns. Bowers and avenues of vines were also planted, and boys employed to scare the birds during the ripening of the fruit. Grapes for the wine press were put into deep wicker baskets, but those for dessert into flat baskets. The Date Palm supplied the natives with food for the greater part of the year. The Gingerbread Palm was also grown, together with Peaches, Almonds, Olives, Figs, and Pomegranates.

The Duke and Duchess of York planted two trees in Dalmeny Park, on Sunday last.

Young Rhubarb, according to Dr. R. Otto, contains oxalic acid, but as the plants mature this is changed into malic acid and sugar.

One thing Lacking.—“What do you think of my new hat, Tom?” “Well, it seems fairly representative. I only notice one thing you have missed, and that is a hunch of Carrots.”—*Scraps*.

Pear Beurre Hardy.—I see this Pear is again on sale in the shops in London, and looking even finer than it did last year when I sent you a line in reference to it. It is, I am informed, grown in California, and in addition to its excellent quality as an eating Pear, it has the finest skin of any Pear I have ever come across, and is, even for its sightliness alone, a decoration to any dinner-table.—*J. C. Stogdon*.

Moss and Lichen on Fruit Trees arise from want of drainage in the soil, and from lack of sunlight. It is chiefly to be found on closely planted trees in grass land, and on undrained soils. Moss may be got rid of by scraping it from the trees with an iron scraper, and by afterwards washing the branches and trunk with lime water. A cleansing of this kind cannot fail to do trees good, but the causes of the presence of the moss have also to be dealt with. The land should be drained if it needs it, and closely planted trees must be thinned to let in the sunlight.

The Dutch and Cauliflowers. — Until a comparatively recent date the Dutch used to supply all our pickle manufacturers with Cauliflowers. Of late years English growers have got a little of their own back, however, and have beaten the Dutch growers out of the market. This is in a large measure due to Mr. R. H. Bath, of Wisbeach, who first entered into an engagement with a well-known pickling firm in London to supply them with Cauliflowers. He now grows over 200 acres of this esteemed vegetable, the best heads going to one manufactory.

Apples on Grass.—A series of trials and experiments recently conducted in Bedfordshire with relation to profitable fruit culture have yielded some interesting facts. It was found that the growth of young Apple trees in grass was seriously interfered with by the grass. The effect was most marked in the leaves, reducing their growth by 35 per cent. in dwarf trees, and 41 per cent. in standards. The loss of wood growth from the same cause was 87 per cent. for dwarf trees, and 74 per cent. for standards. In the dwarf trees the fruit yield was reduced 71 per cent., from the same cause. That trees grown in grass are especially liable to become covered with moss is a matter of common knowledge, and it needed not the confirmation which it received in this case. An open, cultivated soil is recommended for Apples, Pears, and Plums.

Wolverhampton Gardeners.—A lecture on Orchids was given to the members of the Wolverhampton Gardeners' Horticultural Club, on the 7th inst., by Mr. H. A. Burberry. He treated his subject from the standpoint of gardeners having but little glass accommodation, and dwelt chiefly on those species requiring but little warmth so far as the hot water apparatus is concerned. After reviewing the general situation, and pointing out how extremely simple were the wants of those species we already thoroughly understand, he expressed an opinion that those now known as refractory species will be managed equally as easily when we become more familiar with the conditions of their native habitats. The lecturer then entered most fully and extensively into the culture of cool Orchids generally, dividing them into two classes, viz., the warmer and the cooler sections of cool growing Orchids, the former differing from the latter only because more sun-heat should be given during summer when they are growing. He also fully described the conditions which should prevail in each department, and enumerated an enormous quantity of the most popular and showy species which grow and flourish under exactly the same conditions. This at once made the frequently difficult matters of culture and selections very ready and easy to understand. The hearty and cordial manner in which the concluding vote of thanks was proclaimed by those present sufficed to show how greatly Mr. Burberry's remarks were appreciated.

The best cork comes from Algeria, where there are 2,500,000 acres of cork forest.

Sensitive plants are so abundant in some tropical forests that the path of a man is distinctly discernible for a long distance behind him.

Cedar Trees for Pencil Making are said to be practically exhausted in the Old World. Several forests of the tree in Europe have been consumed by this industry.

Grandeur and Decadence.—Under this heading the *Nord-Horticole* discusses the fate of *Symphytum asperimum* and *Polygonum sakhalinense*, which were announced to the world a few years ago as exceedingly productive and valuable fodder plants for dry climates and droughty seasons, or where Clover and Lucerne could not be cultivated to any advantage. The *Symphytum* produces very few seeds and can only be propagated by pieces of the fleshy rootstock and by suckers. Many of these fail to grow and would-be cultivators paid dearly for them. Cattle were by no means fond of it. The same might be said of the *Polygonum*, the stems of which soon get hard and uneatable. The roots of this plant are difficult to eradicate when once they have become established. Neither of the two thrive well in poor dry soils.

Ensilage of Potatoes.—According to the Bulletin de Séances de la Société Nationale d'Agriculture de France, experiments have been made for the purpose of determining whether Potatoes can be stored in silos. In one case the Potatoes were hurried amongst crimson Clover (*Trifolium incarnatum*) in a silo. The temperature of fermenting green clover rises to 160° Fahr., and it was found that the Potatoes had practically been cooked. They also acquired the characteristic colour of that plant, and the flavour due to the process of fermentation. Potatoes were also tried amongst Maize, stored, stalks, cobs and all. The hardness and lumpiness of the Maize did not lie so closely as the Clover, with the result that the temperature did not rise so high. The Potatoes when taken out of the silo parted rapidly with their moisture, becoming very hard, in which state they may be kept for a long time. Before being used as cattle food they must be soaked in water, when they will soften, regaining their digestibility.

NEPENTHES.

Mr. H. J. VEITCH delivered a most interesting lecture upon *Nepenthes* at the last meeting of the Royal Horticultural Society at the Westminster Drill Hall, J. T. Bennett Pöe, Esq., occupying the chair. The lecture was illustrated by diagrams, and also by specimens of the living plants brought from the Chelsea nurseries.

In his opening remarks Mr. Veitch averred that he wished to treat the subject from a horticultural standpoint, and would therefore omit mention of the exact part played by the pitchers, for this had been done by others. Dealing with the history of the *Nepenthes*, Mr. Veitch said that they were first mentioned by Etienne de Flacourt in “L'Histoire de la granadile de Madagascar,” published in 1661, under the name of “*Aromatica*.” They were then apparently forgotten for nearly 130 years. The species mentioned by Flacourt, *N. madagascariensis*, was the last to be introduced having been brought to this country by Curtis in 1878–79. Linnaeus brought *Nepenthes* into notice in the 18th century, but *N. distillatoria* was the only species known to him. The earlier literature relating to the genus is very scattered.

N. rafflesiana, introduced in 1845, *N. hookeriana*, brought to this country from Borneo in 1847, and *N. ampullacea* are some of the first introduced species. Thos. Lohb, sent a lot to the nursery at Exeter, including *N. albo-marginata*, *N. phyllamphora*, *N. sanguinea*, and *N. Veitchii*, and these formed the nucleus of the Chelsea collection. Blume and Koethals, two Dutch botanists at the botanic gardens at Buitenzorg in Java, also brought several species to light. Sir Hugh Low had an interesting find in 1851 when he ascended Mount Kina Balu in Borneo, and found four of the finest species ever discovered, viz., *N. Rajah*, *N. Lowii*, *N. villosa*, and *N. edwardiana*. He only succeeded in bringing dried specimens to this country. Other attempts to secure

living specimens subsequently made by Sir Henry Low, Mr. F. W. Burbidge, Mr. Thos. Lobb, and Mr. P. C. M. Veitch also failed. Sir Joseph Hooker in 1874 advanced the cause of the *Nepenthes* very much by a lecture delivered by him before the British Association (biological section) at Belfast.

By the year 1872, continued Mr. Veitch, there were ten species of *Nepenthes* in cultivation, including *N. Rajah*, and *N. bicalcarata* from Borneo, and *N. Northii*. The last named was discovered through Miss North, the celebrated artist, painting a spray brought to her by a native. Curtis was sent in search

At the conclusion of the paper Mr. F. W. Burbidge, M.A., Curator of the Trinity College Botanic Gardens, Dublin, made some interesting remarks concerning the subject of the lecture. Mr. Burbidge in recounting his experiences as a collector remarked on the prevalence of the white mist in the higher altitudes in Borneo, and the great evenness of the temperature and moistness of the atmosphere. Mr. Burbidge suggested as a suitable house for *Nepenthes* a house that was not directly heated with pipes, but which was surrounded with other hot houses, the air from the latter being allowed to pass into it. A condensation of moisture would thus occur which would be a very close imitation of the natural conditions.

Orchid Committee.

CATTLEYA EUPHRASIA. *Nov. hybr.*—This fine hybrid is the result of a cross between *C. superba* and *C. Warscewiczii*. Both sepals and petals are bright rose, although the sepals are narrower, and a shade deeper in hue than the petals. The lip is large, well expanded, and about 1½ inches in diameter. It exhibits a rich glowing purple, passing into a duller purple at the throat, where originate a series of dull purple stripes which occupy the centre and pass down to the base. On either side of these is a buff-yellow area. First-class Certificate. Messrs. James Veitch & Sons Limited, Chelsea.

PEOPLE I HAVE MET.

MR. JAMES W. LAIRD.

This gentleman, who has frequently been in our office, started life in Edinburgh, when the present firm of Messrs. R. B. Laird & Sons was differently constituted and traded under the old title of Downie, Laird & Laing. Mr. James W. Laird was for some time with the old firm, studying and practising landscape gardening. His next occupation was with Messrs. Fisher, Son & Sihray, the well-known firm at the Royal Handsworth Nurseries, Sheffield. Leaving this nursery he travelled in foreign countries, principally Australia, for the period of two years.

After leaving Australia he returned to the mother country, and joined the late Mr. Andrew Sinclair in the management of Messrs. W. P. Laird & Sinclair's Nurseries, in the neighbourhood of Dundee, where he has ever since been. He is now the senior partner of that firm. The head office is in Nethergate, Dundee, but the nurseries are at Monifieth and Monikie, a little way out of Dundee. Mr. James W. Laird is well known in the English trade as one of Scotland's prominent growers of forest tree seedlings for which the Monifieth Nurseries have long been famous. See p. 42 for a fuller account of these nurseries. Owing to pressure for time we were unable to furnish the dates relating to the various points in Mr. Laird's career, but, as the accompanying portrait will show, he is still a young man and has plenty of time to do some good work for the benefit of the community at large.—[ED.]

MR. WILLIAM P. LAIRD.

MONIFIETH is a delightful little place along the Tay side. It is one of those places that the poets love to dawdle, and when my good friend was too pressing to brook a denial in his cordial invitation to get a breath of fresh air, and an inkling of what true hospitality really is, I gladly availed myself of an invitation to spend a week end at Braefoot, the residence of Mr. William P. Laird. Mine host is just a typical Scotch laddie, possessing the qualities of that exquisite blend of manliness and courtesy which we in the south too often are unable to reciprocate, and rarely able to excel.

Born in Edinburgh in 1865, Mr. Laird was educated at the Edinburgh Institution; he served an apprenticeship with the famous firm of Messrs. Downie & Laird; he went to Dundee in 1885, and fulfilled a useful period of work with his late father, and is now a partner with Mr. James W. Laird, taking over the management of the indoor department of the well-known seed establishment in Nethergate, Dundee. Mr. Laird is a well-known figure at the shows of the Dundee Horticultural Society, and he is the progressive and energetic secretary of the Dundee Chrysanthemum Society, which in the coming November is to hold high carnival in that city of jute and hessian. Mr. Laird married in 1895 a daughter of the late Mr. Swan, of Inverpeffer; and a charming little hairn promises well to carry to posterity the attributes of both father and mother, to whom the genuine and heartfelt thanks of the writer are due for the many hospitalities which they have extended with their thoughtful kindness to him.—*Gyp.*

PLANTS RECENTLY CERTIFICATED.

At the meeting of the Royal Horticultural Society on the 7th inst. the following awards were made.

Floral Committee.

NEPENTHES TIVEYI. *Nov. hybr.*—This is the result of a cross between *N. Veitchii* and *N. Curtisii* superba



MR. WILLIAM P. LAIRD.

of it, and after a good deal of trouble was successful. The number of introduced species has now been brought up to twenty four, although all of these are not in cultivation, some having been lost. The first hybrid was raised by Dominy, and bears his name. This was exhibited by the Messrs. Veitch at a Royal Horticultural Society's meeting at South Kensington in 1862. Seden has also raised several. Here Mr. Veitch gave a list of the finest hybrids up to date. Of these, two of the finest are *N. mastersiana*, obtained by crossing *N. khasiana* with *N. sanguinea*, and *N. dicksoniana*, the result of a cross between *N. rafflesiana* and *N. Veitchii*.

Coming to the culture of *Nepenthes* Mr. Veitch stated that the seed is usually sown on the surface of peat fibre and sphagnum moss, and placed in a close frame with a temperature of 70°–75° Fahr. It will germinate in from six to eight weeks, although imported seeds grow much slower than home grown ones. *Nepenthes* are but poorly provided with roots, and are not wholly land plants, being epiphytal under certain conditions. In the wild state fertilisation is effected by aerial agency. The number of seeds in a capsule varies from 40 to 50, and the seeds are minute and light.

The lecturer discussed in detail the different characteristics of the various forms, both in leaf and pitcher. He quoted Sir Joseph Hocker's statement that he believed the pitchers to be modifications of a gland situated at the apex of the midrib of the leaf.

Coming to the geographical distribution Mr. Veitch stated that out of thirty-six species, or thereabouts, fourteen are confined to Borneo, and three others to that and adjacent islands; thirteen more are extra-Bornean, but strictly Malaysian. North Australia has one, New Caledonia has one, Ceylon one, The Seychelles one, and North East India one (*N. khasiana*). With the exception of the last named all come from insular positions, and all are equatorial. They are found, moreover, in a zone lying within 12° on either side of the equator.

The climatal conditions show that the temperature is very uniform both day and night, for while the greatest heat of the day is 90°–92° Fahr. it seldom falls below 74° Fahr. by night. The air is nearly saturated during the greater part of the year, and the rainfall varies from 75 to 80 inches.



MR. JAMES W. LAIRD.

BRASSIA LAWRENCEANA LONGISSIMA. This is a well marked variety of the species, the sepals being very much produced, and assuming the appearance of long brown-yellow tails, spotted near to their origin with chocolate on a yellow-green ground. The petals are shorter than the sepals, but still long and of the same colours. The lip is ovate-lanceolate in shape, and from three to four inches in length, white at the base, and spotted with deep maroon. Botanical Certificate. Messrs. J. Veitch & Sons, Limited.

RHYNCHOSTYLIS COELESTIS, CAMBRIDGE LODGE VAR.—The plant exhibited here a spike some six inches in length. The individual flowers are small but effective in the mass. The sepals and petals are blue-white, tipped with flesh pink. The bright violet-blue lip is the chief feature, however, and a very attractive one. Award of Merit. Mr. H. J. Chapman, gardener to R. I. Measures, Esq., Cambridge Lodge, Camberwell.

ACINETA BARKERI.—A grand plant was shown of this handsome Orchid, carrying two abnormally large pendent spikes, each of which bore twenty-two flowers—an unusual number. The flowers are subglobose in shape, and very fleshy. In colour they are rich yellow, the lip being spotted with dark red in the centre, and having a deep notch on either side. Botanical Certificate. Mr. F. J. Thorne, gardener to Major Joicey, Sunningdale, Berks.

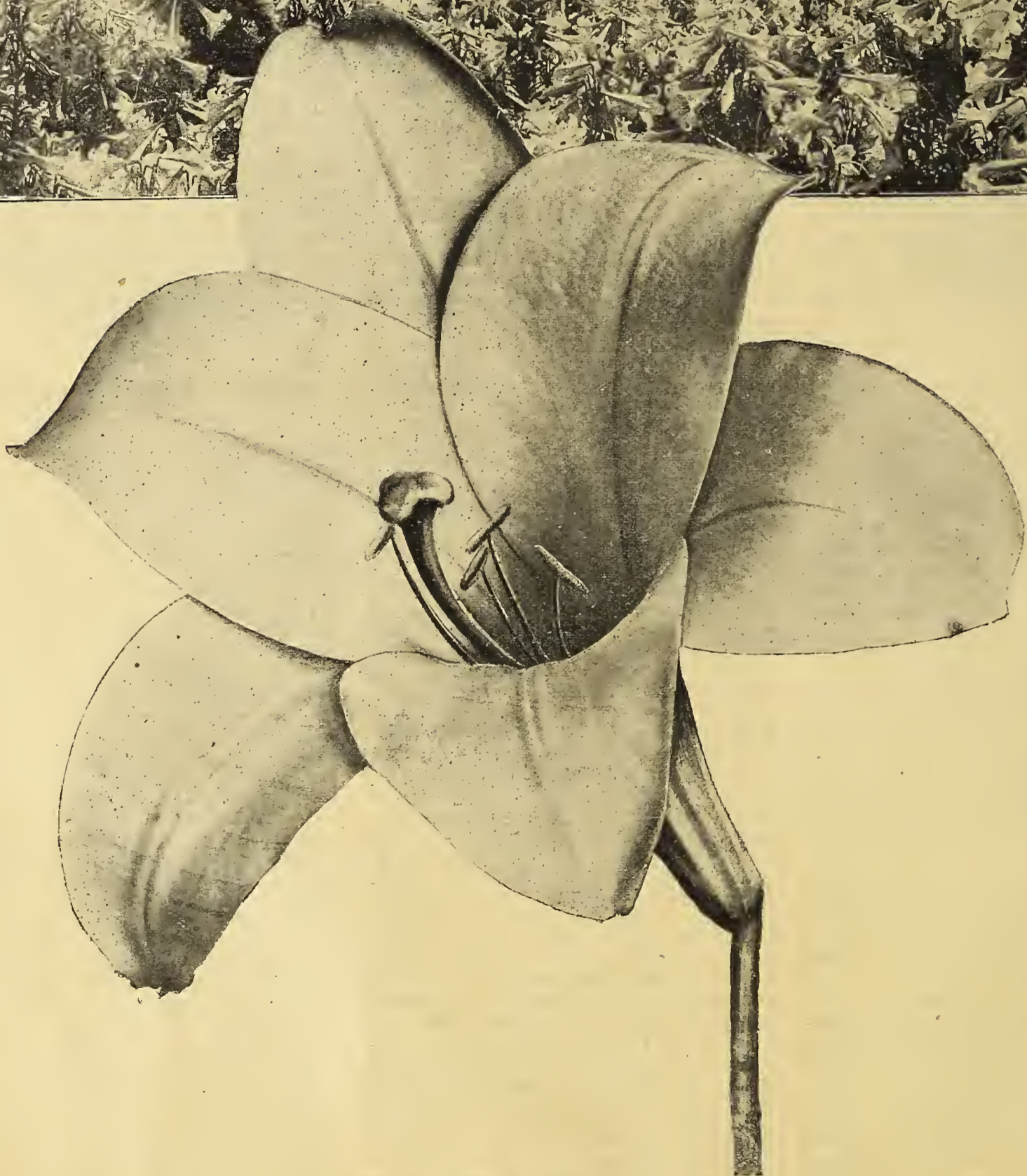
ONCIDIUM PANDURATUM.—This is a rare species with long compound racemes of relatively small flowers. The sepals and petals are chocolate-brown, margined with green-yellow, and with a prettily crisped or waved outline. The apex of the lip is acute and tipped with yellow. From either side of it near to the base appears a small and narrow yellow process, standing at nearly right angles to the body of the lip. Botanical Certificate. Mr. S. Barrell, gardener to Wellhore Ellis, Esq., Hazelhourne, Dorking.

The pitchers are from 7 in. to 9 in. in length, yellow-green in colour, blotched with chestnut. The wings are strongly developed, and bear a few stout, long hairs. The rim is filled, whilst the lid is small, and

great merit. First-class Certificate. Messrs. J. Cheal & Sons, Crawley, Sussex.

ASTER MRS. W. PETERS.—This perennial Aster is from 2 ft. to 2½ ft. in height, and a very free

The latter is small and inconspicuous. The lower leaves are deep green, and linear-lanceolate in shape; the upper ones are narrowly linear in shape, and of a shade lighter green. Both are inclined to be



LILIUM LONGIFLORUM HARRISII IN THE BERMUDAS (See p. 41).

heavily blotched with chestnut-brown. First-class Certificate. Messrs. Jas. Veitch & Sons, Ltd.

CACTUS DAHLIA F. C. PAWLE.—Here we have a fiery crimson true Cactus flower of medium size and

flowerer. The flowers are about 1 in. in diameter, but appear to be considerably less on account of the way in which the long white ray florets, of which there are several rows, curve inwards over the disc.

succulent. Award of Merit. Mr. W. Peters, Givan's Grove, Leatherhead.

HIBISCUS MANIHOT.—This is a very pretty Hibiscus, with large yellow flowers, and from 3 ft.

to 4 ft. in height. The leaves are large, deep green, and palmate in shape, the segments being irregularly serrate. Award of Merit. Mr. F. D. Lambert, Bookham.

Fruit Committee.

MELON MRS. HERRIN.—This is a Melon of fine appearance, with white flesh of great depth and good flavour. The fruits are oval in shape, and handsomely netted. When ripe, the skin is a rich yellow. This new variety was obtained as the result of a cross between Favourite and another seedling. Award of Merit. Mr. C. Herrin, The Gardens, Dropmore, Maidenhead.

BLACKBERRY MITCHELL'S SEEDLING.—In this we have a very free fruiting variety that is well deserving of attention. The fruits are large, conical, and the drupes fleshy. The flavour is pleasantly acid and brisk. Award of Merit. Mr. W. Mitchell, Farnham Royal.

The National Chrysanthemum Society awarded First-class Certificates to the undermentioned Dahlias at the Royal Aquarium on September 7th.

JOHN TRANTER.—A new show variety of medium size, and salmon-scarlet in colour. Mr. R. Tranter, Henley-on-Thames.

HARBINGER.—A very pretty show form. The colour is delicate mauve, and the bloom of fair size and good shape. G. St. Pierre Harris, Esq., Orpington.

THOMAS ANSTISS.—Here we have a bright and handsome magenta-hued flower of striking individuality. Mr. T. Anstiss, Brill, Bucks.

KEYNES WHITE.—This is a medium-sized Cactus form, and marks the latest advance towards the coveted pure white. There is a little yellow in the centre. The form is good. Messrs. Keynes, Williams & Co., Salisbury.

MARY SERVICE.—A handsome Cactus variety. The blooms are of good size, with long revolute and incurving florets, rosy-salmon in colour. The florets are tipped with magenta. Messrs. Keynes, Williams & Co.

LAVERSTOCK BEAUTY.—Another good Cactus flower, has long florets, and exhibits a bright shade of orange-salmon. Messrs. Keynes, Williams & Co.

ARACHUE.—This is a curious Cactus form. The outer florets are white with a broad central band of orange-red. The central florets lack the white. The form is good. Messrs. Keynes, Williams & Co.

ALFRED VASEY.—A large, bright salmon-hued Cactus sort, with rather heavy florets. Messrs. Keynes, Williams & Co.

FALKA.—This is another charming Cactus variety. The flowers are large and fine, and the colour is rosy-magenta—a charming and distinct shade. Messrs. J. Burrell & Co., Howe House Nurseries, Cambridge.

CASSILDA.—Here the wide florets suggest the decorative rather than the most approved Cactus type. The colour is a bright primrose-yellow, the size medium. Messrs. J. Burrell & Co.

ANNIE TURNER.—A fine Cactus bloom of fair size exhibiting a bright shade of rose-crimson. Mr. G. Humphries, Chippenham.

NELLIE BROOMHEAD.—This is the latest addition to the ranks of the pompons. The blooms are neat, and of a delicate lilac hue. Mr. J. T. West, Tower Hill, Brentwood.

MR. MOORE.—This is a magnificent Cactus variety of great merit, and destined to become a great favourite in all gardens where dark-hued Dahlias are admired. The colour is a deep black crimson. The flowers are of perfect form, and borne on long stout stalks that lift them well above the foliage. Mr. John Green, Norfolk Nurseries, Dereham.

NIGHT.—Appropriately enough is also a deep black-crimson flower. It is large, and has very long florets. It belongs to the Cactus section. Mr. J. Stredwick, Silverhill, St. Leonards-on-Sea.

ISLAND QUEEN.—A rosy-pink Cactus variety of considerable merit. Mr. J. T. West.

TRUE FRIEND.—Another very fine deep crimson Cactus form, but several shades lighter than either Night or Mr. Moore. The flowers are of medium size and capital shape. Mr. J. T. West.

GYPSY.—This may be relegated to the decorative section, as the florets are too broad to put in the ranks of the true Cactus varieties. The colour is crimson, with a magenta shade evident at the tips of the florets. Mr. G. Humphries.

E. J. DEAL is a symmetrical Cactus flower of great merit. The colour is fiery-scarlet, and the blooms are both bright and showy. Mr. S. Mortimer, Rowledge, Farnham.

DOROTHY SEALE.—is a very handsome single variety. The outline is perfectly circular, and the petals full and even. The colour is white with a central area of orange-red irregular outline, and of varying size. In some of the blooms the flowers have the appearance of being orange-red with a white margin, whilst in others the relative size of the two colour areas is altered. The sides of the petals are occasionally margined with yellow. Mrs. F. W. Seale, Sevenoaks.

COLTON BEAUTY.—This is a striking and handsome single flower. It is pure white, but the margins of the petals at the sides are bright yellow. The effect is somewhat curious. Size, outline and shape are all first-class. T. W. Girdlestone, Esq., Sunningdale, Berks.

First-class Certificates were also awarded to Messrs. J. Burrell & Co. for the two Gladioli named below.

G. EUNICE.—This variety throws a huge spike, and the individual blooms are also large and substantial. The colour is flesh-pink with a cerise blotch on the lower segment. There is also a circular blotch of cerise at the base of the segments in the centre of the flower.

G. ORIENTAL.—The spike and flower are both as large here as in the former variety, but the colour is rich orange-salmon. The segments are striped and edged with deep violet in a most attractive manner, and the flower altogether has a very distinct individuality.

THE FLOWER GARDEN.

As the days of autumn creep on it becomes an increasingly difficult task to keep the flower garden in ship-shape condition. The wear of the year is beginning to tell heavily upon many things, but it is the gardeners task to prevent this from being too obvious. Up to the time of writing we have at least been spared the experience of sharp frosts, although for at least two nights during the past week the temperature on the grass was quite down to freezing point. The beauty of Dahlias, Gladioli, and other handsome but tender flowering plants may thus be left to us for a little while longer, although after the middle of September has turned we can never depend upon frost holding off for even a day.

Gales of wind and storms of rain have, in the absence of the frost, done their best to pull the plants about, and there is much tying and tidying necessary.

THE HERBACEOUS BORDER is presenting a truly autumnal appearance with the starry flowers of the earlier Michaelmas Daisies, Gladioli and Dahlias in variety. Here there will be plenty to do. The Perennial Asters are a host in themselves, and are worth all the attention that can be given them. Skilful staking and careful tying are among the most important of attentions. How often, however, do we see the poor plants looking sadly like brooms with their stems strained together in a hideous hunch, and their natural symmetry entirely spoiled. Gardens of any size might well include amongst other special features a border devoted to Michaelmas Daisies. We have so many fine forms exhibiting a considerable range of habit, colour and size of flower. Such a border if planted with due regard to these differences of habit may be made to look very handsome but may also in the hands of the man lacking in taste look very stiff and proportionately ugly. Those who propose making such a feature in their garden will do well to observe closely the characteristics of all the good forms they may come across.

ZONAL PELARGONIUMS.—By this time all the required cuttings of zonal Pelargoniums will have been got in, and many of the earliest ones rooted, especially in cases where the practice of putting the cuttings in the open ground to root is adhered to. Generally, it is necessary to lift and pot these up before the end of September, but as long as the frost holds off they will be better outdoors than in.

The heds themselves look rather straggling where the plants have been cut at all hard, but they will pay for a clean up and a hoe over, if only to prolong the season for another fortnight.

The propagation of the tenderer bedding plants

will be going on apace. As these have to be struck in heat they are usually left until the last. Besides, there is a natural disinclination on the part of the gardener to upset until the last moment the strict lines of a carpet bed in order to obtain the needful stock. Alternantheras, Iresines, Heliotropes, Lobelias, etc., all strike freely in a hot hed, and it is worth while to erect one on purpose for their accommodation.

PENTSTEMONS.—The value of these handsome flowers is not recognised so generally as we should expect. Occasionally one sees them used for bedding, and in every case they are brilliant successes. They flower with remarkable persistency and freedom, and given a fairly rich soil the flowers are of relatively large size, also the spikes. Their propagation is remarkably easy, for cuttings root readily. At this time of the year numbers of side shoots and others thrown up from the base make their appearance. These constitute capital cuttings if cut off at a length of about 4 in. Instead of putting them in pots or pans we prefer making up a hed of soil in a cold frame, and dibbling them into it. Shrubby Calceolarias answer well to the same treatment. After they are rooted a fair amount of air may be given, but no attempt should be made to disturb them until the winter is past. Artificial heat is not needed, but we believe in covering the frames up very warmly in cold weather.

GENERAL WORK.—As the grass is growing now with exceptional vigour there is more mowing to do than there has been at any time of the year. Tennis is over now for the season, and advantage may be taken of this to give the green a good dressing of soot. If this is done immediately before a shower so much the better. Showery weather should, of course, be chosen. The laying of turf may proceed apace. Continue to gather seeds of any choice annuals that are ripe, also attend to the drying of those that have been gathered. Do not delay too long in submitting orders for hulks to the selected firms. Bulbs nowadays are both cheap and good, and no spring arrangements can possibly be complete without the inclusion of a good quantity of them.—A. S. G.

HARDY FRUIT GARDEN.

Just now the all engrossing task is the gathering of Apples and Pears as the different varieties become fit for plucking. Gales of wind are to be expected now, and thus it is not advisable to leave Pears on the trees after they will part readily from the foot-stalk, as a sudden squall may leave the gardener lamenting the loss of some of his best fruit. The necessity of careful handling, and of as little of that as possible, has been insisted on by all writers on the subject, and the practical man knows full well that such advice is not to be gainsaid.

The storeroom shelves will have been brushed down previously, and the walls whitewashed where the latter was possible. Do not, as is frequently done, line the shelves with a layer of hay, or the flavour of the fruit will suffer as a consequence, particularly the later varieties of Apples and Pears. Clean, bare shelves are all that is required.

LATE APPLES AND PEARS.—Where trees of the later varieties are carrying good crops it will be advisable to get all those whose size renders this possible. With the gathering in of the grain crops the birds have had a good deal of their food taken from them, and hence they make a dead set at the fruit. It is most provoking to find the largest and best samples with holes pecked in them, and as the birds usually select a spot near the foot-stalk for their operations there is very little chance of the fruit keeping, although sometimes the wound will heal over enough to permit of the fruit keeping.

ALPINE STRAWBERRIES.—Although it cannot be claimed that the Alpine Strawberries are a serious rival to the larger-fruited summer varieties, they come in very handy for prolonging the season, and there are many who appreciate their delicate flavour. Seed sown in spring, in light soil, in shallow drills about 6 in. apart, will furnish fruiting plants in the autumn if the latter are carefully transplanted. A heavier crop will be obtained the second year, after which the beds should be destroyed. An annual sowing is thus necessary to keep up a good supply. As these Alpines are easy to manage, there is no difficulty in obtaining fruit at all seasons, both by planting beds in different positions as well as by lifting the plants and fruiting them under glass.—A. S. G.

HINTS FOR AMATEURS.

Campanula isophylla alba.—There is no greater favourite as a pot plant for the window in both town and country than this charming little Bell-flower, and we may add that there is nothing else to surpass it in its own way. The easiness with which it may be grown either in the smoke of the city or the pure air of the country is amply demonstrated by the fine specimens we often see in cottage windows. The treatment given it is usually of the simplest character, and yet success is obtained. At the present time the plants which have been flowering away for the last couple of months appear to have got to the end of their tether, as far as this season is concerned, and it is necessary to give them a little overhauling. The old flowering stems may be cut away, and to within a couple of inches of the bottom. A few pieces bearing leaves should be left for the present, just to carry on the work of the plant, but even these may be removed as soon as young growths appear in any quantity, so that the whole of the old growths will by that time have been got rid of. The young shoots which are thus thrown up from the base furnish capital material for cuttings, and those who wish to increase their stock of plants may do so with comparative ease. We say comparative because in order to ensure success in rooting these cuttings a little artificial heat must be given. Those who have a heated propagating frame or even a warm pit have nothing to fear. We have also rooted cuttings in a cold frame by covering them with a bell glass, but this can only be done with anything like certainty when September is a fairly warm and bright month. Shoots about a couple of inches long make the best cuttings. They may be inserted four or five in a small sixty-pot in very sandy soil. Place the cutting pots in any position where they will enjoy a gentle heat. We prefer a corner in a gentle hot bed, where the pots may be plunged to the rims in fibre or leaf soil. When the cuttings have made a fair quantity of roots they should be potted off singly into thumb pots, which will last them through the winter. If the cuttings are very late, on the other hand, it will be advisable to leave them in their cutting pots without disturbing them all through the winter. The treatment here recommended for the white form will answer equally well for the type *C. isophylla*, the light blue flowers of which are quite as handsome as those of the variety. Both may be grown side by side.

Chrysanthemums.—As the month wears along the anxiety of the Chrysanthemum grower will increase day by day. The reward of his labours is not so very far away now, and the interest in the plants themselves, which is really never absent throughout the whole of the year, is fast developing. The work of feeding the plants is now of the utmost importance, for everything really depends upon it. In their natural anxiety to do the thing well, not a few cultivators, in which are to be included a quantity of professional gardeners, overdo it. It has become the fashion of late years to dose the plants heavily with chemical manures of various kinds, and although these are excellent in their way, they are very harmful when used to excess, just as an overdose of stimulant would be to their masters. The homely, and it must be admitted, evil smelling manure tub has gone out of fashion to a very great degree, although solutions of sheep, deer, or cow manure are among the safest and most effectual foods that can be given Chrysanthemums. The great point in using them is to obtain the liquid as free from sediment as possible, otherwise harm will result, for the sediment will form a hard crust on the surface of the soil. A clear solution of soot water now and again is of the utmost value, and its effects will be seen in the dark green hue of the leaves, and the healthy appearance of the plants generally. Even in the giving of soot, however, great caution must be observed. The practice of enclosing the soot in a bag of coarse canvas and plunging it in the water has been frequently recommended, and there is no doubt that it is a first-class, and, in fact, the best method. There is one danger attaching to it, however, and in this way:—The solution of soot thus obtained being entirely free from sediment is always comparatively light in colour, and the novice is apt to mistake the lightness of the colour for weakness, and to give his plants a much

stronger dose than is either wise or safe. In no case should the water given the plants be more than a dirty brown-black shade, and should be perfectly clear. Some people dress the soil in the pots with a covering of soot, but this is inadvisable, for the reason suggested above, and also for the fact that the surface roots are in danger of being burnt.

Just now the plants will take a good deal of feeding, and their diet should be varied, not sticking absolutely to the same thing, Clay's Fertiliser, Thomson's, and Guano are excellent, and in careful hands will yield good results.

Earwigs.—Every grower of Chrysanthemums, whether on a large or a small scale, knows how necessary it is to keep the earwigs at bay. The dewy nights of September see the insects in great numbers among the 'Mums, but there is also more chance of catching them. Small pots filled with dry hay, moss, or straw form capital traps, for the earwigs flock into them on account of the warmth and protection from damp that they afford.

Housing.—By the end of September most growers will be thinking seriously of housing their plants, for they are not safe out of doors any later than this, and even now in northern districts the nights and days have to be carefully watched. We usually experience heavy gales and storms of rain about the present time and thus it is very important to see that all the shoots are well secured by ties to stout stakes, or the plants will not be able to pass through the test of the winds.

Rooting through.—Those growers who have plunged their plants in ashes have to think about the rooting through into the material surrounding the pots, which is certain to take place to some extent. Even when the plants are not plunged, but are only stood on the soil, the roots will pass through the hole in the bottom of the pot. Thus many good cultivators do not plunge their plants, but simply stand them on strips of board or rows of paving bricks, or any other flat hard surface. Plants which are not thus served must be gone over frequently and lifted up to disturb or break off the roots which have passed through the pot, for, if this little attention is not given, these outside roots have obtained a firm hold by the end of the season, and when the plants are housed, often in a hurry, a great check is given them as a consequence.

Show and Regal Pelargoniums.—It is high time that these should be pruned, for even those which flowered very late ought, by this time, to have ripened up sufficiently to warrant the knife dressing. The plants should be cut back to within an inch of the old wood, or in the case of young plants, close to the point at which they made their first breaks. Water will have been withheld for some time past, and may be held back for a little longer, at least, as far as root supply goes. After cutting them back put the plants close together in a cold frame, just as they are, in the pots in which they have flowered this season. Keep the frame close, but sprinkle the old stumps nicely each bright day with the syringe. Under such conditions young growths will soon make their appearance, and potting will then have to be taken in hand; but this we will make the subject of another note. Cuttings will be furnished in plenty by the prunings. Use very sandy soil, and place them in heat if possible, for although they will root in a cold frame the process is a slow and rather unsatisfactory one, whilst quick results are obtained from cuttings which have been placed in heat.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Bedding Calceolarias.—Please tell me if I can root cuttings of bedding Calceolarias in a frame, and also if they will keep through the winter in such a place. I shall be glad of any instructions, as I have never tried to root Calceolarias before.—*R. Craig.*

You may root the cuttings and keep them through the winter quite easily in a frame, but in the absence of artificial heat the frame must be covered up warmly during spells of frosty weather. We should advise you to make up a bed of soil from 6 in. to 8 in. deep in the frame. The soil may be rough at the bottom of the bed, but on the surface should be fine.

A layer of sand about $\frac{1}{2}$ in. in depth should be placed on top of the soil. The cuttings should consist of tops of the young growths from 3 in. to 4 in. in length. These may be dibbled in pretty closely to each other. If the soil is fairly moist water will not be required for the present, but a sprinkle with the syringe on bright days will do good. Keep the frame close, and shade from the bright sun until the end of the month, after which no shade will be required. Calceolarias strike very readily in this way, much more freely, indeed, than when the cuttings are put in pans.

Greenhouse Blinds.—*C. C. L.*: You must leave the blinds of the greenhouse up until the end of the month, but you should gradually inure the plants to bright sunlight. The summer cloud shading on the front of the house may be washed off now if desired.

Tecoma radicans.—Will *Tecoma radicans*, spoken of in your issue of August 28th, grow in a garden in East Lothian, close to the sea, where east and north-west winds are very prevalent?—*Novice.*

You may plant the *Tecoma* with every hope of success. Give it the shelter of a wall having a south aspect if possible.

Flies and Grapes.—Yours is by no means an uncommon case, *B. Entwistle*, for at this time of the year flies are often a greater enemy to ripe Grapes than wasps. Your only plan, if you do not want to cut the bunches, is to encase them with fine muslin. This will keep the winged intruders at bay.

Hay in the Fruit Room.—*Q.*: We do not believe in the practice of putting a layer of hay on the shelves in the fruit room for the fruit to rest on, for the latter invariably becomes impregnated with a most unpleasant odour as of musty hay by so doing. Simply lay the fruit on the bare wood. Shelves made after the fashion of trellises, with the spars very close together, are better than those which have no openings in them.

Zinc Labels.—*F. L. Ames*: In using the zinc labels you have probably forgotten to clean the smooth, oily surface of the zinc with a piece of emery or sand paper. If you do this you will find that the writing will not run in the way you mention.

Melons.—*Inquirer*: You are wasting your time and the pit as well in trying to ripen the Melons. After the present month has expired the season will be practically over. The latter part of August as well as the fore half of September, has been a most unfavourable time for Melons, and we are not surprised that you found a difficulty in getting the fruit to set. We hope you will have better luck next time.

Roses.—Please say in your *Amateurs' Page* when to prune and house Roses in pots.—*A. B.*

The Hybrid Perpetuals are hardy enough, and may remain out of doors the whole of the winter or until they are required for forcing purposes. In this case the pots should be deeply plunged in ashes by the end of October at the latest, otherwise severe frost will chip and break the pots. The Teas, on the other hand, being comparatively tender, should be housed some time in October. Pruning may be attended to any time before the plants are placed in heat. The Teas may be pruned if desired as soon as they are housed, as they will not be subjected to the frost, but you must leave the H.P.'s unpruned until you bring them under cover.

Snails in a Garden.—My garden is surrounded with very old walls covered with Ivy, etc. The snails have this year been a regular plague, having destroyed several Sunflowers and other plants. Can you give any recipe for destroying them?—*Novice.*

As long as there is such a convenient harbourage for them you will always be annoyed with snails and slugs in wet seasons. Can you do nothing to lessen the cover for them by trimming up some of the Ivy? The only other remedy is hand picking. A good plan is to drop the pests into a box of quicklime, which will make short work of them. Go round the plants after dusk with a lantern, for at that time you will be more likely to catch the predators at their work. Traps may also be set of Lettuce leaves, and examined occasionally.

Barrington Peach --I have an old Barrington Peach which bears and ripens its fruit well, but the stones are split, and in some cases the kernel is bad. Would you advise root pruning.—A. B.

If you will turn to the answer to *Reader* on p. 14 of the issue of THE GARDENING WORLD for September 4th, you will find something about Peach stones being bad. In your case we are certainly of opinion that it is the age of the tree that is the cause, and we

gardens and nurseries as *Chelone barbata*, is the name of the plant you send, *Old Boy*. It is one of the prettiest hardy herbaceous perennials that we have.

POPULAR LILIES.

ALL the true Lilies (*Lilium*) to the number of 45 species are beautiful and in every respect worthy of

L. Martagon, *L. pardalinum*, *L. umbellatum*, *L. Hansoni*, and many others hardly ever absent from good representative collections.

L. longiflorum eximium is, perhaps, the most popular of all, because the most generally useful for cut flowers and other purposes; and because it readily submits to gentle forcing it may be had in succession for a long period of time. It is best known as *L. l. Harrisii*, and less often as *L. l. floribundum*;



THE WHITE LILY (*LILIUM CANDIDUM*).

know from experience that Barrington is very apt to behave in this manner when the tree is old. We do not think root pruning would be of the slightest use, but you might try the dressing of loam and mortar rubbish recommended to *Reader*. If the tree bears well you would naturally not care to root it out yet.

cultivation; but as in other genera the popular choice has fixed upon a few which may be considered the aristocrats of the genus. Judging of their popularity by the quantity grown we should place *L. longiflorum*, *L. auratum*, *L. speciosum*, and *L. candidum* in the first rank, including of course the grand varieties belonging to the first three of these. Other well known and highly valued species are *L. tigrinum* and its varieties, *L. elegans*, and its forms, *L. davuricum*,

though *L. l. eximium* was first given it by the botanists. The variety is popularly known as the Bermuda or Easter Lily (see illustration p. 38), because, though a native of Japan, it is grown in the Bermudas by hundreds of thousands for supplying the wants of Europe and America. The pure white flowers are deliciously fragrant, but not so overpowering as *L. auratum* when grown in quantity. Some other varieties of it enjoy a greater or less repute.

Pentstemon barbatus, commonly met with in

The Golden-rayed Lily of Japan (*L. auratum*) is the largest and grandest of all Lilies, and is in great request for pot culture for conservatory decoration, and for outdoor beds, especially amongst Rhododendrons. The flowers vary from 6 in. to 12 in. in diameter, but in the latter case they are few. In beds of peaty soil in the open garden the stems are often fasciated, bearing from 30 to 132 flowers, which are of course relatively small. Grand varieties are *L. a. Wittei*, creamy white; *L. a. virginale*, white, with a pale yellow band; *L. a. rubro-vittatum*, with a heavy crimson band; and *L. a. platyphyllum*, with very broad and massive segments.

Very choice are *L. speciosum* and its numerous varieties. *L. s. album* is pure white, but *L. s. Kraetzeri* is the better of the two white forms, as the flowers are of good substance with a pale green band down the centre of each segment. The most handsome of the coloured varieties is *L. s. Melpomene*, having rich crimson flowers, heavily spotted and edged white. Others are indicated by such names as *L. s. roseum*, *L. s. rubrum*, *L. s. purpureum* and *L. s. cruentum*. For conservatory work *L. speciosum* and its varieties stand unrivalled.

The White Lily (*L. candidum*, see illustration) is the type of the genus, both names implying that the flowers are white. They, indeed, require neither painting nor gilding. It is *par excellence* the garden Lily, flowering in June, and extensively cultivated for garden decoration as well as for cut flower purposes. Its popularity is indicated by the several names applied to it, including Madona Lily, common White Lily, Bourbon Lily and St. Joseph's Lily. The double variety is much less ornamental. As the species develops its winter foliage in the autumn it should be planted as soon as received; and the bulbs when intended to be transplanted should be lifted as soon as the foliage dies down in July or August. For the illustrations of *L. candidum* and *L. longiflorum Harrisii* we are indebted to Messrs. J. Carter & Co., High Holborn, London. They should have appeared in our bulb number a fortnight ago, but some delay in procuring electros obliged us reluctantly to go to press without them.

MONIFIETH NURSERY.

THE nursery of Messrs. Laird & Sioclar, at Monifieth, on the sloping ground overlooking the Firth of Tay, is situated a little to the north of Dundee, and was established here about forty years ago. The nursery at Monikie belonging to the same firm is being broken up, as an eighteen acre field has been secured contiguous to the Monifieth nursery to accommodate the nursery stock, which is being rapidly transferred to its new quarters during the planting season. Mr. James W. Laird resides at Monifieth, and takes charge of the nursery there, while Mr. William P. Laird controls affairs at the seed shop in the Nethergate, Dundee.

On the old lawn in front of Mr. James W. Laird's residence at Monifieth, are some old and interesting trees and shrubs, including a fine bush of *Acer polymorphum atropurpureum*, 6 ft. high and 8 ft. wide. On the house itself is the finest piece of *Desfontainia spinosa* we have seen, measuring 8 ft. high and 6 ft. wide. It has been here for many years, and has been in bloom for weeks past. The scarlet tubular flowers are tipped with yellow at first, but soon change entirely to scarlet. A large plant of *Bridgesia spicata* is thriving well on the end of the house, and *Phlomis fruticosa* blooms in this mild northern clime. A fine piece of *Fabiana imbricata*, 8 ft. high, was killed by the severe winter two years ago. The Camperdown Weeping Elm, raised at Camperdown, near Dundee, overhangs the pathway at the gate, and is notable for its fine drooping habit, and its leaves, which are broader than those of the ordinary *Ulmus montana pendula*.

ORNAMENTAL CONIFERS.

The two leading features of Monifieth are forest trees and ornamental trees and shrubs, in great variety, which find their way all over the United Kingdom. Every part of the nursery is kept in clean and perfect order by a large staff of workers, and good management. The choice, ornamental Conifers constitute the bulk of the occupants of wide borders on either side of a broad walk, but many of the more popular are grown in quantity elsewhere in the nursery. *Cupressus lawsoniana* is represented by a large number of varieties of the best colour and habit, including the charming *C. l. Allumii*, of pyra-

midal habit and deep sea-green hue, *C. l. nana*, *C. l. erecta viridis*, and the silvery *C. l. albo-spica*, all of them being well represented. Beautiful and useful also are *Thuja vervaeneana*, *T. Lobbii* (8 ft. high), *Cupressus sphaeroidea variegata*, *Juniperus sinensis aurea* and *Cedrus atlantica glauca*. The two latter stand well on the Firth of Tay. The same may be said of *Thujopsis dolabrata* and its variegated variety.

The Retiosporas are equally as well-represented as the forms of *Cupressus lawsoniana*, and include *R. obtusa*, *R. o. nana aurea* (twenty years old, and forming spreading, dense tufts only 6 in. high), *R. o. aurea*, and *R. o. albo-variegata*, golden, and variegated, respectively. *R. tetragona aurea* is always very compact, and golden, and *R. filifera* is like whipcord. Hardy and useful are *R. squarrosa*, *R. plumosa aurea*, *R. p. argentea* and *R. p. albo-variegata*, the names of which indicate the colours or peculiarities of the same. *R. leptoclada* is always a dwarf and characteristic plant, suitable for borders and lawns. There are some handsome plants of the Golden Arbor-Vitae (*Thuja occidentalis aurea*, 5 ft. high. A curious and ornamental shrub is *Retiospora lycopodioides*, the branches of which are often fasciated and always dense in habit. The small shoots of *Cupressus nutkaeosis albo-variegata* are white, giving the bush a highly ornamental appearance.

In various parts of the nursery we noted some healthy batches of *Podocarpus koraiensis*, resembling a strong Irish Yew. Healthy trees of *Picea nobilis* and *P. grandis* are to be met with in different parts of the grounds. *Pseudotsuga Douglasii glauca* is the Colorado variety of the Douglas Fir, having glaucous foliage. There are some fine trees of *Sequoia gigantea*, and the weeping variety, *S. g. pendula*, also finds a place. A handsome and ornamental subject is *Abies Engelmanni glauca*; and the same might be said of *Picea concolor violacea* (a fine tree of which has been lifted recently and is fit to transplant, though 10 ft. high), *Picea magnifica*, and *Abies Morinda*, 6 ft. high. A strange looking plant is *Cryptomeria japonica spiralis*, of dense habit, and having branches like thick cord. *Juniperus japonica* is also of dense habit. A very uncommon tree is *Arthrotaxus cupressoides*. *Cupressus lawsoniana albo-variegata* is covered all over with small white branches, making it a useful subject for window boxes. *Fitzroya patagonica*, not often met with in collections, thrives satisfactorily here. Nor can we omit mention of the Deciduous Cypress. *Picea webbiana*, a beautiful Silver Fir is represented by a tree 30 ft. high. It is very far from being common in collections. There is also a beautiful specimen of the Golden Wellingtonia, 15 ft. high. *Pinus insignis* is a handsome Conifer that thrives on our sea coast up to a high latitude.

FLOWERING TREES AND SHRUBS.

Even as far north as Monifieth, the evergreen *Phillyraea vilmoriniana* proves quite hardy and happy. *Olearia Haastii* is also valued as a flowering evergreen bush. *Prunus Pissardii* runs up 6 ft. the first year from the bud and carries foliage of a rich dark purple. The purple-leaved Oak is valued for mixing with table decorations, as the foliage shows up well by contrast with a white cloth. Finely cut are the leaves of *Acer polymorphum dissectum*. The rich blue flowers of *Ceanothus Gloire de Versailles* are always serviceable.

Griselinia littoralis, *Laurus nobilis* and *Dipplopappus chrysophylla* are evergreens that seem quite as hardy and ornamental in the north as in the south. *Berberis Aquifolium* assumes a rich red hue in autumn, retaining it all the winter, and is much prized for decorations. The fact that bees puncture the base of the corolla of *Menziesia polifolia* and *M. p. alba* is evidence that they are not the desired visitors. The red berried *Cotoneaster Simonsii* is much valued for making ornamental hedges. Several species of Privet are grown in the collection, including the variegated *Ligustrum argenteo-marginatum* and the golden *L. ovalifolium aureum*. The round-leaved *Cotoneaster nummularia* grows well against a wall, and would probably do so in the open. Rhododendrons are grown in quantity in plantations 1 ft. to 2 ft. high, and well set with buds. The cut-leaved form of the Norway Apple is known as the Eagle's Claw, in allusion to the shape of the leaves. The variegated Mountain Ash, being laden with red berries, is highly ornamental. Here we noted a grand specimen of the Portugal Laurel in standard form, about 12 ft. high and as far through.

Cytisus scoparius andreanus grows and flowers well in this nursery.

Only two stocks are employed at Monifieth for the budding of Roses, namely—the Sweet Brier and the Dog-rose. The former is employed as a stock for *Gloire de Dijon* and other Tea Roses, while the Dog-rose is used for all the hybrid perpetuals. The latter is raised from seed, and we noted a large quantity of healthy stocks recently budded, as well as Tea Roses in a more advanced stage in the open, and full of vigour. Myrobalan stocks have just been budded with Plums. Fine bushes of *Veronica Travensii* are grown in some quantity, and *Rhododendron ferrugineum* is also grown in quantity. *Spiraea bullata* and *S. Bumalda* form bushy tufts about 6 in. high, and are still flowering freely. *Aralia Sieboldi* has survived many winters in sheltered positions. The leaves of *Prunus lusitanicus azoricus* take on a beautiful red tint in autumn and spring. *Abelia rupestris*, after being established for some years, is now about to flower in this northern latitude. It receives no protection whatever. *Ampelopsis Veitchii* is a popular but variable climber in the north. *Weigela Looymansii aurea* takes on a beautiful golden colour, and is well adapted for the front of shrubbery borders, or in beds on the lawn in almost any part of this country.

Herbaceous plants are grown to some extent, but they are an adjunct to rather than a feature of the place. *Gypsophila paniculata* is grown in quantity for the sake of mixing with cut flowers, of which there is a demand for decorative work of various kinds. The steel blue stems and bracts of *Eryngium amethystinum* and *E. oliverianum* are highly ornamental, and the plants are very easily managed—in fact they require only to be kept free from weeds, but otherwise to be left alone. *Aruodo conspicua* flowers in the open ground quite as freely as the Pampas Grass. The Edelweiss is still flowering in the open ground. Equally if not more rare is *Xerophyllum asphodeloides*, here known as Turkey's Beard. The ordinary run of herbaceous plants is also flowering. As might be expected, Chrysanthemums receive their due share of attention. They are grown in pots partly plunged in an open situation. Dahlias are represented by plantations of show, fancy, Cactus and decorative varieties. Those who have not seen Dahlias growing north of the Cheviots would be surprised to note the dwarf and bushy character of the plants and their sturdy appearance. About 18 in. to 2 ft. is a very common average height of Dahlias in the north. Sweet Peas are still in their summer garb, growing and flowering freely.

FOREST TREES.

The larger portion of the nursery is devoted to the culture of Conifers and deciduous trees for the planting of woods and forests. They constitute, in fact, the principal feature of Monifieth, and needless to say they receive the best of attention. Weeds are thriving luxuriantly in Scotland just now, but the beds and plantations here are kept scrupulously clean by a diligent staff of workers. Shelter is afforded by hedges of Holly, Beech and Hawthorn, kept in close and trim order. Ornamental Hollies are also grown in quantity, independently of the typical green form.

As the various plantations, according to age and convenience, are scattered about the nursery, we shall endeavour to mention them as we found them during a rapid survey of the place. All the trees of any size have been recently transplanted. We passed fine plantations of Scotch Fir, 12 ins. to 18 ins. high; Hazel used by planters to obtain rods for crate making; two-year old Douglas Fir in fine condition; one-year old Larch and two-year old Scotch Fir. The two latter Conifers were raised from native or home grown seed, about half a ton of Larch seed being sown. We noted healthy and clean trees of Larch 2 ft. to 3 ft. high. These plantations are repeated in other quarters, and amongst them one-year transplanted Larches are 18 in. to 24 in. high. Large plantations of Spruce have been once and twice transplanted. Pious Laricio has been taken in hand in earnest, many plantations already existing. Those that have been two years transplanted are healthy and vigorous. The Austrian Pine of the same age also grows in grand form, and no better will be got of the same age during the coming planting season. A plantation one year transplanted is also good. Sycamores raised from home and Continental seed show a

marked difference in the colour of the foliage, the former being reddish in colour and considered the hardiest, while trees from foreign seed are green. Seedling Oaks, two years old, are remarkably strong.

Very interesting are the beds of seedlings sown last spring. Oaks, Beeches, and Sweet Chestnut are about 6 ins. high, or the latter slightly over. The Conifers grow much more slowly, being comparatively tiny the first year from seed and very different from trees which have assumed the adult foliage. *Pinus austriaca*, *P. Laricio*, *P. sylvestris* (Scotch Pine) and Norway Spruces are only about two or three inches high. When they commence growth the second year they assume a much more vigorous growth. Intending planters would do well to see the above for themselves, and we can assure them courteous treatment from Mr. James W. Laird, who manages the Monifieth Nursery.

SOCIETIES.

RODMERSHAM GARDENERS.—August 25th and 26th.

THE institution of the Kent Championship Belt by Messrs. H. Caneil & Sons, of Swanley, has done an immense amount of good to horticulture. It has given a great impetus to the cultivation of fruit, vegetables, and flowers, and the degree of merit developed in the various competing exhibits has shown a brisk upward tendency.

This year the struggle for the county championship took place at the annual meeting of the Rodmersham Amateur and Cottage Gardener's Association at the Rodmersham Park on the above dates, through the kindness of Mr. Mercer. For the last few years the competition between Milton and Rodmersham has been very keen. Last year the coveted belt found a resting place at Rodmersham, but this time the Miltonians are the victors. Ever since the feature was instituted either Rodmersham or Milton has been acclaimed victor, other societies simply having to look on.

This year there were eleven entries in addition to the two societies named, Eynsford, Strood, Ash, Penshurst, Charing, Ightham, Linton, Milstead, and Westgate, but at the last minute Charing, Ightham, and Eynsford scratched. The competition is for ten varieties of vegetables, six dishes of fruit, and a stand of annuals or other hardy flowers arranged for effect.

For the rest, the exhibits coming from amateurs and cottagers were limited in number. Mr. W. Worsley scored a first for the best kept and cultivated garden, with 118 points. Mr. J. Allen taking a similar award for a smaller garden with seventy-seven points.

Amongst the gardeners Messrs. W. Saunders and Mr. T. Gordon were the most successful, a fair number of prizes falling to their share. Mr. W. Saunders received first prizes for three table plants, Tomatos, Beetroot, spring sown Onions, two bunches of Grapes, twelve Cactus Dahlias, twelve varieties of garden flowers, and Chinese Asters. The first prize for the collection of vegetables, presented by Messrs. Webb & Sons, Stourbridge, was secured by Mr. T. Gordon, with Mr. W. Saunders in the second place. In a collection of vegetables in which the prizes were presented by Messrs. Daniels Bros., Norwich, Mr. W. Worsley was adjudged to be first, and Mr. E. Day, second.

For a stand of twelve show Dahlias, open to the county, Mr. W. H. Drew, Rocabester, carried off chief honours, the second prize going to Mr. W. Terry, Bapchild. Six dishes of Potatos, shown by Mr. W. Saunders under this section of the schedule received premier honours.

Amongst the exhibits not for competition appeared a collection of fine Cactus Dahlias from Messrs. H. Cannell & Sons, of Swanley. Of the varieties staged, Starfish and Mrs. W. Noble were two of the most striking, although all of the blooms on view were perfect in form and colour, and of more than average size.

PERTSHIRE HORTICULTURAL.

THE annual two days show arranged for by this society was held in the City Hall, Perth. Compared with previous years there was a falling off in the number of entries, especially in the vegetable section. Messrs. D. & W. Croll, Dundee, exhibited

two stands of choice Roses. Messrs. Harley & Sons, Perth, had a lot of excellent pot plants on view, while Messrs. Dickson & Turnbull, Perth, showed a fine assortment of similar material; also forty varieties of Sweet Peas.

In the classes for pot plants Mr. J. Scobbie, Ruthven; Mr. J. Borthwick, Cherrybank; and Mr. A. Barclay, Almondbank, were the most successful exhibitors. Mr. J. Hepburn, Huntingtower, staged the prettiest window box, and Mr. F. Nicoll, Craigclowan, scored for table plants. Mr. J. Harris and Mr. G. Robinson, Fernhill, secured the leading awards for hand and table bouquets.

The model garden competition was an interesting feature, although there were only two entries. Both of the gardens submitted were of great merit, that of Mr. John McKenzie being adjudged the first. Mr. L. McAlister, Muirton Bank, thus received the second prize.

In the fruit section, Grapes were the most conspicuous feature, and seldom, indeed, is it that they have been shown in better condition, both amateurs' and gardeners' exhibits being above the usual standard. The contest practically lay between Mr. W. Little, Muirton Bank, and Mr. J. Leslie, Pitcullen, who divided the cream of the prizes between them, although Mr. T. Dobbin, Dalhousie, was also very successful.

ROYAL JERSEY AGRICULTURAL AND HORTICULTURAL.—

THE Triangle Park, Jersey, was the scene of one of the best shows ever held by the above society, and the energetic officials, Messrs. C. F. Le Feuvre and C. J. Nicolle, deserve all praise for their arduous labours. The entries numbered no fewer than 854, being an increase of upwards of 100 over those of last year. To house these three roomy tents were requisitioned.

The tent devoted to the groups and specimen plants was the centre of a good deal of attraction, for the material on view was capital. Here Mr. H. Becker, of the Imperial Nurseries, staged a fine lot of Dahlias and Asters. Mr. William Colchester, of Ipswich, had a trade exhibit of Ichthemic Guano, the stand being prettily decorated with plants.

Cut blooms were for the greater part accommodated in the second tent, where Mr. Philip Le Cornu showed some excellent Dahlias and Roses. The table decorations and the remainder of the cut flowers, together with the fruit and vegetables, occupied the third tent. Here Messrs. Joshua Le Cornu, High View Nurseries, showed a group of grand Dahlias, which were prettily set up with Ferns.

In the prize list notable exhibitors were Mr. E. G. Marett, who led the way for twenty-four and twelve show Dahlias, and twelve and six Roses; Mr. J. W. Aubin, who was first for twelve bunches of single Dahlias; Mr. J. Harper, who sent the premier stand of twenty-four Cactus Dahlias; and Mr. W. Norman who distanced all other competitors for twelve bunches of Pelargoniums.

Mr. J. J. Dupré was first for three bunches of Black Hamburgh Grapes, and also for three bunches of Grapes of any variety. Mrs. Bashford is also a successful grower and exhibitor of Grapes, for she was credited with firsts for one bunch of black, one bunch of white, and three bunches of Muscat of Alexandria.

GLASGOW AND WEST OF ENGLAND HORTICULTURAL.—September 1st & 2nd.

A GRAND show was got together on this occasion at Glasgow, the large St. Andrew's Hall, the Berkeley Hall, the Octagon Hall, and the South West Hall being all filled with the exhibits, which totalled over a thousand. The platform was tastefully decorated by Messrs. Austin & McAslan, 89, Mitchell Street, Glasgow. Great praise is due to the exertions of the capable secretary, Mr. John Coats.

Amongst the non-competitive exhibits Messrs. Dobbie & Co., Rothesay, had a large and varied exhibit of cut flowers, the leading features being Cactus and pompon Dahlias. Mr. M. Campbell, High Blantyre, showed a fine lot of cut flowers, including early Chrysanthemums. Mr. John Forbes, Hawick, also had cut hardy flowers in quantity; also samples of Carnations Buccleugh Clove, and Yuletide. Mr. M. Cuthbertson, Rothesay, staged a collection of cut hardy flowers and vegetables. Messrs. Smith & Simons, Kennishead Nurseries, had stove and greenhouse plants in good order. Mr. C.

Irvine, Jedburgh, sent Pentstemons and other cut flowers.

Messrs. J. & R. Thyne, of St. Vincent Street, the well-known firm of nurserymen and decorators, as usual, showed excellently well. Space entirely forbids further reviews, but we may just add that the show was an unqualified success throughout.

In the competitive classes Messrs. D. & W. Croll, Dundee, took the highest honours for twenty-four blooms of grand Roses, followed by Messrs. James Cocker & Sons, of Aberdeen, and Messrs. David Robinson & Co., Mossend Nursery, Helensburgh, in order of mention. Mr. Geo. Mair, Prestwick, was first for twenty-two spikes of Gladioli, Mr. M. Campbell taking a similar award for twenty-four blooms of Dahlias. Mr. A. Lister was first for Pansies.

Mr. David Wilson, head gardener to Hugh Steven, Esq., Westmount, Kelvinside, won the Corporation Silver Cup for a really excellent collection of plants in a well-sustained competition, and the same exhibitor was also signally successful in other classes.

The display of fruit was excellent. Here Mr. D. Murray, gardener to the Marquis of Ailsa, Culzean Castle, Maybole, came to the front for twelve dishes; the first prize for a second collection of the same magnitude going to Mr. D. Airdrie, gardener to J. H. N. Graham, Esq., Larbert. Mr. D. Menzies, gardener to J. A. N. Brown, Esq., Dunipace, was again successful for two bunches of Black Hamburgh, whilst Mr. J. Leslie, gardener to A. Coats, Esq., Pitcullen, Perth, was first for White Muscats.

There was a good array of amateurs' exhibits.

BATH HORTICULTURAL.—September 1st and 2nd.

A CONTINUOUS downpour of rain is not exactly conducive to the success of a flower show, and yet this is what the good people of Bath have had to contend with. As in previous years the exhibition was held in the Sydney Gardens, which are in every sense well adapted for the purpose. The number of exhibitors reached 240, including a large number of the best known growers in the south and west of England. Some 1,100 exhibits were contributed, which number was far in excess of that forthcoming in any previous year. The plant section was a remarkably good one, Fuchsias, which are always well shown, being especially good.

Mr. James Cypher, Cheltenham, staged a grand group occupying not less than 100 sq. ft. It was most artistically arranged, and consisted of Palms, Crotons, Orchids, Ferns, etc. in excellent condition. In the Dahlia classes some exhibits by Mr. Tresder of Cardiff came in for a good deal of attention. Mr. G. Humphries, Messrs. Keynes Williams & Co., of Salisbury, Messrs. Cray, of Frome, and Mr. A. Walters, Kensington Nurseries, Bath, were also successful exhibitors of Dahlias.

An exquisite collection of old fashioned garden Roses came from Messrs. Geo. Cooling & Sons, Bath. Mr. J. Mattock of Oxford, Mr. G. Garraway, Bath, and Mr. S. P. Budd, also of Bath, divided many of the prizes for Roses between them, all of them showing some capital material.

There were nearly 400 entries for fruit alone, and the competition was very keen, whilst the standard of quality was high throughout. Alderman Chaffin received a first for grand Grapes. The Rt. Hon. W. H. Long, M.P., staged the best collection of eight dishes of fruit. First awards also went to the following exhibitors in their several classes:—Mr. J. W. Heming, for Black Hamburgh Grapes; Mr. A. R. Bailey, for two bunches of Muscat of Alexandria; Mrs. Greaves, for a dish of nine Peaches; Mrs. C. Bayer, for a dish of nine Nectarines; and Mr. J. Duckett, for a green fleshed Melon.

In the open competition for a collection of twelve kinds of vegetables Lady Theodora Guest was returned first, followed by Mr. G. Garraway.

Cottagers' exhibits were in fair force, and some really good vegetables were staged among them. The Lady Theodora Guest was further successful in winning the special prizes for a collection of vegetables offered by Messrs. Webb & Sons of Stourbridge, and Messrs. Jas. Carter & Co., of High Holborn.

PAISLEY HORTICULTURAL.—September 2nd and 3rd.

THIS society held its annual show on September 2nd and 3rd in the beautiful Geo. A. Clark Hall. This

is a good place for such purpose, being different to most halls, and, having plenty of light, plants when shown in it are seen to great advantage.

The principal feature of the show was undoubtedly the table of plants arranged for effect. We have seldom seen a finer table than the honorary exhibit of Mrs. Coates, Ferguslie (Mr. Duncan Macdonald, gardener), it was a noble group of plants splendidly arranged and well finished. The Palms were grand specimens, clean and healthy. The Crotons, Dracaenas, &c., were well coloured. Liliiums (various), Celosias, Gloxinias, and Hydrangea paniculata were intermixed with Caladiums. Ferns had a most pleasing effect, and we congratulated Mr. Macdonald upon his exhibit, for he far outvalled the competing groups, which were not to be despised.

Mr. F. Davidson, Nurseryman, Paisley, and Mr. James Watkins were the other principal exhibitors of plants, such as Ferns, Palms, and table plants were well represented, and brought forth splendid competition.

In the classes for cut flowers, Gladiolus, Roses, Dahlias, Marigolds, Ploxes, &c., were well to the fore. The prizes fell to Mr. Hugh Dickson, Belfast, and Mr. Campbell, High Blantyre, who showed a good collection of cut flowers, as did also Mr. Alex. Lister, of Rothesay.

Among the vegetables were good grand examples of Leeks, Onions, Cabbages, Parsnips, Turnips, Celery, and Potatos, the prizes offered for a collection being secured by Messrs. J. Laing, Leech, and Leckie in the order named. Amateurs showed well in the classes allotted to them.

Fruit was not at all well represented. A couple of good bunches of Black Hamburgh were staged, but outdoor fruits were small, although some decent Peaches were shown.

New competitive exhibits came from Mr. R. Anderson, Paisley, who was showing cut herbaceous flowers and Sweet Peas; Mr. George Mair, Prestwich, who had Gladioli; and T. Smith & Son, Stanraer, with Roses. Messrs. Croll, Dundee, Hugh Dickson & Son and T. Smith & Son, took the prizes for thirty-six Roses in the order named.

NATIONAL CHRYSANTHEMUM.—

September 7th, 8th, & 9th.

THE Chrysanthemum season opened on Tuesday, September 8th, at the Royal Aquarium, when the National Chrysanthemum Society held its September show. Early Chrysanthemums were in fair quantity, but Dahlias were the chief feature. Gladioli were also good.

In the classes for Chrysanthemums Mr. Eric F. Such, the Royal Berks Nursery, Maidenhead, received the first award for twenty-four bunches in eighteen varieties. He was the only exhibitor in this class. There were three entries for twelve blooms of Madame Desgranges. The winning stand came from Mr. B. Calvert, gardener to Col. A. Houlton, Hallingbury Place, Bishop's Stortford, who had a splendid lot. Mr. Chas. Crooks, gardener to the Dowager Lady Hindlip, Hadsor House, Droitwich, was second; and Mr. W. Perrin, gardener to C. W. Richardson, Esq., Fairgreen House, Sawhridge-worth, was third. In a class for twelve blooms of any coloured Chrysanthemum, Madame Desgranges excepted, Mr. B. Calvert again bore off premier honours with grand samples of G. Wermig. Mr. James Agate, Havant, and Mr. W. J. Godfrey, Exmouth, Devon, were awarded special prizes. Mr. Godfrey had good blooms of varieties Lady Esther Smith, Barbara Forbes, Queen of the Earlies and Emily Silsbury. Six bunches of three blooms each of any yellow variety were best shown by Mr. Calvert, who had Geo. Wermig and Mrs. Hanking. Mr. E. F. Such was first for twelve bunches, three blooms in each, of pompon varieties, and was followed in the second place by Miss R. Debenham, St. Peters, St. Albans. Mr. T. S. Williams, 4a, Oxford Road, Ealing, won the first prize.

In the amateur's classes Mr. D. B. Crane, 4, Woodview Terrace, Archway Road, Highgate, had the best six blooms of any large flowering sort. Miss R. Debenham led the way for twelve bunches of any varieties set up with foliage. Mr. D. B. Crane fell into the second position here.

The class for a collection of cut flowers of Gladioli called forth two exhibits. The first award went to Messrs. J. Burrell & Co., Howe House Nurseries, Cambridge, who had a superb exhibit of this hand-

some flower. The spikes and the individual flowers were huge. Many of the leading varieties were staged. A much smaller exhibit won the second prize for Messrs. Harkness & Sons, Bedale, Yorks.

The nurserymen's classes for Dahlias were well patronised. Mr. J. Walker, Thame, Oxon, scored for forty-eight show and fancy blooms in thirty-six varieties. He had such varieties as Maud Fellowes, Colonist, Queen of Autumn, Mrs. C. Noyes, T. W. Girdlestone, (self) Chieftain, Mrs. J. Greaves, Mrs. Gladstone and Dorotby (self). Mr. S. Mortimer, Rowledge, Farnham, was second; and Messrs. Keynes, Williams & Co., Salisbury, third.

There were five entries for thirty-six show and fancy blooms distinct. Here Mr. S. Mortimer headed the list, followed by Mr. J. Walker, and Mrs. F. W. Seale, Vine Nurseries, Sevenoaks, in order of mention.

Six entries likewise appeared for twenty-four blooms distinct. Here Mr. G. Humphries, Chippenham, led; the second prize falling to Mr. J. T. West, Tower Hill, Brentwood. Mr. G. Humphries also had the best twelve blooms, and Mr. J. R. Tranter, Henley-on-Thames, the second best.

In the amateur's and gardener's classes for show and fancy Dahlias, Thomas Hobbs, Esq., Easton House, Marks Road, Bristol, was first for twenty-four blooms, distinct; Mr. C. F. Kees occupying a similar position for six blooms. Mr. G. Wyatt, gardener to G. Hilditch, Esq., Waldegrave Park, Twickenham, had the best exhibit of six bunches of pompon varieties.

In the open classes for pompon varieties Messrs. Keynes, Williams & Co. were the winners of the first prize for twenty-four bunches. Lady Blanche, Emily Hopper, Madge and Arthur West were some of the most noticeable forms. Mr. C. Turner, Slough, was a good second. In the smaller class for twelve bunches of similar material Mr. J. T. West was first, and Messrs. J. Burrell & Co. second. Mr. E. F. Such staged the winning lot of twelve bunches of single sorts with a very even and handsome lot.

Messrs. J. Burrell & Co. won another well-merited first for eighteen bunches of Cactus Dahlias, distinct. Messrs. Keynes, Williams & Co. were second. T. W. Girdlestone, Esq., Sunningdale, Berks, had the winning stand of twenty-four bunches of single varieties; Mrs. F. W. Seale coming in second. Mr. J. T. West was first for twelve bunches of Cactus forms arranged with their own foliage. Six bunches of like material, but only composed of three blooms each, came from Mr. G. Wyatt, gardener to G. Hilditch, Esq., Waldegrave Park, Twickenham.

The miscellaneous exhibits were numerous and good.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., received a Silver Gilt Medal for a grand oblong group of cut Dahlias and foliage plants. The central feature was a cone some 6 ft. in height, four smaller cones appearing at the corners.

A Silver Gilt Medal also fell to the lot of Mr. H. J. Jones, Ryecroft Nursery, Lewisham, for a prettily arranged group of early flowering Chrysanthemums and tuberous Begonias. The flowering element was well set up with Ferns, Palms and other foliage plants, and the effect was excellent.

Mr. John Green, Norfolk Nursery, Dereham, had a fine tableful of cut Dahlias. The blooms were good and were well arranged (Silver Gilt Medal).

Mr. J. H. Witty, Nunhead Cemetery, exhibited a grand lot of early Chrysanthemums (Silver Gilt Medal).

Mrs. F. W. Seale received a Silver Medal for a table of Epergnes well and prettily filled, and cut blooms of show and fancy Dahlias. A Silver Medal also went to Mr. J. R. Chard, Stoke Newington, for a handsome floral table.

Silver Medals were awarded to Messrs. H. Cannell & Sons, Swanley, Kent; and Mr. Norman Davis, The Vineries, Framfield, Sussex, both of whom had nice tables of cut Chrysanthemums.

Mr. Eric F. Such also had a con-competitive group of cut hardy flowers, including Dahlias in quantity.

Messrs. S. Spooner & Sons, Hounslow, staged a grand lot of Apples. The fruit throughout was excellent (Silver Gilt Medal). The Ichthemic Guano Co., Ipswich, had their usual imposing trophy stand which was this time prettily decorated with Ferns, Hydrangea paniculata and Liliiums. A Silver Medal went to Mr. W. Wells, Earlswood Nursery, Reigate, for a table of bunches of cut Chrysanthemums. Mr.

J. T. Williams had a very pretty floral table (Silver Medal). The Permanent Nitrate Committee had an exhibit of nitrate of soda of 95 per cent. and 96 per cent. purity, also a descriptive stand demonstrating its value. Messrs. Reid, Beckenham Hill, received a Bronze Medal for cut flowers.

ROYAL CALEDONIAN.—September 8th & 9th.

By way of supplementing the list of awards recorded in our telegram of last week, we now place on record a few more of the prizes distributed over the 2,300 entries at this important show. Splendid weather prevailed during the two days of the show so that it was largely patronised by the public, and no doubt the gate money will total up well. To put it briefly the show was the largest and finest that has been held here for many years by the Royal Caledonian Horticultural Society.

FRUIT.—The leading award for twelve dishes of fruit grown entirely out of doors was taken by Mr. J. Day, gardener to the Earl of Galloway, K.T., Garliestown. He had two dishes each of Pears, Apples, Peaches, Plums, Nectarines, a dish of Cherries and another of Figs. Mr. J. Nicholson, gardener to J. W. Milles, Esq., Stewardstone Lodge, Essex, took the second place with smaller fruits in greater variety. Mr. T. H. Cook, gardener to the Earl of Wemyss, Gosford, took the third position. Mr. J. Mattison, gardener to Messrs. Craig, Currie, showed the best two bunches of Black Hamburgh Grapes, which were large in bunch and berry. He was followed by Mr. J. Menzies, gardener to J. A. Harvie Brown, Esq., Dumpace. Mr. J. Sutherland, gardener to T. L. Learmouth, Esq., Polmont, came in third with well formed bunches.

Mr. P. Macdonald, gardener to J. C. McEwen, Esq., Inverness, had the best bunch of Muscat of Alexandria which was large and beautifully finished. Mr. D. Kidd, gardener to Lord Elphinstone, Musselburgh, was second. Mr. J. Menzies came to the front for one bunch of Black Hamburgh, beating Mr. S. Paterson, gardener to Messrs. Younger, Alloa. Mr. P. Hunt, gardener to H. H. Norie, Esq., Murrayfield, led the way for one bunch of Alicante. Messrs. Wm. Murray & Son, Polmont, were second; and Mr. J. Leslie, gardener to A. Cates, Esq., Perth, was third. Mr. A. Hutton, gardener to G. Keith, Esq., Montrose, took the lead for a bunch of Alnwick Seedling which was handsomely finished, the bloom on the berries being of a rich blue-black. Mr. Thos. Lunt, gardener to A. Stirling, Esq., Dunblane, was second with a somewhat smaller bunch. Mr. D. McPherson, gardener to Miss Raffin, Mayfield, led the way for a bunch of Gros Colman, followed by Messrs. W. Murray & Son. Mr. D. Airdrie, gardener to J. H. A. Graham, Esq., Larbert House, had the best bunch of Lady Downes, the berries of which were handsome. He was followed by Mr. J. Day, who came to the front with a grand bunch of Gros Maroc. Mr. L. McLean, gardener to D. Thomson, Esq., Alloa, came in second but beat all his rivals for a bunch of any other white Grape, showing Buckland Sweetwater handsomely. Mr. Wm. Williamson, gardener to J. H. Rigg, Esq., Tarvit, was a good second. Mr. T. Sutherland had the finest flavoured black, showing Madresfield Court. Mr. J. Leslie was second. Mr. D. Murray, gardener to the Marquis of Ailsa, Mayhole, had the finest flavoured white in Muscat of Alexandria. Mr. W. Rutherford, gardener to D. Graham, Esq., Bridge-of-Allan, being second. The black Grapes with the finest bloom were shown by Mr. J. McPherson and Mr. J. Day, respectively, Alicante and Gros Maroc being the varieties shown.

Mr. D. Kidd showed the best Queen Pineapple, beating Mr. D. Murray. Mr. Malcolm McIntyre, gardener to Sir Chas. Tennant, Bart., The Glen, Innerleithen, received the first award for any other Pineapple. Mr. A. Richardson, gardener to J. R. Forman, Esq., Craig Park, Ratho, showed the best green Melon, Mr. J. Waldie, gardener to W. H. Dobie, Esq., being second. Mr. A. Richardson again came to the front for a scarlet-fleshed Melon. The finest Figs were shown by Mr. J. Morrison, gardener to Mrs. N. Hamilton Ogilvy, Archerfield. Mr. F. Harris, gardener to Lady H. Somerset, Ledbury, had the finest Peaches, being large and richly coloured. The finest Nectarines were shown by Mr. T. Lunt, in strong competition. Mr. D. Mackay, gardener to A. Hope, Esq., Liberton, was first for Apricots. Mr. Wm. Laing, Mr. J. Harper and Mr. J. Day took all the

leading prizes for Plums, which were abundant. Mr. James Gibson, gardener to E. W. Watts, Esq., Devonhurst, Cbiswick, took the lead for a collection of twelve varieties of Apples; Mr. J. F. McLeod, gardener to J. Pierpont Morgan, Esq., Dover House, Roehampton, was a good second. Mr. J. Day had the best collection of Apples grown in Scotland. The best six varieties of Apples were shown by Mr. J. Cairns, gardener to the Earl of Home, The Hirsell, Coldstream. Mr. Jas. Gibson staged the best six dishes of dessert Apples, the best Kerry Pippin, Court of Wick, and others. Leading prizes for Apples were also taken by Mr. D. Murray, Mr. F. Harris, Mr. G. Edgar, Mr. J. Harper, Mr. R. J. Hamill (the two latter from Jersey), Mr. W. Williamson, Mr. J. Ovens, Mr. J. Matheson, Mr. A. McComb, Mr. G. Isaacs, Mr. J. F. McLeod, Mr. J. Cairns and Mr. J. Nicholson.

Mr. J. Harper, Jersey, tabled the best collection of twelve varieties of Pears, which were good though not yet ripe. Mr. James Gibson made a very good second, his fruits being much clearer skinned. Mr. D. Murray exhibited the best six dishes of Pears grown in Scotland. Mr. J. McIntyre, gardener to Mrs. Gurney Pease, Darlington, showed the best Jargonelle Pears. Mr. J. Harper had the best Williams Bon Chrétien, the best Beurré d'Amanlis and Louis Bonne of Jersey. Mr. J. Gibson was first for Marie Louise.

The first prize for a group of twenty-four evergreen shrubs was taken by Messrs. R. B. Laird & Sons, Frederick Street, Edinburgh, who showed choice Conifers, Olearia Haastii, Sweet Bay, variegated Hollies, Box, etc. Mr. D. Mackay secured the first award for six table plants.

VEGETABLES.—The leading award for six Cauliflowers was taken by Mr. J. Waldie, who was followed by Mr. Wm. Galloway, gardener to J. H. Ford, Esq., Liberton. The best French Beans were shown by Mr. D. Logan, Coldstream. Mr. W. Harper, gardener to J. R. S. Richardson, Tulliehutton House, Perth, was first for Scarlet Runners. Mr. J. Waldie was an easy first for a collection of vegetables showing fourteen kinds. He was followed by Mr. A. Dickson, gardener to M. G. Thorburn, Esq., Glenormiston. Mr. W. Wilson, Musselburgh, was first for Cabbages in heavy competition, his specimens being very hard; he was also first for Savoys. Mr. J. Waldie was first for Celery. Mr. James Gibson had the best Parsnips. The best Carrots were shown by Mr. C. Davidson, Pencaitland. Mr. John Hood, gardener to Miss Baillie, Dryburgh House, St. Bothwells, led the way for twelve Leeks. The best twelve Onions were shown by Mr. D. T. Mackinlay, Ampthill, Beds. Mr. A. Angus, gardener to Lord Hamilton, Dabyell, was second, and Mr. J. Gibson took third place. Mr. John Hood showed the best six dishes of Potatoes, which were clean and good.

TRADE EXHIBITS.—By an unfortunate oversight last week we omitted to mention two large exhibits made by Mr. John Forbes, Buccleuch Nurseries, Hawick, N.B. In the larger of the two exhibits he had a collection of 200 blooms of Carnations in 100 varieties, including the famous Yule-tide, the deliciously fragrant Buccleuch Clove, and the charming Countess Cowpar, the two latter being border varieties. He also had rich collections of Phloxes, Hollyhocks, Pentstemons, East Lothian Stocks, Cactus, decorative and Pompon Dahllas, Cannas, &c. The second collection consisted chiefly of the prize strain of Hollyhocks grown at Hawick. His exhibit in the competitive class was admitted to be very fine both in the matter of quality and arrangement. The herbaceous plants were extremely varied in character.

Messrs. James Cocker & Son, Aberdeen, independently of their grand exhibit in the competitive class, staged another, scarcely inferior in the matter of variety, though the arrangement was less effective. Phloxes, Gladioli, Montbretias, Chrysanthemums, perennial Asters and Roses were the more conspicuous subjects in this collection.

Messrs. D. & W. Buchanan, Forth Vineyards, Kippen, Stirling, exhibited nine baskets and twenty four bunches of grapes decorated with their well-known coloured Vine leaves. Cannon Hall Muscat, Gros Colman, Alnwich Seedling, Cooper's Black, and Gros Guillaume were staged in grand form.

Messrs. Page Brothers, Liberton, exhibited a fine collection of Tomatos most neatly arranged in market baskets. The variety mostly grown is a selection of their own, and the fruits were all graded according to size. They also had Vegetable Marrows and

Cucumbers, and received a First-class Award. They evidently understood both the cultivation and the most effective way of displaying the fruits. Besides their large group of Conifers Messrs. R. B. Laird & Sons, Edinburgh, also had a table of smaller specimens brightened with cut flowers of Lillies, Dahlias in the various sections, Hedera Helix madeirensis variegata and herbaceous plants.

Messrs. Geo. Bunyard & Co., Maidstone, staged a collection of Apples and Pears in their usual excellent style. Gascoyne's Seedling, Lady Sudely, Worcester Pearmain, Duchess of Gloucester, and Emperor of Alexander Apples were grandly coloured. They also had magnificent dishes of Dr. Jules Guyot and Beurré Mortillet Pears.

Mr. J. Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton, showed twenty one varieties of Water Lillies, including the best and newest.

GARDENERS ON HOLIDAY.

ON the Friday morning after the show of the Royal Caledonian Horticultural Society at Edinburgh last week, a number of gardeners, judges, and others connected with the annual competition met by appointment at the Royal British Hotel, as the guests of Mr. David W. Thomson, of 24, Frederick Street and Windlestrawlee Nursery, who engaged a brake to conduct the party to the Forth Bridge, which is now one of the principal sights of the city and its neighbourhood. Besides the generous and courteous host, the party included Mr. J. Hunter, Lambton Castle, Fence Places; Mr. Nathaniel Barnes, gardener to the Duke of Westminster, Eaton Hall; Mr. H. E. Gribble, gardener to the Marquis of Londonderry, Wynyard Park; Mr. David Murray, gardener to the Marquis of Ailsa, Culzean Castle; Mr. A. Outram, of Messrs. Sutton & Sons, Reading; Mr. H. J. Jones, of Ryecroft Nursery, Lewisham; Mr. John Melville, of Finshury Park, London; and Mr. J. Fraser.

The route taken was by the Dean Bridge and Cramond Bridge, passing the Barnton estate and Dalmeny Park, the latter having been brought into prominence last week by the visit of the Duke and Duchess of York. The Dean Bridge spans the Water of Leith in one of the busiest thoroughfares of Edinburgh, and the water, trees, and fine buildings overhanging the precipices on either side constitute a magnificent spectacle of nature and art. Reaching the country the gardeners could not but admire the marvellous fertility of the land either for market gardening or farm crops. Celery is grown in long beds on the American principle. The woods and fine wall of about seven miles in length, surrounding the Barnton estate, and built of dressed stones, afforded matter for much comment. Unfortunately for the estate and gardening, the grounds or part of them are now used as a golf course by a club having fine buildings. Grand scenery was again witnessed at Cramond Bridge, which crosses the River Almond, which here flows through a rocky gorge, overhung with lofty Beeches and other trees.

The woods and enclosures of Dalmeny Park, the residence of Lord Rosebery, next engaged attention, the high trees overhanging the road in places greatly enhancing the pleasure of travellers. They consist largely of Oaks, Beeches, Elms, Cherry, Sycamore or Scotch Plane, and Scotch Firs. Dalmeny House is a modern structure, but the original structure known as Barnhogle Castle, previously in ruins, has been restored on the old Scotch baronial style. It stands on a rock on the Firth of Forth, where it is a conspicuous object. Lord Rosebery keeps his library in the castle.

The Forth Bridge having been reached, the party proceeded to view the bridge at close quarters by means of a steamer lying alongside of the quay. On the return of the steamer the party partook of luncheon at the hotel close by, and soon after commenced the return journey. When Cramond Bridge was again reached another route was taken, passing Barnton estate on the right and Dalmeny Park on the left. At one point on the road Cramond Kirk was passed, where one of the ancient Scottish kings lies buried. The road next descended to the mouth of the little River Almond, whence a fine view of Barnhogle Castle could be obtained. In the Forth itself lies Cramond Island or Inch, with the fortified Inchkeith a little further off. On the opposite side of the river the land gradually rises into the Ochil Hills extending

along the southern littoral of Fife. The view of the water, woods, and mountains obtained at this and other points along the broad waters of the Firth of Forth is picturesque and romantic.

Soon after the journey was resumed a tower in a wood to the right was pointed out as having been built by a gentleman who named it Rest-and-be-thankful. As the higher ground was reached a fine view of the modern Athens was obtained, including Fettes College, Calton Hill, National Monument, Edinburgh Castle, Salisbury Craigs, Arthur's Seat, &c., all towering above the city, which continues to expand on every side.

The party again touched the Forth at Granton Harbour, and paid a short visit to the Royal Forth Yacht Club, of which Mr. D. W. Thomson is a member. It is the finest of its kind in Scotland. Fine views of the river and the Fife hills on the opposite shore were also obtained from here. Away on the right the obtusely conical mass of the Bass Rock, one of the few haunts of the Solan-geese in the British Islands, was seen. The Royal British Hotel was reached before dusk, after a very pleasant outing under the guidance of Mr. Thomson.

SCUTELLARIA MOCINIANA.

PAYING a visit to an old friend a few days ago, who has charge of a garden noted for its rich collection of rare plants, I observed in passing through a greenhouse a very pretty shrubby plant bearing terminal, erect racemes of bright scarlet tubular flowers, each flower having its tubular corolla about 1¼ in. in length, with a small lip, the inside of which is yellow. This Labiate being a stranger to me, I enquired its name, and upon being shown the label I observed it marked *Scutellaria mociniana*. Being curious to know a little more about this genus I, as do other GARDENING WORLD readers, consulted Nicholson's *Dictionary of Gardening*, not to learn the derivation—that I learnt from the pages of the GARDENING WORLD a few months ago, although I really forget whether a round dish or square saucer was meant by the disputants. I fear I'm wandering from my text and to return. It is said by Nicholson to be a native of Mexico, and is described as one of the most beautiful of stove or warm greenhouse flowering plants. Williams, in his *Choice Stove and Greenhouse Plants*, speaks of this plant as being superb for drawing room decoration. My admiration of this beautiful flower led me to break the tenth commandment, and also my friend to break me off a few cuttings.—A. P.

THE COMPOSITION OF HARICOTS, LENTILS, PEAS.

THE analysis we made regarding Haricots, Lentils, and Peas, are epitomized in the following table:—

| | HARICOTS. | | LENTILS. | | PEAS. | |
|--|-----------|-----------|-----------|-----------|-----------|-----------|
| | Min. p.c. | Max. p.c. | Min. p.c. | Max. p.c. | Min. p.c. | Max. p.c. |
| Water..... | 10'00 | 20'40 | 11'70 | 13'50 | 10'60 | 14'20 |
| Nitrogenous substances | 13'81 | 25'16 | 20'32 | 24'24 | 18'88 | 23'48 |
| Fatty „ | 0'98 | 2'46 | 0'58 | 1'45 | 1'22 | 1'40 |
| Sugary and Amylaceous subs. | 52'91 | 60'98 | 56'07 | 62'45 | 56'21 | 61'10 |
| Cellulose..... | 2'46 | 4'62 | 2'96 | 3'56 | 2'90 | 5'52 |
| Ash..... | 2'38 | 4'20 | 1'99 | 2'66 | 2'26 | 3'50 |
| Average weight of 100 grains in grammes. | 20'00 | 134'60 | 2'49 | 6'26 | 15'46 | 50'00 |

HARICOTS.—The minimum of nitrogenous substances and the maximum of fatty, as indicated above, are only met with exceptionally in very big Spanish Haricots. In the case of all the others studied, white or coloured, the variations are less marked and resemble those obtained with Lentils and Peas. The average maximum weight of the grain decreases almost one half. The Germs, as with Beans, are very nitrogenous and relatively poor in fat.

LENTILS, with the exception of cellulose, are much the same as Beans. Egyptian Lentils, like Beans of similar origin occupy the first place as regards nitrogen. Auvergnian Lentils, almost as small as the Egyptian, are more nitrogenous than Bohemian, Spanish, Moravian and Russian, the average weight of which is twice as heavy.

PEAS.—The different varieties are somewhat uniform in composition and more like Lentils than Haricots. Imperfectly developed Peas are more nitrogenous than Peas gathered when quite mature;

this fact was noted in 1856 by Poggiale. It will be interesting to recall this to manufacturers and consumers, now that preserved Peas occupy such an important place in alimentation.

Haricots, Lentils, and Peas resemble Beans in acidity; the hull only amounts to seven to nine per cent., much less than Beans. The proportion of resisting cellulose does not exceed thirty per cent. in the hulls of Haricots and Lentils, whereas in Peas, like Beans, it attains forty-eight per cent.; these last contain more cellulose than Lentils and Haricots. Only in the decorticated seeds is less variation found. Cellulose decreases, and fat and nitrogen increase; there are also more mineral substances and as a rule the hulls give less ash when incinerated than the kernels. In equal weights the broken Peas of commerce are thus more nutritious than ordinary dry Peas. Peas, Haricots, and in particular Lentils keep for a long time without change in their chemical composition. They inflate considerably in water at the ordinary temperature. In the year after harvest the absorption of water attains one hundred per cent. in twenty-four hours, but afterwards absorption is slower and the proportion less; the kernel is dryer, darker, more corneous and less permeable.

The area occupied by Beans, Haricots, Lentils and Peas in France is very slight, not exceeding 0.65 per cent. of the total surface of the territory. Thence the necessity of onerous foreign imports (in 1895 more than £920,000). It seems that these leguminous plants which through their large proportion of nitrogen give such resources to alimentation ought to be cultivated much more extensively as they are in Belgium and Germany.—*Comptes Rendus*, July, 1897.

GARDENING MISCELLANY.

TRACHELOSPERMUM JASMINOIDES ANGUSTIFOLIUM.

Most gardeners are familiar with the more common and typical form of the plant, usually grown as a greenhouse subject. The narrow-leaved variety is much hardier, for it has grown and thriven against a wall at Kew for many years past. The leaves are very densely arranged, completely covering the wall. The flowers, produced in trusses, are creamy with a golden yellow centre, and forcibly remind one of the fragrance of a Clover field.

MICHAUXIA CAMPANULOIDES.

I NOTICED a very fine spike of this remarkable plant in Mr. John Forbes' Nurseries at Hawick lately. It was over 8 ft. in height, much branched, and carried, I was told, over 300 flowers, one half of which at least were in full bloom when I saw it. The flowers are white, slightly tinged with purple on the outside of the petals, 4 in. across, drooping, wheel-shaped, and the petals being curled back give it a curious appearance. It is certainly well worth growing, and prefers rather a dry position, being liable to damp off in winter.—*W. S.*

SHANKING OF GRAPES.

AFTER all that has been written on this subject there remains a widespread ignorance as to its causes and prevention. There are most likely more than one set of conditions which tend to bring about this unfortunate result, annoying alike to employer and cultivator. Having a deeply-rooted conviction that it is more often due to over dryness at the roots of the Vine, I have frequently given expression to it—in one instance this season with the most satisfactory results to a neighbour, who has had more or less trouble from the shanking of his Grapes for some time. Acting upon the hint he has watered his Vine borders more copiously this season than had been his custom, and recently he had the pleasure of showing me a house of Grapes without a single shanked berry in it.—*W. B. G.*

QUESTIONS AND ANSWERS

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Dimensions and plan of a Tennis Court.—*Inquirer*: The dimensions of the court will vary according to

the number of players. We shall first give the dimensions for four players. The plan is that of a parallelogram. The extreme length of the court should be 78 ft. Lay down a straight and tight line to guide you in marking off the court with a thin paste made of whitening and water. But peg out the whole before you commence with the whitening. The base line at either end of the court should be 36 ft. long. When the two sides and the two ends are marked off, find the centre and mark it off where the net should be fixed up, right across the whole width. The service lines should then be marked off at 18 ft. from the base lines at either end of the court. Then from one service line to the other, mark off a line right through the middle of the court longitudinally. This will be 42 ft. long and is termed the "half court line." The court is now marked off so that you may whiten the lines. If you desire a size for two players only, take off 4½ ft. from either side of the court, thereby reducing the base lines to 27 ft. in length. Both sizes of tennis court may be marked on the grass for the convenience of two or four players as may be desired.

Preparing Strawberries for forcing.—*H. H.*: You may succeed very well yet, but we must say that they should have been put into 6in. pots some time in August, the earlier the better, so as to let them fill their pots with roots before winter. Use good, substantial loam, of a turfy character and rather heavy than light. Some bone meal and wood ashes might be mixed with the soil now, and you could feed the plants with liquid manure, twice or three times a week, if not too strong, after the fruits have set. We should not advise you to begin forcing very early seeing that the plants must now be late in getting the pots filled with roots. If you put the first batch into heat about Christmas (which is indeed early) you may expect ripe fruit sometime in March according to the heat you apply. You must not give the plants a higher temperature than 50° till the fruits are well set, after which you can hurry them by giving more heat. Stand the plants as near the glass as possible. If you are in a smoky locality there may be some danger of the flowers not setting in the case of early batches. You may plunge the pots in coal ashes or cocoanut fibre in the cold frames or even out of doors until you require them; if in frames give plenty of ventilation always. Batches put in heat about February and March will come on much more rapidly than those put in during winter. Royal Sovereign is the best of the four you name for forcing.

Vine Leaf Perforated.—*W. B. G.*: We have no doubt that the injury is due to insect attack. We frequently receive leaves of some sort or other perforated in the same way, particularly Peach leaves. There are several large, or relatively large weevils of black and gray or clay colours that infest gardens and hothouses, either of which may be found outside or inside. The black Vine Weevil (*Otiorhynchus sulcatus*), is, perhaps, the most frequent under glass. They are all nocturnal in habit and have hard wing cases, but neither of them fly. They hide during the day under boards, in crevices or cracks in walls from which the mortar has fallen out. They come forth at night and climb up the tree stems or Vine rods and gnaw the leaves, or sometimes the stems, flowers, and buds. If you find similar damage to your Vines or Peaches in future, lay a white cloth on the floor of the house beneath the same; come in at night with a lantern and turn the light suddenly upon the foliage; tap the stems at the same time, and if any weevils are present they will drop on the cloth, where you can catch them before they escape. Cement all cracks and cranies in the walls and clear away every kind of rubbish in the house that affords any shelter for the depredators, and you should soon be able to get rid of them.

Names of Plants.—*W. C.*: 1, *Matricaria inodora* flore pleno; 2, *Leycesteria formosa*; 3, *Aster diffusus* horizontalis.—*J. C. S.*: 1, *Origanum Tournefortii*; 2, *Abies magnifica*; 3, *Amaryllis Belladonna*.—*A. W.*: 1, *Oncidium excavatum*; 2, *Oncidium incurvum*; 3, *Cypripedium harrisianum*.—*A. L.*: 1, *Tropaeolum tuberosum*; 2, *Jasminum officinale*; 3, *Cotoneaster microphylla*; 4, *Gypsophila paniculata*; 5, *Hydrangea paniculata grandiflora*; 6, *Pernettya mucronata*.—*Alex. Robertson*: 1, *Selaginella emiliana*; 2, *Selaginella uncinata*; 3, *Pteris straminea*; 4, *Adiantum Capillus-Veneris* var.; 5, *Aspidium falcatum*.

Communications received.—*E. H. Krelage & Son.*—*Solanaceae.*—*C.*—*Salen.*—*P. M.*—*Roberts.*—*Ch. Gazelle.*—*T. B.*—*H. L.*—*E. D.*—*J. Ward.*—*L.*—*W. J.*—*F. L. O.*—*C. B.*—*W. Margate.*—*Forcing.*—*M. N.*—*Walter Carson.*—*Robert S. L.*

TRADE CATALOGUES RECEIVED.

WILLIAM CUTBUSH & SON, Highgate Nurseries, London, N., and Barnet Nurseries, Herts.—Catalogue of Border, Tree, and Malmaison Carnations, Pinks, Cloves, &c.

B. S. WILLIAMS & SON, Victoria and Paradise Nurseries, Upper Holloway, N.—Plant Catalogue.

A Special Offer to Readers of THE GARDENING WORLD. 25/- BOOK for 8/-

NO HOME SHOULD BE WITHOUT ONE

Ogilvie's Encyclopædia OF USEFUL INFORMATION AND WORLD'S ATLAS.

No Single Book ever before contained such a Wealth of Knowledge.

By Special Arrangement with the Publishers of the "Encyclopædia of Useful Information and Atlas of the World," we are enabled to offer to the Public a Magnificent 25s. Volume for 16 of the coupons, which will appear weekly, together with 6d. each, accepted in Weekly Instalments, or the Coupons may be held until the whole period has elapsed and brought or sent to the Office with 8s., and 6d. towards carriage.

A COMPLETE ILLUSTRATED LIBRARY IN ITSELF.

A universal assistant and treasure-house of information on every conceivable subject, from the household to the manufactory. In short, gives information about everything, is absolutely indispensable to everyone in all walks of life; the contents being so separated, indexed, and arranged that they can be turned to at once. It is

THE BEST { BOOK OF } EVER
 { INFORMATION } ISSUED.
Size of Encyclopædia: 9 by 11½ inches. 656 Pages

It contains

MANY MAGNIFICENTLY ENGRAVED COLOURED MAPS,

and a description of every country under the sun, besides much other matter relative to the Home, the Farm, the Factory, a Dictionary of Statistics—many Useful Tables, Poetical Selections, Synonyms, Famous Bridges and Ships, How to Calculate, How to Cook, How to Get Rich, How to Cure all Diseases, How to Succeed in Business, Table of Weights and Measures, and

HUNDREDS OF OTHER TOPICS OF GREAT VALUE TO EVERY PERSON

who desires to be up to the times. To see the Book is to want it. To Members of Mutual Improvement Societies it will prove of inestimable value.

The articles are written by men whose lives have been devoted to the subjects treated, are short and concise, but contain full information up to date. It is to be consulted on every subject that arises in everyday life, by old and young alike. It contains a complete Illustrated Atlas of the World.

IN THESE DAYS OF COMPETITION

it is imperative that a Gardener should be a well-informed individual. Here is an Encyclopædia containing an immense amount of knowledge that will be of the greatest service to him.

YOUNG GARDENERS,

do you wish to be successful? Then remember that to possess knowledge is the surest way to achieve success.

It is elegantly bound in Morocco Cloth, with beautifully designed Gilt Side-stamp and Red Edges, making at once the most handsome and durable as well as THE MOST USEFUL BOOK EVER MADE or sold for 25s.

18997. COUPON.

OGILVIE'S ENCYCLOPÆDIA OF
USEFUL INFORMATION,
AND WORLD'S ATLAS,
PRICE 25s.
16 COUPONS, AND 6d. WITH EACH.

Name _____

Address _____

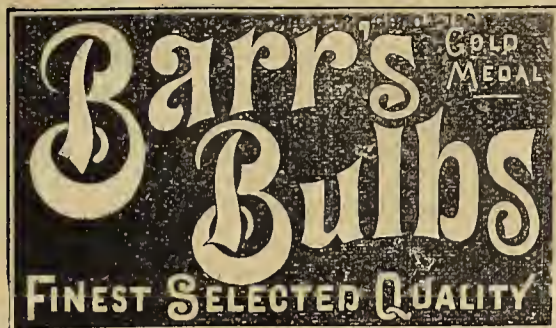
Postal Orders or ½d. stamps may be sent.

COUPONS AND CONTRIBUTIONS MAY BE
LEFT at or SENT TO the Office for

THE PUBLISHER OF

THE GARDENING WORLD.

COPIES OF THIS BOOK CANNOT BE
BOUGHT. They can be obtained only by using
these Coupons.



HYACINTHS, for Pot Culture, with fine handsome spikes.

One each of twelve named varieties, 5s. 6d.

Do., do., un-named, in a good variety of colours, per dozen, 4s.

HYACINTHS, Dwarf White Roman, for Early Forcing.

Per 100, 10s. 6d. and 15s.;
Per doz., 1s. 6d. and 2s. 3d.

HYACINTHS, Barr's Beautiful Rainbow Mixture, for Beds and Borders, outdoors.

1st size bulbs, per 100, 17s. 6d.; per doz., 2s. 6d.
2nd " " per 100, 13s. 6d.; per doz., 2s.

TULIPS, Barr's handsome varieties, for pots.

Three each of twenty named sorts, 6s. 6d.

" Barr's Beautiful Rainbow Mixture, Single or Double, per 1,000, 42s.; per 100, 4s. 6d.

CROCUSES, Barr's choice Large-flowered sorts, for pots, &c., 100 in 10 named vars., 3s. 6d.

" Barr's Special Mixture, for planting in grass, &c., per 1,000, 10s. 6d.; per 100, 1s. 3d.

ILLUSTRATED CATALOGUE OF HYACINTHS, TULIPS, CROCUSES, SNOWDROPS, POLYANTHUS NARCISSI, and all the Best Bulbs for Spring and Summer-flowering.

FREE ON APPLICATION.

BARR'S ILLUSTRATED DAFFODIL CATALOGUE, FREE ON APPLICATION TO—

BARR & SONS,
12 and 13 KING ST.,
COVENT GARDEN, LONDON.

CARNATIONS & PINKS
A GREAT SPECIALTY.
CATALOGUES ON APPLICATION.
LAING & MATHER,
Nurserymen and Seed Merchants,
KELSO-ON-TWEED.

J. J. THOOLEN,
BULB AND PLANT GROWER,
Overveen, near Haarlem, Holland,

Has the honour to inform his clients that his Illustrated Price List in English, Autumn, 1897, at lowest prices will be sent post free on application. No CHARGES FOR PACKING. ORDERS OF 10S. AND ABOVE ENTIRELY FREE TO DESTINATIONS in England, Scotland, and Ireland, &c.

| Some sorts of Bulbs noted in our Price List. | Per 100. | 1,000. |
|---|----------|--------|
| | s. d. | s. d. |
| Single Anemones, The Bride, pure white | 1 4 | 12 6 |
| Single Anemones, in finest mixture | 1 2 | 11 0 |
| Crocus, in finest mixture, second size | 8 8 | 6 3 |
| Crocus, in finest mixture, first size | 7 4 | 10 2 |
| Hyacinths, mixed, for hedging or forcing | 8 10 | 83 4 |
| Hyacinths, single, first size, named, in several best leading sorts red, white, and blue varieties equal quantities, my selection | 16 0 | — |
| Iris Kaempferi (Japan Iris), in finest mixture | 5 0 | 40 0 |
| Iris Germanica (Flag Iris), in finest mixture | 6 8 | 60 0 |
| Iris sibirica, all sorts mixed | 5 0 | 40 0 |
| Spanish Iris, in the finest mixture | 0 6 | 4 2 |
| Lilium tigrinum splendens, rich red black spots | 8 0 | 70 0 |
| Lilium candidum, single, pure white | 10 0 | — |
| Monthretia crocosmiaeflora, orange-scarlet | 1 6 | — |
| Narcissus Polyanthus, in the finest mixture | 2 6 | 23 4 |
| Narcissus poeticus Pheasant's-eye | 1 0 | 8 4 |
| Narcissus campenelle (Jonquill) | 1 2 | 10 0 |
| Narcissus double incomparable, primrose | 1 6 | 14 0 |
| Narcissus Van Slon, single yellow trumpet | 2 6 | 23 4 |
| Narcissus Stella, white, yellow cup | 1 4 | 12 6 |
| Narcissus alho-pleno (dbl. poeticus), pure white | 1 6 | 14 0 |
| Gladiolus Marie Lemoine | 5 6 | — |
| Sella sibirica praecox, intense blue | 1 0 | 8 4 |
| Ixias, in the finest mix ure | 0 6 | 4 6 |
| Single early Tulips, in the finest mixture | 1 0 | 9 6 |
| Double early Tulips, in the finest mixture | 1 4 | 12 6 |
| Duc Van Thol Tulips, in fine mixture, excellent for early forcing | 2 6 | 20 0 |
| Grape Hyacinth, blue | 0 7 | 5 4 |
| Anemone japonica, pure white, Wind-flower | 5 0 | — |
| Anemone japonica, rose Wind-flower | 6 0 | — |
| Hemerocallis (Day Lily), mixed | 10 0 | — |
| Gladiolus Brenchleyensis, deep scarlet | 2 0 | 19 0 |
| Oenothera Youngi, pure yellow bells | 10 0 | — |
| Allium magicum, white sweet-scented | 3 0 | — |
| Pyrethrum Bridesmaid, with fine double pure white flowers | 15 0 | — |
| Sedum Selfsklanum, with many pure yellow flowers | 10 6 | — |
| Tritoma Uvaria grandiflorum (Red-hot Poker) | 14 6 | — |

250 bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.

COLLECTION D for spring garden, containing 1,370 bulbs, £1 1s.; half of this, 11s.

COLLECTION B for indoor, containing 529 bulbs for 92 pots or glasses, £1 1s.; half of this, 11s.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, SEPTEMBER 25th, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, September 27th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
TUESDAY, September 28th.—Radcliffe-on-Trent Potato Show. Sale of Dutch bulbs by Messrs. Protheroe & Morris.
WEDNESDAY, September 29th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
THURSDAY, September 30th.—Royal Horticultural Society's Show at the Crystal Palace (3 days). Sale of Dutch bulbs by Messrs. Protheroe & Morris.
FRIDAY, October 1st.—Sales of Dutch bulbs and imported and established Orchids by Messrs. Protheroe & Morris.

THE PRINCIPLES OF FRUIT-GROWING.*—

The facile pen of Professor L. H. Bailey, of the Cornell University, Ithaca, New York, seems never at rest, judging from the number of books he has written for the services of mankind in all that pertains to the science and art of plant culture in garden, orchard, field, and under glass. Many of the details do not conform to our rules of gardening on this side of the Atlantic, but the climates of the two countries would easily account for apparent discrepancies—we say discrepancies because they do not conform to our experiences; but at the same time we do not imply that they mean errors. On the other hand there are many features of American gardening that we might well copy with advantage.

The inventory of fruits, forming part of the first chapter, appears formidable at first sight compared with the relatively small number of species of plants which we cultivate in Britain for the sake of their fruits. An analysis of the long list shows that most or all of the fruits grown here are also grown in North America, including the United States and Canada, together with a vast number, either native or exotic, that can be grown in some part or other of that vast continent. With the larger portion we are more or less familiar, but many of them are confined to glasshouses, some indeed to the economic houses of botanical gardens, while others are ornamental trees or shrubs on which we can place no reliance for the production of fruit in this country. We suspect, however, that many of the trees included in this list are still under experiment with a view to their improvement, before they can be placed on the same level of importance with the fruits of the temperate regions of the old world, which have been undergoing improvement at the hand of man for centuries. The species of Prunus (Plums and Cherries chiefly) are numerous, but some of them already in this country do not hold out much hope of becoming serviceable, though they may fruit more freely in some parts of America, and prove capable of improvement at the hands of enterprising experimenters. We hope they will. A large number of tropical and sub-tropical trees are included in the list, which cannot cope with our climate, and few of them offer facilities for cultivation under glass, like the Pineapple, for instance.

In speaking of the evolution of a fruit region, the author says that agriculture when at its best continues so, improving with succeeding years of cultivation, but

*The Principles of Fruit growing. By L. H. Bailey. New York: The Macmillan Company. London: Macmillan & Co., Ltd. 1897.

admits that American agriculturists, like miners, have hitherto been extracting as much as they could get from the soil without returning anything, and then shifting further and further into the wilds in order to secure virgin soil for their crops. Naturally enough they now recognise the mistake of impoverishing the soil. That kind of ruinous cultivation, by the robbing of the land of its natural fertility, is not unknown in this country, as has amply been testified in the case of the wasted orchards. Our countrymen may well take the hint and mend their neglect of both scientific principles and common sense. Success in the matter of fruit-growing, says the Professor, is dependent chiefly upon the personality of the grower and the prospective conditions of the market. The would-be grower must possess a love of the occupation, indomitable energy, cool judgment, and sterling honesty. As to the other point, the author says there is always a demand for, and not enough of, the best of any commodity. The latter he defines as the unlike—that of which there is least—or in other words "that in which there is the least competition." The cultivator should always be on the outlook for something with which the market is badly or not at all supplied; and if he produces the best article, he will always secure the top price. The author brightens the prospect when he says that cultivators need have no fear of success if they grow what the people want or so display it as to make them believe they want it. This latter implies sorting, grading, careful handling, and the putting up of the fruits in a tempting and attractive way. He admits that the growing of the more common kinds of fruit is overdone, particularly Apples, and that a good crop means low prices. This again means that Apple-growers allow the seasons and local conditions to control the bearing time of the orchard.

The author advises the fruit farmer to get a thorough and correct knowledge of the local conditions under which he is placed. We think that a man of energy and untiring devotion to business will overcome most difficulties, excepting, of course, the state of the weather, it may be, while his Apple trees are in bloom; and unless he can manage that, we fail to see how a man can control the bearing time of an orchard. Nevertheless, he says truly that "close and single-minded attention to business makes for success." Training is the best stock in trade of the fruit grower, business methods counting for a large part of it, as is evidenced by people of other occupations who take to farming and have succeeded. He thinks that the farmers of the future will be drawn from other occupations in which men are free from the bonds of tradition; and because they have well trained, unbiased minds they are more likely to adopt modern improvements in all that pertains to changing and progressive times. The cultivation of fruit and the disposal of it to the best advantage are the two lines along which the fruit growers of the present and future must direct their attention. Not every one can take a high rank in both those branches of the profession, so that to be successful, most people will have to confine their energies to one department only. The grower has not yet discovered the secret by which he can make his orchards bear in years of general scarcity, but Mr. Bailey says he must acquire that skill. We hope that science will succeed in making it possible, and the sooner the better.

In speaking of the influence of bodies of water upon fruit growing, the author makes some interesting observations, but chiefly with regard to vine culture in the open. The more notable Grape growing districts

lie around the margins of lakes as a rule, and in the case of Lake Erie, the Grape belt is confined to an area not extending beyond two or three miles from its shores. When the land slopes towards the lake, the area enjoying the greatest immunity from frost does not extend beyond the crest; and if the elevation is 300 ft., the suitable land only extends two-thirds of the distance towards the summit. The explanation of these facts is that a large body of water has an equalising effect upon temperature. The depth of the water is of more importance than its width. The atmosphere in the neighbourhood of these lakes is cooler in summer and warmer in winter, than land at greater distances or higher elevations. The low temperature of the water in spring has the effect of retarding the Vines till the season of frost is practically over; and should frost occur, the presence of water has the effect of moderating the temperature. Fruit growers in Britain when speak of suitable sites for plantations of Apples, Pears, Plums, etc., advise the planter to keep as far away from water as possible, because the frost is always most intense in valleys and on low-lying land, while water, if present, intensifies the evil. It is not very easy to reconcile these two opinions unless we take it for granted that the lakes and rivers in this country are neither broad enough nor sufficiently deep to exercise any ameliorating influence upon the atmosphere in their neighbourhood. In practice we find that a dry atmosphere is always more favourable to a good set of fruit than a wet one, even though cold weather or frost prevail at the time in either case. A better comparison, perhaps, would be to consider the effect of climate around our sea shores upon fruit growing, when thinking of the great inland lakes of America. The Vine growing area along the lower Hudson River does not extend more than a mile from its banks.

The book is of small octavo size, but runs to 508 pages, including an exhaustive index. It is made up of eight long chapters, of each of which a very full synopsis of contents is given at the beginning of the book. The hints above given have been culled at random from the first two chapters; and the whole book teems with information and suggestions, which those who are engaged in fruit culture or intend doing, would do well to study. Numerous illustrations are given relative to the tillage of the land and the tools employed; also fruits, flowers and leaves injured by frost or other means, tree pruning, root pruning, planting, etc. The fertilising of fruit lands, the evolution of soils, saving water, irrigation, pruning, the girdling of trees, the raising of new varieties from seeds, double planting, packing fruits, nitrogen for orchards and many other things pertaining to horticulture in its widest sense. The paper used is of the very best and the large type of the text is clear and in every way excellent.

Mimulus luteus.—One of the most remarkable of exotic plants that have been introduced to this country is *Mimulus luteus*, hailing from North America. Originally imported as a garden plant, it has become naturalised all over England, Scotland and Ireland, more or less, as well as on many of the smaller islands from Skye southwards. It loves the water and may be found upon the banks of rivers, streams and ditches, wading out to the centre of many of the smaller brooks. We found it last week on the margins of Loch Fad, a fine sheet of water occupying a valley between hills and extending across the island of Bute, almost from shore to shore. It luxuriates in the crystal and weedy springs that run from the base of the hills into the loch. It is perfectly at home amongst the native vegetation and bears a wealth of large, rich yellow flowers all

through the season, being much admired and appreciated by the collectors of wild flowers for the local flower show. We have seen it spring up spontaneously in gardens much further north, but it never looks finer nor more interesting than when growing in a truly wild state.

Other Uses for Fruit.—After eating as much fruit as we like or as we can obtain, we may proceed to apply it to other uses. It is stated that Orange juice is the best dressing for black boots and shoes. We are perfectly aware that there is no better application for tan boots or shoes than the inside of a Banana skin. The said skin should be rubbed well all over the boot, the latter wiped with a soft cloth and polished with soft leather or a piece of flannel.

French Rosarians.—Our Gallic neighbours have ever paid a deal of attention to the cultivation of what is generally regarded in this country as the English national flower, the Rose, but they are even proceeding to greater efforts. A congress of Rose-growers, recently held at Orleans, has resulted in a permanent commission having been appointed. Its work will be to deal with all communications touching Roses—their names, classification, cultivation, etc. The congress was under the presidency of M. Viger, sometime Minister of Agriculture. An interesting feature of the gathering was the presentation of a medal to M. Paul Verdier, one of the greatest authorities on Roses, not only in France, but in the world.

Parisian Flower Boxes.—Paris is nothing if not gay, and the garishness of all things Parisian has not forgotten the flower boxes. These almost excel in brilliancy the brightness of the flowers they contain, much to the disgust of our insular but more sober tastes. Plain boxes are almost, if not quite, unknown at the fashionable florists. The bunch of Roses, Daffodils, Carnations, or anything else that one may buy is invariably covered with designs of variously coloured ribbons, tied in knots and bows of all shapes and sizes, as obtrusive as they are ridiculous. The sober and garden flower pot is rigidly kept out of sight, and peculiarly constructed and wondrously hued receptacles take their place. This is going a few steps beyond the British country housewife, who daubs her pots with red ochre to enliven them up a bit.

Saxifraga aizoides.—As a rule this species grows upon wet rocks by alpine and subalpine streams. We noted it in plenty on an old sea bank, but within a hundreds yards or so of the present high water mark of the Firth of Clyde, at Craigmare, Bute. Water trickles down from above over the dark conglomerate rock, and keeps the plants continually moist. Cultivators would do well to make a note of this fact and plant it where the soil is moist rather than otherwise. The yellow flowers, spotted with orange, are really very pretty. The dense tufts have been flowering for a long time past, but have not yet gone out of bloom; and this coupled with the fact that the leaves are glandular-ciliate would make it identical with or closely allied to the form described by Linnaeus under the name of *S. autumnalis*. All the same it is evidently the prevailing form in this country. The northern latitude and the dripping rocks would account for its occurring at so low an elevation.

Durham Show.—The twenty-fifth annual exhibition promoted by the Durham Floral Society was held on Tuesday, September 8th, in the New Markets, Durham. The weather was fine, and the excellence of the show delighted everybody. The total number of entries was 1,480, as against 1,533 the previous year. Mr. F. Nicholas Upleatham, maintained the first position for four stove and greenhouse plants. Mr. Charles Burton, Seaton Carew, was first for a group of plants, and Mr. McIntyre, Woodside Gardens, Darlington, was second. Mr. McIntyre led the way for Crotons, and Mr. R. J. Knaggs, of Whorlton, for hardy Ferns. The section for table decorations was the most interesting in the floral department, and was well patronised both by exhibitors and visitors. Mr. J. Atkinson, Corbridge, secured the chief award for the best collection of cut flowers, the remaining prizes being won by Messrs. W. Reason, J. Tullet, Raby Castle; R. Wharton, West Hartlepool; G. Lonsdale, and R. Burton. Mr. H. E. Gribble, gardener to the Marquis of Londonderry, Wynyard Park; Mr. J. Hunter, Lambton, and Mr. Yare, Wolsingham, were the judges.

The last London season cost the aristocracy between £20,000 and £25,000 for flowers and Palms.

The Tree-planting Society of Newcastle set an example by dying, which is being followed by many of the trees themselves which were planted under its auspices. The only green tree is a Black Italian Poplar, which was planted by Mr. Robert Sanderson.

A Big Bunch of Nuts.—Mr. A. Loram is the happy gatherer of the biggest bunch of wild Nuts of which we have ever heard. It was picked at Ringmore, Shaldon, and contained fifteen well-formed, good-sized Nuts, all on one stem. We are waiting for the next bunch.

Too Contented.—"Well, gardener, how is my son getting on in the profession?" Gardener: "Well, sir, he's very contented." Father: "Ah, that is a good thing. I'm glad to hear it." Gardener: "Yes, yes—h'm—rather too much of a good thing. He says that by looking at the Chickweed choking down the Groundsel, it will save him the trouble of pulling it up."

Honour to whom honour is due.—Mr. Alfred Outram, F.R.H.S., a well-known and general representative of the horticultural profession, has been the recipient of a well-merited and well-earned honour at the hands of the County Borough of Hanley Corporation, which body so successfully inaugurated and carried out its first annual fête and horticultural exhibition. Naturally, as a body of business men the Council, in the arrangement and management of their show, consulted the best expert opinion obtainable, and Mr. Outram was readily able to give them valuable practical assistance in this way, which has been gracefully and fittingly recognised by the presentation of an illuminated address to that gentleman, setting out in suitable words the thanks and esteem of the Corporation for the services rendered on the occasion referred to.

Sleep of Plants.—A Norwegian observer has been making some investigations on the sleep of plants, with the object of shortening the period of repose, and he claims to have succeeded. His plan was to subject bulbs and the buds of resting plants to the action of chloroform vapour. He asserts that plants so treated subsequently grow more rapidly, than those under normal conditions. He considers that the repose of the plants was intensified by the narcotic, and therefore that a shorter period is necessary. The so called sleep of plants, from this point of view must be on a different footing to that of animals with which the less of narcotics used the better. Bulbous and other plants that have been retarded by low temperatures till past their usual period of growth usually come away more rapidly than those allowed to start under natural conditions.

After-Dinner Speeches.—The wisdom, or otherwise, of the tirade of adulation which sometimes follows the occasion of some of the public dinners held in connection with a few of the shows was brought sharply to the notice of some of the guests at a certain horticultural function recently. It was a matter of comment that some of the speeches fell short of the usual standard, and why this should have been so was not particularly clear, for there were many men present who could, and probably would, have done better justice to the occasion. The fault, we assume, rests with the managers or those who are responsible for the toast list, over which a little more trouble might, we think, profitably be taken. We are aware that in securing suitable speakers for or in response to a toast it is of paramount importance to "first catch your hare," and it may also be pleaded that until the last moment it is not always possible to tell who will be present, or if present, be agreeable to undertake a duty, often onerous, and one sometimes that is looked upon with a grudging stinginess by those who really ought to be better informed. Still, we do think that a frequent difficulty does occur, and certainly no small additional success might be obtained by adopting the custom which obtains in most of our leading societies in arranging by post beforehand matters of this kind. Moreover, it would give the horticultural Press a better chance of completing its record of an otherwise interesting function, especially when a special edition is in process of production. We commend the matter to the official consideration of committees of management.

Mr. Robert Lewis, foreman at Usan House, Montrose, the residence of George Keith, Esq., has been engaged as head gardener to Miss Paton, Links House, Montrose, N.B.

Second Flowering of Late Phloxes.—It is not generally known that the garden race of Phloxes belonging to the *P. paniculata* type can be made to flower a second time. In the more southern counties of England at least, when the Phloxes are cut down after having flowered, the stems will throw out side shoots and bloom a second time in October. The stems should be cut down to 6 in. or 9 in. from the base. The secondary shoots will be shorter than the original ones, but sufficiently long to make them suitable for cut flower purposes. Delphiniums may be treated in the same way, except that the old stems should be cut clean away.

Thomas a' Becket and the Fig.—There is a legend extant to the effect that Becket brought the Fig to England. Soon after he was made Archbishop of Canterbury by Henry II. he quarrelled with the king and went to Rome to lay his case before the Pope. When the quarrel was patched up he returned to England bringing with him a Fig tree, and planted it in his garden. The big Fig garden at West Tarring, near Worthing, is the result of that Fig tree, and the said garden was probably at one time part of the primate's palace grounds. Until recently there existed, if indeed it is not there still, an old Norman building alleged to have been the palace of Becket.

A new name in the Rose world is Mr. Augustus G. Green, who has commenced business at "Rose Lands," Great Horkesley, Colchester, that grandest centre in all the world for the cultivation of this flower. His catalogue, which is before us, refers to the success which has attended Mr. Green during the past season, and includes some very useful hints on growing and on the management of Roses. We wish Mr. Green all the success that he can possibly desire, and need hardly remind him, perhaps, that in entering the lists he has to try his mettle against the leading growers of the Rose in all the world; but we have always an admiration for the new comer and a new competitor, if for no other reason than for the additional stimulus which is thereby caused in the race for the tape.

The Destruction of Alpine Flowers.—The beauty and popularity of the Gentian, the Edelweiss, Cyclamen, *Arnica montana*, and other Alpine plants have caused them to become increasingly scarce in the market. The Edelweiss particularly is much prized by visitors to the Swiss mountains as a souvenir of their visit, and is now sold at a price sufficiently high to entice the Alpine peasants to risk life and limb in gathering it. An edict has just been issued by the Prefect of the Haute-Savoie with a view to stopping the indiscriminate destruction of native plants. All lovers of natural beauty and of plants will hail this as a necessary and laudable movement, for we know something of the destruction of charming native plants in our own country, and would like to see similarly restrictive measures rigidly enforced here.

The Rice Crop in Korea.—The food of the people of Korea is Rice, meat and vegetables being mere accessories. In the extreme north where Rice cannot be grown extensively, Wheat, Millet, and Beans are used as substitutes, but wherever Rice can be had it is always preferred. Korean Rice is of excellent quality, some of it being considered almost equal to the best Japanese. Consul Allen says it is difficult to estimate the amount of Rice grown in Korea, as no proper statistics are kept, but the actual consumption is estimated at about 2,000,000 bags per annum, or 320,000,000 pounds. In former years the surplus was stored in Government granaries against a bad year, the old Rice being issued the next season, bag for bag, for new Rice. In 1886 the export of Rice from Korea began in a small way and has increased year by year, subject, of course, to the condition of the yield. The native method of cleaning is by pounding in stone or wooden mortars and separating the chaff by winnowing. This leaves much gravel with the Rice and causes injury to the teeth in eating. Lately, a number of fanning mills have been introduced from Japan, and Japanese have started a few crude steam Rice mills.—*Journal of the Society of Arts.*

£15,000 for Flowers and Plants.—This was the estimated cost of the flowers and Plants employed along the route by which the Jubilee procession passed.

Public Fig Gardens.—It is stated that the only public Fig Garden in England is situated in the parish of West Tarring, near Worthing, in Sussex, and contains some hundreds of trees.

Mr. Chas. Hott gave a practical demonstration on the summer management of fruit trees at St. Agnes, at the beginning of the month. Several gardens were visited, and formed illustrative material for the lecturer. Mr. Hott gave a list of what he considered to be the best Apples. It was as follows:—Culinary: Lord Grosvenor, Lord Derby, Cox's Pomona, Ecklinville, Bismarck, Bramley's Seedling, Lane's Prince Albert, Pott's Seedling, and Grenadier. Dessert: Lady Sudeley, Worcester Pearmain, Beauty of Bath, Gladstone, Cox's Orange Pippin, Adam's Pearmain, and King of the Pippins. The demonstration was the result of an arrangement made by the Technical Education Committee.

Another Kailyard Story.—Dr. Leitner, a learned German philologist, declares that the Gaelic language is a contemporary or derivative of a tongue closely allied to the spoken language out of which the Sanscrit became evolved as a written language. This will go to confirm the ancient belief of the Gael himself that his mother tongue was spoken in the Garden of Eden. Some would fain have it that kilts were but a development or advance upon the Fig leaves worn by the first knight of the blue (?) apron. A. M'Leod considers that when Adam gathered up the Fig leaves it must have been autumn, and the leaves consequently in their customary autumnal yellow tints, just like the M'Leod tartan.

Southern Counties Carnation Society.—This society, which has been inaugurated in the neighbourhood of Southampton, has now fairly started, and has close upon one hundred members, including amongst others Mr. Martin R. Smith, Mr. James Douglas, Mr. Robert Sydenham, Mr. Weguelin, Mr. Nutt, Mr. Harden, Mr. Phillips, Mr. Keen, and others. By an advertisement appearing in our issue of to-day it will be seen that the society purposes sending out this autumn the first distribution of Carnations, so that those who take an interest in the culture of the Carnation and Picotee should lose no time in joining. In addition to this proposed annual distribution of plants, which is entirely the gift of the hon. secretary it is proposed to hold an annual exhibition, to which all members and their friends will be admitted. To those who have not yet received particulars of the society's intention, it may be mentioned that all subscriptions received will go to making up a liberal prize fund, in order that every class of Carnation can be represented, by which means it is hoped that a large and successful exhibition will be ensured. All information as to the society can be procured on application to the hon. secretary, Mr. William Garton, Jun., of Woolston.

Market Peas.—The conservatism that prevails in market gardening has again been brought to the front by a discussion on the subject in the *Daily Telegraph*. Messrs. J. Carter & Co., of High Holborn, London, find that the demand for Peas scarcely extends beyond half a dozen varieties, while in many districts nearly all the growers cling to one variety. Surely that is very bad policy when there are so many good sorts, early, midseason, and late, with which the grower might prolong the harvest, greatly to his own and other people's advantage. For instance, they made a general sowing on March 29th last, and the varieties were ready for picking in the following order:—Lightning, June 10th; Springtide, June 13th; Prince of Wales, June 24th; Telephone, Stratagem, and Daisy, June 28th; Telegraph, and Yorkshire Hero, June 30th; G. F. Wilson, July 10th; and Michaelmas, July 20th. Varieties picked from the above and sown at various periods from February or March and onwards to June, would furnish a supply to the end of September. All of the above are Marrowfat Peas, except the first named, and greatly superior to much that is put on the market. The main point to observe, however, is the succession that a selection from them will ensure.

The Sparrow again.—Miss Eleanor A. Ormerod has presented us with reliable information concerning the little ways of the house sparrow. She has recently issued gratuitously an eight page pamphlet, in the production of which she has been assisted by Mr. W. B. Tegetmeier, showing the nature of the sparrow's food as demonstrated by dissection. It is estimated that during the life of an adult sparrow 75% of its food is corn of some kind, and it is averred that even the insects they eat are so much food taken from other birds, almost entirely insectivorous. The pamphlet points out that in Canada, on the recommendation of the Agricultural Department, the sparrow is no longer protected. They have also found the sparrow out in the United States, for in the report made by the Board of Agriculture it states that Mr. C. V. Riley, entomologist to the board has found that out of 522 bodies examined only two contained insects. The evidence of Mr. G. H. Gurney, also an entomologist of fame, who examined the stomach contents of 694 sparrows killed during each month of the year bears out Miss Ormerod's statement. It shows too that in young sparrows only half is corn, the other half insects. Clearly our friend the sparrow is in a bad way unless he can clear himself, which seems scarcely likely. Hitherto farmers have been induced to put up with his cheek in assuming rights of proprietorship over new sown fields in the hope that he makes amends by keeping down the insects. If the latter is proved to be only a pretence on his part he had better look out for himself. Copies of the pamphlet in question may be obtained from Miss Ormerod, Torrington House, St. Albans.

TRIALS AT CHISWICK.

ZONAL PELARGONIUMS.

NEARLY 165 varieties of Zonal Pelargoniums have been subjected to trial at Chiswick this season. Amongst these are included many old varieties that have given a good account of themselves in gardens all over the country, and it is interesting to note how well these good old varieties have borne themselves when placed side by side with other and newer ones. The Floral Committee assembled at Chiswick on August 19th to decide upon the respective merits of the varieties. The verdict of highly commended, exemplified by the XXX, was given in the case of each of the following sorts:—

DOLLY VARDEN.—A dwarf, compact-habited tricolor that stands the drought remarkably well, and is, moreover, a free grower. The leaves have a central area of pale green, with a broad zone of black-brown and a red margin. The flowers are large and bright scarlet. Messrs. H. Cannell & Sons, Swanley, Kent.

MASTERPIECE.—This is one of the best of the tricolor section, a free grower, and of good habit. The centre of the leaves is green, the zone is dark brown and red, and the margin bright sulphur-yellow. Messrs. H. Cannell & Sons.

ZULU.—This belongs to the bronze section. The zone is dark and very broad, and the margin primrose-yellow. In habit this is a very vigorous variety.

MARECHAL McMAHON.—This is one of the finest and best known of the "bronze" section. It has a heavy zone of brown-red, and the margin is yellow. Messrs. H. Cannell & Sons.

GOLDEN HARRY HIEOVER.—This well-known variety needs little further description. The yellow-green foliage, with the narrow bronze zone, the profusion of scarlet flowers, and the dwarf, compact habit render it a great favourite for edging purposes. Messrs. H. Cannell & Sons.

MISS KINGSBURY.—This is a first-class bedder. The leaves are silvery-white, with a central area of light green. The flowers are orange-scarlet. Messrs. H. Cannell & Sons.

CREED'S SEEDLING.—There is no handsomer, and none more suitable for edging purposes than this. It is dwarf and compact in habit, although somewhat delicate of constitution. The foliage is bright green-yellow, and the flowers scarlet. Messrs. H. Cannell & Sons.

BOULE DE NEIGE (BICOLOR).—A variegated form of great merit. The leaves have green centres, with broad margins of pure white. The variety is free-growing, and a capital bedder. The flowers are scarlet. Messrs. H. Cannell & Sons.

FLOWER OF SPRING has for so long been recognised as one of our very best variegated bedding varieties,

that no more is necessary in the way of description. Messrs. H. Cannell & Sons.

SIR HAMILTON.—A free blooming form of great merit. The flowers are magenta in hue, and double. The leaves are free from markings of any kind. Messrs. H. Cannell & Sons.

MRS. BARNEY.—Like the last named there is no zone observable on the green foliage of this form. The plant is of medium height and sturdy. The flowers are double and exhibit a charming shade of rose pink. Messrs. H. Cannell & Sons.

HENRY JACOBY is still one of the finest deep crimson Pelargoniums that we have. Messrs. H. Cannell & Sons.

RASPAIL IMPROVED.—Here the flowers are double, large, and crimson-scarlet in colour. The truss is of great size, and the habit of the plant strong and vigorous. Messrs. H. Cannell & Sons.

ADOLPHE BRISSON.—In this we find a moderate bloomer, but one bearing exceedingly large trusses. The pips are of great size, scarlet in colour, with a pink-white centre or eye. The foliage is free from any zonal mark. M. Lemoine, Nancy, France.

MADAME ROECHLIA.—The flowers are white, and the trusses large, but the plant is a comparatively poor bloomer. There is no zone in the foliage. M. Lemoine.

BOULE DE NEIGE.—This must not be confused with the variety of the same name mentioned earlier in the list. In this case the flowers are pure white, and very double. The habit is free, and somewhat spreading and bushy. The zone is broad and deep. R. H. S.

ADVANCER is another double white, similar in many respects to Boule de Neige, but the leaves are much larger. R. H. S.

ALBION is a single white form of great merit. The habit is dwarf and bushy, and the plant is a free grower. Messrs. H. Cannell & Sons.

CAPTAIN H. COLVILLE.—Here the flowers are double scarlet, and the habit dwarf and spreading. R. H. S.

The two undermentioned subjects received an award of XXX. on the same date:—

AGERATUM AMERICANUM COMPACTUM, THE ZOO.—This is a very dwarf and compact-habited Ageratum, whose great point, however, is its marvellous floriferousness. The flowerheads are produced in dense clusters, are large, and bright purple-blue in hue. R. H. S.

CALLIOPSIS NIGRA NANA.—In this we have one of the dwarfiest and freest of all the Calliopses. The flowers are deep crimson-maroon—a rich and telling shade. Messrs. Watkins and Simpson, Essex Street, Strand.

CHINA ASTERS.

A meeting of the Floral Committee was also held at Chiswick on September 7th, when the merits of a quantity of China Asters, as well as French and African Marigolds, and scented Pelargoniums were taken into consideration. The China Asters have been grown on a border facing to the west, and against the wall dividing the property of Devonhurst from the society's gardens. The undermentioned Asters were awarded XXX.

A.—Dwarf Victoria Aster, bright rose, tipped with white, a large flower; height 1 foot.

B.—Liliputian Aster, rose; flowers about 1½ ins. in diameter; height, 8–10 ins.

C.—Imbricate or Pompon Crown Aster, rose, with white centre; height, 15 ins.; habit, spreading; also a rose variety, somewhat dwarfer in habit.

D.—Mignon Aster, large white, with reflexed segments. The stalks are long, and good for cutting.

E.—Great Chrysanthemum Aster, pure white. This is a huge flower, strong, and handsome. The height is about 15 ins.

F.—Dwarf Chrysanthemum Aster, shining rose-white. This is a very pretty form, the plants growing from 6 to 8 ins. in height.

MARIGOLDS AND PELARGONIUMS.

AFRICAN MARIGOLDS.—A fine strain of lemon and orange African Marigolds was commended for the size of the flowers, their well-developed character, and rich colour. Messrs. Watkins and Simpson.

PELARGONIUMS.—A large batch of sweet-scented varieties has been raised at Chiswick by hybridising *P. crispum* with the pollen of *P. radula*, *P. quercifolium*, and possibly *P. denticulatum*. Most if not all of them are very distinct from, and quite unlike, the seed parent, *P. crispum*. Unfortunately no

record has been kept of the various species used as pollen parents, so that we have been guided by the foliage alone to determine this.

WM. MARSHALL.—The leaves of this hybrid are pinnatifid with oblong segments similar to those of *P. radula*, but having a light bronzy zone down the centre of each, suggesting the influence of *P. quercifolium*. XXX. Royal Horticultural Society.

C. JEFFERIES.—The lobed leaves in this case have broad segments, with a bronzy-black centre, fading with age, and very similar to an old variety named *P. quercifolium majus*. XXX. R.H.S.

G. STEVENS.—The leaves here are very large, more or less bipinnatifid or twice divided, and resemble those of *P. radula*, but are much larger. XXX. R.H.S.

R. DEAN.—The light green, finely divided leaves of this hybrid are intermediate between *P. denticulatum* and *P. radula*, suggesting these two species as the parents. XXX. R.H.S.

H. B. MAY.—Leaves very large, light green, and pinnatifid, or having the lower segments again divided. A slender bronzy line runs along the centre of each segment. XXX. R.H.S.

J. D. PAWLE.—The leaves in this instance are similar in size and form to those of H. B. May, but they are more crisped, and without the bronzy line traversing the principal nerves. XXX. R.H.S.

EARLY-FLOWERING CHRYSANTHEMUMS.

Ten members of the Floral Committee of the Royal Horticultural Society met at Chiswick at one o'clock on Friday the 17th inst., and made the awards as mentioned hereunder. Awards of Merit were accorded to a few of the very finest of the newer varieties of early-flowering Chrysanthemums, and XXX was given to the best of the older kinds to indicate their value and generally meritorious character. Two China Asters also received recognition, together with the new *Matricaria Parthenium Golden Ball*. As a matter of course only those Chrysanthemums in full bloom could be dealt with. Many of the taller ones especially are not yet in flower, but will be examined again on the 4th October. The collection is very extensive.

JAPANESE.

MITCHETT WHITE.—The plant is of dwarf and bushy habit, being only 18 in. high. The blooms are of medium size for an early variety, and pure white, with gracefully drooping or recurved florets. For cut flowers the variety is one of the best, and simply charming. Award of Merit. Mr. H. J. Jones, Rye-croft Nursery, Lewisham.

MADAME CASTEX DESGRANGES.—Flowers large creamy-white, with a yellow centre during the early stages. XXX. Messrs. Dobbie & Co., Rothesay, Scotland.

G. WERMIG.—A soft yellow sport from the previously named variety. XXX. Messrs. Dobbie & Co.; Messrs. H. Cannell & Sons, Swanley; and Mr. Divers.

MRS HAWKINS.—The darkest yellow sport from Mme. C. Desgranges. XXX. Messrs. Dobbie & Co.; Divers; and Barr & Sons, King Street, Covent Garden.

MRS. BURRELL.—Plant vigorous and about 2 ft. 9 in. in height, producing a large quantity of soft yellow flowers, with a deeper centre. XXX. Messrs. Dobbie & Co., and H. Cannell & Sons.

MADAME MARIE MASSE.—Blooms large, with broad, spreading, silvery-purple or rose florets; plant about 18 in. to 2 ft. high. XXX. Messrs. Dobbie & Co.

MADAME GASTELIER.—Plant bushy, about 20 in. high, and bearing a profusion of creamy-white flowers. XXX. Messrs. H. Cannell & Sons; and Divers, Rutland.

EDITH SYRATT.—Blooms of a fine rich rose, with narrow and closely arranged florets. Plant 2 ft. high. XXX. Messrs. H. Cannell & Sons.

MADAME EULALIE MOREL.—Plant of good habit, and 2½ ft. high. Flowers cerise, shaded gold. XXX. Messrs. Barr & Sons; H. J. Jones; and Divers.

MADAME LOUIS LIONNET.—Blooms soft salmon-pink, with a yellow centre when young, and having narrow, graceful florets. XXX. Messrs. Barr & Sons; and Divers.

POMPONS.

L'AMI CONDERCHET.—Plant of dwarf, branching, bushy habit, 12 in. to 18 in. high, and admirably adapted for bedding purposes. Flowers bright

yellow gradually fading to pale yellow. Golden Drop is a synonym of the above. Award of Merit. Messrs. Dobbie & Co.; and Barr & Sons.

MADAME JOLLIVART.—Flowers of medium size and white, with a yellow centre in the early stages, but changing to white and ultimately becoming tinted with rose in the open air. The plant is very floriferous and grows only 18 in. high. Award of Merit. Messrs. Dobbie & Co.; and H. Cannell & Sons.

LONGFELLOW.—Plant about 2 ft. to 2½ ft. high, branching, and floriferous. The flowers are white, blushing somewhat as they grow old in the open air. Award of Merit. Messrs. Dobbie & Co.; H. Cannell & Sons; and Barr & Sons.

WHITE ST. CROUTS.—Flowers white, with a yellow centre, and ultimately tinted with purple in the open. Plants dwarf, branching and flowering profusely. XXX. Messrs. Dobbie & Co.

GOLDEN FLEECE.—Plants 2 ft. high, branching freely, and bearing a profusion of bright yellow flowers. XXX. Messrs. Dobbie & Co.

LITTLE BOB.—Stems 15 in. to 18 in. high, branching freely, and bearing a profusion of small, dark brick-red blooms. Messrs. Dobbie & Co.; and Barr & Sons.

STRATHMEATH.—Plant 2 ft. high, of good habit, and bearing rosy-pink flowers in great profusion. XXX. Messrs. H. Cannell & Sons; and Dobbie & Co.

MRS. CULLINGFORD.—The stems and branches of this variety are stouter and more rigid than those of most early varieties. The blush white flowers are also compact, neat, and very choice. The plant is 2 ft. to 2½ ft. high. XXX. Messrs. Dobbie & Co.

MISS DAVIS.—This is a pale pink and beautiful sport from Mrs. Cullingford, from which it differs merely in colour. XXX. Messrs. H. Cannell & Sons; and Dobbie & Co.

FLORA.—The golden-yellow flowers and profusely flowering nature of this variety are well known. XXX. Messrs. Dobbie & Co.; H. Cannell & Sons; and Divers.

MR. SELLEY.—Flowers of good average size, soft silvery-rose, and produced in profusion. The stems are only 16 in. to 18 in. high. XXX. Messrs. Barr & Sons; and Dobbie & Co.

NANUM.—Flowers blush-white, and produced in great profusion on bushy stems 18 in. high. XXX. Messrs. Dobbie & Co.

TOREADOR.—Stems 1½ ft. to 2 ft. high, bushy and floriferous, the blooms being dark bronzy-crimson. XXX. Messrs. Dobbie & Co.; and H. Cannell & Sons.

BLUSHING BRIDE.—Flowers blush-white, deepening to rose on the outer florets with age. XXX. Messrs. Dobbie & Co.

CANARI.—The florets of this variety are fluted and bright yellow, while the bushy branching stems are only 15 in. to 18 in. high. XXX. Messrs. Dobbie & Co.

PIERCY'S SEEDLING.—The bronzy-yellow flowers of this variety are borne in great profusion on stems 18 in. high, or less. XXX. Messrs. H. Cannell & Sons; Dobbie & Co.; and Divers.

BRONZE BLUSHING BRIDE.—This differs from Blushing Bride only in having bronzy yellow flowers, being a sport from it. The stems are 2 ft. high. XXX. Messrs. Dobbie & Co.

DODO.—This is one of the very dwarfiest in the collection, forming spreading bushes only 9 in. to 12 in. high, and covered with a profusion of bright yellow flowers. XXX. Messrs. H. Cannell & Sons.

SALTER'S EARLY BLUSH.—Flowers blush rose and profusely produced on stems 18 in. high. XXX. Mr. Divers.

ANASTASIA.—The plants are of dense, bushy habit, 18 in. high, and entirely covered on the top with a profusion of rich rosy-purple flowers. XXX. Messrs. Barr & Sons.

PETILLANT.—Flowers creamy-yellow with darker centre, and borne on branching stems 18 in. high. XXX. Messrs. Barr & Sons.

MISCELLANEOUS.

MATRICARIA PARTHENIUM GOLDEN BALL.—Seedlings of the Feverfew continue to vary. That under notice has semi-globose and neat densely-quilled heads of a soft or light buttery-yellow hue. Award of Merit.

CHINA ASTER LILIPUT WHITE AND ROSE CENTRE.—The name given to this charming variety is practically a description in itself. The plants are 9 in. to

12 in. high, erect, branching, and bearing small, extremely neat, and quilled heads of great beauty. The heads are white round the circumference, followed inwardly by a bright rosy zone, surrounding a yellowish centre. They are about the size of a Daisy, and amongst Asters a real "Daisy." XXX.

CHINA ASTER BALL OR JEWELL SCARLET.—The florets of this variety are of a dusky yet glossy rose colour, and so compactly incurved that they might be taken for an incurved or Chinese Chrysanthemum if shown in the cut state apart from the plant. XXX. Messrs. Dobbie & Co.

It will be seen from the above Chrysanthemums in perfection, on the 17th inst., that there is neither lack of colour nor variety generally amongst early-flowering Chrysanthemums. Some plants of the earliest sorts were indeed past their best, but later planted ones of the same variety were in their prime.

VEGETABLE CALENDAR.

THE maturation of root and other crops at this season will give occasion for reflection on future operations. It is very important to settle the rotation of cropping at the present time, so that land, as soon as vacant, can be dealt with in a manner suitable for the crop intended to be put on it. Where land is foul, either with weeds or insect pests, the present time should not be allowed to pass without making an effort to rid it of both. Perseverance with the fork will be needed to get rid of rhizomatous weeds; and for slugs, grubs, and insects of all kinds nothing equals moderate dressings of gas-lime. This should be broken fine, distributed equally over the surface, and be allowed to remain exposed for a few weeks before digging it into the land. In addition to being obnoxious and destructive to insect life, it is an excellent manure, being rich in ammonia, and when used in moderation is very valuable for all garden crops. Where "clubbing" has existed, an extra dressing may be given, as it is a safe and sure cure for the disease.

LETTUCE.—With the prospect of an early change to lower temperatures and rougher weather, it will be necessary to make preparation for the protection of several crops; and frames should be in readiness for Lettuces in various stages of growth. Full-grown plants of the Cos kinds will be better lifted with a ball of earth and placed under glass. Get the roots well covered with light soil and give a watering round the base of the plants as the work proceeds; at the same time remove decaying leaves. Abundance of air will be required to prevent decay, and no moisture overhead, or rain should be allowed to fall on the plants. Succession or half-grown crops of the Cos kinds may also be planted into frames in soil composed of half leaf mould and loam. In this they will make quick root action and acquire a succulency equal to a summer crop. Specially prepared beds in a sunny and sheltered position should be planted to stand over the winter. Hick's Hardy and Bath Cos are the best for this planting, and All the Year Round is a good Cabbage kind for the same purpose. Another sowing may be made in a cool house or frame to produce plants for frame planting early in the new year. A last sowing should be made early next month in a specially prepared frame filled with light sandy compost. These will prove useful for planting in warm positions in February next.

PARSLEY.—Provision for sheltering a well-grown bed should now be made. A few skeleton frames made of a size to suit any old lights will answer well for keeping off snow and breaking the force of rough winds. Some of the strongest plants may be potted up in 32-sized pots, and stood under a north wall for a fortnight until root action commences, when a more open position will be better. These may be placed under cover as convenience occurs, and also into gentle warmth should it be desirable to do so.

SPINACH.—Slugs are often troublesome with this crop, and where this is the case, no time should be lost in making up deficiencies by transplanting or fresh sowings, in freshly dug positions. A dressing of soot and lime will help to keep down slugs, and this with frequent hoeing among the crop will soon hasten the plants into a safer stage of growth.

POTATOS.—The latest of these ought to be lifted on favourable occasions, and a selection made for planting next season. None but the best shaped tubers and typical of the variety should be saved. These, after greening, should be stored away in a

cool dry place ready for future planting. Any seed previously stored and intended for early frame planting should be examined occasionally to detect diseased roots. After selecting seed the main crops may be stored in any position under cover free from frost, and where the light must be excluded from them by straw or other material.—*f. R.*

THE PLANT HOUSES.

The Stove.

Now that the end of September is practically here there will be little need to fear the effects of bright sun upon the plants. The blinds, therefore, may be taken down within the course of the next week or ten days, unless it is intended to employ them during the winter months for covering up the house. Before storing them away they should be carefully dried and folded up, so that they may be in good condition for next year. The upright sashes, angles in the roof, and other places over which the blinds cannot be worked are generally shaded by painting the glass with "Summer Cloud Shading" or whitening. The rains of the latter part of August and September have well-nigh washed the glass clean, but it will be advisable to finish the work of the rain, and give the glass a good washing, for the time of the year is fast approaching when all the light that it is possible to get will be needed.

During the daytime the outdoor temperature is fairly high, and, therefore, it will be possible to give air for a little while yet with some amount of freedom. The morning and afternoon syringings are also of moment, for within a few weeks the syringe will have to be given a holiday, as far as its general application is concerned. The nights are cool, and a considerable amount of fire-heat is necessary to keep the temperature up. For the next fortnight the thermometer in the larger stove should not be allowed to drop below 70° Fahr. by night, and this temperature should be kept up without much trouble.

CALADIUMS.—As most of the plants are now in a decidedly shabby condition, it will be well to take them out of the large stove and give them a place to themselves in a warm pit, where they may be allowed to ripen off gradually without any notice being taken of their shabbiness. The water supply may be gradually curtailed as the process of maturation goes on.

EDGINGS TO THE PLANT SHELVES.—The plan of planting *Panicum variegatum*, *Tradescantia zehrina*, and other trailing subjects on the edges of the plant stages is a good one, and is pretty commonly followed. The plants have made a great deal of growth during the summer, but although they will preserve their appearance for a month or six weeks yet, they will look straggly and untidy as the autumn wears on. Cuttings should, therefore, be rooted in small sixty-pots, ready to take the places of the old plants when it is found needful in the interests of tidiness to cut them away.

Cool Conservatory.

THE lapse of time has made itself felt upon the occupants of the cool conservatory. The summer-flowering things have had their turn for the year, and a rare clearance of them, or rather their remains, must soon be made. All plants that are past their best should be cleared out without delay, some to be thrown away, others to be cared for in other departments. A washing and cleansing, as far as can be conducted without unduly disturbing the permanent subjects, should be carried out, and then the heavy plants, such as Acacias, Azaleas, Camellias, and Oranges that have been out-of-doors for the latter part of the summer, may be settled into their places.

AZALEAS, particularly, should not be left out any longer in case of frost. Thrips are almost sure to be upon them to some extent, and therefore a good washing with a reliable insecticide by means of the syringe is to be recommended. The plants should be laid on their sides on the grass to effect this, otherwise harm may result to their root systems.

FUCHSIAS.—The few that remain are only carrying two or three straggling flowers, and they may as well be turned out along with the rest of the relatives in a sheltered corner of the frameyard to ripen off for the present. Of course they will require to be housed before the advent of hard and continuous frost.

TUBEROUS BEGONIAS.—The best thing for these is to transfer them to a cold frame where they may finish in peace. Do not dry them off too rapidly or the tubers will suffer. In cases where the stakes render the plants too tall for the frame, they (the stakes) may be taken out, for the plants, standing close together, will mutually support each other.

EUPATORIUMS AND SALVIAS may as well be housed without delay, since after the expiration of September they are never safe for two days together.

EARLY FLOWERING CHRYSANTHEMUMS have been and are still doing well, and they come in admirably at a time when, if the early autumn is cold and cheerless as it has been this year, there is apt to be a rather awkward break. In addition to those plants which have been grown in pots expressly for conservatory decoration, a good supplement may be effected by lifting some of the plants from the open, before their flowers have been too much weather beaten.

CLERODENDRON FALLAX.—Although this requires an intermediate house to grow it on properly it may be turned to capital account for the decoration of the cool conservatory when it is in flower. As soon as the blooms are expanded the plants should be shifted into their cooler quarters, where they will last longer than they would in the warmer house. The temperature, however, should not be too low, nor the atmosphere too heavily charged with moisture or the flowers will be liable to damp.—*A. S. G.*

The Orchid Grower's Calendar.

MANURING ORCHIDS.—This is a subject that is engaging the attention of scientists and practical gardeners all over the country, and in giving my experience with the use of manures I cannot be accused of imitations since the judicious use of stimulants has been advocated in the calendars from time to time for the past four years over the initial C.

Not so many years ago it would have been almost a criminal offence to have even thought of mixing cow manure with the compost for *Calanthes*; but who, I should like to know, grows them at the present time without its use or its equivalent? Then again, take *Cymbidium lowianum*, *Cypripedium insigne*, *C. villosum*, *Lycastes*, &c., all of which are very much benefited by a little help in this respect. Most of these I have enumerated are what are called terrestrial Orchids, and are naturally stronger growers, and being found growing on or near the ground get more nourishment than those growing high up the trees. I do not mean but that the *Dendrobiums*, *Cattleyas*, and the like, which grow high up, must get supplied with a certain amount of ammonia, by the heavy dews at night, as we are told they do get in their native habitats.

We know here at home how beneficial this is to plant life; but our Orchids under glass get no such health restorer or invigorator from the hot water pipes, so we have to supply this deficiency by means of stimulants, either supplied direct or in the atmosphere, if we are to keep our plants in rude health from year to year.

We are, I think, all agreed that there is a something that they want, but are as yet not quite unanimous as to what it is, or when to apply it.

As this is not a patent medicine advertisement, I must come to the point at once; here it is. Imported plants are treated in the ordinary way until established and well furnished with roots, after which they are treated to a weak dose of guano water once a week during the growing season. This is given to *Cattleyas*, *Laelias*, *Vandas*, *Oncidiums*, *Lycastes*, *Dendrobiums*, *Odontoglossums*, &c.

We use the best Peruvian Guano for the purpose. A pinch taken between the thumb and finger, to about two gallons of water, is all we give them. Such a small quantity cannot possibly do any harm to healthy plants, and is much better than to keep on watering with clear water, which in time washes out what little nutriment there is in such hungry stuff as peat and moss. For strong-growing kinds a double dose may be afforded.

DAMPING DOWN WITH MANURE.—Those who are opposed to the use of stimulants direct would do well to use a little farmyard liquid with the water when damping the walls and stages. A half pint to two gallons of water just colours it.—*C.*

HINTS FOR AMATEURS.

Hyacinths.—A few weeks ago we discussed the value and utility of the Roman Hyacinth, and now the large flowered varieties must have their turn. In this section, as a rule, the bulb only throws up a single flower spike, but the latter is larger, stouter, and more imposing than in the Roman. The individual flowers, too, are much larger and more massive. Then the range of colour is infinitely greater, ranging from deep purple-black, almost black, in fact, through a host of purples, blues, and reds, to yellow, pink, and white. The yellows are the weakest of all both in constitution and from a numerical point of view, but a considerable amount of improvement has been manifest of late years. The other colour sections seem to have been pretty well at a standstill for a number of years, and the flowers shown at exhibitions now are not better than they used to be as far as the intrinsic merit of the variety is concerned. Culture, perhaps, is carried out in a more enlightened manner now than it used to be thirty years ago. The idea must not be entertained, however, that the florists have relaxed their labours, for they keep adding year by year to the list of so-called varieties, many of which are little, if any, removed from some of the good old ones. Others again differ only by the merest shade of colour, and it is not easy to tell them apart except they are displayed side by side, and even then one must have a delicate and true perception of colour to do so. The result of this is evident to the amateur who picks up a catalogue with a view to making a selection. He or she is confronted with formidable lists of varieties that are all described as being good. The difficulty, of course, is one of confusion, for the would-be grower knows not which to select or which to pass over.

The following lists are intended to be as a guidance to those who are in such a fix, and we hope may prove of service, since the time for ordering the supply of bulbs is here with us. Those amateurs who have got beyond the need for such an aid will, we hope, pardon us for devoting the space to these lists.

The whites are a very strong section, and any or all of the following may be thoroughly relied upon:—Pure white—Alba Maxima, Queen of the Whites, La Grandesse, and La Neige; creamy-white—Lord Shaftesbury; rose-white—Grandeur a'Merveille. All these are single flowered varieties. La Tour d'Auvergne and Princess Alice are the best of the doubles.

In the single red section, General Pelissier, deep crimson; King of the Reds, fiery scarlet; Solfaterre, orange-scarlet; Macaulay, striped carmine; and Countess of Roseherry, dark red; are all good. Of the doubles, Koh-i-noor, salmon-red; and Duke of Albany, bright carmine, are excellent.

The rose and blush varieties are second only in numerical strength to the blues. Taking the singles first we have Norma, delicate waxy-pink; Blushing Bride, bright rose; Charles Dickens, light rose-pink; Lady Palmerston, bright rose; Fahiola, shaded rose; and Gigantea, delicate pink. Lord Wellington, bright rose; and Nohle par Merite, deep rose, are two of the best of the doubles.

For the sake of convenience we may divide the blues into light blue, blue and dark blue, and violet. In the first division, Duke of Teck, porcelain blue; King of the Blues, true Oxford blue; and Princess Wilhelmina, very bright blue; may be patronised as singles. A good double is Laurens Koster, which is almost a purple blue. Queen of the Blues, Princess Mary of Cambridge, and Lord Derby are three of the best singles, whilst in the doubles we may recommend Blocksberg and Van Speyk. Single dark blues would be well represented by King of the Blacks, deep blue-black; Starlight, violet-blue; General Havelock, purple black; and Black Prince. The Sultan is also a great favourite with many cultivators.

Coming to the yellows, Ida, pale yellow; Ball of Gold, golden yellow; Obelisque, and Marchioness of Lorne, striped creamy-orange, are all single forms well worthy of a place in any collection, whilst if the choice is limited to one variety only, Obelisque would be our first selection. It is a beautifully bright yellow. Cloth of Gold is one of the very best of the double yellow sorts.

It will be noticed that we have given much greater

prominence to single varieties than to double ones. This is due, not only to the fact that the singles are stronger in number and in range of colour, but also because they are more generally popular. The doubles are generally too stiff to be elegant, for when we have a large full spike, the flowers are naturally rather crowded, and when, in addition to this, the flowers are large and double, each bell seems to lose its individuality in what appears to the eye as a shapeless mass of colour.

So much for selection with regard to colour and variety. As far as the choice of the bulbs themselves goes, readers cannot do better than follow the advice given with regard to the Roman Hyacinths to choose sound, well-ripened, medium-sized bulbs of good weight relative to their size. Of course this only refers to cases when the purchases are personally conducted over the counter of a local tradesman. Orders entrusted to the care of respectable firms are always properly carried out and the best of material obtainable for the money sent in fulfilment of the order. To obtain a good article, naturally enough, good money is necessary.

The method of culture does not differ from that carried on in the case of the Romans with the single exception of the size of the pots used. For medium sized bulbs a large 48 pot will be required, one bulb being put in the centre of each pot. For the larger bulbs a 32 sized pot will not be too roomy, whilst for exhibition purposes we frequently see a size larger pot than 32's used. This is the extreme, however, and need not as a rule trouble the amateur.

In potting we must again remind our readers to make the soil moderately firm, and to leave the crown of the bulb peeping well out of the soil. The six weeks or so of probation in the plunging bed is required with Hyacinths, as with all bulbs that are to be forced, in order to admit of the root action being vigorous and healthy before the plants are introduced into heat.

Hyacinths in Glasses.—This represents a very popular and successful way of growing Hyacinths for indoor decoration. A special make of glass is needed, having a ledge at the mouth to support the bulb, and keep it from direct contact with the water. The glasses should be filled nearly full of soft water, and a nodule of charcoal, about the size of a marble dropped in. The bulb when placed on the circular ledge at the mouth of the bottle should have its base close to but not exactly touching the water, for if it did touch, the bulb would be likely to rot. Store the glasses with the bulbs in a cool dark place for a few weeks. This is analogous to the plunging in the case of the pot plants. When the roots are freely emitted, and the leaves are just making their appearance from the crown of the bulb the plants may be taken out and gradually inured to the light. All the attention that is needed is to keep the glass supplied with water as the plants exhaust it, but in refilling take care that the water shall never be higher than its first level, *i.e.*, just below the base of the bulb. For dwelling room decoration the glasses with their plants are always thought highly of, for somehow or other the ladies of the household will never become reconciled to the ordinary flower pots and resort to all sorts of devices to cover them up when the plants are inside the dwelling house.

Instead of filling the glasses with water, and allowing the bulbs to root in it in the manner described excellent results are obtained by filling them, as well as other ornamental vases, jardinetts, etc., with a mixture of cocoanut fibre, refuse and charcoal which can be purchased very cheaply from any dealer in horticultural sundries. When this medium is employed before the bulbs are placed on it, it should be watered until it is thoroughly saturated and cannot absorb any more water. Subsequently further supplies of water may be given as they become necessary. The roots of Hyacinths are very fond of this medium, and run freely in it.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Ficus elastica.—Will you kindly tell me what is the matter with my India-rubber plant? The leaves turn yellow and fall off. It is in a warm house,

and has done well for about eighteen months until the last few weeks. I should like to propagate it. How and when should I proceed?—*O. H.*

From what you say, it is very possible that the plant does not obtain sufficient nourishment, and may stand in need of being re-potted. It is too late however to do this now, you must wait till spring. If the roots look fairly healthy and vigorous you may give weak solutions of cow manure and soot about twice a week for the next month or six weeks. You may propagate by cuttings, but you should also wait until spring for this. About the end of January you may take off the top of the plant and insert it as a cutting in a small pot filled with very sandy soil. If you keep the old stem syringed it will break into growth, and the young shoots may be taken off and inserted as cuttings as fast as they appear. A brisk bottom heat is necessary to root the cuttings. You may also cut the old stem up into eyes, which will soon grow in a propagating frame.

Cocos weddeliana is a stove Palm, *F. L. O.*, and you cannot expect to keep it in good health for very long in a dwelling room. As soon as it shows signs of getting shabby, return it to a warm glasshouse or stove to recuperate its strength for another spell in the dwelling-room.

What is a Greenhouse?—In popular parlance, *Walter Carson*, all glasshouses are greenhouses, but the gardener has specialised the word greenhouse, and employs it to convey the idea of a cool-house, the temperature of which during winter does not usually decline below 40° Fahr., and does not rise above 50° to 55° by day. A warm greenhouse, from a gardener's point of view, is a house that is kept about 5° warmer than the greenhouse. Then comes the intermediate stove, which is warmer still, and lastly, the stove. We trust this explanation will satisfy you that when your man spoke of a warm greenhouse he had the correct idea from a gardener's point of view.

Tomato Seed.—*Robert S. L.*: If you wish to save seed of your Tomatos select the largest, finest shaped, and best ripened fruits from the plants that are carrying or have carried the heaviest crops. The fruits from which the seed is taken should be nearly dead ripe. Crush the fruits in water, and strain the pulp through fine muslin until you get it perfectly clear. The seed must be then dried as speedily as possible, for if it is allowed to remain damp it soon commences to germinate. It will dry quickly if spread thinly on the muslin and laid out in a warm room. You may also expose it to the sun on bright days. After it is thoroughly well dried pack it away in paper bags and keep it through the winter in a dry, cool room.

Carnations.—*R. S. O.*: "The Carnation" by *Dodwell* is a very practical book, and will afford you a deal of reliable information. If you are commencing to grow Carnations you will find it of the utmost value.

Fuchsias.—*C. B.*: The Fuchsias are getting to the end of their tether for this season. You may curtail the water supply, but do not dry the plants off at once. By-and-bye when the leaves have all dropped, water may be withheld entirely. Pruning had better be deferred until spring.

Chinese Primulas.—*W., Margate*: Lose no time in potting the plants off. As the season is so far advanced we should recommend 48's as the best size pots, 32's would be too large. Some of the plants may be left in the small pots they now occupy. They will bloom in them freely enough, although the flowers will naturally not be so fine as those on the plants which have had more room given them.

Aloysia citriodora.—I have a fine plant of the Lemon-scented Verhena growing out-of-doors against a wall facing to the south. Shall I require to lift it in order to keep it through the winter or would it keep in the open ground if protected?—*C. B.*

The plant will be all right (unless the winter is exceptionally severe), if you leave it where it is, and cover it up with a mat at night, and by day as well, during spells of hard frosts. Some of the tops of the branches will be likely to go off, but there will be

plenty of growths made lower down next year, and the loss will not be serious.

Cassia corymbosa.—Is this pretty plant generally used for bedding? I have had it in a bed in my flower garden where it has bloomed very freely. I am delighted with it, and shall have more of it next year.—*Subscriber.*

The plant is not so frequently employed for bedding as it ought to be and might be. It may occasionally be seen in greenhouses.

CARNATION MAUD DEAN.

THE powerful fragrance in this variety is delicious and its keeping qualities remarkable. It has an extra well-formed bloom, and a good stiff stem which always carries it erect, making it an ideal flower. The colour is white, deepening to the centre, which is a delicate pink, making it the most striking and attractive flower ever seen. The variety was raised by Mr. J. N. May, of New Jersey, and has received First-class Certificates from all the principal exhibitions in America. An eye-witness from this country saw the plants in December last, when a fine batch was bearing thousands of flowers. The same plants were again covered with bloom in May last. They were grown under the usual treatment accorded to Carnations as a rule, when they are being forced for the supply of cut flowers. About 4 in. of soil was placed upon the benches and the Carnations planted in this. Pot culture is seldom, if ever, attempted for market work. The fragrance of the flowers alone should recommend the variety to lovers of Carnations. Individual blooms measure about 3 in. across, on the stronger stems. The accompanying illustration was prepared from a photograph supplied us by Mr. May, and shows a popular method of displaying them in dwelling rooms, or on exhibition tables.

GLAMIS GARDENS, FORFAR.

GLAMIS CASTLE, of historical interest, is situated about a mile from Glamis Station, a beautiful part of Forfar. A few years ago the disastrous storm ruined the forest, uprooting thousands of trees. The gaps are plainly visible and will be so for many years to come. Gardening at Glamis for many years past has been a noticeable feature. It is now upwards of twenty-five years since I first visited Glamis. At that time the late renowned George Johnstone was in charge; and it may be fresh in the memory of many how he swept the decks of the principal prizes at the Dundee International Show with his grand Grapes, &c. After his death he was succeeded by Mr. Whitton, now Superintendent of the Parks and Gardens of Glasgow, and whose position there is giving the greatest of satisfaction to the Corporation. He was worthily succeeded by Mr. T. Wilson, the present gardener, a young man full of enterprise and a great enthusiast in gardening. Glamis has lost none of its prestige in high class gardening, for it is well represented in every department. Good order and cleanliness are the order of the day.

The fruit houses, a fine range, contain fine crops of Peaches, Nectarines, and Grapes, which are everything that one can desire. It is really astonishing what fine Grapes the old vines produce. Mr. Wilson is judiciously replanting, some grand young Vines being on the way.

The plant houses, of which there are many, contain numerous novelties worthy of note. Stove and greenhouse plants are well represented. I was particularly struck with a grand batch of the lovely *Gymnogramme schizophylla*, over 2 ft. through, a grand plant for baskets or elevated positions when well done. Standing at intervals between these and some well-grown Maidenhair Ferns, what struck me as a beautiful plant for decorative work are many dozens of the scarlet *Clerodendron fallax*, plants clothed with foliage to the pots, about 2 ft. high, with grand branching spikes of their rich scarlet flowers. They are used here extensively for indoor decoration, and stand well, so I was informed.

Other houses are gay, one with a grand batch of tuberous Begonias, many over 2 ft. through, as much in height, and superb varieties. These are quite a grand feature. Another house is full of well-grown and profusely-flowered plants of the best zonal, double, and single Pelargoniums, making a dashing display. *Lilium auratum* and its varieties, *L. lanci-*

folium, *L. Harrisii*, and Tuberoses are grown well, and swell the varied display. Noticeable were some fine *Hydrangea paniculata grandiflora* with enormous heads; the old favourite of mine, *Cassia corymbosa*, with its bright golden flowers; and the grand old *Vallota purpurea*, which is flowering profusely.

Marguerite Carnations, as well as others, are specially well done. A house of these in 48-size pots sown in January is grand. The strain is Sutton & Sons'. For variety of colours, flowers of fine form and substance, and most beautifully fringed, they are truly magnificent. As these are just in perfection, they will continue to flower for months to come. The plants are very free, producing enormous quantities of flowers. The Tree Carnations and the Souvenir de la Malmaison types are likewise well done.

The stove houses contain grand collections of young plants suitable for decorative purposes; and a house of splendidly-grown *Calanthes* of various

of bedding is well represented. Carpet bedding receives its due attention. Unfortunately the severe frost of a few days ago spoiled the effect of the flower garden on the terrace, the Begonias, *Tropaeolums*, *Heliotropiums*, &c., being completely cut up and black. The walls in various parts of the grounds are well planted with climbers, Clematis, Roses, &c., still making a good display. The pleasure grounds, which are well planted, contain many grand specimens of hardy trees and shrubs, Coniferae, &c. Every season some new addition to these is being made. The demand for cut flowers, fruit, vegetables, and plants for decorative work is great, but Mr. Wilson is equal to the demand, and I congratulate him upon his success in all-round gardening, which is fully appreciated by his noble employer.—*Alfred Outram, F.R.H.S.*

BUCCLEUCH NURSERIES, HAWICK.

MANY of our readers are familiar with Mr. John



CARNATION MAUD DEAN.

sorts calls for special comment. They are grown principally in 32-size pots. Many of the pseudo-bulbs are fully a foot, and others 15 in. long, and stout in proportion; and judging from their vigorous appearance they will give a good account of themselves later on. A large batch of all the best *Bouvardias* attracts one's attention, flowering profusely.

Tomatoes, Melons, Figs, Cucumbers, &c. are fruiting well and giving every satisfaction. The frames are full of seedling Begonias, Pelargoniums, Carnations, and other useful plants. A grand batch of *Chrysanthemums* will soon have to be housed, which will give a good supply of cut flowers, and make a fine display through the winter months. These combined with the scarlet *Salvias* make a good show.

Bedding is well done. The display in front of the large range I shall not forget. Every good annual, combined with all useful bedding plants, is there in full glory, not formally arranged, but broken up, which to me is more interesting. Every kind or style

Forbes, Buccleuch Nurseries, Hawick, N.B., but a greater number know him only by reputation. The nurseries from which his seeds and plants emanate are situated in a narrow valley amongst the mountains, which surround and tower above Hawick on every side. The Teviot and Slitrig flow through this valley, adding likewise to the romantic character of the situation. We had the pleasure of inspecting these nurseries on the 2nd inst., and noted a few of the several specialities here, particularly in the way of hardy plants. During a downpour of rain we passed through

THE GLASSHOUSES,

and in the conservatory saw some fine old Camellias, which prove very serviceable about Christmas. The varieties included many of the best such as Alba Plena and Imbricata, both handsome white flowers; also Beaulie, Guthrieana, Michael Angelo, Meteor, Juluthe, Rubens, Argus, Diana, Lourii, Archduchess Marie, and Coradino. *Lapageria rosea* and *L. r.*

alba were flowering freely on the roof. Some Tree Ferns also stand about amongst the Camellias. On the side shelves are *Lilium auratum*, *L. lancifolium*, and *L. l. rubrum* with a groundwork, as it were, of *Statice profusa*, *S. Butcheri*, and *S. brassicaefolia*. The latter has flowers of a purple-blue shade, while those of *S. Butcheri* are of a pleasing sky-blue colour. The little known Buttercup of the Canary Islands (*Ranunculus cortusaefolius*) was in seed. The large-flowering Cannas of the Madame Crozy strain have found their way here in considerable numbers and variety, in yellow, scarlet, crimson, spotted and edged varieties. Variety is also furnished by batches of *Araucaria imbricata* in various sizes, *Hydrangea paniculata grandiflora*, Harrison's Musk, and the variegated Musk, the latter being rather uncommon.

Many varieties of Clematis are grown in pots amongst which we noted several still in bloom. *C. Viticella kermesina* has small purple flowers, but those of *C. Star of India*, are many times larger and dark purple-blue. A very choice sort is the pure white Mrs. Geo. Jackman. Mr. G. M. Innes is double mauve. Fairy Queen is of a pale flesh with purple bars. The well-known *C. montana* is also here. Close by was *Crinum mooreanum* with blush-white flowers on scapes 4 ft. high. *Grevillea Hillii*, a little known species with deeply-lobed leaves, is located in the same house as the above.

One house is largely devoted to Palms of various sizes, including *Latania*, *Scaevthias*, and *Kentias*, associated with *Cycas revoluta*. Useful species and varieties of Maidenhair Fern, such as *Adiantum cuneatum*, *A. c. grandiceps*, *A. c. Pacotii*, etc., are also grown on the shelves. Useful foliage plants for the stove are *Phyllanthus nivosus* and *P. roseopictus*, variegated with white, and rose and white respectively. *Bougainvillea glabra sanderiana* flowers about the end of May and the beginning of June. The Tangerine Orange is a small fruiting variety. Bold climbers are *Passiflora quadrangularis* and *Stigmatopbyllum ciliatum*, the yellow flowers of the latter resembling an *Oncidium*. *Clerodendron fallax* is in its beauty.

Eucharis grandiflora, planted out in a frame in soil overlying hot-water pipes looks very healthy and is always flowering. A cold frame is filled with that useful little *Fuchsia Dunrobin Bedder*.

The greenhouse is brightened with *Celosia pyramidalis* in yellow and crimson colours, as well as a handsome crimson variety of *C. cristata*. Rare and curious is *Bowiea volubilis*.

The collection of *Fuchsias* is extensive, including all the best. *Lafayette* is a very large double variety with a rich purple corolla and scarlet sepals. *Duc d'Aumale* has a large double white flower, tinted with pink and capped with a red calyx. Another huge double is *Alfred Raimbaud*, with a purple-blue corolla changing to magenta. The lilac-blue corolla of *George Feydeau* is very handsome, especially by contrast with the scarlet sepals. A much older but certainly handsome variety is *Mrs. Rundell*, having light orange-red sepals and a bright scarlet corolla. *Fuchsia gracilis variegata* is a graceful and handsome subject for any purpose, but might be much more often bedded out than it is. *Dunrobin Bedder* forms little bushes about a foot in height, very freely branched and laden with coral-red flowers all the summer.

The collection of zonal *Pelargoniums* is very extensive including a large number of the finest and most recent varieties. The large salmon flowers of *Oenone*, borne in large trusses, are very handsome. The same may be said of *Livy*, with huge, rich orange flowers. *Sir Percival* is pure white, large and very choice. *Goldfinder* is a double variety, having scarlet flowers shaded with yellow; and *Love Gold* is, perhaps, the nearest approach to yellow we yet have. Very pretty is *Nydia*, having white flowers tinted with cream and a pinky-red centre. *Agnes* is even purer white than *Sir Percival* owing to the almost total absence of anthers. *Black Vesuvius* has small, very dark leaves and scarlet flowers, forming dwarf, flat-topped tufts. *Iseult* is rich salmon internally and orange scarlet on the outer face, making a unique variety.

Passing into the *Begonia* house we noted single and double tuberous sorts in great variety, many of the finer ones being named. Amongst the singles were some fine pure white, cream and rose seedlings, the flowers of which stand clear above the foliage. Very striking was *L'Orientale*, with yellow flowers

and a deep orange centre. *Gem* was of a beautiful salmon and very free. The circular flowers of *Ariel* were buff, suffused with pink. Of the double varieties a greater number has been honoured with names, but we noted only the best, including *Marquise de Treviso*, clear rose and crimped; *Buttonhole Bonquet*, rosy-pink, fringed, and having broad guard petals; *Dr. Marshall*, deep scarlet; *Madame E. Tourtell*, milky-white; *Conspicua*, rosy-carmine; *Mrs. Ross*, golden-yellow; and *Primrose Dame*, bright yellow. *Jessie Forbes* has large, wavy-petalled, straw-coloured flowers, that are both distinct and beautiful. They are carried erect on short, stout footstalks. *Panama* is large, pure white and of good form. The deep scarlet, erect flowers of *Surprise* are large and in shape like a *Hollyhock*. *Picotée* is French white with a well-defined pink edge. There are also many fine seedlings of white, salmon, salmon-pink, yellow and other colours. Amongst other kinds we noted the charming *Begonia La Lorraine*, which practically keeps up a succession of bloom all the year round under proper treatment.

Hybrid greenhouse *Rhododendrons* are also kept in stock. Showy and useful is *Browalia speciosa major*. A house is devoted to Palms of various useful sizes, including *Kentias*, *Geonoma*, *Cocos*, *Chamaerops*, &c. In the stove are *Caladiums*, including *Gerard Dow*, having yellow leaves and red veins; and *Mme. Jules Picot*, translucent pink, with green veins. *Panax Victoriae* has silvery variegated leaves. Other well known and useful things in the stove are *Dracaena sanderiana*, *D. goldiana*, *Pbyrium variegatum*, *Hoya bella*, and the beautiful *Reidia glaucescens*. The narrow-leaved *Dracaena Princess May* and *Miss Glendinning* are amongst the best table plants in cultivation. Choice also are *Croton*, *Mrs. Swan* and *C. superbum*, the latter having very long and graceful, narrow leaves. The large white flowers of *Scrubertia graveolens* are very fragrant. *Begonia President Carnot*, with pink flowers and scarlet fruits has found its way here.

The pits and frames are occupied by a variety of subjects. In one of them we noted *Rose White Pet* and *Red Pet*, very floriferous and useful for bedding, the one being a useful companion to the other. In the seed house we noted bright blue, and other varieties of *Delphinium grandiflorum*, some flowering, and others ripening a crop of seed. The same may be said of *East Lothian Stocks* which Mr. Forbes grows so well and which find their way into gardens all over the country as far as London at least. They are now in seven colours, namely, white, crimson, purple, white wallflower-leaved, scarlet, crimson wallflower-leaved, and rose, the latter being both choice and new. These Stocks are a speciality at Hawick. *Brompton Stocks* are also grown here. *Hollyhock eyes* were being rooted in quantity in frames. *Witbania origanifolia* is an uncommon plant belonging to the *Solanum* family.

OUTDOOR DEPARTMENT.

So important is this department of the *Buccleuch Nursery* that space is altogether inadequate to do it justice on this occasion. The leading specialities in florist's flowers must, therefore, be dealt with on another occasion. Suffice for the present to indicate a few of the more interesting subjects we noted while passing through the grounds.

The collection of *Montbretias* is rather extensive, both in quantity and variety, the plants being in the height of their glory when we saw them. Bright and floriferous were *Bouquet Parfait*, rich orange-scarlet; *Pluie d'Or*, golden-yellow; *Phare*, orange and scarlet, branching, and 2½ ft. high; and *Talisman*, dark orange-red or vermilion, and very handsome. Altogether there are about thirty-five to forty varieties in the collection. *Lilium tigrinum* was just beginning to open, while *L. candidum* was mature and ready for lifting. Many of the bulbs were lying almost on the surface of the soil, and in fine condition. *Antirrhinums*, in striped, mottled, and self colours, are grown in great variety. Several of the best varieties of tall *Lobelias* are grown, including the brilliant fiery scarlet *Firefly*.

A noted collection of *Hollyhocks* has been well grown here for many years. The fine spikes were being preserved from the violence of the wind and torrents of rain in readiness for the *Edinburgh* show. A large brake is occupied with them, and in passing through we noted handsome pink, rose, salmon, scarlet, purple, white, yellow, cream, purple-red, primrose, and other varieties. Orange and

lemon African as well as French Marigolds are grown in quantity. Violets are cultivated in quantity and variety.

Ornamental and flowering trees and shrubs are also amongst the requirements of this establishment. *Hydrangea paniculata grandiflora* is perfectly barded here, as is the handsome, free-flowering *Hypericum moserianum*. *Spiraea Douglasii*, *S. salicifolia*, *Golden Elder*, *Spruce*, *Scotch Fir*, single and double *Scotch Roses*, *Apples*, *Pears*, *Plums*, *Gooseberries*, and other small fruits go to make up a varied assemblage of necessary stock. We shall refer to specialities in florists' flowers in the near future, for they succeed remarkably well at Hawick.

SCOTTISH HORTICULTURAL ASSOCIATION.

THIS body of gardeners holds a series of monthly meetings throughout the year, the last one being held on the evening immediately prior to the opening of the *Royal Caledonian Horticultural Society's* annual show in the *Waverley Market*. The *Scottish society* convening these lectures are fortunate in securing annually a list of lecturers eminently able to deal with the wide range of subjects coming under notice. Mr. M. Todd, the president for the year, now current, occupied the chair, and there were present Mr. D. T. Fish, formerly of *Hardwick, Bury St. Edmunds*, the lecturer for the evening, Mr. Mackenzie, treasurer, Mr. H. J. Jones, *Lewisham*; Mr. Grieve, Mr. Morrison, Mr. Robert Laird, Mr. J. H. Murray, Mr. A. E. Stubbs, and many others. The president introduced the lecturer, who chose for his subject—"Plants, fruits, and flowers in the home and in the life." He observed in the course of his opening remarks, that spring-time was naturally the best time to approach such a subject. The attributes of horticulture filled us with admiration, and freshened us up from the zero of winter, fit for nobler opportunities. Quoting *Shakespeare*—"There is a tide in the affairs of men which taken at the flood leads on to fortune." Welcome spring! And what of autumn time? The lingering touch of summer he dwelt upon with excellent touch and effect. The *Apple* may be instanced as the commencement and the finish of our summer—the *Apple blossom* with its lovely radiance—the mellow fruit in autumn, full of poetry and teaching of seedtime and harvest. He touched upon the cheerful effect of flowers upon the garret or the mansion. We share the comradeship of flowers, and adore them as household pets. Amongst them we love to live, and move, and have our being; and we might safely follow the path of flowers, a statement, be declared, too deep for commonplace expression.

We praise art, we commune with Nature, we love the flowers. They live for us and others; the flowers so infinitely pure, spotless, and stainless. He described the plants as the scavengers of Nature; yet had it not been said, "that *Solomon* in all his glory was not arrayed like one of these." The markets of our cities contained a wealth of bloom, and a variety of growths not to be equalled in any nobleman's garden; but the lecturer did not touch upon the much discussed subject of market gardeners.

He touched upon the enormous developments of the fruit-growing of the world; also the *Lilies* and other flowers for cut blooms; vegetables all the year round, the aggregate of quantities being simply enormous; piling up *Narcissi*, and the like for *Christmas decorations*; picture the possibilities possible! *Tulips* and *Orchids* come in quantities from the south—in millions, constituting a mighty power in the decoration and adornment of our homes.

The speaker next referred to the lower percentage of bad seeds in the bulk of seeds now offered, describing it as a grand advance on fifty years ago. Open our doors and let the new beauty come in, raising us to higher conditions of social and physical life, when every home shall have its garden at the door. The growth of continuation schools was a great help to this end for the busy worker who is thus enabled to devote to study his leisure time.

He described the late *John Wills* as the pioneer of the new decoration of the home, the dinner table with his robust effects in icebergs and rockwork, rendering the dinner table of to-day more a fine art than a mere annual feast. All this had a very real effect in our home life. The presence of art and the spell of beauty made the good things of this life even

more palatable, promoting our health and refining our taste and manners.

The lecturer dwelt upon the even greater possibilities in the time to come, and concluded his peroration amidst applause. Discussion followed, and a successful meeting was brought to a close.

Exhibits are encouraged at these meetings, and certificates awarded where they are deserved. A collection of Cactus Dahlias came from Mr. Wilson, Belladrum, Beauvy. Messrs. Thos. Methven & Sons, Edinburgh, sent new Chrysanthemums. A new seedling yellow Carnation, named Miss Alley, was tabled by Mr. Robertson Munro, Langside, Glasgow, and was accorded a First-class Certificate. The table decorations were kindly provided by the president, Mr. M. Todd, Maitland Street, Edinburgh.

A RUN ROUND THE NURSERIES.

WHEN on a visit to the North of London recently, I thought I could kill two birds with one stone, as they say. My first step was, then, to give the Messrs. Hugh Low & Co. a look up at their Clapton nursery. Calling at the office, which is situated close to the entrance, I was asked to step this way by the smart and courteous clerk, and was soon introduced to Mr. Ianson, who very kindly did the amiable, for it was the Orchids I had called to see.

The first house we entered was a span-roofed one, the middle stage of which was crammed full of *Vanda caerulea*, all in grand condition, and in sizes to suit all parties. The price too was extremely moderate. Some of the pieces are marked as being flushed with rose. On the side stages are fine pieces of the easily-grown *Vanda kimbaliana* and *V. amesiana*, all in rude health.

In another division close by is a most wonderful batch of *Miltonia Roezlii*. This species is not always found in good condition, but here it grows like a weed, small pieces making fine specimens in a very short time. The house in which they are growing appears to be a naturally moist one, a condition of things which this beautiful Orchid likes. The temperature, too, must be brisk, and the shading fairly heavy.

PHALAEOPSIS.—This, the Moth Orchid, is a speciality here, and always has been. Eighteen years ago, when first I entered this nursery in quest of a situation as journeyman, the impression that a houseful of plants of this magnificent Orchid, with immense leaves without a sport, made on me has never been effaced. To-day they are, if anything, even in better order. The prices, too, are so reasonable; even the special varieties are not put at a prohibitive figure. I noticed in their culture that every precaution is taken to keep the heat and moisture nicely balanced, and with this end in view the spaces underneath the stages are filled with clinkers and other moisture holding material, whilst on the stages under the lattice work there is a quantity of ballast for the same purpose. At the end of this division I noticed a fine piece of the beautiful *Aerides lawrenceanum*, and a grand plant of *Vanda Lowii*. In another house there is a very fine lot of the pretty *Angraecum articulatum*.

The *Dendrobium* house is full of *D. wardianum*, *D. crassinode*, *D. primulinum*, &c., all in the pink of condition. *Cypripediums* are represented by great quantities of *C. Charlesworthii*, *C. Curtisii*, *C. bellatulum*, together with several of the best hybrids, including *C. Alfred Hollington*, *Mrs. E. V. Low*, &c. The Butterfly Orchid (*Oncidium Papilio majus*) is represented by great numbers in splendid condition. The pretty *Bulbophyllum claptonense* was to be seen in flower. Of *Cattleyas* and *Laelias* there is any quantity, including *C. Mendelii*, *C. Trianaei*, *C. Mossiae*, *C. labiata autumnalis*, and a fine lot of *Laelia purpurata*. There are, of course, numerous other Orchids of equal interest.

The Orchids are, however, being drafted to their new establishment at Bush Hill, Enfield. Indeed, the *Odontoglossums* are already located there, and are said to be making splendid growths. This I can readily believe, for, being more out in the country, the atmosphere is much clearer in winter, and the air more pure than what it is at Clapton. Time, however, would not permit of my extending my visit thus far, as I had other business to transact, so with a hearty "good-day" to my courteous guide I made tracks, but next time I go on the rampage I shall

certainly run down to the Bush Hill establishment of this most reliable firm.—*S. Cooke.*

TO THE IVY-LEAVED TOAD-FLAX.

Quaint little trailer
Cresting the wall,
Ivy-leaved Toad-flax
Flinging thy broad, lax
Cushions of blossom—
Darker or paler,

Daintily small—
Over the kindly
Stones that embosom
Rootlets and roots,
Searching so blindly,
Feeding thy shoots;
List me, I pray thee,
Homage I pay thee!

Old Father Time,
Hoary and crinite,
Weathers and crinkles,
Hardest of granite,
Smoothing each feature
Over with slime;
Old Mother Nature,
Harvesting seeds,
(Call them not weeds)
Sows them and sprinkles
Crannies and wrinkles.

Mountain and plain,
River and main,
Oft and again.
Golden-eyed wilding,
Wall, rock, and building—
Homes of thy choice—
Smile and rejoice,
When from the ledges,
Purpling the edges,
Springeth thy garlands,
Studded like star-lands
Over the stones.
Hues, tints, and tones,
Palate and spur;
Fashioned demurely,
Puzzle thee surely,
Sage connoisseur!

Sculptured and furrowed
Flower of the wall,
Savants scholastic
Hail thee with names;
Encomiastic—
Most of them borrowed—
Just as if all
Slighted thy claims.
Who is thy grower?
Seedsman and sower?
Who can unravel
How thou dost travel?
No one can answer,
Save a romancer.

—*Osmunda*, 1st July, 1897.

PATHOGENIC MICROBES ON KITCHEN-GARDEN VEGETABLES.

MR. BRANDEIS, of Bayonne, has called the attention of hygienists to the dangers for public health caused by the employment of human excrement for manuring vegetables, some of which are eaten raw.

On the other hand, Mr. G. Roux has sent to the Lyons Society of Medicine a brief note on this question, in which he mentions the resistance of certain microbes deposited on the surface of vegetables, and the great difficulty found in removing them by repeated washings. Mr. Guiraud, of Toulouse, has made a series of experiments on the Toulouse suburban grown vegetables where human excrement is employed as manure. A recrudescence of typhoid fever having occurred some months ago at Toulouse, the researches of Mr. Guiraud were devoted exclusively to the *Eberth bacillus* and the *coli bacillus*. Less successful than Mr. Brandeis, he did not succeed in isolating the *typhoid bacillus*. He found, by making cultures with the various colonies developed on plates, bacilli resembling by their characteristics those called *paratyphoid* or *similo-typhoid*, some causing very slight fermentation of lactose, and only turning litmus liquids red after several days, others which do not coagulate milk, or produce more or less scanty cultures on Potatos, but he never found colonies presenting typical characteristics of the *Eberth bacillus*.

On the other hand, in sixteen samples various salads, Strawberries, &c., collected at random in the market the author verified nine times the presence in large quantities of the *coli bacillus* with all its characteristic reactions. The *coli bacillus* is so common in the exterior medium, as the most recent researches tend to demonstrate, that there is no

reason to attach much importance to its presence on vegetables, had not the microbe thus isolated displayed particular virulence. With three of the microbes thus isolated the author made intraperitoneal injections with a dose of 2 cubic centimeters in three guinea pigs, all of which became seriously sick. One died forty-eight hours later, and at the autopsy a sero-fibrinous extravasation of the peritoneum, marked signs of peritonitis, and acute congestion of the intestines, kidneys, and lungs were observed.

Needless to add that the bacillus extracted from the peritoneal extravasation had preserved all its virulence, as was demonstrated by a series of inoculations. Without giving exaggerated importance to the presence of so ubiquitous a microbe as the *coli bacillus* in our aliments or beverages, we may say that it is not, doubtlessly, a subject of indifference to allow repeated entrance into our organism of a germ so markedly virulent in animals, and perhaps by continued researches in this direction some light might be thrown on what ancient medicine termed *season constitutions*, and an explanation found in the varying virulence of germs of the exterior medium, which enter one way or another into our organism.—*Revue Scientifique*, Sept. 11th, 1897.

ATHOLE HYDROPATHIC, PITLOCHRY.

THIS lovely spot is owned by Mr. William Macdonald, a great enthusiast in gardening. The gigantic mansion is built of stone, and stands in a prominent position overlooking a fine country. The scenery is magnificent, the surroundings most pleasant, and the grounds are beautifully undulated, well laid out and planted with ornamental trees and shrubs. *Rhododendrons* do well; in fact, everything seems to flourish. There are miles of walks through shady glens where the bubbling water flows, the whole being most pleasant and picturesque. The water fowl upon the various streams, and the beautiful colour of the autumn foliage, make this a most enjoyable retreat for a holiday. The place is so well patronised that many hundreds of people have to be turned away during the season. Two hundred and eighty guests is the average number. This with a staff of over seventy servants means great consideration and management. Yet all works with ease and comfort. All regret when their time comes to leave. Amusements of all kinds are provided. There are tennis grounds, racket courts, good fishing and shooting, and at night theatrical and other entertainments.

The place is beautifully decorated with plants and cut flowers. Stately Palms meet the eye in every direction, liveried up with bright cut flowers. These are grown in great quantities. For instance, there is a line of *Montbretia*, 200 yards long and 3 ft. through, a sight worthy of a long journey. Various other flowers, such as *Asters*, *Sweet Peas*, *Heliotrope*, *Stocks*, &c., are grown in great quantities for the decoration of the Hydro. Various kinds of bedding are well done, the ribbon borders specially so. Not only is the outside a feature, but Mr. Macdonald is an old Orchid enthusiast. He has a grand collection of *Cypripediums* in excellent health, noble specimens of good old sorts, many of the plants being 2 ft. through, including *C. Sedenii candidulum*, *C. Charles Canham*, *C. vexillarium*, *C. insigne Maulei*, *C. Morganiae*, and many smaller plants of the new varieties, which are grand. The stages are draped with *Panicum* and *Selaginella*, in narrow boxes (6 in.), which add much to the appearance of the houses. Cool Orchids are equally well done. Many hundreds of *Odontoglossums* of various kinds are grown, including *O. Pescatorei*, *O. Alexandrae*, &c., just now in flower, and a few *Masdevallias*. A grand plant of the curious *Nanodes Medusae* over 2 ft. through, and having thirty-six fine growths, attracts one's attention. *Cattleyas*, *Laelias*, *Dendrobies*, and *Coelogynes* in quantities occupy other houses. All seem to enjoy the treatment they receive.

Palms and decorative plants are well done, also great quantities are daily in use for the decoration of the various rooms and corridors of this gigantic palace. The bedding has very much suffered with the recent frosts. The *Begonias* and *Heliotropes*, which are greatly used, are perfectly black; for on September 13th there were ten degrees of frost, which likewise cut down all the Beans, Marrows, &c., in the kitchen garden. This is an important means of supply for such a place. A large garden of some acres is very well stocked with fruit trees in variety,

and vegetables, the demand being very great, as one can imagine.

There are upwards of thirty-five acres of pleasure grounds, with over six miles of walks, to which visitors have free access at all times; also to the plant houses. We congratulate Mr. Macdonald upon being the possessor of such a gigantic establishment, and so ably managed, as I heard some ladies express. A home from home is, indeed, found at the Athole Hydro.—*A. Outram.*

THE WOBURN EXPERIMENTAL FRUIT FARM.

DURING a visit of the Essex farmers to the experimental farm, by the permission of the Duke of Bedford and of the Royal Agricultural Society, the following notes were made by Mr. C. Wakely, horticultural lecturer to the Essex County Council:

"As might be expected (from the limited time the trees have been planted) very little difference was to be seen in some of the plots, as experiments must be conducted over a number of years in order to obtain reliable results. Hence the value of the farm as an experimental station will increase from year to year.

"One of the most forcible lessons learnt was that of the importance of the proper planting of, and after-cultivation around, young trees. In order to illustrate this, trees of the same age and kind had been planted on adjoining plots of ground. In one case the planting was thoroughly done, whilst in the other the roots were placed in the hard ground without any previous preparation, and the weeds had been allowed to grow afterwards. Some of the trees planted in the latter way were quite dead, and the remainder were in a very sickly state.

"The importance of the pruning of young trees in order to get them well furnished with useful wood was also well illustrated. The difference between pruned and unpruned trees was very marked. The former were developing into shapely specimens, whilst the latter consisted of a few weakly, badly-furnished branches, never likely to give satisfaction. These two experiments are specially commended to the notice of Essex farmers.

"An effort is also being made to solve the question as to the time at which the newly-planted trees should be pruned, whether in the year of planting or in the following one. This question has caused a deal of discussion, and the results to be obtained under the two systems will be closely watched for by fruit growers.

"Experiments in deep and shallow planting are also being carried out, but sufficient time has not yet elapsed to give good results. The droughts since planting have also interfered with this experiment.

"Further experiments are also being conducted in order to ascertain the best time for planting trees—autumn, winter, or spring. The last season appears to be the best, but fuller proof is certainly called for."—*The Journal of the Essex Technical Laboratories.*

WEEDS.

It is not every garden that can boast of growing more than a dozen weeds in perfection. In most, one particular one holds predominant sway, either Chickweed, Groundsel, or Shepherd's Purse. But in a garden that I knew in the West Riding of Yorkshire the following all grew luxuriantly:—

Coltsfoot, Couch Grass, Groundsel, Shepherd's Purse, Chickweed, Docks, Bindweed, Dandelions, Buttercups, Knot Grass, Peppermint, Willow Herb, Germander Speedwell, Yarrow, Lady's Mantle, White Goosefoot, Hedge Woundwort and Common Nettle.

The owner of this garden (who had only had it a short time) was in a terrible way about the state it was in, and waged war continually against the weeds. I often heard him murmuring to himself as he worked away (even by moonlight sometimes).

"One year's seeding, is
Seven years' weeding."

"Have you ever seen such an untidy garden?" he repeatedly asked me. "No," I used to reply laughingly, "although I have been in many, I never saw one before where the couch grass was as tall as yourself, the Convolvulus twined all round the Gooseberry and Currant bushes, and such quantities of Dandelions grew that anyone would think you were going to make gallons of Dandelion Tea."

"Well, you lazy fellow, set to and help to get rid of them," was his invariable answer.

"I will have a go at the Couch Grass, but nothing else," was my reply. I dared not confess it to him, but in my secret heart I could not help admiring the lovely yellow heads of the Coltsfoot, the graceful white flowers of the Convolvulus, the exquisite blue of the Speedwell or Veronica, and the pretty little flesh-coloured flowers of the Knot Grass. I remember something rather funny in connection with the latter plant. One day I heard a lady (a very clever botanist) go up to another who was first beginning the study of wild flowers, and say, "See, Miss G—, this is Knot Grass." "Well, I never said it was," smilingly replied the other one, not knowing there was a K in the word. I enjoyed a hearty good laugh at them both.

My "go" at the Couch Grass was generally over in ten minutes, for after digging furiously for a certain piece, which would always break in two as I took hold and pulled, my temper (I am ashamed to own) would so get the master of me that I would fling away the spade as far as I could, and march back to bully my friend.

"You would never make a gardener, you have no patience," he generally remarked as he worked industriously on.

It is three years since I first saw this garden, but when I went again this summer I should not have known it for the same place. My friend, with pride on his countenance, showed me all round. There was hardly a weed to be seen, just a stray bit of Groundsel and Chickweed here and there.

"You see what a great blessing it was I weeded so persistently that first year," he remarked to me. "I must confess," I replied, "that I don't like the garden as much as I did, it looks bare; I miss the Convolvulus, Dandelions, and Docks. You should have left a few in odd corners for 'auld lang syne.'" His disgust was so great that he walked off and left me.—*Solanaceae.*

GARDENING MISCELLANY.

DAHLIAS FROM BLOXHAM.

MESSRS. Townsend Bros., The Nurseries, Bloxham, Oxon, are well-known cultivators and exhibitors of Dahlias. They also engage in cross-breeding and raising new varieties. A box of blooms on our table contains decorative and single Dahlias. That named Monarch is a decorative sort to be sent out next year, and is notable for the enormous size of its blooms, which are of a rich maroon-crimson. Many of the outer florets measure $1\frac{1}{2}$ ins. across, but the others are not so much flattened. That named Mr. Chipperfield is smaller, though still a large Dahlia, and of a rich dark salmon-red, and as far as we remember it is quite distinct. Sulphur Queen is of a pleasing soft yellow, more or less shaded with a subtle tint of pink, which shines through from the back of the florets. It will be distributed next year, but Lady Sefton is new for this year. Like the three previous ones this also is a decorative variety, but the smallest bloom. The ground colour seems to be purple, heavily overlaid with scarlet, but shading into orange at the base. It is certainly a charming combination of colour, and should be valued for cut flower purposes. New single varieties are Beauty, Speckled Gem and Little Fairy. The first-named is scarlet, with a dash of cream along the centre of the broad florets. Speckled Gem grows only 18 ins. high and bears flowers that are striped and variously mottled with crimson on a yellow ground. Little Fairy is the most distinct of the three, and pretty, though the admirers of flat flowers might not like it. The single row of ray florets are scoop-shaped, and heavily shaded at the base and around the sides with a rich buff orange, while the remaining area is of a delicate blush pink. For cut flower purposes this ought to find a large share of favour amongst the British public.

THE WIREWORM BEETLE.

THE problem of dealing with the voracious wireworm always presents itself at some time or other to the gardener, and the result is that we hear of many desperate attempts to get rid of the pests. A plan recently adopted with success in Cambridgeshire in a Barley field where the Click beetles were very numerous is worth repetition. A wisp of Clover was

placed under a tile and left as a bait. It was occasionally examined and any beetles it contained put to death. So successful was the trap that within the space of a fortnight no fewer than sixty of the beetles were killed. Assuming half of these to be females, we get thirty, which, at a moderate computation would each lay thirty eggs, which totals up to an equivalent of 900 wireworms or 930 including the thirty killed which were supposed to be males. This may serve as a hint to the harassed gardener, for wisps of Clover are neither rare nor expensive articles.

VIOLA MARCHIONESS.

THIS Viola is without doubt one of the very best bedding varieties we have at the present time. Its colour is rich creamy white with clear yellow eye without rays of any sort. The flower is of good size, almost round and of splendid substance. The habit is all that could be desired, being robust, close and symmetrical; and the flowers having long footstalks, stand well clear of the foliage and are of uniform height. When seen in rows it has a charming effect, and is also well adapted for cut flower purposes when arranged with its own foliage or otherwise.—*Coila.*

FUCHSIA FULGENS.

A SMALL circular bed filled with this Fuchsia in the Royal Horticultural Society's gardens at Chiswick has rendered a capital account of itself during the past year. When we take into consideration the beauty of this half-hardy species, and the excellent effect produced by the racemes of bright scarlet flowers in contrast with the large, dark green leaves, it becomes a matter for some wonder that from enjoying a considerable share of popularity it has been sadly neglected of late years. In very few gardens do we meet with any more than a straggling plant of it, and that in a more or less miserable condition. As a sub-tropical bedding plant considerable use might be made of it, either in filling small beds entirely with it, as at Chiswick, or employing it as a dot plant among dwarfier subjects. *F. fulgens* was introduced to this country from Mexico in 1830.

PHLOX COCCINEA.

To those who are on the look out for a Phlox possessing a telling and durable colour, as well as a good branching habit, I would recommend this grand old variety. The flowers are certainly smaller than what is expected now-a-days, but the form and substance is above reproach, and in colour it is a rich vermilion. When massed in beds with suitable surroundings, it has a grand effect; and is also welcome in groups on the mixed border where it makes its presence felt in no unmistakable way.—*Coila.*

APPLE AND ROWAN JELLY.

TAKE about an equal weight each of Rowan berries and Apples. Slice up the Apples, skins, cores and all. Put the Rowan berries and Apples into an enamelled pan with just sufficient water to cover them. Put the pan on the fire until the water is on the point of boiling. Then mash up the contents of the pan finely. Strain the whole through a piece of gauze, and to a pint of the juice add one pound of loaf sugar, and boil until the juice solidifies sufficiently to form a jelly. The thicker it is the better, and the longer it will keep when stored.

SOCIETIES.

POLLOKSHIELDS HORTICULTURAL.—Sep., 8th and 9th.

THE 15th annual exhibition held at Maxwell Park, Pollokshields, Glasgow, was not so large as in other years, although the plants exhibited were remarkably good. Cut flowers were also a feature of the show, Asters being specially noteworthy. Dahlias, Gladioli, and herbaceous plants were good. Fruit was in small quantity, but excellent in quality, more particularly the grapes. Vegetables also showed a falling off, but Celery, Potatoes, and Greens were in capital condition.

In the open classes, and also in those confined to villa residents in Pollokshields, Mr. G. Irvine was a heavy winner, showing some excellent pot plants. Mr. J. Gault, Maxwell Park, also was most successful in the classes for bouquets, sprays, buttonholes etc., displaying a good deal of taste in his various arrangements.

ROYAL HORTICULTURAL.—September 21st.

HARDY plants and outdoor subjects generally were in strong force on Tuesday last, Michaelmas Daisies, Dahlias, Gladioli and Roses being conspicuous by their quantity and variety. Stove and greenhouse plants and large flowering Chrysanthemums were also staged in good form. Orchids are beginning again to fill their wonted positions. Fruit was represented by Melons and Apples; and vegetables by Onions.

Messrs. Hugh Low & Co., Clapton, exhibited an interesting and showy group of Orchids, including a number of plants of *Vanda caerulea*, bearing richly coloured flowers, Handsome also were the numerous specimens of *Cypripedium Charlesworthii*, *Odontoglossum grande*, *O. crispum*, *O. luteo-purpureum*, *sceptrum*, and *Oncidium jonesianum*. Very handsome was the new variety named *Cattleya hardyana Lowae*, both sepals, petals and lip being handsomely coloured. *Houlletia Brocklehurstiana* may be described as both handsome and pretty. *Cynoches chlorochilon*, *Cattleya schofieldiana*, *Oncidium unguiculatum*, *O. varicosum*, and *Odontoglossum harrayanum* added much to the general effect and conspicuous character of the group (Silver Flora Medal).

Messrs. F. Sander & Co., St. Alban's, staged a small group of Orchids containing a large and grandly flowered piece of *Odontoglossum grande*. They also had good pieces of *Laelia dayana*, *Dendrobium Farmeri aureo flavum*, *Miltonia moreliana*, *M. lamarcheana* and *M. lubbersiana*.

Very pretty and distinct was *Vanda amoena* exhibited by Messrs. Linden, Parc Leopold, Brussels. *Miltonia peetersiana*, a hybrid, was exhibited by R. I. Measures, Esq. (gardener, Mr. H. J. Chapman), Cambridge Lodge, Camherwell. W. S. McMillan, Esq. (gardener, Mr. W. S. Robertson), staged a plant of the beautiful *Cattleya aurea* Mrs. Fred. Hardy. *Lycaste denningsiana* was brought over from the Royal Botanic Gardens, Glasnevin. *Cattleya Harrisoniae major* and *Oncidium Papilio* were exhibited by D. M. Grimsdale, Esq., Kent Lodge, Uxbridge. Very pretty were the flowers of *Laelia praestans* Gatton Park var., exhibited by J. Coleman, Esq., Gatton Park, Reigate.

On the right hand side of the entrance to the hall just inside the door, Mr. J. H. Wittey, Nunhead Cemetery, staged a large semi-circular group of early Chrysanthemums. For early flowers some of them were of great size, although white predominated. An edging of Maidenhair Fern imparted a finish to the group (Silver Flora Medal).

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., made a brave display with Dahlias, of Cactus varieties chiefly. The flowers were large and very bright. In the centre of the group, in the background, some fine flowers of *Lilium nepalense* and *L. wallichianum* were very conspicuous (Silver Gilt Flora Medal).

Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., set up a nice lot of stove foliage plants in a very tasteful manner. They included finely variegated pieces of *Dracaena sanderiana*, the pretty *Leea acabilis*, several late *Caladiums* and some nicely coloured *Crotons* and *Dracaenas* (Bronze Banksian Medal).

Messrs. John Laing & Sons, Forest Hill, S.E., staged a lot of capital stove foliage plants. *Dracaena massangeana*, *D. Doucettii* and *D. indivisa rubra* were represented by some handsomely coloured specimens. *Crotons* in variety were also bright and attractive. A box of the pretty *Saxifraga sarmentosa tricolor superba* occupied a position in the front rank (Silver Banksian Medal).

Roses in capital condition considering the advanced season were shown by Messrs. Wm. Paul & Son, Waltham Cross, Herts. Baskets full of the new apricot-hued China Rose Queen Mab were very noteworthy here. Some capital examples of *Enchantress*, *Niphetos*, Mrs. John Laing and *Sylph* were also on view. The blooms all through were remarkably fresh (Silver Gilt Banksian Medal).

A very effective decorative exhibit came from Messrs. Jones & Sons, Shrewsbury. It was composed entirely of Dahlias, chiefly of the Cactus section, arranged with suitable greenery. The hardy autumn flower appeared to great advantage in the large pyramidal bunches and shower bouquets that found a place in the back of the exhibit. There was no semblance of stiffness in the arrangement, great taste and judgment being displayed throughout. The

front ranks displayed stands of cut blooms of both show and Cactus sections. Of the latter Cycle, Miss Wehster and Mrs. Turner were some of the most striking novelties (Silver Flora Medal).

Some first-class Dahlias were shown by Mr. J. Hudson, Gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton, Middlesex, which included Cactus, single, pompon, and the so-called single Cactus varieties. The narrow florets of the last-named are very distinct and striking, particularly in the case of such varieties as *Novar*, *Meg Merri-lees*, *Sir Walter*, *Ivanhoe*, *Brenda* and *Queen Mary*, which were all shown in excellent condition (Silver Flora Medal).

Messrs. H. Cannell & Sons, Swanley, Kent, were well to the fore for cut Dahlias. The blooms were staged in the fashion generally adopted by the Messrs. Cannell, viz., in large flat pyramidal bunches, with sprays of Asparagus. A layer of hardy Fern served for a ground-work. Cactus forms were chiefly in evidence, very choice being *Miss Irene Cannell*, *Gloriosa*, *Major Haskins*, *Mrs. W. Nohle*, *Fusilier*, *Robert Cannell*, *The Czar*, and *Mrs. H. Cannell*. A few bunches of pompoms were also staged. These, too, were all choice (Silver Flora Medal).

A grand batch of the early-flowering Chrysanthemum *Lady Mary Fitzwigram* was sent by Mr. Geo. Wythes, gardener to Earl Percy, Syon House, Brentford. The plants were marvellously floriferous, and in addition to the expanded flowers were carrying a heavy crop of buds (Silver Flora Medal).

Mr. H. B. May, Upper Edmonton, showed a nice batch of the grand *Salvia splendens grandiflora*. The plants were arranged in a semi-circular group, and edged with a broad band of Maidenhair Fern (Silver Banksian Medal).

Mr. Hudson likewise showed some magnificent specimens of the *Salvia*, the racemes of flower being much larger and finer than in the first named group. The plants indeed literally blazed with scarlet (Silver Flora Medal).

Mr. S. Mortimer, Rowledge, Farnham, Hants, received a Silver Flora Medal for a superb display of show and fancy Dahlias. *Duchess of York*, *Perfection*, *Arthur Rawlings*, *John Hickling*, *Shotsham Hero*, *Majestic*, *Shirley Hibberd*, *Jas. Cocker*, *Jas. Stephen*, *Burgundy*, *Eldorado*, *Duke of Fife*, and *Rebecca* were some of his strongest forms. In the background of the show and fancy blooms was a row of flat pyramidal bunches of Cactus and Pompon sorts.

A Silver Banksian Medal was awarded to Mr. J. T. West, Tower Hill, Brentwood, for a capital display of cut Dahlias. *Arthur Rawlings*, *Mande Fellowes*, *Virginale*, *William Powell*, *Hero*, *Willie Garrett*, *Mrs. John Downie*, and *Nellie Cramond*, were some of the best of the show and fancy forms and were all represented by superb blooms. Pompoms, and Cactus varieties were likewise shown in excellent form.

Stands of pompon, Cactus, show, and fancy Dahlias were contributed by Mr. Geo. Humphries, Kington Langley, Chippenham, Wilts. (Bronze Banksian Medal).

Messrs. J. Burrell & Co., Howe House Nurseries, Cambridge, sent cut Dahlias, conspicuous amongst which were some superb Cactus flowers. *Charles Woodbridge*, *Harmony*, *Falka*, *Cassilda*, *Lady Penzance*, *Beatrice*, *Regulus*, *Mrs. Wilson Noble* and *Fusilier* were the pick of the collection. A grand display of cut spikes of Gladioli was forthcoming from the same firm. Many of the leading varieties were on view, together with a host of very fine seedlings. The flower spikes and the individual flowers were of great size throughout, and the colours were both rich and varied (Silver Gilt Flora Medal).

Messrs. J. Cheal & Sons, Crawley, Sussex, weighed in strongly with a comprehensive collection of pompon, single, and Cactus Dahlias. The pompoms were especially fine, and such forms as *Jessica*, *Bacchus*, *Ruy Blas*, and *Erica* were splendid samples of their kind (Silver Flora Medal).

A Silver Flora Medal went to Mr. Chas. Turner, Slough, who showed Cactus Dahlias in a novel and effective fashion. Instead of being done up in bunches the stems of the flowers were inserted in baskets filled with moss, pots of *Adiantum* being interspersed between the baskets. *Mrs. Beck*, *Tonga*, *Earl of Pembroke*, *Fusilier*, *Mrs. C. Turner*, *Gloriosa*, and *Mrs. Barnes* were in particularly good condition.

Mr. John Green, Dereham, showed a number of bunches of miniature Cactus Dahlias.

Mr. W. J. Godfrey, Exmouth, Devon, showed four dozen large fine blooms of Chrysanthemums. *W. R. Prince*, *Barbara Forbes*, *Milano*, *M. Hoste*, *Lady Esther Smith*, *Lady Kennaway*, *Madame Gustave Henry*, *Miss Emily Silshury*, *Miss Oxenham*, and *In Memoriam* were the varieties shown.

Messrs. Wm. Cutbush & Sons, Highgate, N., had a small group of cut hardy flowers, including samples of the *Poke Plant*, *Phytolacca decandra*. A fine array of cut hardy flowers came from Messrs. Jas. Veitch & Sons, Ltd., Chelsea. It included a bright patch of the showy *Tritoma hybrida*, *Anemone japonica*, *A. j. alba*, *Helenium autumnale*, *Helianthus strumosus*, *H. multiflorus plenus*, and perennial Asters in variety (Silver Flora Medal).

Messrs. Paul & Son, the Old Nurseries, Cheshunt, received a Silver Banksian Medal for a bright and varied collection of cut hardy flowers.

Mr. Eric F. Such, Maidenhead, was awarded a Bronze Banksian Medal for a collection of cut early Chrysanthemums. Messrs. H. Cannell & Sons, had samples of *Physalis Franchetti*. Messrs. Sander also had an exhibit of similar material. A stand of Cactus Dahlias came from Messrs. Keynes Williams & Co., Salisbury. Messrs. Jas. Veitch & Sons, Ltd., sent samples of the tuberous rooted *Begonia Lafayette*.

At a meeting of the fruit and vegetable committee a Silver Knightian Medal went to Mr. Empson, gardener to Mrs. Wingfield, Amptill House, Amptill, Bucks, for a collection of Onions. There were some grand bulbs here—large, sound, and weighty—and many varieties were represented, including *Ailsa Craig*, *Giant Rocca*, *Holhorn*, *Barnet Hero*, and *Excelsior*. There were eleven dishes of Pears staged for the Veitch prizes. Mr. C. Herrin, Dropmore, was first with *Souvenir du Congrès*. Mr. Geo. Wythes was second with *Autumn Nelis*. Eleven dishes of Apples competed. Mr. Wythes won the first prize with *Ribston Pippin*. Mr. King, gardener to Col. Coleman, Reigate, was second with *Worcester Pearmain*.

Several Melons were shown, but none of them gained an award. Mr. W. Kemp, The Gunyah, Barnes, showed a dozen Melons, and a dozen Cucumbers. A Cultural Commendation was given to Mr. G. Woodward, gardener to Roger Leigh, Esq., Barham Court, Maidstone, for a fine dish of *Pear Beurré Martillet*.

OBITUARY.

MR. JAMES COCKER.

Though aware of the illness of the senior partner of the firm of Messrs. James Cocker & Sons, Aberdeen, we were pained to hear of his death at 12.35 on the morning of Wednesday, the 15th inst., at his residence, Sunnypark Nursery, in the sixty-fourth year of his age. He has been known to us by reputation for more than twenty years, but we made his personal acquaintance at some of the big shows of the Royal Horticultural Society, while still at South Kensington.

Mr. Cocker had been ailing for the last two years, and for some time past was unable to attend to business. He was borne at Corse, in the parish of Fergie, on the north-west borders of Aberdeenshire, in 1832. His father was the founder of the firm at the Sunnypark Nursery, and the deceased commenced his gardening career with his father at Sunnypark. After a time he went as a journeyman to Cloncaird Castle, Ayrshire. Sometime afterwards he found his way to London, where he spent a number of years studying the various branches of the nursery business. About 1871 he went into partnership with his father and brother, and this partnership continued till the death of his father in 1881, about which time we made his acquaintance, recognising him as an ardent florist. At this time he started business on his own account, taking into partnership his three sons, James, William and Alexander. His eldest son James died about three years ago, but the two younger are still carrying on the business with energy and courage, as the recent reports of the Aberdeen, Dundee, Edinburgh and other shows in our pages testify.

For many years past Mr. James Cocker was an enthusiastic and successful cultivator of Dahlias, Pansies, Pinks and Carnations. The *Dahlia James Cocker*, a show variety is still one of the best of its class and to be found in every representative collec-

tion of Dahlias, whether grown for exhibition or otherwise. For ten years past at least he has given his attention to herbaceous plants getting together a valuable and widely representative collection. Roses are another speciality of the firm, and an extensive collection has been got together, as many an exhibitor and visitor to various shows in Scotland can testify. Besides being an ardent cultivator and exhibitor, he was also a raiser of Roses, Pansies, Pentstemons, Phloxes and Violas. Sunnypark Rival was raised so long ago that it seems to have been the first Pansy in cultivation of a decidedly blue colour. It is still cherished as one of the best of its kind.

So well known was Mr. Cocker in the North, that his services as judge were constantly in great request at the various horticultural shows—a striking testimony to his knowledge of florist's flowers and garden produce generally. In this capacity he has served at Edinburgh, Newcastle and the Crystal Palace. The general nursery stock of the business is located at the Sunnypark Nursery, but the Roses which have been brought into such prominence during recent years, are grown at Morningfield. The ground here slopes to the south, and is well drained, thus enabling the Roses to be grown to great perfection even in the northern latitude of Aberdeen. That hybrid perpetual Roses can be grown here we are not surprised, but that Tea Roses should succeed so well in the open is indeed marvellous, considering the difficulties with which southern growers have to contend. Some seventy acres are planted with Roses and merely sheltered by hedges. In our report of the nursery in 1895 it is recorded that 50,000 dwarf Tea Roses were grown here, and passed successfully through the winter of 1894-95. Climbing Roses are grown by thousands, as are the best hybrid perpetual varieties. *Rosa rugosa* in numerous varieties also find a home here and fruit as freely as they do in the warmer and more sunny south. Mr. Cocker leaves a widow, the two sons in the business, and three daughters.

QUESTIONS AND ANSWERS

* * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Seed Pods of *Lilium giganteum* and Frost.—*M. M'L.*: We do not think that green seed pods would stand much, if any, frost without greater or less injury. You can protect them, however, for a considerable time yet without much danger, as early autumn and late spring frosts are easily warded off. By driving in a few long stakes round the plants, and securing them at the top by means of a piece of tar string, you will have made a framework over which you can throw a mat every night before leaving the garden, whether frost threatens or not. By so doing you can save yourself the trouble of going back late at night to it in case of frost. By tying the tops of the two stems together you can protect both as easily as one. Leave the stems attached to the bulbs as long as you can, and, unless winter comes early, they should mature where they are. After that you may cut the stems and hang them up so that the seeds will not drop out in case the pods should open. Let them complete their ripening in this way in a greenhouse or other place protected from frost before removing them from the pods. We intend using one of the photos as soon as we can find space.

Seed Growing.—*Eureka*: The soil should be poor rather than rich, as the seeds would be more likely to ripen early during fine weather. If the ground is too rich the plants keep growing and flowering to a late period, so that the autumn rains spoil the seed before it can be harvested and dried. You might try Delphiniums, Antirrhinums, Godetias, Clarkias, Poppies of sorts, Tropaeolums, Marigolds, Golden Feather, Eschscholtzia, Candytuft, Nemophila insignis, fine strains of Mignonette and similar things. The best plan is to begin with a few things and do them well. Many varieties of one species should not be grown except at long distances apart, in case the bees, &c., might mix them, which they are very apt to do. Gain experience by careful trials of a few things till you feel able to deal with more difficult subjects. Cockscombs and *Celosia pyramidalis* require careful management in frames over a shallow hot-bed, but you might learn in course of time to do them well. Some of the hardy annuals might be sown rather thickly in autumn and thinned out in spring to the necessary distances between the plants.

***Lilium sulphureum* not flowering.**—*M. M'L.*: You do not tell us whether you have been growing this Lily in pots or planted out. It requires the protection of a greenhouse, though it may with advantage be stood out of doors in a sheltered place with full exposure to sunlight during summer. It is usually grown in pots and flowers well, though we think it might even grow stronger if planted out either in a greenhouse or in a frame, where it may be protected in the colder weeks of late spring and early summer. Your bulbs have evidently not been very strong when you got them, or else you have been growing them in too small pots. You might use a 9 in. or 10 in. pot for each bulb, giving plenty of drainage, and not overwatering the plants till the soil is well permeated with roots. This ought to encourage vigorous growth and ensure flowering. When in full growth you could feed with weak liquid manure; but beware of using manure of a rank nature in the soil. The bulbets might be kept in slightly moist sand during winter, and planted in a compost of equal parts of peat and loam, either in pots or in a frame, the bulbs to be lifted and kept in sand during winter again.

Choice herbaceous plants.—*Eureka*: Such things as you mention might be grown to advantage provided you have the means of disposing of them. It is a question of finding out what is chiefly wanted, and of growing as many as are likely to be required each year. There would be less risk of large quantities of stock on hand for which there might be no demand.

Viola sport.—*J. Dick*: The occurrence of sports amongst Violas is very common, and many of them keep true to the change or comparatively so, provided the sport is real and not merely apparent. A considerable number of varieties, particularly white ones, sometimes yellow, blue and purple varieties change colour to some extent at different periods of the year, being darkest in spring and autumn, and palest in summer, particularly when the atmosphere is very dry. If you consider the new colour sufficiently pretty and distinct to constitute a desirable variety you should propagate it from the shoots that have sported. In any case there would be no harm in trying what it may do next year.

Names of Plants.—*A. O.*: The larger leaved species is *Cotoneaster buxifolia*; the other is *Cotoneaster congesta*.—*Alex. Reid, Jun.*: *Lycium europaeum*.—*A. T.*: 1, *Aster Amellus*; 2, *Lavatera trimestris*; 3, *Clematis Flammula*; 4, *Clematis Vitalba*; 5, *Corylus Avellana purpurea*; 6, *Berberis Darwinii*.—*W. Walls*: 1, *Oncidium incurvum*; 2, *Odontoglossum Pescaforei* var.; 3, *Cypripedium harrisianum*; 4, *Cypripedium Sedeni*.—*H. F.*: 1, *Liquidambar styraciflua*; 2, *Acer dasycarpum*; 3, *Pyrus japonica* (it often behaves in this way); 4, *Rosa indica monstrosa* (the green Rose); 5, *Fittonia Verschaffeltii*.—*A. N.*: 1, *Amaryllis Belladonna*; 2, *Colchicum autumnale*; 3, *Sternbergia lutea*.—*R. Walker*: 1, *Pteris longifolia*; 2, *Pteris cretica* Mayi; 3, *Asplenium hulbiferum fahianum*.—*J. C. S.*: 1, *Chenopodium rubrum*; 2, *Galeopsis tetrahit*; 3, *Setaria viridis*.—*Omega*: 1, Gout-weed; Bishop's-weed or Goat-weed (*Aegopodium Podagraria*); 2, Small or Field Bindweed (*Convolvulus arvensis*).—*A. Robb*: 1, *Adiantum tenerum*; 2, *Adiantum Ghiesbreghtii*; 3, *Adiantum cuneatum*; 4, *Adiantum formosum*; 5, *Ophiopogon Jaburan variegatus*; 6, *Agapanthus umbellatus variegatus* (Next time please pack Ferns with a little damp moss. The *Adiantums* were shrivelled up almost beyond recognition).

Fruits to Name.—Correspondents please note that our Pomologist is away from home at present, but the fruits will be attended to as soon as possible.

Communications Received.—*T. M.*—*Omega*.—*A. O.*—*A. E. S.*—*Laing & Sons.*—*H. J. Hobby.*—*Inquirer.*—*H. Deverill.*—*W. P. L.*—*H. R.*—*W. A.*—*Allan Cameron.*—*P. McCowan.*—*W. D.*—*Rowan.*—*Asb.*—*M. T.*—*S. L.*—*Geo. Tripps.*—*C. B.*—*Q.*

TRADE CATALOGUES RECEIVED.

ANT. ROOZEN AND SON, OVERVEEN, near Haarlem, Holland.—Catalogue of choice Dutch and Cape Bulbs, &c.

JOHN RUSSELL, the Richmond Nursery, Richmond, Surrey.—Descriptive Catalogue of Dutch and other Flowering Bulbs, Herbaceous Plants &c.

PAPE AND BERGMANN, Quedlinburg, Germany.—Price List of Bulbs, Tuberos-rooted Plants, &c.

WEBB AND SONS, Wordsley, Stourbridge.—Catalogue of selected Seed Corn, season 1897-98.

FREDK. W. KELSEY, 150, Broadway, New York.—Selected Hardy Trees, Shrubs, Bulbs and Plants for Fall Planting.

JOHN COWAN AND CO., (Limited), The Vineyard and Nurseries, Garston, and Gateacre Nurseries, Gateacre, Liverpool.—Dutch Bulbs, Hyacinths, Tulips, Narcissi, Crocus, &c.

AUGUSTUS G. GREEN, "Rose Lands," Gt. Horkeley, Colchester.—Rose Catalogue.

THEODORE TURNER, Begonia Nurseries, Great Sutton, Chester.—Catalogue of Bulbs.

A Special Offer to Readers of THE GARDENING WORLD. 25/- BOOK for 8/-

NO HOME SHOULD BE WITHOUT ONE

Ogilvie's Encyclopædia OF USEFUL INFORMATION AND WORLD'S ATLAS.

No Single Book ever before contained such a Wealth of Knowledge.

By Special Arrangement with the Publishers of the "Encyclopædia of Useful Information and Atlas of the World," we are enabled to offer to the Public a Magnificent 25s. Volume for 16 of the coupons, which will appear weekly, together with 6d. each, accepted in Weekly Instalments, or the Coupons may be held until the whole period has elapsed and brought or sent to the Office with 8s., and 6d. towards carriage.

A COMPLETE ILLUSTRATED LIBRARY IN ITSELF.

A universal assistant and treasure-house of information on every conceivable subject, from the household to the manufactory. In short, gives information about everything, is absolutely indispensable to everyone in all walks of life; the contents being so separated, indexed, and arranged that they can be turned to at once. It is

THE BEST { BOOK OF } EVER
INFORMATION } ISSUED.
Size of Encyclopædia: 9 by 11½ inches. 656 Pages

It contains

MANY MAGNIFICENTLY ENGRAVED
COLOURED MAPS,

and a description of every country under the sun, besides much other matter relative to the Home, the Farm, the Factory, a Dictionary of Statistics—many Useful Tables, Poetical Selections, Synonyms, Famous Bridges and Ships, How to Calculate, How to Cook, How to Get Rich, How to Cure all Diseases, How to Succeed in Business, Table of Weights and Measures, and

HUNDREDS OF OTHER TOPICS OF
GREAT VALUE TO EVERY PERSON

who desires to be up to the times. To see the Book is to want it. To Members of Mutual Improvement Societies it will prove of inestimable value.

The articles are written by men whose lives have been devoted to the subjects treated, are short and concise, but contain full information up to date. It is to be consulted on every subject that arises in everyday life, by old and young alike. It contains a complete Illustrated Atlas of the World.

IN THESE DAYS OF COMPETITION

it is imperative that a Gardener should be a well-informed individual. Here is an Encyclopædia containing an immense amount of knowledge that will be of the greatest service to him.

YOUNG GARDENERS,

do you wish to be successful? Then remember that to possess knowledge is the surest way to achieve success.

It is elegantly bound in Morocco Cloth, with beautifully designed Gilt Side-stamp and Red Edges, making at once the most handsome and durable as well as THE MOST USEFUL BOOK EVER MADE or sold for 25s.

| | |
|--|----------------|
| 25997. | COUPON. |
| OGILVIE'S ENCYCLOPÆDIA OF USEFUL INFORMATION, AND WORLD'S ATLAS, PRICE 25s. 16 COUPONS, AND 6D. WITH EACH. | |
| Name | _____ |
| Address | _____ |

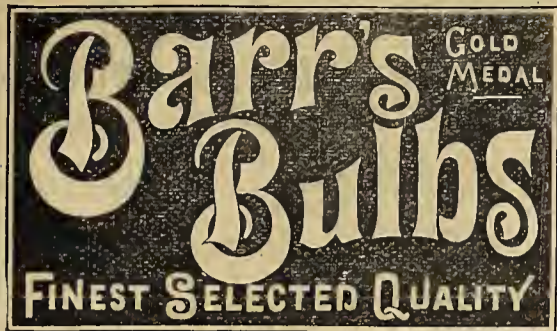
Postal Orders or ½d. stamps may be sent.

COUPONS AND CONTRIBUTIONS MAY BE LEFT at or SENT TO the Office for

THE PUBLISHER OF

THE GARDENING WORLD.

COPIES OF THIS BOOK CANNOT BE BOUGHT. They can be obtained only by using these Coupons.



HYACINTHS, for Pot Culture, with fine handsome spikes.

One each of twelve named varieties, 5s. 6d.

Do., do., un-named, in a good variety of colours, per dozen, 4s.

HYACINTHS, Dwarf White Roman, for Early Forcing.

Per 100, 10s. 6d. and 15s.;
Per doz., 1s. 6d. and 2s. 3d.

HYACINTHS, Barr's Beautiful Rainbow Mixture, for Beds and Borders, outdoors.

1st size bulbs, per 100, 17s. 6d.; per doz., 2s. 6d.
2nd ,, ,, per 100, 13s. 6d.; per doz., 2s.

TULIPS, Barr's handsome varieties, for pots.

Three each of twenty named sorts, 6s. 6d.

„ **Barr's Beautiful Rainbow Mixture, Single or Double, per 1,000, 42s.; per 100, 4s. 6d.**

CROCUSES, Barr's choice Large-flowered sorts, for pots, &c., 100 in 10 named vars., 3s. 6d.

„ **Barr's Special Mixture, for planting in grass, &c., per 1,000, 10s. 6d.; per 100, 1s. 3d.**

ILLUSTRATED CATALOGUE OF HYACINTHS, TULIPS, CROCUSES, SNOWDROPS, POLYANTHUS NARCISSI, and all the Best Bulbs for Spring and Summer-flowering.

FREE ON APPLICATION.

BARR'S ILLUSTRATED DAFFODIL CATALOGUE, FREE ON APPLICATION TO—

BARR & SONS,

12 and 13 KING ST.,
COVENT GARDEN, LONDON.

CARNATIONS & PINKS
A GREAT SPECIALTY.
CATALOGUES ON APPLICATION.
LAING & MATHER,
Nurserymen and Seed Merchants,
KELSO-ON-TWEED.

J. J. THOOLEN,

BULB AND PLANT GROWER,
Overveen, near Haarlem, Holland,

Has the honour to inform his clients that his Illustrated Price List in English, Autumn, 1897, at lowest prices will be sent post free on application. NO CHARGES FOR PACKING. ORDERS OF 10S. AND ABOVE ENTIRELY FREE TO DESTINATIONS IN ENGLAND, SCOTLAND, AND IRELAND, &c.

| Some sorts of Bulbs noted in our Price List. | Per 100. | 1,000. |
|---|----------|--------|
| | s. d. | s. d. |
| Single Anemones, The Bride, pure white ... | 1 4 | 12 6 |
| Single Anemones, in finest mixture ... | 1 2 | 11 0 |
| Crocus, in finest mixture, second size ... | 8 8 | 6 3 |
| Crocus, in finest mixture, first size ... | 7 4 | 10 2 |
| Hyacinths, mixed, for hedding or forcing ... | 8 10 | 83 4 |
| Hyacinths, single, first size, named, in several best leading sorts red, white, and blue varieties equal quantities, my selection ... | 16 0 | — |
| Iris Kaempferi (Japan Iris), in finest mixture ... | 5 0 | 40 0 |
| Iris Germanica (Flag Iris), in finest mixture ... | 6 8 | 60 0 |
| Iris sibirica, all sorts mixed ... | 5 0 | 40 0 |
| Spanish Iris, in the finest mixture ... | 0 6 | 4 2 |
| Lilium tigrinum splendens, rich red-black spots ... | 8 0 | 70 0 |
| Lilium candidum, single, pure white ... | 10 0 | — |
| Monthretia crocosmiaeflora, orange-scarlet ... | 1 6 | — |
| Narcissus Polyanthus, in the finest mixture ... | 2 6 | 23 4 |
| Narcissus poeticus Pheasant's-eye ... | 1 0 | 8 4 |
| Narcissus campernelle (Jonquill) ... | 1 2 | 10 0 |
| Narcissus double incomparable, primrose ... | 1 6 | 14 0 |
| Narcissus Van Slon, single yellow trumpet ... | 2 6 | 23 4 |
| Narcissus Stella, white, yellow cup ... | 1 4 | 12 6 |
| Narcissus albo-pleno (dbl. poeticus), pure white ... | 1 6 | 14 0 |
| Gladiolus Marie Lemoine ... | 5 6 | — |
| Scilla sibirica praecox, intense blue ... | 1 0 | 8 4 |
| Ixias, in the finest mixture ... | 0 6 | 4 6 |
| Single early Tulips, in the finest mixture ... | 1 0 | 9 6 |
| Double early Tulips, in the finest mixture ... | 1 4 | 12 6 |
| Duc Van Thol Tulips, in fine mixture, excellent for early forcing ... | 2 6 | 20 0 |
| Grape Hyacinth, blue ... | 0 7 | 5 4 |
| Anemone Japonica, pure white. Wind-flower ... | 5 0 | — |
| Anemone japonica, rose Wind-flower ... | 6 0 | — |
| Hemerocallis (Day Lily), mixed ... | 10 0 | — |
| Gladiolus Brencleyensis, deep scarlet ... | 2 0 | 19 0 |
| Enothera Youngi, pure yellow hells ... | 10 0 | — |
| Allium magicum, white sweet-scented ... | 3 0 | — |
| Pyrethrum Bridesmaid, with fine double pure white flowers ... | 15 0 | — |
| Selium Selfiskianum, with many pure yellow flowers ... | 10 6 | — |
| Tritoma Uvaria grandiflorum (Red-hot Poker) ... | 14 6 | — |

250 bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.
COLLECTION D for spring garden, containing 1,370 bulbs, £1 1s.; half of this, 11s.
COLLECTION B for indoor, containing 529 bulbs for 92 pots or glasses, £1 1s.; half of this, 11s.

CARNATIONS.

From 4s. 6d. per dozen; 30s. per 100.

Our stock exceeds 30,000 well-rooted plants in perfect health.

A few Recent Testimonials.

"The Carnations came safely to hand this morning. I consider them a very fine lot." H. A., Beeston.

"Your Carnations are the best I ever had."—G. L., Portsmouth.

"The Carnation plants which I had from you are very fine."—T. S., Meiden.

"The Carnations to hand yesterday; they are sturdy plants, and I am well pleased with them."—G. F., Melrose.

"The Carnations arrived all right, and are very satisfactory."—C. T., London.

"The Carnations to hand; they were beautifully packed, and in good condition."—F. T., Kingston-on-Thames.

"The Carnations you sent me last year gave me much satisfaction."—J. D., Johnstone.

"I have received the 200 Carnation plants. They are good stuff; kindly repeat the order."—J. L., Withington.

ROSES.

From 5s. 6d. per dozen; 30s. per 100.

"The Roses I had from you have turned out well. I took the Silver Medal for Roses at Brynamman Show last season; also 19 Prizes at the Ammanford Show."—G. M. D., Ammanford.

"I have done very well with the Roses I got from you 3 years ago, even in this smoky district."—A. S., Leeds.

"I beg to express my entire satisfaction at the condition of the Rose Trees to hand, and also the packing of them, which was a perfect credit to your establishment."—R. M'W., Kilbrnie.

"I have much pleasure in informing you that the Rose Plants I received from your Orpington Nursery are doing splendidly."—H. M'G., Mid-Calder.

"I am glad to tell you that the Roses which you sent to Jamaica for me arrived in good condition, and are now growing splendidly."—C. L., Hamilton.

"I am glad to say that the DAHLIAS, single and double, and the ROSES, which I received from you last December are doing well. They rooted before the hot season, and after passing through that trying time, are now, during rainy season, in a healthy and vigorous condition. There are many flowers, and they make a fine show."—A. R., Nagpur, India.

"Mr. O. G. writes that the Roses arrived in Ceylon in very good condition, having been beautifully packed, and were doing well."—W. F. S., Bovey Tracey.

VIOLAS.

From 2s. 6d. per dozen; 12s. 6d. per 100.

"Messrs Dobbie and Co., stand first in Viola culture."—*Birmingham Daily Gazette.*

CATALOGUES FREE.

DOBBIE & Co.,

(Queen's Florists),

ROTHESAY.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, OCTOBER 2nd, 1897.

NEXT WEEK'S ENGAGEMENTS.

- MONDAY, October 4th.—Sales of Dutch bulbs by Messrs. Protheroe & Morris.
- TUESDAY, October 5th.—Sales of Dutch bulbs by Messrs. Protheroe & Morris.
- WEDNESDAY, October 6th.—Sales of Dutch bulbs by Messrs. Protheroe & Morris.
- THURSDAY, October 7th.—Sales of Dutch bulbs by Messrs. Protheroe & Morris.
- FRIDAY, October 8th.—Sales of Dutch bulbs and imported and established Orchids by Messrs. Protheroe & Morris.

BURFORD LODGE, DORKING—Some weeks ago we made remarks upon the Orchids at the beautiful and romantically situated residence of Sir Trevor Lawrence, Bart., Burford Lodge, Dorking. Orchids may be regarded as the principal speciality of the establishment under the shadow of Box Hill, an abrupt spur of the North Downs in Surrey, where the range has been cut through by the River Mole. The superb collection here is well known to Orchid growers all over the world. There are

other specialities including subjects for outdoor and indoor decoration. Everything is done on entirely modern lines, as might be expected of the president of the Royal Horticultural Society. The garden is of limited extent, but the space at command is utilised to the best advantage, and occupied with the best of everything that finds favour with the owner. The favourites, whether rare or common, are given the best of attention and treatment at the hands of the gardener Mr. W. Bain, and, needless to say, the plants respond to the care bestowed upon them, with a wealth of blossom according to the season of the respective kinds, such as no gardener could possibly be ashamed to own.

Anthuriums are special favourites at Burford Lodge, as the splendidly grown specimens and large spathes from time to time testify as they are brought before the public at the meetings and shows of the Royal Horticultural Society. One house is mostly monopolised by species, varieties, and recently produced hybrids. A lawrenceae is practically a white A. andreaum, with its characteristically sculptured or wrinkled spathes. The crushed-strawberry spathes of A. rothschildianum attain handsome proportions here; and the same may be said of the popular A. scherzerianum. A parisense bears handsome salmon-pink spathes, and a white-spathed seedling promises to be a fine thing. In another house we measured leaves of Alocasia thibautiana, 2½ ft. in length by 18 in. or 19 in. in width. These facts speak for themselves. A case of Bertolonias is in grand condition. The Eucharis does well under the narrow side stages of a stove where they are subjected to drip two or three times a day, summer and winter, from the plants overhead when they are being watered. Some plants have been in one of the East Indian houses for the last twenty years or more, and still they flower well, though the border is saturated with water. The fernery contains large and healthy specimens of Adiantum farleyense, A. cultratum, A. Williamsii, Microlepia hirta cristata and many others.

The greenhouse is kept gay during the season with a great variety of subjects, including tuberous and other Begonias, Streptocarpus hybrids of various strains or races, Cannas, and the beautiful leafy stems and white flowers of Watsonia iridifolia Ardernei, about 4 ft. in height. Single and double tuberous Begonias in all the leading colours peculiar to the race are grown. A dwarf double yellow variety with small leaves, proves useful for table decoration. Named double varieties of the sweet-scented Begonia odorata, may be reckoned a speciality; for at the moment we do not recollect seeing double varieties of this species elsewhere, and they are not abundant anywhere in this country as yet. An old and beautiful subject is Trichinium Manglesii, which requires special treatment in very sandy soil to make it do well in our climate. The richly coloured and charming Torenia Fournieri is well grown in this house. That strange race of tuberous Begonias with a cross formed of crests upon the flowers has found its way to Burford Lodge. They exist in many colours and seem to have been rousing interest amongst the British public latterly. Lapagerias flower freely upon the roof of this cool and well ventilated house. A pit is filled with Caladiums of the finer and newer sorts, also Crotons and Sonerillas used for table decoration. Gardenias are also well cared for.

The outdoor garden is entirely occupied with flowers and is always interesting to us on account of its well kept character and the free flowering condition of the occupants, some of which are rare or special, and to be found only in a few gardens of the country.

Amongst a fine collection of late flowering Phloxes, that named Etna stands out conspicuously by reason of its large and brilliant scarlet flowers. Many other varieties are notable for the handsome proportions both of their spikes and flowers. We were particularly pleased with a vigorous well flowered piece of the purple Rudbeckia purpurea. The double R. laciniata Golden Glow and R. californica also do well here. A rich strain of Pentstemons, splendidly grown, is always a feature of this garden. A large plantation of Salpiglossis in a gorgeous array of colours should go far to make this garden race of flowers popular. Every plant stands 3 ft. high. Hollyhocks in a variety of colours add their quota to the display. The yellow Statice Bonduelli is strikingly distinct, but has not yet attained that popularity enjoyed by S. Sewerzowi, also grown here. Hydrangea paniculata grandiflora flowers profusely.

Tall Lobelias of the L. splendens type, but mostly hybrids have for some years received considerable attention, and some of them have been honoured with certificates from the Royal Horticultural Society, including Carmine Gem, of which there is a bed. Both it and Crimson Gem have dark foliage, and the colour of their flowers is well indicated by their names. Queen Victoria is of branching habit with scarlet flowers. Truly this splendid race deserves more extended cultivation. The glaucous foliage of Lonicera splendida climbing over an arch makes it very noticeable. A plantation of Montbretias shows that the half-hearted treatment given this race of plants in comparatively recent years has been entirely overcome, and that their proper position is in the open ground, where they give a profusion of flowers second to none in their beauty and usefulness for cut flower purposes. Eldorado has orange-scarlet flowers; Crocosmiaeflora, orange; and Etoile de Feu, darker orange. A bed of the handsome Pentstemon barbatus bespeaks the treatment it receives, for the stems are 3 ft. to 5 ft. high. The white Anemone japonica alba, and the rose A. j. elegans, also produce a rich harvest of blossom. Gladioli have long been favourites here, and the many varieties grown, flower profusely. A fine form of Chrysanthemum latifolium develops flowers of handsome size.

Some large beds in front of and between the glasshouses always constitute an interesting part of the garden, on account of the specialities with which they are adorned. A large bed is occupied with the pink Crinum Powelli and C. P. album, both rare hybrids, particularly the white one. The first-named was honoured with a First-class Certificate in 1886, and the white variety last summer. The flowering stems of the beautiful Eremurus Bungei attain a height of 5 ft. here. The fine new race of large flowering Cannas of the Madame Crozy type are grown in great variety and attain to wonderful perfection in the open. Formerly we were led to believe that Streptosolen Jamesoni could only be grown and flowered successfully in pots with special treatment, but the massive bushes in the open ground have literally been aglow for weeks. It is, indeed, a bedding plant of the first water, for southern gardens at least. A collection of hardy young Water Lilies is being established in tubs by the side of the beds we have just been mentioning. Liliun auratum and L. tigrinum attain perfection amongst a plantation of Azaleas.

Between the mansion and the River Mole, and isolated on the smooth shaven turf is a small but neat tank of aquatics, chiefly Water Lilies. It is elevated a little above the general level, so that it serves to attract the notice of visitors and invite inspection. Amongst those in flower at the

time of our visit were the massive Nymphaea marliacea alba, white, slightly tinted pink; N. m. carnea, flesh-coloured; and N. Chromatella, of a clear, soft yellow. The blue Pontederia azurea is also a pretty, hardy aquatic. The tank is of wavy outline, and tuberous Begonias are very effectively employed in the recesses or bays outside the walls that retain the water. Two beds of night-scented Tobacco are planted against the wall of the mansion, where they could hardly do otherwise than make their presence felt during the cool and dewy twilight hour. A short distance away on the soft and smooth turf are interesting and attractive beds of tuberous Begonias, Fuchsias, and fragrant Heliotrope.

Heavy falls of snow have taken place recently in various parts of France.

The Crystal Palace is not being sold to a syndicate. The rumour has been declared by Mr. W. Gardiner, Secretary to the Crystal Palace Company, to be absolutely without foundation.

United Horticultural Benefit and Provident Society.—The anniversary dinner of this society will be held at the Holborn Restaurant, High Holborn, London, on Tuesday, 12th October, at 6 for 6.30 p.m. As was announced last year Mr. H. B. May will preside, when we hope he will be well supported by the gardening fraternity and all interested in this useful benefit society.

Poisoned by Fruits from American Blackberry.—A friend told me a few days ago that one of his young men managed to scratch his arm a short time ago with this Blackberry, the result being that he had to seek medical aid. The doctor said that had the scratch been higher up the arm it would probably have proved fatal. Have any readers ever had such an experience with a scratch from this or any cultivated Blackberry? Or is it likely that blood poisoning was caused by accidental introduction of some microbe into the wound caused by the Bramble?—A. P.

Honour to whom honour is due.—In relation to a paragraph in our last issue under this heading, we are pleased to be in the position to give a copy of the illuminated address presented to Mr. A. Outram for his services at the Borough of Hanley Show. It is as follows:—

COUNTY BOROUGH OF HANLEY.

First Horticultural Fête in Hanley Park, Wednesday and Thursday, 7th and 8th July, 1897.

The thanks of the Mayor, Aldermen, and Burgesses of this County Borough are tendered to—

MR. OUTRAM,

for his valuable aid and assistance in making the fête the success it has proved. Hoping to have the benefit of similar assistance on future occasions.

Mr. James Dobbie, of Rothesay.—During the course of our peregrinations in the West of Scotland, we found time to call upon this noted Scotch florist, the real Mr. Dobbie, as he is frequently styled. He was the founder of the well-known firm of Messrs. Dobbie & Co., but retired altogether from business some years ago, and now lives in one of the beautiful, commodious, and recently-built villas on the wooded hill side above the beautiful Bay of Rothesay, on that side of the borough stretching towards Craigmore. We were sorry to find him confined to bed owing to an accidental injury to his leg. But though retired from business and confined to bed, he was otherwise hale, hearty, and as enthusiastic as ever over his favourite flowers and vegetables. It is contrary to his nature to remain idle for any length of time, and he finds both employment and pleasure in the ample garden surrounding his villa. He also carries on experiments of various kinds, and is very highly interested in the problem of preventing or remedying the Potato disease. He feels confident of discovering some method that will prove of service to Potato growers. It is to his active and enthusiastic nature that he owes a green old age, and that heartiness which has endeared him to a wide circle of friends. He is still as good as his portrait, which appeared in THE GARDENING WORLD on the 31st December, 1887, that is, close on ten years ago.

Immense timber forests have been discovered in Labrador by an American syndicate, which intends taking a lease of the tracts from the colony of Newfoundland, and to commence operations next year.

Edinburgh Show.—In another column we reproduce the portrait of the winner of the Diamond Jubilee Competition at this show for the best table of fruit arranged for effect. The competition excited much interest, and the fact that, apart from many other reasons, our readers will, we feel sure, welcome that doughty champion of Lambton—Mr. James Hunter—in our gallery of portraits of men of the day.

Syndical Chamber of Belgian Horticulturists.—At the monthly meeting of this body on the 5th ult., in the Casino, Ghent, Certificates of Merit were accorded to a lot of three Sonerillas, presented by M. L. De Smet-Duvivier; to Sobralia xantholeuca, presented by M. le Marquis de Wavrin (with unanimity); to Beaufortia purpurea, Chironia exifera and Chironia floribunda, all presented by M. E. Beddinghaus; and to a lot of cut flowers of Begonias, with double flowers, presented by M. Ernest de Clercq. Some certificates were also awarded for culture and flowering, and some honourable mentions made.

Shirley Gardeners' Mutual Improvement Association.—The monthly meeting of the above Society was held at the Parish Room, Shirley, Southampton, on the 20th inst., Mr. B. Ladhams, F.R.H.S., presiding over a good attendance of members. There was an exhibition of vegetables for medals kindly given by Messrs. Toogood & Sons, Seedsman, Southampton, and there were seven competitors for the four Medals. Mr. J. W. Mitchell, gardener to J. W. Fleming, Esq., Chilworth, was awarded first prize, Certificate, and Silver Medal; Mr. H. Curtis, gardener to W. F. G. Spranger, Esq., Southampton, was second (Bronze Medal); Mr. W. Risbridger, gardener to C. Stuart Menteth, Esq., J.P., Rowhams Mount, was third (Bronze Medal). The prizes were for six sorts of vegetables, open to all. For three sorts of vegetables, open to cottagers only, Mr. J. R. Cole was first, receiving a Bronze Medal. There was a first-class show of Dahlia blossoms, some very good fruits and Tomatos, and hardy herbaceous cut flowers. Mrs. Keates, Rowhams House, (gardener, Mr. W. G. Bushell), was awarded a Certificate for a seedling Potato, a cross between Schoolmaster and Beauty of Hebron. There was an interesting and useful discussion on the exhibits joined in by a number of the members. The annual excursion of the members will take place on the 2nd of October to the Crystal Palace, when it is hoped a good number will be present.

"Fruit Culture in Her Majesty's Reign, 1837-97."—This was the subject of the paper read by Mr. George Bunyard, of Maidstone, on the afternoon of the first day of the exhibition of British-grown fruit at the Crystal Palace on the 30th September. He commenced by asking the audience to follow him into a garden of 1837. He reviewed the system of culture then in vogue, stating the sorts with which a garden of that period would be furnished, both of wall trees, espaliers, and flowering shrubs. The leading fruit tree growers of that time were then mentioned by name, and sketches given of the introduction of Continental novelties and ways of culture. The grand work done by the late Thomas Rivers was touched upon, and the increase of glass culture in the "forties" and "fifties" alluded to. Passing to more recent times, allusion was made to the good work done at Chiswick under Mr. Barton, especially the first Apple Conference. The reader then spoke of other workers in the field, both by pen and practice, and paid a tribute to the activity and excellent work done by the trade and the Fruit Committee of the Royal Horticultural Society. He concluded with carefully compiled lists in the form of appendices of the fruits of 1837 now in culture; of the fruits certificated by the Royal Horticultural Society in the sixty years; of other notable fruits of the period, with the dates of introduction of the best of those, put into commerce; and gave a list of the best fruits in 1841 taken from a leading gardening paper. The pomological literature of the period was also reviewed. Altogether, a mass of valuable information, historical and otherwise relating to the Queen's reign, was got together,

A second crop of fruit has been produced by a Victoria Plum tree in the garden of Mr. Kelsey, Chessington.

Messrs. Edward Humphries, Ltd., Pershore, have just received advice from the Committee of the National and International Agricultural Society of Holland, whose show is now being held at The Hague, that their improved and patented oil engine has received the first prize Gold Medal.

Strawberries at Chiswick.—The recently issued part of the Royal Horticultural Society's *Journal* commences Vol. XXI. The reports of five of the numerous trials conducted at Chiswick this year are included. Some idea of the magnitude of the trials may be gleaned from the fact that there are fifty-six varieties of Strawberries alone. Many of them are merely mentioned owing to the fact of their being so lately received that they had insufficient time to show what they were capable of doing. This means, we should understand, that the trial will have to be continued the next, and possibly following years. Some of the varieties have borne heavily both the first and second year, yet their quality is declared to be decidedly bad. What then is to be the fate of heavily cropping, badly flavoured varieties? Some would declare that they must inevitably be discarded by growers and gardeners generally. We know, however, that some such varieties find considerable favour, even for dessert purposes. To their good looks, sweetness if not flavour, is added by means of sugar and cream. First-class Certificates have been awarded to Auguste Boisselot, Countess, Edouard Lefort, Latest of All, Leader, Monarch, Pioneer, Royal Sovereign, and Veitch's Perfection. Meatmore and Wonderful received Awards of Merit.

Devon and Exeter Gardeners' Association.—The annual business meeting of this association was held in the Council Chamber of the Guildhall, Exeter, on Wednesday, the 29th ult., under the presidency of E. A. Sanders, Esq., J.P., the president. The business of the meeting was to receive the treasurer's report for the past year; to elect a president, vice-president, secretary, treasurer, and committee for 1897-98; and to transact any other competent business that might be brought forward. The hon. secretary, Mr. Andrew Hope, has got together a good programme for the autumn half of the session. The association meets fortnightly. On the 13th October, Mr. J. Mayne, gardener to the Hon. Mark Rolle, Bicton, will read a paper on "The Qualifications and Duties of a Gardener." Mr. R. Hodder, gardener to Mrs. Trevor Barclay, Ponsonby, Torquay, will discourse on "How a Knowledge of Botany is a Help to Gardening" on the 27th October. Mr. T. H. Slade, gardener to Lord Poltimore, Poltimore Park, will treat of "Pruning and the General Management of Fruit Trees" on the 10th November. "Herbs—their Cultivation and their Uses" will be dealt with by Mr. W. Andrews, gardener to W. Danby, Esq., Elmfield, Exeter, on the 24th November. Mr. G. Camp, gardener to E. Byrom, Esq., Culver Gardens, Exeter, will speak about "Winter-flowering and Foliage Begonias," on the 8th December. The 22nd December will be set apart for sundry papers by the junior members.

The Dahlia and its History.—On this subject, Mr. George Blench, gardener to Thos. Carver, Esq., J.P., recently read a paper before the Marple Gardeners' Association. A fine collection of blooms contributed by Messrs. Clibran, Altrincham, illustrated the various points of the lecture. In his opening remarks, Mr. Blench stated that the Dahlia is a native of Mexico and Central America, and received its generic name after Dr. Dahl, a Swedish botanist, but was spoken of as late as the year 1812 as "Georgina." In 1787 a Frenchman, named Nicolas Joseph Thieri de Renonville, was sent to America to find Chichineal, and described the Dahlias he had seen growing in the gardens of Mexico. In 1789 the director of the Botanic Gardens at Mexico forwarded seeds to the Royal Gardens at Madrid. In 1802 John Fraser, a collector of American plants, obtained from Paris seeds of Dahlia coccinea. He raised a batch of seedlings, some of which flowered in one of his greenhouses in 1803. In 1815 a stock of double flowers was imported from France, and since that time continual progress has been made. Mr. Blench

then went into cultural details, and spoke of a well drained and manured heavy soil as being the best for them. Speaking of propagation, he said that seeds sown in March in heat under glass flower the same year, although cuttings form the means generally adopted, 90 per cent. of them rooting under skilful hands and proper conditions. The lecturer then dealt with the various sections or types of the popular flower. The show type embraces all the self-coloured and shaded flowers, the fancy section being a later development. The pompon or bouquet Dahlia is of German origin, and has a style and shape identical with the show flower, although the size is much less. The Cactus type is exceedingly popular, and since its introduction in 1880 much improvement has been made in it. The decorative section is intermediate between the show and the Cactus types. Singles and and single Cactus varieties are also thought highly of, and are most useful to grow for supplying cut flowers.

A Full Catalogue.—The autumn catalogue of Messrs. Ant. Roozen & Son, Overveen, near Haarlem, Holland, is stated on the front page to contain choice Dutch and Cape Bulbs, but a glance at the interior shows a vast number of subjects that can only be associated with bulbs by virtue of their having tuberous roots or rhizomes like those of Anemone, Paeony, Iris, Water Lilies, &c. The catalogue runs to 101 pages, including the index, and the whole is closely printed, each species or variety of plant mentioned having an appropriate description in English. All of these plants are also numbered, running up to 4,514, and finishing up with three species of Ginger Plants, so that hardy and hothouse plants are included. Independently of these standing numbers, so to speak, the new and rare plants are separately classified, and occupy the beginning of the catalogue. They, together with bulbs and plants for naturalisation, and for masses in wild gardens, &c., make an additional 224 to the general list, and for the sake of distinction are marked 0224. The fulness of the list of terrestrial Orchids will serve to give an idea of the exhaustive and comprehensive nature of the collection of plants that may be associated with bulbs by virtue of their tuberous roots. There are fourteen species of Cypripedium, and other species in proportion, including the greater number of British Orchids. Needless to say Lilies, Tulips, Hyacinths, and other popular bulbs are treated in the same comprehensive way. The work may be regarded as a valuable *vade mecum* for everything in the above line which may be required in the garden.

PEOPLE I HAVE MET.

MR. JAMES HUNTER, OF LAMBTON CASTLE GARDENS.

Who shall dispute the enthusiasm and popularity with which the judges' decision in the great Diamond Jubilee fruit class at Edinburgh was received? Mr. Hunter was the recipient of many congratulations and goodwill, as the hero of a well fought fight, no less than a man of great prominence in the ranks of horticulturists. I welcome him in the name of our thousands of readers to our portrait gallery.

Born at Dirleton, near North Berwick, on the bonny banks of the Firth of Forth, in 1839, Mr. Hunter can point to nearly sixty years spent amongst us. His apprenticeship at Archerfield with Mr. Thomson extended to seven years, when he was sent to Thoresby Park, as foreman to Mr. Henderson, where he remained until he was chosen for Lambton by the late Wm. Thomson, of Dalkeith. As director-general of the beautiful gardens of the famous Castle of Lambton, the seat of the Earls of Durham, Mr. Hunter has proved himself the occupant of a worthily-filled position.

In the ranks of competitors at our leading horticultural societies' shows his prowess is so well known as hardly to need comment; but it is interesting to trace Mr. Hunter's history as an exhibitor since the days of his first competition at the Glasgow International Exhibition, where he defeated the late Mr. Fowler, of Castle Kennedy, and Mr. Johnson, of Glamis Castle. In the year following, at Edinburgh, and indeed, every year since, he has been prodigiously successful. Again at Manchester, in the long-to-be-remembered Wills compe-

tion for fifty guineas offered for the best twelve bunches of Grapes, Mr. Hunter was equal to the occasion; and the reputation of Lambton Castle still maintained its supremacy. Mr. Hunter's winning twelve included Black Hamburg over 14 lb. to the bunch, only to be eclipsed at Belfast



MR. JAMES HUNTER.

later on with another fine bunch from Lambton—also of black Hamburg—weighing 21 lb. 12 oz. In the Queen's Jubilee class at Newcastle, fifty guineas for fifty dishes of fruit also fell to Mr. Hunter's share. My good friend's thirty years' record at Lambton is a fine tribute to the man and the master whom he is proud to serve.

One word more. I am sure Mr. Hunter will forgive me if I place on record the opinion of no less an authority than Mr. Thomson, who, on visiting Lambton this season remarked that "the bedding was not only original, but the prettiest and finest piece of work he had ever seen." This, as a tribute to the gardens as a whole, shows our friend to be not only a doughty champion in the world of competition, but also that the gardens themselves at Lambton Castle are a monument to his ingenuity and skill. Nor can I forget that Mr. Hunter was the raiser of the seedling Pineapple, named Lady Beatrice Lambton, put into commerce in 1882.—*Gyp.*

PIERIS FORMOSA AT BICTON.

THERE are something like ten species belonging to this genus of the Heath family, natives of the Himalayas, Malayan Peninsula, Japan and North West America. In this country gardeners are most familiar with *P. floribunda* and *P. japonica*, which are amongst the neatest in habit of evergreen shrubs in gardens. The former is a native of the United States, and the latter of Japan. Both are perfectly hardy in the south, at least, and *P. floribunda* even to the far north. They are all best known to gardeners under the name of *Andromeda*, including the subject under notice, but that name covers many things which are very distinct both in appearance and botanically.

Pieris formosa is a native of Eastern India and China, and is the handsomest and boldest of the genus, but unfortunately is not hardy except in the warmer and more sheltered places on the south coast of England, and possibly in Ireland. Even in the suburbs of London it requires the shelter of a greenhouse to make it thrive. It frequently flowers in the Temperate house at Kew, and we have been reminded of this fact by the receipt of the top of a shoot from a plant which has just flowered with Mr. J. Mayne, gardener to the Hon. Mark Rolle, Bicton, Devon. It is growing under glass and has now reached the height of 14 ft. If planted out in a well lighted house it will flower while only 4 ft. to 6 ft. in height. The foliage alone is highly ornamental, being

evergreen, dark and glossy, and resembling that of *Clethra arborea* greatly magnified and much brighter. Many of the individual leaves of the shoot sent us measured 6 ins. to 8 ins. in length, and in shape not unlike those of *Magnolia grandiflora*. The flowers are tubular, porcelain-white, with a waxy appearance, and are borne in branching racemes at the apex of the shoots. Each branch flowered for 4 ins. to 6 ins. of their length. At a short distance away they are not unlike Lily of the Valley. The fine ranges of houses at Bicton contain many tall growing subjects, many of which are very uncommon in gardens generally.

LAMBTON CASTLE GARDENS.

LAMBTON CASTLE, Fence Houses, Durham, is the seat of the Earl of Durham, and the gardens are pre-

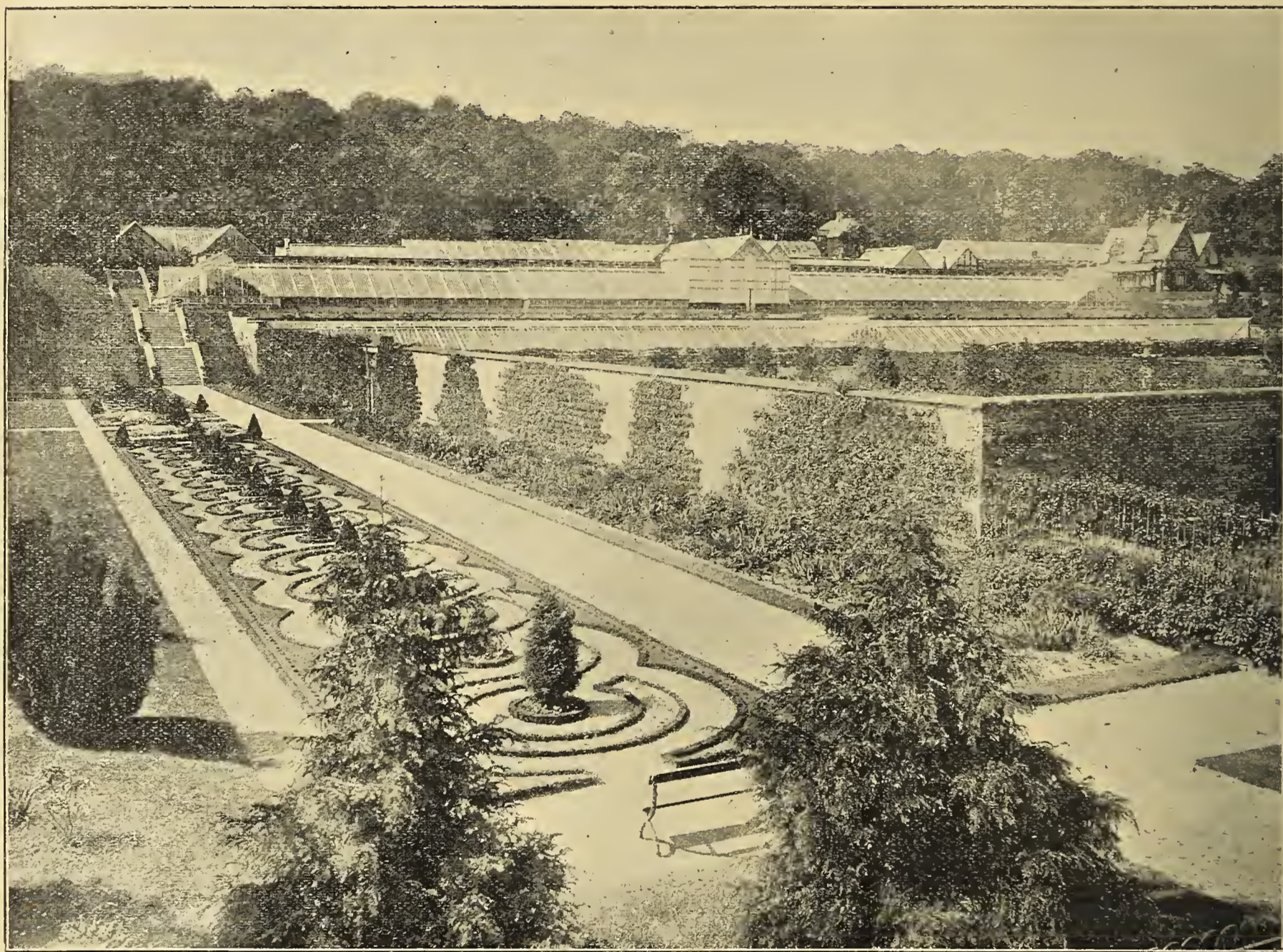
central span-roofed house projecting at right angles from it. Higher up is a more roomy range of span-roofed houses, having a massive central block of three taller, span-roofed houses built closely together, and standing at right angles to the rest. Above and behind this range is another range of glasshouses and other structures to meet the requirements of the establishment. The gardeners' cottage, an elegant building on the upper right hand corner is another instance of a well-planned and equipped garden.

The broad walk with the high wall covered with fruit trees on the one hand, and the excellent example of chain-bedding on the other speaks plainly of the style and magnificence of this noted north of England establishment. The neatly-trimmed shrubs occupying the small circular beds between the links of the chain serve to break the monotony of what would otherwise be a level surface.

edges like *L. p. praestans*. The lamina is orbicular, emarginate, and rich purple blue, with the exception of the usual white area in the centre of the apex. The interior of the tube is lemon, with raised lines of the same colour, and fading to white towards the sides. In these latter respects it approaches *L. p. dayana*, but differs in the raised lines not being purple. First-class Certificate.

CATTELEYA HARDYANA LOWAE. Nov. var.—Here we have another very handsome variety of a famous *Cattleya* noted for the gorgeous colours of its flowers. The sepals are rose, shaded with white along the centre, while the petals are rich rose, with a silvery midrib. The lip is of an intense crimson, with the two eye-like blotches golden-yellow. The throat and tube are dark purple marked with numerous pale yellow lines. Award of Merit. Messrs. Hugh Low & Co., Clapton.

VANDA AMOENA. Nov. hyb. Nat.—This is evidently



LAMBTON CASTLE GARDENS, FENCE HOUSES, DURHAM.

sided over by Mr. J. Hunter, who was brought into great prominence at the autumn exhibition of the Royal Caledonian Horticultural Society, Edinburgh, on the 8th and 9th of September last. The fine collections of fruit which Mr. Hunter put up furnished good evidence of large resources, turned to the best advantage by a skilful horticulturist.

The accompanying illustration of Lambton Gardens, reproduced from a photograph placed at our disposal, will give our readers some idea of the extent of the glass ranges, their sunny southern exposure, on sloping ground, the wooded nature of the ground to the north, furnishing the necessary shelter, and the good keep-up of the place generally. The glass-houses are elevated one above the other, on terraces, as is shown by the three flights of steps at the upper left-hand corner. The front range consists of lean-to structures on the lower level of the garden, and in one continuous line running right and left of the

PLANTS RECENTLY CERTIFICATED.

THE Royal Horticultural Society made the under-mentioned awards at the meeting of the committees on the 21st ult. :—

Orchid Committee.

LAELIA PUMILA GATTON PARK VAR. Nov. var.—An extremely pretty variety was exhibited by J. Cleman, Esq. (gardener, Mr. King), Gatton Park, Reigate, under the name of *L. praestans* Gatton Park var.; but although it has much in common with *L. pumila praestans* it differs considerably, and seems to partake of the character both of *L. p. dayana* and *L. p. praestans*, while perfectly distinct from either. The sepals and elliptic petals are white, tinted with the faintest shade of blue, giving them a French gray appearance. The sides of the tube of the lip are creamy white and considerably overlapping at the

a natural hybrid between *V. Roxburghii* and *V. caerulea*, the combination resulting in an unassuming but marvellously pretty *Vanda*. The flowers are rather larger than those of *V. Roxburghii*, with rich or dark gray sepals and petals spotted with violet, especially towards the base. The lip is bright blue, spotted with violet in eight longitudinal lines; the bifid apex is like that of *V. caerulea*, but the breadth of the lower portion recalls *V. Roxburghii*. The column is white, lightly shaded and mottled with blue. Award of Merit. Messrs. Linden, Parc Leopold, Brussels.

LYCASTE DENNINGSIANA.—The long, incurved sepals and petals are pale yellow shaded with a fuscous tint. The lip is oblong, obtuse, reflexed at the edges in the upper half, and of a rich dusky salmon-red. Award of Merit. F. W. Moore, Esq., Royal Botanic Gardens, Glasnevin.

MILTONIA PEETERSIANA. Nov. hyb.—The seed bearer

in this case was *M. spectabilis moreliana*, and the pollen bearer *M. Regnellii*. The lanceolate sepals and the oblong petals are purple. The obovate, cuspidate lip is the largest organ of the flower, and rosy-purple, intensified to a dark buff-purple at the base, and radiating in lines along the veins. Award of Merit. R. I. Measures, Esq. (gardener, Mr. H. J. Chapman), Cambridge Lodge, Camberwell.

ONCIDIUM PAPILLO.—A fine variety of this species was exhibited by D. M. Grimsdale, Esq. (gardener, Mr. A. Kitwell), Kent Lodge, Uxbridge. The lateral sepals were very broad and richly banded with brownish-orange. The lip also was large, and rich brownish-orange, with a yellow centre. Award of Merit.

Floral Committee.

RETINOSPORA OBTUSA SULPHUREA.—The tips of the branches and twiglets of this Conifer are of a soft sulphur-yellow; but in other respects it has got the habit and vigour of the type. Like the other varieties of *R. obtusa* in cultivation it is a highly-ornamental and valuable subject either for the lawn or shrubbery border. First-class Certificate. Messrs. J. Veitch & Sons; Ltd., Chelsea.

APERA ARUNDINACEA.—The leafy portion of the stems of this beautiful and remarkable grass is 2 ft. high and erect. The flowering portion above this is 2 ft. to 3 ft. longer, but droops in the most elegant fashion, and being much longer than the leaves, it is necessary to elevate the plant on a pedestal to show off its peculiar beauty to the best advantage. The grass is allied to *Agrostis*, and the flowering panicle is 1 ft. 1½ ft. long, and of far-reaching delicacy and elegance. For groups of plants, conservatory and winter garden decoration it is an acquisition. The slender, drooping stems are pink. It should be grown in pots for the above purposes. First-class Certificate. Messrs. J. Veitch & Sons, Ltd.

CHRYSANTHEMUM MITCHETT WHITE.—This pure white early flowering Japanese variety was brought up to the meeting by Mr. M. Russell, Mitchett, Farnborough, and received an Award of Merit from the general committee. See last week's issue, p. 54.

DAHLIA NELLY BROOMHEAD.—The small, compact, and very neatly formed heads of this pompon Dahlia are of a soft lilac. Award of Merit. Mr. J. T. West, Brentwood.

DAHLIA ISLAND QUEEN.—The heads of this Cactus variety are of medium size, with long, pointed, clear, rosy-lilac florets. Award of Merit. Mr. J. T. West.

PRIMULA OBCONICA FIMBRIATA.—In this we have a great improvement upon the original, inasmuch as the flowers have six overlapping segments instead of five starry ones. The colour varies from pale to dark lilac. Award of Merit. Mr. Thomas Lowton, Faversham.

CORYLYNE AUSTRALIS RUSSELLI.—The leaves of this variety are linear, very narrow, arching, and of a light coppery-bronze. The plant comes very close to *C. a. lentiginosa*. Award of Merit. Mr. J. Russell, Richmond, Surrey.

DAHLIA CASILDA.—For a Cactus Dahlia the heads of this variety are large, with long, pointed yellow florets, shaded with pink at the tips. Award of Merit. Messrs. J. Burrell & Co., Howe House, Cambridge.

DAHLIA FALKA.—The florets of this Cactus variety are drawn out into a long slender point, and are of a rich carmine, tipped with violet. The heads are of the first size. Award of Merit. Messrs. J. Burrell & Co.

DAHLIA SALMON QUEEN.—The long projecting florets of this Cactus variety are orange-salmon, tipped with rosy-salmon and very pretty. Award of Merit. Messrs. J. Burrell & Co.

DAHLIA MINNIE RICHARDS.—This is of good average size for a pompon Dahlia, of a delicate blush, and very neatly formed. Award of Merit. Mr. T. S. Ware, Hale Farm Nurseries, Tottenham.

PHLOX MISS PEMBERTON.—This variety belongs to the *P. paniculata* type, and bears large flowers of a clear salmon colour, with a crimson eye. Award of Merit. Messrs. Paul & Son, Cheshunt.

CRASSULA COOPERI.—This species forms rosulate tufts of fleshy leaves, more or less tipped with red, and throws up a compact mass of flowering stems only 3 in. high. These terminate in cymes of small bright red flowers, supported by duller red bracts and calyx. It is a native of South Africa, and may be used for carpet bedding or greenhouse decoration. Award of Merit. Messrs. Paul & Son.

DAHLIA MRS. JOHN GODARD.—This is one of the finest of recent introductions amongst Cactus Dahlias, on account of its stiff, straight, sharply-pointed florets, and their glowing, crimson-scarlet colour. The heads are also large. Award of Merit. Messrs. J. Cheal & Sons, Lowfield Nurseries, Crawley, Sussex.

DAHLIA MISS FINCH.—The heads in this case are of good average size for a Cactus variety, and are made up of long, narrow, carmine florets, tipped with rosy-violet. Award of Merit. Messrs. J. Cheal & Sons.

DAHLIA MALUMA.—The neatly compressed and clear yellow florets of this beautifully refined pompon are of small size and well adapted for cut flowers. Award of Merit. Mr. C. Turner, Slough.

DAHLIA MARY SERVICE.—The long, pointed florets of this Cactus variety are incurved in a very characteristic way, as are those of the next three varieties mentioned below. They are of a beautiful apricot, tipped with pink, and very distinct. Award of Merit. Messrs. Keynes, Williams & Co., Salisbury.

DAHLIA ARACHNE.—The florets in this case are white, holdly edged with orange; and the heads are of medium size for a Cactus variety. Award of Merit. Messrs. Keynes, Williams & Co.

KEYNES WHITE.—This is a white Cactus variety of the same size and form as the two preceding, and highly meritorious. Award of Merit. Messrs. Keynes, Williams & Co.

HAVERSTOCK BEAUTY.—The flower heads of this Cactus variety are of a beautiful orange-salmon. All of the four preceding varieties throw their flowers well above the foliage like the pompons. All are closely allied, differing chiefly in colour. Award of Merit. Messrs. Keynes, Williams & Co.

DAHLIA HARBINGER.—The heads of this show variety are very small, but neatly formed, refined and soft lilac-pink, but darker than Maude Fellowes. Award of Merit. Mr. H. P. Harris, Orpington, Kent.

DAHLIA MURIEL HOBBS.—Here again we have a show variety, but of large size, and clear yellow, sometimes tipped with bronze. Award of Merit. Mr. Thos. Hobbs, St. Mark's Road, Bristol.

DAHLIA GREEN'S GEM.—Heads of small to medium size for a Cactus Dahlia. Florets long, narrow, pointed, incurved and orange-salmon in colour. It is both neat and pretty. Award of Merit. Mr. J. Green, Dereham.

THE PLANT HOUSES.

Pits and Frames.

ONCE again we are on the eve of the season when every inch of under-glass space will be of value. So many plants are requiring protection, or will be requiring it in the course of the next week or two that some management will be necessary to make the space adequate to requirements.

CHRYSANTHEMUMS.—The cultivator must not be tempted by fair weather to delay the housing of these for too long. Despite the damp and somewhat cold September the wood has ripened fairly well, and the plants look healthy. The first week in October is quite late enough to leave them out, however, and it is far better to do this while there is time to do it comfortably, than to have to do it in a hurry at a very short notice. Early Peach houses, vineries, and orchard houses have all to be requisitioned for the accommodation of the "Mums," although the plants are almost sure to become rather drawn from the lack of light. This fact compels the gardener to keep the plants out-of-doors until the last moment, in order that as many of the leaves as possible may fall before the houses have to be used. If a fairly roomy conservatory or greenhouse is part of the conveniences of the establishment the earlier plants may be housed forthwith in it, the later ones being relegated to the "protection ground" until a little more light can be commanded in the fruit houses. The "protection ground" should be fitted at once with heavy blinds or sheets of tarpaulin, attached to rollers, and these must be let down every night upon the slightest signs of frost.

Once in the show house the plants must be very closely watched. Fly usually causes some trouble, and it will be advisable to guard against it by fumigating or vapourising twice or thrice. If the fly should again make its appearance some weeks hence

another light fumigation may be given, but as the flowers will then be considerably advanced more caution must be used. Watering, too, must receive even greater attention.

WINTER-FLOWERING CARNATIONS.—A house should be got ready for these at once. A light, clean, roomy structure is necessary, which can be kept up to a temperature of from 55° to 50° Fahr. by night without making the atmosphere too dry and arid. Under such conditions the flowers will expand freely, which they would not do in a lower temperature and in a comparative absence of light. The pots should be washed, yellow leaves picked off, and the plants generally made presentable, whilst the cultivator should assure himself that fly is absent.

WINTER-FLOWERING PELARGONIUMS.—A batch of these may now be allowed to develop their flower buds, which hitherto have been kept closely picked off. Feeding may also be more liberally done now than it has been up to the present. These earliest plants should be given a place in a nice light pit near the glass. The others may for the time be stood in a frame on a bottom of ashes.

BULBS.—The potting up and plunging of these as they come to hand will take up a good deal of time where the bulb list is a heavy one. Hyacinths, Tulips, Crocuses, Snowdrops, and Narcissi are all indispensable for winter decoration. The African Tuberoses also come to hand about this time. Early batches of Roman Hyacinths are now ready for removal from the plunging beds to cold frames, where they may be gradually inured to the light, and from whence they may be introduced into heat as required.

LILIUM HARRISII.—Of all the Lilies this is the most useful for forcing, and the stock of bulbs should include a goodly number of it. Rich fibrous loam, with a little dried cow manure and plenty of sharp sand is the best compost to use. Place the bulbs singly in 6-in. pots, but keep them rather low down in the pot in order that there may be room for a substantial top-dressing to be given when the usual circle of thick fleshy roots is emitted at the base of the stems. After potting consign the bulbs to a cold frame.

BEDDING STUFF is taking up a good deal of space, and will need very careful looking after. *Alternantheras*, *Heliotropes*, and *Verbenas* do well upon shelves in an intermediate house. *Lobelias* are all right in a greenhouse, but must be watched to see that they do not damp off. *Zonal Pelargoniums* should all be under cover by this time, and if the cuttings are well-rooted may be given a pick over. Those that are not rooted must be let alone for a while yet, even though they may look untidy.

COLEUSES.—Cuttings of these to furnish plants from which to propagate next spring should be inserted. The old plants, after having furnished the cuttings, may as well be thrown away, as they are now of no further use. The cuttings may be allowed to remain in their first pots through the winter, and should be given a place on a shelf in a warm house.

RICHARDIAS must all be lifted from the open ground and brought under cover. After potting up place them in a pit, and keep them fairly close, giving occasional sprinklings with the syringe. Shade from the sun in the daytime, and turn on just enough heat during the night to warm the pipes if the temperature sinks below 40°.

BERRIED SOLANUMS should also be lifted, picking the best shaped and most heavily berried plants. Similar treatment to that given the *Richardias* should be accorded them for a week or so.

SALVIA SPLENDENS GRANDIFLORA.—Without doubt this is one of the best, if not the very best of the *Salvias*, and at the present time there is no more imposing object in the conservatory than this. The long racemes of brilliant scarlet flowers are very freely produced, and the constitution and general habit of the plant is good. The height varies from 3 to 4 ft.

SCUTELLARIA MOCINIANA.—Although it needs to be grown on in a warm house this beautiful Mexican shrub will stand the temperature of a cool house well enough when it is in flower; and the blooms indeed last longer in the lower temperature than they would in the higher. Take care before moving the plants to the conservatory, that they are free from mealy bug, which is very partial to the plants, and often finds a lodgment in the dense terminal racemes of flowers.

HINTS FOR AMATEURS.

PREPARING FOR FROST.

THE summer has taken a final farewell of us or the year with the vanishing September, and we have now to look forward to a long spell of more or less dull, dreary, and cold weather, and to make what arrangements we can to protect our floral pets from suffering from the experience. September has been a very chequered month, and on the whole we have had more bad weather than good; for the first two weeks at any rate were cold, wet, and miserable. Frost, however, only touched us very lightly, too lightly to do any damage, although on two evenings the thermometer showed a couple of degrees of frost upon the grass. It will not do to trust any longer to the weather in case of those plants that are of importance for the winter supply of bloom, but steps must be taken at once to get them under cover.

Richardias—Plants that were put out in an open border in well worked soil have made a good deal of headway of late. The drought of July and the first half of August kept them from starting into growth until late in the year, for no matter how they were watered the ground seemed to be too hot and the atmosphere too dry for them. They have made amends for it since the rain came, however; and although the plants are rather ranker in growth than we like to see them, still, they will doubtless improve. Lifting and potting up should be seen to without delay, for a fairly sharp frost would injure them considerably, having regard to their somewhat soft and sappy condition. Large plants will require a good deal of care in lifting, for it is very necessary that no more of the thick, fleshy roots should be injured than can be helped. If manure was buried in the soil previous to planting, the roots will almost surely have gone down after it, and will take a good deal of fishing out. A digging fork with long tines will be found absolutely essential to get the plants up, and the soil all round the largest specimens will have to be loosened well before attempting to lift. Good balls of earth will thus be attached, which is a consideration. Before potting, this soil may be reduced a little by the use of the fingers, and the lower roots may even be shaken quite free, in order to admit of a fair sized pot being employed. Any little suckers that are observed round the base should likewise be picked away, otherwise they will develop into a mass of small leaves. For soil, a compost of two-thirds of good loam and one-third leaf soil, or leaf soil and dried horse droppings mixed, with a liberal addition of coarse river sand should be employed.

The pots are the next consideration. It is manifest that fairly roomy ones will be required in order to get in the large balls of earth without too much breaking. There is another point to receive attention, however, and that is that it is not advisable to give too much root room at the approach of winter, otherwise there will be a lot of cold stagnant soil lying round the roots of the plants, and this cannot fail to do harm. The exact size of the pots must be decided by the plants themselves, whether they are large or small. Generally speaking, however, an 8-in. pot should be sufficiently roomy for a large fine plant. Second size plants may be accommodated in 7-in. pots. All of these plants should flower freely this season, but there will be a number of smaller ones that will not be large or strong enough to flower, or at best may each throw one late bloom. For the best of these 6 in. pots will be quite roomy enough, and the smallest samples of all may do in a pot a size less than this even.

Now a word as to potting:—The size and fleshy character of the roots will have prepared the amateur to some extent for the statement, that too firm potting would be a mistake; but on the other hand such free rooting subjects as Richardias must not have too loose a root run or they will grow too rankly, and there will be a corresponding hesitancy on their part to flower well. A medium course should therefore be adopted, and the soil made fairly firm. A rammer may be employed to effect this end, but it must not be too freely wielded, and above all, should not be used at all when the potting soil is very wet.

Filling the pots too full of soil is a mistake that amateurs and young gardeners are often guilty of. In no case should the surface of the soil come higher in the pots than to within an inch of the surface when

7-in. and 8-in pots are employed. In the smaller pots a proportionate amount of room must be left.

Treatment after Potting.—Supposing lifting and potting off to have been successfully performed, there ensues a period when a little coddling is necessary. The sun of October, although its brightness is a daily diminishing quantity, is yet strong enough to try these newly lifted plants not a little. It is a good plan therefore to stand them fairly close together in a brick pit, if possible, or failing that, in a frame and keep them close for a week or ten days, and shaded from all direct sunlight. If the pit is gently heated during cold nights, so much the better. Do not deluge the plants with water at the root, but keep them sprinkled overhead with a fine syringe. Under such conditions the plants will not be long in recovering from any check they may have sustained.

Berried Solanums.—These, too, are calling out for a change into winter quarters. They should now be fairly well set with berries, some of which are beginning to turn from the bright olive green, which they assume in their earlier stages, into the scarlet, which is at once so showy and so much admired. These plants naturally take on a symmetrical and bushy habit, and when well set with berries form very handsome plants for the greenhouse and conservatory, as well as being quite the thing for the dinner table. If the seed was sown early, good bushy plants are now the result, and as a few more of these should have been planted out than will be required, it should be possible to pick the best plants. If the grower does not want them all himself, there is usually plenty of opportunity to give them away to others less fortunately situated. The largest plants will be furnished by "cut-backs," i.e., last year's plants which were cut back in the spring and allowed to break into growth again. For these 7-in. pots may be needed if they have grown freely and done well. Seedlings of this year, resulting from seed sown in February, will, however, be amply satisfied with a 6-in. pot, and if they can possibly be got into a size smaller, so much the better. Pot rather firmly, and use a compost similar to that employed for the Richardias. The after treatment of the two subjects is likewise similar, although after the Solanums have picked up, after the shifting, they must be given all the light possible to enable them to ripen off the berries as speedily as may be.

Marguerites.—Perhaps we have had a little too much of the white Marguerites in beds, borders, and window boxes, during the summer months and some people will perhaps be asking in an injured sort of way what on earth we want to drag them into winter arrangements for, but the plants themselves must be their own excuse. White flowers, even if they are the despised Marguerites, are always welcome in the winter time, and in these plants we have subjects that are exceedingly tractable and useful. We had a number of plants in 7-in. pots which flowered themselves nearly to death early in the summer. When they got shabby they were cut back, knocked out of their pots, and planted out in a border facing to the east, where they got scarcely any sun. This situation was not given them as the result of choice, but from necessity; because there was no room for them anywhere else at that time. These plants have made a lot of growth and are now as healthy and vigorous specimens as could well be imagined. Lifting and potted up now, they will soon commence to flower, and by the aid of a little manure water at intervals, will remain in bloom all the winter and early spring. They will be placed, if possible, in 8 in. pots, and the soil made fairly firm about them. Large old plants that require very big pots or small tubs to hold them are often well worth the space they occupy, and in the absence of large subjects to fill the conservatory may well be utilised. Once they have got hold of the new soil, which they speedily do, they may be treated pretty liberally with manure water.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Lilium candidum.—I have several large clumps of the Madonna Lily in my garden, and should like to

divide them up so as to increase the stock. Will the present be a favourable opportunity for doing this?—*Q.*

It is now too late in the season to think of transplanting *Lilium candidum*. This Lily, and one or two others commence to grow early in the autumn—in fact, they should have started strongly now—and their foliage is persistent through the winter. If you disturb the bulbs now you will be almost sure to prevent the flowering next year. The best time to lift and replant the bulbs is some time during August, after they have bloomed, and the stems have ripened off. This being so we should advise you to wait until next year before you touch them.

Calathea (Maranta) zebrina.—*Geo. Tripps.*: This plant requires a warm house to do it properly. It would grow all right in an unheated house during the summer months, but the temperature there would be much too low for the greater part of the year.

Chamaepeuce dlanantha is the name of the plant you are enquiring about, *C. B.* It is a most handsome subject, and is used with great effect in the public parks, as well as in many private establishments, for sub-tropical and carpet bedding. The plants make symmetrical rosettes of handsomely-variegated foliage, and do not flower until the second year. They are not hardy. Propagation may be effected by seeds sown in heat in September or February.

Vines.—*Subscriber*: If the foliage is beginning to turn colour the wood should ripen up well in the coming six weeks if we get fairly bright weather. You may require to give a little artificial heat to assist in ripening the wood should the weather prove dull, but of that you must be the judge. In any case, a little fire-heat at the beginning of November cannot do harm. Give as much air as you can in the meantime.

Begonia Seed.—*S. L.*: If the capsules have dropped from the plants naturally, and not as the result of violence or rough handling you may assume that they are ripe, although they still appear to be green. Lay them on a sheet of paper in a dry room to finish drying. When dry they will burst open, and the seeds will fall out.

Dried Mint.—*A. O.*: Mint is dried in most gardens in the way you have done by simply cutting down the plants, and exposing the cuttings to the sun and air to dry. There is very little demand for Mint dried thus, however, for housewives prefer that that has been dried more quickly, either by putting it before a fire or laying it in a slow oven, most of the green colour then being retained for an indefinite period.

Gladstoll.—*M. T.*: The corms must not be left out all the winter, but must be housed before severe frost. You will do well to lift them with the half-ripened stems attached sometime during the present month, and pack them in shallow boxes with sand. The remains of the stems may be left on until they are quite dry, and then removed.

Ampelopsis Veitchii.—Than the propagation of this favourite climber nothing is easier, *Ash.* Take pieces of well-ripened growths of last year, cut them up into lengths of 3 in. or 4 in., and insert them in light sandy soil. The cuttings will root quicker if placed in a cold frame or in a greenhouse. You should have no difficulty in working up a stock.

Failure with Mushrooms.—We have no doubt that your failure in Mushroom growing last year was due to the fact that you let the droppings become much too wet, *J. G.* Once the manure has been exposed to the action of heavy rains in the manner yours was there is little chance of succeeding with it. Even good spawn would not be at all likely to yield results planted in such a medium. You must put the manure under cover somewhere, while it is undergoing the necessary turning and shaking up. It will not heat itself dry, unless it is allowed to remain without being disturbed for too long. Every time fresh manure is added to swell the heap a good turning should be given in order to thoroughly mix the old and new material.



| | | | | | | | |
|--|---|---|--|--|--|--|--|
| Mr. J. CAIRNS. The Gardens, Balruddery House, Dundee. | Mr. J. BRYSON. Assistant Secretary Royal Caledonian Society. | Mr. H. J. JONES. Ryecroft, London S.E. (Judge) | Mr. R. LAIRD. Secretary Scottish Horticultural Association. | Mr. A. OUTRAM. Messrs Sutton & Sons, Reading. (Judge) | Mr. A. F. BARRON. Royal Gardeners' Orphan Fund. (Judge) | Mr. W. CUTHBERTSON. Messrs Dobbie & Co., Rothesay. | Mr. W. P. LAIRD. Secretary Dundee Chrysanthemum Carnival. |
| Mr. THOMSON. Messrs. Cocker & Sons, Aberdeen. | Mr. MONCUR. Messrs. McKenzie & Moncur, Edinburgh. | Mr. J. MACINTYRE. The Gardens, Woodside, Darlington. | Mrs. D. T. FISH. | Mr. D. T. FISH. The Gardeners' Chronicle. | Mr. JAS. HUDSON. The Gardens, Gunnersbury Park. (Judge) | | |
| Mr. H. DOUGLAS FLEMING. Ichthemic Guano Co. | | | Mr. ARTHUR E. STUBBS. Ichthemic Guano Co. | | | | |

MESSRS. COLCHESTER'S OCTAGON GROUP

AT THE ROYAL CALEDONIAN SOCIETY'S DIAMOND JUBILEE SHOW, EDINBURGH, SEPTEMBER, 1897.

From a photo by MESSRS. J. HORSBURGH & SON, EDINBURGH AND LONDON.

OUR ILLUSTRATIONS FROM EDINBURGH.

WE have been favoured with the copyright of several magnificent photos taken by those well-known artists to the Queen, Messrs. J. Horsburgh & Son, of Edinburgh and London. These pictures include the principal groups and portraits taken on the occasion of the Royal Caledonian Society's Diamond Jubilee Show a fortnight since, and to-day we have the pleasure of submitting to our readers the first of the series. Messrs. Colchester's beautiful Octagon shaped group (see p. 73), occupied a central position in the western extremity of the Waverley Market, and a brief description of the principal plants and flowers used in its very pretty decoration may not be out of place.

There were handsome specimens of *Latania borbonica*, *Kentia belmoreana*, and other Palms, *Araucaria excelsa*, *Aralias*, *Asparagus plumosus*, *Dracaenas*, *Maidenhair Ferns*, *Pteris major*, and *P. tremula*, and splendidly bloomed plants of *Hydrangea paniculata grandiflora*, interspersed with beautiful spikes of choice *Gladioli*. The edges of the stand were gracefully festooned with *Smilax* and pots of *Lysimachia Nummularia*. The statuary, which was a striking feature in the decoration, was adorned with lovely trails of *Tropaeolum speciosum*, with its lovely scarlet flowers, glowing like fireflies amongst its beautiful green foliage. The plants were all well grown attractive specimens of sturdy vigorous growth, and with rich shining green foliage, characteristic of plants that have had a judicious application of Ichthemic Guano.

VICTORIA PARK.

SOME idea of the extent of this London Park may be gained when we state that it is 1½ miles in length or more, and possesses 22 gates for the admission of the teeming population which surrounds it on all sides. Some years ago large areas of it consisted of bare ground without a vestige of grass; but since it was taken in hand by the present superintendent, Mr. J. W. Moorman, these areas have been trenched, re-sown with grass, and fenced off piece by piece to keep the public off until the grass should get well established. There is now a fine sward instead of bare ground; and in several other respects vast improvements have been effected.

PALM HOUSE AND NEIGHBOURHOOD.

Some time ago we made a rapid inspection of the park particularly in relation to the bedding, and the glasshouses. The large Palm house or "winter garden" at the west end of the park now contains many large and well grown specimens of Palms, *Dracaenas* and *Tree Ferns*, about 20 ft. in height. Two tall specimens of *Dicksonia antarctica* are furnished with fine heads. Originally they formed one specimen with two trunks which were cut asunder and successfully re-established by Mr. Moorman. These and other foliage plants were brightened with tall standard *Fuchsias*, some of which consisted of three varieties grafted on the top of one another and forming three tiers of flowers of different colours. *Impatiens Sultani Episcopi*, deep blue *Hydrangeas*, and *Pelargoniums* enlivened the benches.

The flat near the Palm house is always an interesting spot for all who are interested in flower bedding. Being fully exposed to light and air on all sides except what shelter is afforded by shrubs at the back, *Pelargoniums* and other flowering subjects produce a blaze of colour not often met with. All the plants were put out about the middle of May. The planting in several respects is different from that of former years. For instance, the carpet bedding has been omitted in this particular design, and succulents employed instead.

We shall only attempt to notice the finest of the beds this season. In the back line two mixed beds have been very gay indeed. They consist of white and yellow *Marguerites*, *Erythrina Crista-galli*, *Gladioli*, *Lilium auratum* and *Fuchsias*, on an undergrowth of *Pelargonium Lucius* with an outer band of *Crystal Palace Gem*. On either side of these central beds is one of the pink *Pelargonium Mrs. Turner* mixed with *Fuchsias*, and having a broad edging of white *Lobelia*. Towards either end is another mixture of white *Marguerites* and *Pelargonium Henry Jacoby* making a bold and effective contrast. These two are edged with a broad band of the blue *Ageratum Dunbar's Dwarf*. The corner

beds of the design are circular and consist of succulents on a restful groundwork of *Herniaria*, golden *Creeping Jenny*, and *Antennaria tomentosa*. The succulents are dotted over these, and consist of green and variegated American *Aloes*, *Echeveria metallica*, *Canary Island Houseleeks*, *Agave filamentososa*, *Pachyphyton bracteosum*, *Haworthia subulata*, *Opuntias*, *Cereus*, and other quaint or grotesque subjects.

In the second line from the back are two fine beds of East Lothian Stocks, and Ivy-leaved *Pelargonium Madame Crousse*, edged with the pretty *Cuphea platycentra* and the yellow *Fuchsia Golden Fleece*. Two circular beds of *Celosia pyramidalis* on a ground of *Viola Max Colb* and *The Mearns*, have been charmingly effective for a long time. Striking also are two beds of the dazzling scarlet *Pelargonium Bonfire*, edged with *Pelargonium Flower of Spring* and *Brighton Lobelia*. Here also are two beds of succulents, similar to those at the extreme corners of the design.

There are two fine beds of *Heliotrope President Garfield* and *Petunias* on a ground of *Harrison's Musk*, bordered with spotted *Mimulus*, and the whole edged with white *Lobelia*. The groundwork is seen in the early part of the season only previous to the growth of the taller subjects. Two circular beds of *Celosias* and *Viola Duchess of Sutherland*, edged with *Sempervivum canariense*, are also well worth copying. Massive beds of the pink *Pelargonium Cleopatra*, edged with *Centaurea ragusina candidissima* and *Amarantus melancholicus ruber*, are simple in design, but imposing in effect. The middle bed at the front edge of the design is known as the *Butterfly or Prince of Wales' Feather*, from its form and planting. The wings and tail consist of a mixture of *Duchess of Sutherland* and *William Niel Violas*, and the bronze *Pelargonium Mrs. Quilter*. Inside of the above come three rows of *Pelargonium Vesuvius* running all round; then two rows of the bicolor *Pelargonium Princess Alexandra*, mixed with *The Mearns Viola*. There is a triple edging of *Iresine Lindeni*, *Lobelia Blue Queen* and *Pyrethrum selaginoides*.

The large circular bed in the triangle between three broad walks, and for some years planted with succulents, is entirely different this year. Tall plants of *Plumbago capensis* are placed at intervals, between which are shorter specimens of the *Coral-tree*, yellow *Marguerites* and *Petunias*. There is a triple edging of *Coleus Verschaffelti*, *Centaurea geminicaarpa* and *Sempervivum arboreum*.

WEST END OF PARK.

Pursuing the path on the north side of the park and in a westward direction one comes upon a continuous line of oblong and other beds by the side of the walk. The number of beds throughout the park is simply enormous, and a pleasing feature is the reduction of the *Pelargoniums* in favour of other plants, separately or in mixture to furnish as much variety as possible. Pleasing is a mixture of the dark *Fuchsia Scarcity*, *Abutilon Souvenir de Bonn*, and Ivy-leaved *Pelargoniums*. A similar bed edged with *Pelargonium Creed's Seedling*, dwarfer than *Crystal Palace Gem*, has also been fine. Other noteworthy beds are filled with *Begonia atropurpurea*, *Acacia lophantha*, and *Chlorophytum elatum variegatum* in mixture; *White Intermediate Stocks* and *The Mearns Viola*; *Pentstemons* and *Viola Wm. Neil*; late *Phloxes* and *Gladioli*; *Phlox Drummondii* in rich variety; *Zinnias* in mixture; and succulents and rockwork. A striking mixture consists of early *Chrysanthemums*, *Dahlias*, white *Marguerites* and *Aster Amellus*, in a bed of scolloped outline. A large oval bed, built up into seven mounds, is planted with green and variegated American *Aloes*, and *Opuntias* on a ground of white *Antennaria*.

A large, three-lobed bed contains a striking mixture of *Gladioli*, night-scented *Tobacco*, *Heliotrope*, Ivy-leaved *Pelargoniums*, *Phlox Drummondii*, *Fuchsias*, *Cape Hyacinth*, and others edged with *Viola Ardwell Gem*, many of the subjects being old plants. Several large banks of shrubbery here have massive mixtures of popular and showy flowers in front of them, including *Sunflowers*, *Shirley Poppies*, *Tobaccos*, annual *Chrysanthemums*, *Phloxes*, *Rudbeckias*, *Chilian Beet*, *French* and other *Marigolds*, *Clarkias*, *Malva moschata*, *Coreopsis grandiflora* and many others producing a most gorgeous display. *Crimson Cockscobs*, tuberous *Begonias*, *Acacia*, *Abutilon megapotamicum variegatum* and others make a showy circular bed.

In the reserve ground are plantations of *Canterbury Bells*, *Delphiniums*, &c., for next year. *Chrysanthemums* in batches of five and ten, up to forty of each variety, give promise of a fine display presently. In the houses close by the offices are large quantities of stock for next year, as well as plants in reserve for any bed that may give out before the season is over. There are something like 1,000 *Fuchsias* alone, from 6 in. to 3 ft. in height. Other plants are *Amicia zygomeris*, hundreds of *Ficus elastica*, *Tuberoses*, *Azalea indica*, *A. amoena*, &c., all in pots.

THE SCROLL BED.

Not far from the east end of the ornamental water is the scroll bed, which is always an interesting feature of the park, being a neatly and elaborately executed carpet bed. This year it has been specially designed in reference to the Diamond Jubilee of Her Majesty The Queen. The bed is 78 yds. in length, and relatively narrow like chain bedding. In the centre is a crown and medallion, 10 ft. long and 3 ft. 6 in. wide. The monogram V.R.I. is made of *Alternanthera paronychoides aurea*, *A. amoena*, and *A. versicolor* on a ground of *Herniaria*. The outside is formed of a double row of *Echeveria Peacocki* and one of *Alternanthera paronychoides major* with *Sempervivum tabulaeforme* on the perpendicular slope. On either side of the medallion is a Maltese cross.

On the left-hand side of the central designs are the words "May children of our children say," and continued on the right, "She wrought her people lasting good." The letters are worked out with various *Alternantheras* and small succulents, such as *Pachyphyton bracteosum*, *Kleinia repens*, *K. tomentosa*, *Echeveria farinosa*, variegated *Mesembryanthemum*, variegated *Ground Ivy*, golden *Creeping Jenny*, &c. Between every two words is a stop formed of plants. At the extreme ends of the scroll is a shield with the monogram V.R. done with *Alternantheras* and *Echeveria Peacocki* on a ground of *Antennaria*.

The scroll bed is a continual source of attraction to visitors who take a lively interest in reading the legend of inscription, and studying the other pieces of intricate work. At either end of the design is a large circular bed of undulated outline, and planted with many varieties of *Celosia cristata*, mixed with *Verbena venosa*.

BAND STAND AND FOUNTAIN.

Towards the east end of the park the band stand is surrounded with plantations of popular flowers, and forms a great centre of attraction when the band plays. The large fountain bequeathed to the park by the Baroness Burdett Coutts, is another gay spot close by. It is surrounded by massive beds, four of which are filled with *White Marguerites*, which have buried the groundwork that was gay in the beginning of summer.

There are two of the scarlet *Pelargonium Bonfire*; three of *Ricinus Gibsoni*, *Cannas* and yellow *Marguerites*; and two of *Pelargonium Mrs. Turner*; all have a groundwork of something, and double edgings. Besides the beds there are eight massive vases filled with popular flowers, and all have flowered grandly.

SUB-TROPICAL NOOKS AND BAYS.

On the north side of the ornamental water are numerous creeks and bays sheltered with tall shrubbery, and occupied with beds consisting very largely of mixtures of flowering and foliage plants. In one large bay are fifteen beds of various shapes and sizes. One excellent mixture consists of *Abutilon Thomsoni*, *Coral-tree*, *Ficus*, *Fuchsias*, *Gladioli*, *Palms*, *Petunias*, &c. Others are variously occupied with *Cannas*, *Heliotropes*, tuberous *Begonias*, *Fuchsias*, *East Lothian Stocks*, *Abutilon Souvenir de Bonn*, &c. In another bay are *Latantias*, *Phoenix*, *Kentias*, *Dracaenas*, &c., where carpet bedding used to be. Further on one comes upon circular beds in another bay, variously filled with flowering and foliage plants, which have given the fullest satisfaction.

A piece of rockwork, usually entirely devoted to grotesque *Opuntias* and other succulents, has this year been enlivened with *Chinese Pinks*, *Phlox Drummondii*, *Antirrhinums*, *Statice*, *Crocoshia* and other flowering plants, as well as succulent subjects. The beauty, keeping and reputation of this large park are being fully sustained by Mr. Moorman.

At a fashionable Wedding celebrated a short time ago the flower bill came to 1,000 guineas.

HAMBURGH EXHIBITION.

"THE trust that's given, guard, and to yourself be just," thus are the words of Dana. In fact, the Hamburg Exhibition does guard the trust given by the Hamburg public and exceeds it in many a way. Therefore, we easily understand the great success which this undertaking has attained, and we understand why the exhibition will remain until October 4th. On this ground the fruit exhibition (fourth special show) had been postponed for a week and opened on September 24th, thus bringing the whole affair to a worthy end.

On September 17th there was but a small special exhibition of fruit for sale to tickle the most spoiled palate. All the halls have been so richly ornamented with fruit of every sort and description that the interest rises by each step, and the visitor will never get tired in comparing the hundreds of products of England, Germany, France, Belgium, and the Tropics. This exhibition was enlarged on September 24th, and is now carried over all the territory of the immense place, thus being the largest exhibition of the kind ever held. Above 1,000 exhibitors brought their products to Hamburg for competition. Even the Government themselves participate at this exhibition, having sent special delegates, as for instance, Hungary, represented by Mr. Von Molnar, the agricultural expert; Austria, by Ministerrath Ritter v. Herzmanowski; France, by Monsieur Viger, the agricultural leader in several departments, and the President of the French Horticultural Society; also from all parts of Germany have experts and delegates arrived. The advantage of certain countries as regards their climatic situation has been equalised by dividing the countries into certain zones, competing with one another. Thus there are together for competition in the first zone, Norway, Sweden, Finland, North Russia, and Poland; in the second zone, Denmark, Great Britain, Ireland, Holland, North Germany, the Highlands of South Germany, South Russia, excluding the Crimea, and the Highlands of Switzerland. Another zone is again formed by Belgium, North France, South Germany, Austria, Hungary, the Valleys of Switzerland, competing with South France and South Europe as a separate zone; whilst the last zone is occupied by the non-European countries. The fruit-hungry visitor, however, cares but very little for all these zones, and appreciates only what suits his tongue the best.

Now we had better go round the show and see the products themselves. The principal country is Germany on this occasion. Schleswig Holstein exhibited a series of dessert Apples, which grow in the damp climate of the province in an excellent way and are shown in wonderful assortments. Pears of this province, however, do not grow so well, as the climate keeps them back, though some special assortments prove that by right cultivation good results may be obtained. The high quality of the Schleswig dessert Apples is shown best in their competition against the Holstein Apples, as every single cultivator exhibited no less than 20 Apples of a kind. There are the so-called Belle de Boskoop, Gravenstein, etc., and certainly these fruits may successfully be put next to the French products.

The exhibits of Oldenburg, and of Lübeck, have about the same character as the fore-named one; then follow Brunswick and Saxony. Here the Apple has to give way for other fruit, though it still prevails, as in Brunswick the Apple is about 74 per cent. of all fruit, whilst the Pear is but 6½ per cent.

Now we see the exhibition of Hanover, showing a greater series of assortments fighting for the prizes. There are in fact very valuable provincial special fruits, as Hanover takes the first place in cultivating fruit. The Gravenstein however, must retire and in its place we notice the Golden Reinette, Golden Pearmain, etc.; but there are also other Apples, such as Belle de Boskoop, Harbert's Reinette, etc.; whilst of Pears we see the "Duchesse d'Angoulême," Napoleon, the "Baconspear," etc., which of course occupy the place of honour in the show.

The Rhine-Provinces, Brandenburg and Mecklenburg also sent their best products to Hamburg this year, but we shall refer thereto later on. Worth while mentioning also is the Holland exhibition, which is rather extensive and from which all products may pass as samples, whilst the other non-German competitors as England and Denmark take no serious place.

The chief point, however, of the whole exhibition,

is the fruits from France, Switzerland and of Tyrol. The blue sky and the warm sun of these privileged countries do more than all gardeners ever will be able to do. Certainly the best products are not to be had by everybody on account of their price, but this must not prevent us from having a good look at them.

Hungary must not be forgotten, as she brings a large assortment of Apples and Grapes. Up to now Hungary was but little known as a fruit cultivator, but no doubt now she will soon find the place she deserves.

The list of the prize-takers has not yet been published, but to give our readers an idea how the exhibition came off we shall just reckon up the prizes which the firm of Herr Johs. Mortensen, St. Pauly, Hamburg, was lucky enough to take during the show.

I. SPECIAL SHOW.—Neat flower basket, first prize, small Silver Medal and 40 marks; Orchid bouquet, small Silver Medal and 75 marks; vase bouquet, small Silver Medal and 10 marks; planted basket, small Silver Medal and 20 marks; a wireless bouquet, small Bronze Medal and 5 marks.

II. SPECIAL SHOW.—For a flower arrangement, fourteen different items, including mourning symbols, baskets, &c, large Golden States Award; a terrarium, small Silver Medal; fancy arrangement, a similar award; Cornflower bouquet, small Bronze medal.

III. SPECIAL SHOW.—Flowers in ice, highest prize, first prize, and the prize of honour, 200 marks (given by Mr. Theodor Levy); best table decoration, first prize, the large Gold Medal.

GREAT AUTUMN SHOW.—Table decoration of flowers, first prize, large Silver Medal; table decoration of flowers and plants, first prize, large Silver Medal; neat flower basket, first prize and 20 marks, large Silver Medal; a vase bouquet, first prize and 30 marks, large Silver Medal; various garlands, first prize and 30 marks, large Silver Medal; Orchid bouquet, first prize and 30 marks, large Silver Medal and prize of honour, 50 marks (from Dr. Petersen); a baptism garland, large Bronze Medal and 10 marks; easel, small Silver Medal and 10 marks; ten table bouquets, large Bronze Medal and 50 marks; for new introduction in the art of binding, large Bronze Medal; fancy Orchid bouquet, small Silver Medal and 30 marks.—F. D.

GLASGOW PARKS AND GARDENS.

For some time past the Corporation of Glasgow have been particularly active in securing open air spaces for the benefit of the ever-extending city. They do well to be ever on the alert for the securing of land on the outskirts of the city before it comes into the capacious and grasping clutches of the builder. Glasgow is the second city in the Empire for number of population, and within the last few years the County of Glasgow has been enlarging its borders by leaps and bounds. Several important suburbs have been annexed, while at the same time parks and gardens have been secured for the benefit of the community. The only certain method of doing this is by anticipating the builder. There are now fourteen parks, gardens, and recreation grounds, including, of course, the Botanic Gardens. With recent additions to four of these open spaces the fourteen have a combined area of 978½ acres. In addition to these larger spaces there are thirteen minor ones totalling 13 acres 2 roods 32 poles. Seven graveyards, five of which are open to the public, give another 11 acres 3 roods 24 poles. The total acreage under the care of Corporation amounts to 1,003 acres 2 roods 16 poles. All of this vast space with exception of the Botanic Gardens, is under the direct superintendence of Mr. James Whitton, formerly of Coltness, Wishaw, and Glamis Castle, Forfar. Needless to say he is one of the busiest men in Glasgow, and from what we can see he is both qualified and competent for the work. He was formerly a gardener, and has foremen under him in all of the principal places, who are also gardeners by profession.

GLASGOW GREEN.

In the limited time at our disposal one afternoon after 4 p.m., we made a rapid survey of a few of the principal parks, commencing at Glasgow Green, the oldest open space, it having been acquired in 1662 and added to up till 1792. It is situated on the banks of the Clyde, and extends to 136 acres. A

People's Palace has been built upon it at a cost of £22,000 or over. The palace includes a museum library and winter garden. The latter alone cost £8,500, is 180 ft. long, 120 ft. wide, and 60 ft. high in the centre. Sir Henry Doulton, of Lambeth, bequeathed to it a drinking fountain at considerable cost.

GOVANHILL GROUNDS AND QUEEN'S PARK.

On the south side of the Clyde we passed the Govanhill Recreation Grounds, opened to the public last year. They formerly consisted of an old brickfield, left in a chaotic condition, and involving a great amount of labour and time to put them in proper form. They cost the Corporation £12,000, though only four acres in extent.

The Queen's Park is close by Govanhill, and was designed by Sir Joseph Paxton. It was the third of the parks to be acquired, is now forty years old, and cost £30,000. The centre of the park is elevated, affording fine views of the city when the atmosphere is clear. A long and broad flight of stone steps gives access to the terrace, on which summer flower bedding is extensively carried out. The long border on the edge of the terrace is very imposing, consisting as it does of Pelargoniums and bold edgings of Lobelia and Cerastium tomentosum. Even in the second week of September the beds were still gay with blossom in this northern latitude. The ground below the terrace, as well as on the high ground around it, is sheltered with mixed plantations of trees, which have not in all cases grown very rapidly, owing to the ungenial nature of the ground, which consists largely of boulder clay, reaching generally to a great depth. Amongst the trees we noted fine specimens of Prunus Mahaleb and the gray-leaved Pyrus salicifolia. Mr. Whitton is very fond of trees and shrubs, and is doing all he can to enrich the parks with those species which will thrive here.

CAMP HILL.

The glasshouses and propagating department of the parks are situated at Camp Hill, which consists of fifty-eight acres, acquired in 1894 at a cost of £63,000. This price, however, included fifty-three acres of feuing land, not reckoned with the park. Camp Hill is contiguous to and continuous with the Queen's Park, making a combined area of 148 acres.

The glasshouses are situated on high ground, close to the beautiful village of Langside, and immediately outside the fence is the monument commemorating the battle of that name and well known in history. The plant houses are open to the public daily. Many of the large specimens in tubs have been presented by private gentlemen in the city or suburbs. Passing through the stove we noted that it is devoted to Palms, Eucharis, Caladiums, Hymenocallis macrostephana, and Pancratium fragrans, the two latter of which were carrying their fragrant white flowers. The Hymenocallis was, indeed, flowering for the second time this season. Numerous plants of Strobilanthes Dyeri are larger than we usually see them. There is a grand piece of Coelogyne massangara in a basket 18 in. square. A magnificent specimen of Musa Ensete, 20 ft. high, and bearing enormous leaves, with red petioles, was presented by Miss Drummond, of Megginch. Dicksonia squarrosa, 20 ft. high, was presented by J. B. Merrilees, Esq., Redlands. Both of these tall specimens stand in the roomy corridor connecting the houses together. Here also is a grand plant of the Bird's-nest Fern, with leaves 4 ft. to 5 ft. long, Oranges in fruit, large Camellias in bud, and a very old specimen of Beaucarnea recurva.

Orchids are not neglected, more than one house being devoted to them. A grand piece of Platyclinis was carrying thirty-two spikes of its flowers like golden filigree work. There is a good collection of Cyripediums, of which C. Charlesworthii, C. barbatum, and others were in flower. C. purpuratum is a dwarf and choice thing. Choice things in flower include Oncidium incurvum, Miltonia Phalaenopsis, Pleione Wallichii, and Vanda kimballiana. The uncommon Urceolina pendula flowers freely.

In the propagating pit we noted the third batch of Clerodendron fallax in bloom. Many things are propagated here, including Anthuriums, Golden Privet, Araucaria excelsa, and others, of which there are batches in various stages. In one division is the striking Begonia heracleifolia Sambo, with black leaves; also a grand plant of the graceful Restio

subverticillata, and flowering specimens of *Allamanda Williamsii* and *A. nerifolia*. The Stephanotis-like, fragrant flowers of *Scrubertia graveolens* adorn the roof.

A large number of species of *Masdevallias* are located in one of the useful span-roofed houses. Flowering subjects here include *Masdevallia dayana*, *Odontoglossums* (grown in quantity), *Oncidium excavatum*, and the pretty *Odontoglossum hastilabium*. One bench is occupied with Ferns, including several forms of *Nephrolepis*. The Onion Plant (*Ornithogalum longibracteatum*), well known in cottage windows all over the country, has been flowering for a long time past. Pretty also is the pale yellow *Cytisus scoparius sulphureus*.

In another house we noted *Pancreatium fragrans*, *Hydrangea paniculata grandiflora*, and *Tritonia rosea*, all in bloom. Austin's Eclipse and Comet Tomatoes are grown on one bench. Zonal and Ivy-leaved Pelargoniums, and *Swainsonia galeifolia alba* fill another house. The old double white Chinese Primula and Begonias, such as *B. metallica* and *B. President Carnot*, monopolise another house. Japanese Maples, *Cytisus proliferus*, and *Passiflora caerulea purpurea* are samples of the occupants of another structure. Others are *Acacia pulchella*, standard *A. armata*, *Lilium auratum*, Azaleas, and Rhododendrons in variety show what are popular here. Still another house is filled with Ferns, *Asparagus*, *Eryngium bromeliaefolia*, &c., for decorative work.

In the greenhouse are some tall and massive plants of *Euonymus japonicus laifolius albus*, Camellias, Palms, Cannas, Pelargoniums, Coleus, Lilliums, *Hydrangeas* and *Dicksonia antarctica*. Good stuff of *Begonia President Carnot* will afford flowering plants for the winter.

Leaving the hothouses at Camphill we passed through the shrubbery and nursery grounds around the base of the hill. Before they were acquired by the Corporation these grounds formed part of a private demesne. They are largely utilised for the rearing of shrubs, trees, &c., for the parks. A plantation of early flowering *Chrysanthemums* was very gay, including floriferous masses of Canary, Golden Shah, Piercy's Seedling, Flora, &c. A weeping Ash about 35 ft. high is considered the finest in Scotland. We hope the feuing land will not be built upon, as it is planted with tall and fine trees.

MAXWELL AND BELLAHOUSTON PARKS.

Maxwell Park consists of 21 acres, the gift of Sir John Stirling-Maxwell, Bart., in 1891. It is situated on houlder clay of great depth, and is planted with Limes, Poplars, Willows, and others which will thrive on this ungenial soil.

Bellahouston Park is situated in the southern suburbs of the city, and was acquired in 1895. Much of the land is yet under agricultural crops, but will undergo a transformation presently, which will render this one of the finest and most picturesque parks in Glasgow. It has an area of 178 acres, being the largest piece of land cared for by the Corporation in the interests of the people. The highest portion is 140 ft. above sea level, and here the superintendent's house is located. It was formerly the residence of the private gentleman who held the land. The latter cost the Corporation £50,000. The hill nearly in the centre is planted with trees which are conspicuous from a great distance owing to their elevated site. Great improvements are to be effected and we have every confidence that Mr. James Whitton will leave the imprint of his hand upon the beautifully undulated grounds which lie around the wooded heights.

PRESERVATION OF USEFUL BIRDS.

THE small birds, so useful to agriculture, are menaced with destruction with the object of preventing so-called damages which they cause crops in the neighbourhood of towns. In any case, the work they do in destroying all kinds of injurious insects more than compensates for their pilfering, and we cannot plead their cause too eloquently. The President of the Society for the Protection of Animals has just written an interesting communication on this subject to the head of the French police. Amongst other things he states that the starling, the value of which is disputed, is a useful bird. In many parts of Europe, particularly Germany, far from destroying it, nests are built by the people to assure reproduction.

The society advocates by the mouth of its presi-

dent that no birds should be sold in the markets except foreign species or home birds born and reared in cages. We must admit that, in spite of the clear instructions given, this principle is not always easily applied, and sellers and bird-catchers have been favoured by regrettable toleration. For years birds have been publicly sold; not merely adult native birds, crowded to suffocation in cages, but unfeathered young ones, some yet in the nest.

In any case, if arrest of the sellers is useful, it is equally necessary to provide against the supplies by exercising increased vigilance at the Paris gates and railway stations. Thus poachers who catch millions of birds in close time with prohibited snares would be detected. The actual classification being vague and ill defined also makes application of the law difficult. It is desirable that birds should cease to be classed by order of size, *e.g.*, stating that it is unlawful to kill such a bird of the same size or less than a blackbird or quail. It will be better, once for all, to give a simple accurate list—(1) Of all noxious birds; (2) Of game birds—and announce that all the others without exception are protected. —*La vie Scientifique.*

PERSIAN CYCLAMEN.

THERE was a fair attendance at the Westminster Drill Hall on Tuesday, 22nd ult., to hear Mr. W. Iggulden read a paper on the Persian Cyclamen. Mr. James Douglas occupied the chair. The lecturer commenced by commenting upon the popularity of the Cyclamen. There are no other plants that can be raised and grown so cheaply that are more profitable, for they may be had in bloom from October to March inclusive. In spite of this there is only a limited number of cultivators that can grow them well, and indeed there are far more failures than successes. Cyclamen cannot be grown in the haphazard fashion adopted with Primulas, and Cinerarias, but they must receive every care and attention. Private growers are placed at a disadvantage as compared with trade growers, for the former have not as a rule the kind of houses at their disposal that best suit the requirements of the Cyclamen. If private growers cannot do the plants well, however, it will be better to leave them alone.

With regard to seed sowing, the times vary considerably, said Mr. Iggulden. Many trade growers sow in August and September, others in October, November and January. February and March is too late for seed sowing, although I have raised good plants from seed sown in January. New seed is to be preferred to old. Thin sowing is very essential, as the necessity for pricking out may be thus obviated. The soil should consist of half loam, and half leaf soil, with sand; covering the seed to the depth of about a quarter of an inch. The seed pans should be placed in a temperature of from 60° to 70° Fahr., shaded, and kept moist. Under such conditions germination will take place in from five to six weeks. The young seedlings should be kept growing on steadily, taking care to shield them carefully from draughts, and spray them with tepid water. The first shift will be into 2½ inch pots, and if the thin sowing recommended has been practised the little plants may be taken out of the seed pans with a nice ball of earth attached, in such a way that they will not receive any check.

The winter temperature should range from 55° to 65° Fahr., and as it must be remembered that the plants will not thrive in dry surroundings, the atmosphere surrounding them must be kept moist. At this stage a small aphid attacks the plants, and if not checked will soon do them a great deal of harm. Nicotine fumes are the present day remedy for these aphides, and are very effective in clearing the plants of them.

The next shift will be into 5-inch pots. The soil should consist of two parts loam, one part leaf soil, and one part dried cow manure, with sand. After potting, stand the plants on ashes or moss and keep them damp. During the hottest part of the summer, continued the essayist, I put my plants in shallow pits or frames sloping away from the sun, shade them carefully when necessary, and spray them regularly.

In August the strongest plants may be given a further shift into 7-inch pots. The earliest flowers will need to be removed for a time. Clear soot water or other liquid manure may be applied occasionally with advantage. The plants will flower well and freely in a temperature of 45° to 50° by night, with a proportionate rise by day.

With regard to drying off, Mr. Iggulden went on to say, I am at variance with some authorities. I do not throw my plants away after the first season, but grow them on again after they have had a thorough resting. They are dried completely off and almost baked. The best lot of plants I ever had had been laid on their sides on a shelf in a Melon house where they were really baked. I treat all the plants to this annual resting, and find them do all the better for it. Early in July they are taken down, repeatedly watered until the balls are reduced to a state of moisture, and sprayed regularly with the syringe. The result is that the corms break into growth all over the upper surface. I have experimented in various ways with the plants to find out the best way to treat them, and amongst other things I planted them out in a bed of soil made up in a frame after they had done flowering and tried to keep them growing on, but success did not ensue. I have found good two-year-old plants better than good year-old ones.

In addition to the apbides spoken of, eelworms often attack Cyclamens. Bearing this in mind it is well to keep the plants away from old Melon or Cucumber beds. The best way to deal with the eelworms is to dissolve two ounces of Phenile in three gallons of water, and apply it to the roots of the affected plants.

In procuring any flowers or leaves they should always be "drawn" away from the corms, as if they are cut the bases are left and rot, spreading decay. In conclusion the lecturer pointed out the great improvement that had been made by the florists in Cyclamens, for the cultivated plants are superior to their ancestors in size of flower, and strength of constitution. The foliage too is exceedingly handsome. Of all the firms that have had a hand in the development of the flower, none has done more than that of Messrs. Sutton & Sons, of Reading, and only recently they have given us cherry-red, and rose—two colours hitherto wanting in Cyclamen.

At the close of the paper, Mr. R. Sydenham offered a few remarks. He advised his hearers to let their plants be exposed to the summer night dews, which strengthened the foliage immensely. He also spoke to the value of "XL All" as a fumigant. He had from time to time received complaints from various sources that the flowers of Cyclamen would not last when cut. He had found, however, a way to obviate this difficulty, for he slit down the base of the stem of each flower after it was cut, for the distance of about half an inch, and found that then they kept well for weeks together. Some flowers that he had thus treated had been sent to Switzerland where they arrived in a wonderfully fresh condition, and lasted for six weeks from the time at which they were cut.

Mr. John Wright followed with advice to intending growers, or those that had met with failures in their attempts to grow Cyclamen, to keep their plants amidst more humid surroundings, otherwise they would not succeed.

A vote of thanks to the lecturer terminated the proceedings.

GARDENING MISCELLANY.

GLORIOSA SUPERBA.

AMONGST the many interesting grand examples of cultivation in the houses at Brougham Hall, Penrith, is the above, covering the whole of the roof of one of the stoves. It is carrying hundreds of its queer shaped, orange and scarlet flowers which are found invaluable for cutting purposes. These plants have been in flower for months and will continue for some time yet. We ought to see this more frequently as it is most showy and useful; so Mr. A. Taylor finds it. —A. O.

CHRYSANTHEMUM MADAME MARIE MASSE.

THIS early flowering variety has already had a First-class Certificate awarded it, and its merits have been still further recognised by the Royal Horticultural Society's floral committee by a verdict of "highly commended" after trial at Chiswick. The variety is certainly the best of its colour among the early-flowering Japanese section and might well be largely grown. The flowers are bright rosy pink, and the florets long and slightly twisting. Grown without

disbudding, large trusses of brightly-coloured blooms are the result. These when cut with long stems carrying a fair amount of foliage, which, by the way, is healthy, clean, and of a deep green hue, are most effective in vases of cut flowers. In the open ground when exposed to the sun the flowers are apt to lose their colour soon, but this is only what might be expected when we consider the earliness of the season.

"ICHTHEMIC" AT YARMOUTH.

Griffin Mills Employees' Outing.

The employees of the firm of Wm. Colchester, of Griffin Mills, Ipswich, on Saturday, held their annual outing, the rendezvous being Yarmouth. Starting by the early morning train from Ipswich, the party to the number of between sixty and seventy were accommodated with special saloon carriages by the Great Eastern Railway Company, and favoured with magnificent weather everything augured well for a successful day. Besides the members of the staff, headed by the Ipswich manager, Mr. A. E. Stubbs, there were the workmen and workwomen from the entire factory at Ipswich, together with several visitors who had acceded to the kind and pressing invitations extended by the firm, including Mr. G. Gilbert, of the Floral Nurseries, Ipswich, Mr. J. Andrews (secretary of the Woodbridge Horticultural Society), Mr. F. Millar (Messrs. Fred Smith & Co., Woodbridge), Mr. Arthur Sowman, formerly head gardener at Springfield House, Ipswich, and now elected horticultural instructor, under the technical education scheme, and others. At the journey's end the numbers were augmented by M. LeCornu (the firm's Continental representative), Mr. H. Douglas Fleming (representative in Scotland), Mr. E. A. Cooke (Great Western Railway), and Mr. C. F. Hoad (Great Eastern Railway).

Breakfast was found waiting for the party at the Bath Hotel, and under the presidency of Mr. Stubbs full justice was done to the meal provided by host Foulsham. The tables presented a very attractive appearance, thanks to the efforts of Mr. J. R. Chard, Florist, of Stoke Newington, who, by the aid of gracefully constructed arches and epergnes of woven wire, displayed with taste striking examples of the fertilising virtues of "Ichthemic" Guano. The morning was passed in visiting the various amusements in which Yarmouth abounds, and at 1.30 the party re-assembled for dinner. The manager again occupied the chair, Mr. R. Ennals (agent in charge of the Stowmarket district), Mr. J. Andrews, Woodbridge, Mr. C. Smout, and Mr. H. Douglas Fleming filling the vice-chairs. Dinner over, the Chairman gave the usual loyal toasts.

Mr. Andrews next proposed the toast of the day, "The health of Mr. Wm. Colchester," the head of the firm. He adverted to the growth of the business, and the popularity of the proprietor, and complimented those present on their connection with so successful a commercial undertaking. The toast was accorded musical honours.—Mr. A. E. Stubbs, in reply, thanked those present, on behalf of Mr. William and Mr. Charles Colchester, for the hearty manner the toast had been received, and related in humorous terms the history of the previous outings of the firm, which commenced by a journey to sea on one of the steam tugs belonging to Mr. Colchester. He was delighted to be able to allude to the excellent understanding which had always existed between all departments of the firm. Their employer had reached a great age, and it was his pride that during the seventy-eight years of the firm's existence such a thing as a strike of the workmen was totally unknown amongst them. Mr. Stubbs adverted to the fine business qualities of the gentlemen whose names they had honoured. They were men of great energy, and had by the means of untiring zeal in business rendered the name a power in the commercial world.—Mr. Douglas Fleming gave "The Visitors," which was responded to by Mr. E. A. Cooke (G.W.R.), and Mr. C. F. Hoad (G.E.R.), both testifying to the increasing business relations between their lines and the firm of Wm. Colchester.

The Chairman added a toast of congratulation to Mr. Sowman on his appointment as horticultural lecturer and instructor under the aegis of the Suffolk County Council. Although living at Woodbridge, where as head gardener at the Grange he had made his name famous as a successful competitor along

the country side, yet they looked upon him still as an Ipswich man, the town in which Mr. Sowman spent some period of his early life, and if his new duties made it necessary for him to make his headquarters at Ipswich, horticulturists would be glad to welcome him back again within their borders.

Mr. Sowman suitably responded.

The other toasts were "The Press," given by the Chairman, and responded to by Mr. Hurrell, "Eastern Daily Press," and Mr. W. F. Cornish, "Evening Herald," "The Chairman," "The Ladies," etc.—A capital musical programme was provided. M. LeCornu gave songs of his native land, Mr. A. E. Stubbs, Mr. F. Stubbs, and Mr. E. A. Cooke also sang, while Mr. C. F. Hoad recited. A vote of thanks to Mr. Henry Myers, one of the firms travellers, for the satisfactory organisation of the excursion and a similar compliment to Mr. Anderson, organist of St. Peter's Church, Ipswich, who superintended the musical arrangements brought the toast list to an end, and the party re-embarked for home at 6.50 p.m.

QUESTIONS AND ANSWERS

* * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Hedge under the shade of trees.—M. M'L.: We are not surprised that Portugal Laurel should refuse to thrive under the shade of large trees. In the first place, the sunlight is too much obstructed; and, secondly, the roots of the trees impoverish the soil by abstracting all the nourishment it contains, and by preventing the rain from falling upon it. The Arbor-vitae seedlings you mention should succeed much better than the Portugal Laurel, and we believe the Yew would also be suitable, because both these trees would thrive in a much drier soil than the Portugal Laurel. Very much depends, however, upon the density of the shade produced by the tall trees. It would be of great advantage to take out a trench where the hedge is to be, cutting away as many of the roots of the trees as you dare without injuring them or rendering them liable to fall. Mix the natural soil with old soil from under the potting benches, leaf soil and old hot-bed manure, if you have any. At all events, use some fresh soil and vegetable matter. You could also top-dress the ground above the roots after planting the hedge for some years afterwards. Of course, the trees will also root into the fresh material, but the latter will give the hedge a good start.

Potatos per acre.—Omega: If 160 square yards of ground give a return of 1,080 lbs. of Potatos, a statute acre will produce 14 tons 11 cwt. 2 qr. 22 lbs.

Botanical term.—Omega: The botanical term for a mule flower is "hybrid," which means a cross between two species such as Dianthus barbatus and D. superbus.

Church decorations.—Constant Reader: We have never heard of a book which deals with church decorations. Hitherto the demand for such has been so small, that no one, probably, has ever conceived the idea of writing one. At all events no such work has come under our notice. We think the best plan for you would be to pay a visit to one or more churches where the decorations at the "harvest thanksgiving" or at Christmas are well carried out. You could then employ your time profitably by at first imitating what you have seen and afterwards improving upon them. No two churches, probably, are decorated alike, and the buildings being very often different you would have to follow a plan which would best harmonise with each church you undertake to decorate.

Practice with the Microscope.—Arthur Pentney: The most complete book on the subject is *Practical Botany*, by F. O. Bower, and published by Macmillan & Co., London; but it costs about 10s. if we rightly remember. *Practical Biology*, by Professor Huxley and H. N. Martin, and published by Macmillan & Co., costs 6s., but it deals with a few types only of flowering plants, the rest being cryptogams and animals. *Huxley's Elementary Course of Botany*, published by John Van Voorst (now Gurney & Jackson), Paternoster Row, would give you a considerable amount of information about the structure of stems, roots, leaves, &c. It costs 15s. The first-named book tells you how to mount objects. *Morphology and Physiology*, by William Ramsay McNab, and published by Longmans, Green & Co., Paternoster Row, is 6d. Edmond's *Botany* by the same publishers is about 2s. Both would give you information with illustrations about the structure of plants, but nothing about mounting. With the small amount of time at your disposal at present we do not think it would be worth your while to attempt permanent mounting, as it is a tedious process to

begin with, though there is nothing but time and patience to hinder you from succeeding. A winter or summer course of practical botany at a class would be of immense assistance. Nevertheless we advise you to make a start on your own account. A microscope, a glass slide or two, and a good razor are all that you want for a time. The objects could be mounted in water or glycerine temporarily while you make notes of everything you examine. Study the structure of roots, stems, and leaves in transverse and longitudinal section, and you will soon get familiar with many things. When you meet with difficulties communicate with us again.

Book on Fruit Culture.—Omega: The book concerning which you ask may be obtained from Mr. B. Wells, the Fruit Nurseries, Crawley, Sussex. The price is rs., exclusive of postage.

Crop of Potatos.—Omega: We consider 14 tons, 11 cwt. of Potatos a very good crop indeed. About 6 tons is the average on many soils. On the contrary as much as 22 tons or more have been dug from rich, well-tilled, and well-manured soils; but this is only in the case of certain heavy cropping varieties.

Sweet Pea Seeds.—M. M'L.: By all means let them hang upon the plants as long as possible. If you have any particular favourites you would like to save you might throw a piece of tiffany or shading over them at night when frost threatens. When you are at last obliged to gather them do not shell them. A better plan would be to gather the stems and hang them up in bunches in a dry cool shed. The next better plan would be to gather the pods and put them thinly into pots, boxes, or baskets, placing them in a dry, cool place till the seeds turn black of their own accord. By these means the Peas will continue to derive sustenance from the pods or from the stems for some time till they get dried up. On no account shell them till then. If quite firm now they will ripen tolerably well even if gathered and treated as directed.

Temperature for Ripe Grapes.—Omega: After the Grapes are thoroughly ripe keep them as nearly as possible at a temperature of 45°. The atmosphere must be kept as dry as possible by proper ventilation day and night. The artificial heat necessary will dispel the moisture so long as you keep the ventilators open, only a little, of course, at night, but sufficient to let the moisture escape. The borders must not be allowed to become too dry so long as Grapes are still hanging.

Names of Plants.—Inquirer: 1, Aster, *Novae-Angliae pulchellus*; 2, Aster not recognised; 3, Aster *Amellus*; 4, Aster *Novi-Belgii* var.; 5, Aster *Novi-Belgii* Harpur Crewe; 6, Aster *Drummondii elegans*.—P.M.: *Croton* not recognised.—Omega: 1, *Enchanter's Nightshade* (*Circaea lutetiana*); 2, *Persicaria* (*Polygonum Persicaria*).—J.C.S.: 1, *Clematis recta*; 2, the single form of *Zinnia elegans*.—H.C.: 1, *Helianthus orgyalis*; 2, *Rudbeckia speciosa*; 3, *Helenium autumnale*; 4, *Aster diffusus horizontalis*; 5, *Sedum epectabile*.—T.W.: 1, *Clematis Flammula*; 2, *Lonicera sempervirens*; 3, *Cattleya dowiana aurea*; 4, *Oncidium varicosum*; 5, *Cypripedium barbatum* var.; 6, *Oncidium incurvum*.

Names of Fruits.—Salen: 1, Ribston Pippin; 2, Cellini; 3, Hawthornden; 4, not known; 5, not known; 6, Claygate Pearmain; 7, Keswick Codlin; Plum, Mitchelsons.—James Robertson: 1, Duke of Devonshire; 2, Autumn Pearmain; 3, Scarlet Nonpareil; 4, Grange Pearmain; 5, not known; 6, Keswick Codlin.—J. L.: 1, Beurré Clairgeau; 2, Marie Louise d'Uccle; 3, decayed; 5, William's Bon Chretien; 6, Dumelow's seedling.—P.M.: 1, not known; 2, Duchess of Oldenburg; early Pear, rotten.

Communications Received.—E. H. Krelage & Son.—J. C. Clarke.—A. C.—J. MacBride.—Polton (see next week).—African Critic.—P. M. Cowan.—Joseph Darby (will communicate later).—J. Sullivan.—H. C. Zwart.—The House.—G.—S. R.—James L.—Toby.—Saxenby.—Rob.—C. L. O.

TRADE CATALOGUES RECEIVED.

THOS. S. WARE, Hale Farm Nurseries, Tottenham, London.—Bulb Catalogue of Tulips, Hyacinths, Crocus, Lilies, Narcissi, Iris, &c.; also catalogue of Carnations, Picotees, Roses, Clematis, Paeonies, &c.

JAMES CARTER & Co., 237, 238, and 97, High Holborn, London.—Carter's Bulbs as supplied to the Royal Parks and Gardens of London.

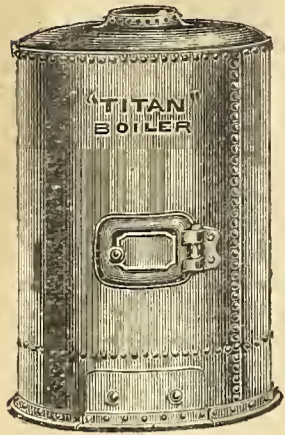
W. & J. BIRKENHEAD, Fern Nurseries, Sale, Manchester.—Ferns and Selaginellas. Special Autumn List.

DICKSONS & Co., 1, Waterloo Place, Edinburgh.—Bulb Catalogue.

J. CHEAL & SONS, Lowfield Nurseries, Crawley, Sussex.—Catalogue of Ornamental Trees and Shrubs.

The Crop of Grapes of the famous Vine at Fontainebleau, recently sold by auction, realised £143. There were 137 lots of 56 lbs. each or thereby. The highest price for one lot was £1 15s. This price has not been exceeded during the past eleven years.

HEATING APPARATUS.

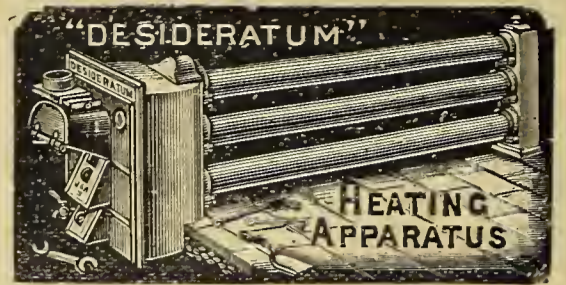


Our "TITAN" Boiler for large ranges of pipes is unequalled. Estimates for complete apparatus.

W. Jones' Treatise, "Heating by Hot Water," 220 pages; Cloth, 2s. 10d. post free.

Our 1897 CATALOGUE contains the largest assortment of Fittings, best selection of Boilers, greatest variety of Radiators, Valves, Gratings &c., of any in the Trade. 460 pages, Free.

MEDALS AND HIGHEST AWARDS WHEREVER EXHIBITED.



Supplied with various arrangements. Special Price List prepared for complete apparatus for Greenhouses 3 feet to 40 feet long. Estimates for larger Houses.

Works and Head Offices: STOURBRIDGE. London Branch: 35, Old Queen St, WESTMINSTER, S.W.

RETARDED Lily of the Valley Crowns NOW FROM ICE.

A LADY writes:—"These 'retarded' Crowns are the most delightful, inexpensive floral invention of the age, and Mr. Jannoch deserves the universal gratitude of all lovers of flowers.

WRITE FOR LIST.

T. JANNOCH,

Lily of the Valley Grower to H.R.H. the Prince of Wales. DERSINGHAM, KING'S LYNN, NORFOLK.

NEW BOOKS ON GARDENING.

- Amateur Orchid Cultivator's Guide Book** (second edition), Illustrated with four Coloured Plates. By H. A. Burberry, F.R.H.S. Price, 5s.; post free, 5s. 6d.
- The Amateur's Handbook on Gardening** (second edition), with Valuable Special Articles by Several Renowned Gardeners. Price, 2s. 6d.; post free, 2s. 9d.
- How to Grow Vegetables and Fruit for Profit and Exhibition** (second edition). By George Garner. Price, Boards, 1s.; Cloth, 1s. 6d.; post free, 2d. extra.
- The Popular 6d. Book on Gardening.** By Celebrated Specialists. Post free, 8d.
- Modern Chrysanthemum Culture for the Million.** By Two Eminent Growers, in Press, will be ready shortly. Price, 6d.; post free, 8d. Sold by the principal Seed Merchants, or direct from the Printers and Publishers.

BLAKE & MACKENZIE, School Lane, Liverpool.

USE Pure Ichthemic Guano For Garden or Greenhouse. Sold Everywhere.

No worm or other vermin can possibly enter a plant where

Porter's Patent Invincible Crocks

is used. Neither boards, slates, nor ashes are required to stand the pots on, so that money, time, and injury to plants are saved; they fit any pot, and last for many years. All Chrysanthemum growers should use them. Mr. J. Crawford, Coddington Hall Gardens, Newark, when writing in "The Bazaar" about these Crocks, says—"I now use them for anything and everything that is of the least value, and I am quite confident that when as well known as they deserve to be, no other Crock will be used."

30, 1s.; 100, 3s.; 1,000, 25s.; Carriage Paid.

A. PORTER, STONE HOUSE, MAIDSTONE.

DARLINGTON'S HANDBOOKS

"Sir Henry Ponsonby is commanded by the Queen to thank Mr. Darlington for a copy of his Handbook."

"Nothing better could be wished for."—British Weekly. Far superior to ordinary guides."—London Daily Chronicle.

1s. each. Illustrated. Maps by JOHN BARTHOLOMEW, F.R.G.S.

- BOURNEMOUTH AND THE NEW FOREST.**
- THE ISLE OF WIGHT.**
- THE CHANNEL ISLANDS.**
- BRECON & ITS BEACONS.**
- THE WYE VALLEY.**
- ROSS, TINTERN, and CHEPSTOW.**
- ABERYSTWITTH, BARMOUTH, and CARDIGAN BAY, &c.**
- MALVERN, HEREFORD, WORCESTER & GLOUCESTER**
- BRISTOL, BATH, CHEPSTOW & WESTON-SUPER-MARE**
- LLANDRINDOD, WELLS, AND THE SPAS OF MID-WALES**

3s. 6d. net. 60 illustrations. 24 maps and plans.

LONDON AND ENVIRONS. By E. C. COOK and E. T. COOK, M.A.

Crown 8vo, cloth, 2s. **THE BIRDS, WILD FLOWERS, FERNS, AND GRASSES OF NORTH WALES.**

Llangollen—DARLINGTON & Co., London—SIMPKIN, MARSHALL & Co., LTD.

PHOTOS (Birthday, Xmas, and Season Cards) of Scenery Ruins, &c., in Italy, Greece, Turkey, Asia Minor, Palestine and Egypt, 1s., 1s. 6d., 2s., and 2s. 6d. each.

Specimen and List, 1s. DARLINGTON & Co., Llangollen.

A Special Offer to Readers of THE GARDENING WORLD.

25/- BOOK for 8/-

NO HOME SHOULD BE WITHOUT ONE

Ogilvie's Encyclopædia

OF USEFUL INFORMATION AND WORLD'S ATLAS.

No Single Book ever before contained such a Wealth of Knowledge.

21097. COUPON.

OGILVIE'S ENCYCLOPÆDIA OF USEFUL INFORMATION, AND WORLD'S ATLAS, PRICE 25s. 16 COUPONS, AND 6d. WITH EACH.

Name _____

Address _____

Postal Orders or 3d. stamps may be sent. COUPONS AND CONTRIBUTIONS MAY BE LEFT at or SENT TO the Office for THE PUBLISHER OF

THE GARDENING WORLD.

COPIES OF THIS BOOK CANNOT BE BOUGHT. They can be obtained only by using these Coupons.

INDEX TO ADVERTISEMENTS.

| | |
|---------------------------------|--------------------------------|
| Auction Sales. | Horticultural Builders. |
| Protheroe & Morris..... 66 | J. Boyd & Sons..... 65 |
| Bulbs. | W. Cooper, Ltd..... 79 |
| Barr & Sons..... 67 | J. Gray..... 65 |
| W. B. Hartland..... 65 | Messenger & Co..... 80 |
| T. Jannoch..... 78 | W. Richardson & Co..... 80 |
| R. Sydenham..... 65 | J. Weeks & Co..... 65 |
| Sutton & Sons..... 65 | Insecticides |
| J. J. Thoolen..... 67 | Gishurst Compound..... 65 |
| J. Veitch & Sons, Ltd. ... 66 | Manures. |
| E. Webb & Sons..... 66 | Anglo-Continental..... 65 |
| C. G. Van Tubergen..... 65 | Clay & Son..... 80 |
| Catalogues. | W. Colchester..... 80 |
| Barr & Son..... 65 | Icibemic..... 80 |
| R. H. Bath..... 65 | Laws'..... 80 |
| Bunyard & Co..... 65 | Tamar Chemical Co..... 80 |
| Ant. Roozen & Sons..... 65 | W. Thomson & Sons... 80 |
| Sutton & Sons..... 65 | Miscellaneous. |
| J. Veitch & Sons, Ltd. ... 66 | Blow's Bees..... 80 |
| E. Webb & Sons..... 65 | Gishurst..... 65 |
| Florists' Flowers. | Hailstorm Insurance..... 65 |
| R. H. Bath..... 65 | Potter's Felt..... 65 |
| H. Cannell & Sons..... 66 | Smyth's Baskets..... 65 |
| Dobbie & Co..... 67 | Orchids. |
| Kelway & Son..... 65 | J. Cypher..... 66 |
| Lalng & Mather..... 67 | Leeds Orchid Co..... 65 |
| S. Pye..... 65 | W. L. Lewis & Co..... 65 |
| Surrey Seed Co..... 65 | P. McArthur..... 80 |
| Young & Co..... 65 | F. Sander & Co..... 65 |
| Flower Pots. | Publications. |
| Sankey & Sons, Ltd..... 80 | Blake & Mackenzie..... 78 |
| Fruit Trees. | Darlington..... 78 |
| G. Bunyard & Co..... 65 | Ogilvie..... 78 |
| Cbeal & Sons..... 80 | Roses. |
| Garden Sundries, &c. | Dobbie & Co..... 67 |
| J. Arnold..... 66 | James Walters..... 65 |
| Hirst, Brooke & Hirst... 65 | Seeds. |
| Horne's fruit-tree dressing 66 | Dobbie & Co..... 67 |
| A. Outram..... 80 | Hugh Low & Co..... 65 |
| Porter's Crocks..... 64 | Strawberries. |
| Hardy Plants | Laxton Bros..... 65 |
| A. Swanson..... 65 | Trees. |
| Heating Apparatus. | W. Cooper, Limited... 79 |
| W. Cooper, Limited... 79 | Jones & Attwood..... 78 |
| Jones & Attwood..... 78 | Thames Bank Iron Co... 65 |
| Thames Bank Iron Co... 65 | |

GARDENING BOOKS.

HARDY ORNAMENTAL FLOWERING TREES AND SHRUBS, by A. D. WEBSTER. A valuable guide to planters of beautiful trees and shrubs for the adornment of parks and gardens. Second and cheap edition now ready. Price, 2s.; post free, 2s. 3d.

CHRYSANTHEMUMS AND THEIR CULTURE. By Edwin Molyneux. Ninth Edition. By far the best practical work yet written on this subject, Price, 1s.; post free, 1s. 2d.

VINES & VINE CULTURE.—The best book on Grapes. By Archibald F. Barron, late Superintendent of the Royal Horticultural Society's Garden, Chiswick, and Secretary of the Fruit Committee.—A New and Cheaper Edition, Revised and Enlarged. Demy 8vo, Handsomely Bound in Cloth. Price, 5s.; post free, 5s. 3d.

THE CARNATION: ITS HISTORY, PROPERTIES, AND MANAGEMENT; with a descriptive list of the best varieties in cultivation. By E. S. Dodwell, Third edition, with supplementary chapter on the yellow ground. Price, 1s. 6d.; post free, 1s. 7d.

FERNS & FERN CULTURE. By J. Birkenhead, F.R.H.S.—How to grow Ferns, with selections for stove, warm, cool and cold greenhouses; for baskets, walls, wardian cases, dwelling houses, &c. Price, 1s.; by post, 1s. 3d.

THE AMATEUR ORCHID GROWER'S GUIDE BOOK. By H. A. Burberry (Orchid Grower to the Rt. Hon. J. Chamberlain, M.P.). Second Edition, with coloured plates. Containing sound, practical information and advice for Amateurs, giving a List with Cultural Descriptions of those most suitable for Cool-house, Intermediate-house, and Warm-house Culture, together with a Calendar of Operations and Treatment for each Month of the Year. In Cloth. Price 5s.; post free, 5s. 3d.

Postal and money orders should be made payable at the East Strand Post Office to F. A. COBOLD

"GARDENING WORLD" Office, 1, Clement's Inn, Strand, London, W.C.

Agricultural Economist.

AN ILLUSTRATED MONTHLY MAGAZINE of 52 pages and cover Exponent of scientific and high-farming; advocate of co-operation in agriculture, in the supply of farm requisites and the sale of produce; organ of the Agricultural and Horticultural Association, the pioneer society for mutual supply of pure oilcakes, complete manures, reliable seeds and implements on wholesale terms. Specimen copy free. Subscription per annum, 5s. inclusive of postage. Single Copies 6d. each, through all Newsagents,—3, AGAR STREET, STRAND, LONDON, W.C.

"AMERICAN GARDENING."

An Illustrated Journal of Horticulture, published in the interests of the amateur in the Garden, the Conservatory, the House, the Fruit and Vegetable Grower, Trees, Shrubs, and Flowers.

The Leading American Horticultural Authority. Issued weekly, and mailed, postage paid, to English subscribers for a 6s. money order.

Address, "AMERICAN GARDENING," 170, Fulton Street New York, U.S.A.

The Gardening World.

ESTABLISHED 1884.

Price One Penny; Post Free, Three-halfpence Subscription (including postage): 3 months, 1s. 8d. 6 months, 3s. 3d.; 12 months, 6s. 6d., prepaid.

Foreign Subscriptions to all countries in the Postal Union, 8s. 8d. per annum, prepaid.

Published every Thursday morning, and can be obtained through all Newsagents and Booksellers, and from all Railway Bookstalls.

WEBB'S' BULBS

Free by Post or Rail.

Finest Selected Roots.

WEBB'S' 21/- BOX
FOR
GREENHOUSE DECORATION,
&c.,

- | | |
|---------------------------------------|---|
| 1 Amaryllis Formosissima | 25 Scilla Sibirica. |
| 100 Crocus, five choice varieties. | 100 Snowdrops. |
| 12 Chionodoxas. | 6 Tulips, Duc Van Thol, scarlet. |
| 6 Freesias. | 18 Tulips, early single, six varieties. |
| 18 Hyacinths, choice named varieties. | 6 Tulips, Rex Ruhrorum, double. |
| 9 Jonquils, sweet-scented. | 6 Tulips, Tournesol, double. |
| 6 Narcissus Bulbocodium. | |
| 9 Polyanthus Narcissus. | |

OTHER BOXES, from 5s. to 105s. each.

WEBB'S' BULB CATALOGUE,

Beautifully Illustrated, and containing complete cultural instructions, Post Free, 6d. Gratis to customers.

Seedsman by Royal Warrants to H.M. the Queen and H.R.H. the Prince of Wales.

WORDSLEY, STOURBRIDGE.



H. CANNELL & SONS'
Cannas, Begonias, Pelargoniums,
Carnations, Gloxinias, &c., &c.

FINEST DISPLAY & COLLECTIONS IN THE WORLD.

Our Nurseries will be found now and all the season the most interesting and edifying probably of any similar establishment in England. All admirers of good gardening will save and derive considerable benefit by sending for Catalogues and making themselves thoroughly acquainted with our firm. All kinds of Bedding Plants are ready and sent off at an hour's notice.

SWANLEY, KENT.

J. J. THOOLEN,

BULB AND PLANT GROWER,

Overveen, near Haarlem, Holland,

Has the honour to inform his clients that his Illustrated Price List in English, Autumn, 1897, at lowest prices, will be sent post free on application. NO CHARGES FOR PACKING. ORDERS OF 10s. AND ABOVE ENTIRELY FREE TO DESTINATIONS in England, Scotland, and Ireland, &c.

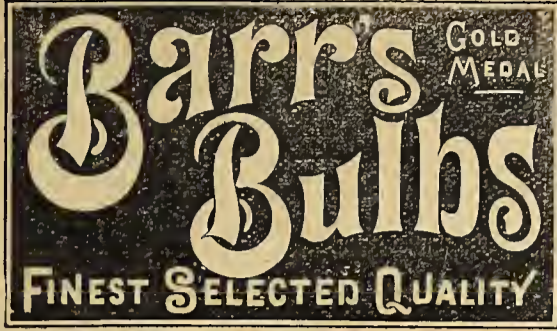
Some sorts of Bulbs noted in our Price List. Per 100. 1,000.

| | s. d. | s. d. |
|---|-------|-------|
| Single Anemones, The Bride, pure white ... | 1 4 | 12 6 |
| Single Anemones, in finest mixture ... | 1 2 | 11 0 |
| Crocus, in finest mixture, second size ... | 8 8 | 6 3 |
| Crocus, in finest mixture, first size ... | 1 4 | 10 2 |
| Hyacinths, mixed, for bedding or forcing ... | 8 10 | 83 4 |
| Hyacinths, single, first size, named, in several best leading sorts red, white, and blue varieties equal quantities, my selection ... | 16 0 | — |
| Iris Kaempferi (Japan Iris), in finest mixture ... | 5 0 | 40 0 |
| Iris Germanica (Flag Iris), in finest mixture ... | 6 8 | 60 0 |
| Iris sibirica, all sorts mixed ... | 5 0 | 40 0 |
| Spanish Iris, in the finest mixture ... | 0 6 | 4 2 |
| Lilium tigrinum splendens, rich red-black spots ... | 8 0 | 70 0 |
| Lilium candidum, single, pure white ... | 10 0 | — |
| Montbretia crocosmiaeflora, orange-scarlet ... | 1 6 | — |
| Narcissus Polyanthus, in the finest mixture ... | 2 6 | 23 4 |
| Narcissus poeticus Pbeasot's-eye ... | 1 0 | 8 4 |
| Narcissus campenelle (Jonquil) ... | 1 2 | 10 0 |
| Narcissus double incomparable, primrose ... | 1 6 | 14 0 |
| Narcissus Van Slon, single yellow trumpet ... | 2 6 | 23 4 |
| Narcissus Stella, white, yellow cup ... | 1 4 | 12 6 |
| Narcissus alho-pleno (dbl. poeticus), pure white ... | 1 6 | 14 0 |
| Gladiolus Marle Lemoine ... | 5 6 | — |
| Scilla sibirica praecox, intense blue ... | 1 0 | 8 4 |
| Ixias, in the finest mixture ... | 0 6 | 4 6 |
| Single early Tulips, in the finest mixture ... | 1 0 | 9 6 |
| Double early Tulips, in the finest mixture ... | 1 4 | 12 6 |
| Duc Van Thol Tulips, in fine mixture, excellent for early forcing ... | 2 6 | 20 0 |
| Grape Hyacinth, blue ... | 0 7 | 5 4 |
| Anemone Japonica, pure white, Wind-flower ... | 5 0 | — |
| Anemone japonica, rose Wind-flower ... | 6 0 | — |
| Hemerocallis Day Lily, mixed ... | 10 0 | — |
| Gladiolus Brencchleyensis, deep scarlet ... | 2 0 | 19 0 |
| Ooothera Youngi, pure yellow bells ... | 10 0 | — |
| Allium magicum, white sweet-scented ... | 3 0 | — |
| Pyrethrum Bridesmaid, with fine double pure white flowers ... | 15 0 | — |
| Sedum Selfskianum, with many pure yellow flowers ... | 10 6 | — |
| Tritoma Uvaria grandiflora (Red-hot Poker) ... | 14 6 | — |

250 bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.

COLLECTION D for spring garden, containing 1,370 bulbs, £1 1s.; half of this, 11s.

COLLECTION B for indoor, containing 529 bulbs for 92 pots or glasses, £1 1s.; half of this, 11s.



HYACINTHS, for Pot Culture, with fine handsome spikes.

One each of twelve named varieties, 5s 6d.

Do., do., un-named, in a good variety of colours, per dozen, 4s.

HYACINTHS, Dwarf White Roman, for Early Forcing.

Per 100, 10s. 6d. and 15s.;

Per doz., 1s. 6d. and 2s. 3d.

HYACINTHS, Barr's Beautiful Rainbow Mixture, for Beds and Borders, outdoors.

1st size bulbs, per 100, 17s. 6d.; per doz., 2s. 6d.

2nd " " per 100, 13s. 6d.; per doz., 2s.

TULIPS, Barr's handsome varieties, for pots.

Three each of twenty named sorts, 6s. 6d.

" Barr's Beautiful Rainbow Mixture, Single

or Double, per 1,000, 42s.; per 100, 4s. 6d.

CROCUSES, Barr's choice Large-flowered sorts,

for pots, &c., 100 in 10 named vars., 3s. 6d.

" Barr's Special Mixture, for planting in

grass, &c., per 1,000, 10s. 6d.; per 100, 1s. 3d.

ILLUSTRATED CATALOGUE of HYACINTHS, TULIPS, CROCUSES, SNOWDROPS, POLYANTHUS NARCISSI, and all the Best Bulbs for Spring and Summer-flowering.

FREE ON APPLICATION.

BARR'S ILLUSTRATED DAFFODIL CATALOGUE, FREE ON APPLICATION TO—

BARR & SONS,
12 and 13 KING ST.,
COVENT GARDEN, LONDON.



"Gardening is the prnest of hman pleasnres, and the greatest retrebtment to the spirit of man."—BACON

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, OCTOBER 9th, 1897.

NEXT WEEK'S ENGAGEMENTS.

- MONDAY, October 11th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
- TUESDAY, October 12th.—Royal Horticultural Society: meeting of committees at 12 o'clock.
- Early Autumn Chrysanthemum Show of the National Chrysanthemum Society at the Royal Aquarium (4 days). Sale of Dutch bulbs by Messrs. Protheroe & Morris.
- WEDNESDAY, October 13th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
- THURSDAY, October 14th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
- FRIDAY, October 15th.—Sale of Dutch bulbs and Orchids by Messrs. Protheroe & Morris.

BRITISH GROWN FRUIT—The general public have again had an opportunity of seeing for themselves what British soil and climate can do under the guidance or control of skilled cultivators in the production of fruit. This applies more particularly to fruit grown in the open air, for the atmospheric influence in glasshouses is even more decidedly under the control of the growers. It would be interesting to learn if the more successful exhibitors, or any of them, took any steps to protect their fruit trees while in bloom, seeing that there has been such an outcry about the scarcity of fruit in general, and of some kinds in particular. The past spring and summer, we are aware, have been very inimical to the interests of fruit growers in certain localities, but we have had good evidence

that Apple trees, at least in many gardens, brought a very satisfactory crop of fruit to maturity, without any protection whatever. The quality of the bulk of the Apples shown at the Crystal Palace on Thursday, Friday, and Saturday of last week was beyond reproach; though we feel confident that none of the exhibitors staged anything inferior to their best. We may say at once that Apples took the leading position both for quantity and quality. Pears were deficient in quantity compared with former years, particularly in the class for a collection of fifty distinct varieties, and in the large non-competitive exhibits, whether staged by the trade or the private grower. Peaches, Nectarines, Plums, and even Figs were more strongly represented than we have seen them. On the whole the exhibits were greatly in excess of last year judging from the extra number of plates in requisition.

Grapes were decidedly a feature of the show for various reasons. The bunches were more numerous than usual and better displayed, having been arranged on long, continuous tables, so that visitors in passing between the tables could see two long rows at least. There were many weak bunches, and all the entries in the class for Madresfield Court, in our opinion, were weak. In some of the other classes the Grapes seemed to have suffered considerably by rubbing during transit to the show. On the contrary all of the entries in the classes for Muscat of Alexandria and Alicante were very creditable, being the best in the show. Concerning Figs, we may say that three varieties were shown, of which Brown Turkey took the lead for quantity and quality as well. All the three prizes were awarded to as many dishes of this variety. The huge fruits of Brunswick came next in point of number. Though inferior in quality to Brown Turkey, some are of opinion that the great size of its fruits is telling upon the exhibition table; but in this case, at least, the judges were of a different opinion.

The Apple is the king of British fruits both in the matter of usefulness, fine appearance, and the certainty with which it can be grown in our climate. It fully upheld its reputation on this occasion in spite of the alleged scarcity. There is one phase of Apple culture that well deserves attention in the matter of experiment, and that is, can the trees in an orchard be so regulated as to bear an average or satisfactory crop every year, instead of an indifferent crop or none at all, except at intervals of some years? At present, we may never have an entire failure in any one year, but that is largely due to the great number of varieties in cultivation, and the fact that some or other of them are sure to be in bearing. We commend the matter to the attention of the British grower, and urge him to endeavour to find a solution of the problem, whether every variety can be made to bear annually by preventing over-cropping or otherwise regulating production. This would have a great bearing on supply and demand, thereby preventing great fluctuations in price, due to scarcity, and a plethora of fruit in different seasons. Orchard house culture certainly has some bearing upon the question, inasmuch as the setting of the fruits is rendered more certain by the protection afforded; but although practised in private establishments and to a smaller extent, perhaps, by nurserymen, this method cannot be adopted to advantage on a large scale for market purposes, on account of the much greater cost of production.

The practised eye has no difficulty as a rule in detecting those fruits which have been grown and matured under glass. The pale and clear skin of the fruits, particularly

of Apples, has a telling appearance; but it is questionable whether the ruddy glow of Apples ripened in the open air does not indicate better quality and flavour than house grown fruit. Sun and air improve the flavour of all kinds of fruit with which we are acquainted; and to get the best results with Apples, consumers have merely to wait a little longer for perfect maturity. This we shall say, however, that Apples grown in pots housed in spring and early summer set with more certainty, at least in districts with a clear atmosphere; and the fruits are more likely to be thinned than if grown upon trees in the open, thereby ensuring size. Colour and flavour can then be secured by standing the pot-trees out of doors when the weather becomes favourable. This method is both reasonable and practicable, and the results obtained are wonderful. There is no question that the finest fruits are obtained from young trees; and it is equally certain that the largest and best coloured fruits come from the southern counties of England, particularly Kent, Sussex, and Devon. Visitors to the Crystal Palace last week had ample opportunity of proving this, both in the case of Apples grown by nurserymen and by gentlemen's gardeners. In the matter of flavour the awards were more widely distributed; the best flavoured Apple (Ribston Pippin) coming from Sussex, while Cox's Orange, which was second, came from Bucks. The best flavoured Pear (Louise Bonne of Jersey) came from Berks, while the second award went to Kent for Fondante d'Automne.

Amongst Apples there were magnificent samples, both as to size and colour, of Peasgood's Nonsuch, Gascoigne's Seedling, King of Tomkins County, Emperor Alexander, King of the Pippins, Annie Elizabeth, Crimson Queen, Col. Vaughan, Calville Rouge Precoce, Mother, Dumelow's Seedling, Hoary Morning, Bismarck, The Queen, Worcester Pearmain, Lady Sudely, Cox's Pomona, Mère de Menage, Newton Wonder, and many others. Naturally, the above are all highly coloured Apples; but those from Kent, Sussex, and Devon, had to be seen to be fully realised.

Amongst Pears there were really grand samples of Pitmaston Duchess, Duchess d'Angoulême, Conference, Durondeau, Calebasse Grosse, Beurré Clairgeau, Louise Bonne of Jersey, Marie Louise, Souvenir du Congrès, the new variety Marguerite Marillat, Beurré Hardy, Beurré Bosc, and others. The more sober colours of Pears, whether grown in the open air or under glass, fail to produce that effect on visitors which Apples do. Only one class was set apart for cooking Pears, but grand samples of Catillac, Uvedale's St. Germain, and Bellissime d'Hiver were shown in the large collections, competitive and non-competitive. In the latter case there were splendid tables of fruit from Middlesex, Surrey, Bucks, and other counties. The large Pineapples, Royal Jubilee Tomatos, Apples, and Pears from the Royal Gardens, Windsor, were a source of great attraction to the public.

The crops in Victoria, Australia, have greatly benefited by the splendid rains which have fallen all over the Colony.

Progressive Fruit Culture at the Cape.—A writer in *The African Critic* states that during the week a report has reached England that Mr. Rhodes is quietly supplying capital to farmers in the Western districts of Cape Colony, with a view to the development of progressive fruit culture there. If true, this fact will greatly increase British interest in the Cape fruit trade. Next week I shall deal with the general question, on the basis of Professor MacOwan's recent deliverances thereon.

Mr. Joseph Stoney, for fourteen years head gardener to Sir Thomas Earle, Bart., has been appointed head gardener to the Hon. Frederick G. Wynn, Glynllivon Park, Carnarvon. Mr. Stoney commenced his duties on the 6th inst.

Mr. J. Smith, who has been for the last ten years foreman in the Orchid collection of R. I. Measures, Esq., Cambridge Lodge, Flodden Road, Camherwell, has succeeded Mr. Burberry as Orchid grower to the Right Hon. J. Chamberlain, Highbury, Birmingham.

The Palace Fruit Show.—Some fifteen or sixteen leading provincial dailies were represented at the above show, and reports of the leading exhibits appeared north and south the next morning. Possibly the frequent special editions of *THE GARDENING WORLD* are waking up some of our contemporaries to a sense of duty with regard to these leading horticultural shows.

Mr. Alexander Duncan, for the past four years foreman at Stoneywood House, Aberdeenshire (the residence of A. G. Pirie, Esq.) has been engaged as head gardener to Mrs. Gray, Carsegray House, Forfar, N.B. Mr. Duncan is quite a young man, and has had a long career of gardening. His horticultural friends will be sorry to hear of him leaving the locality, as he took a keen interest in shows, and especially in Chrysanthemums, of which he was an expert grower; and his friends trust to hear of Mr. Duncan's success in the south.—*J. J.*

Edwards on Cyclamen.—This useful little brochure has reached its third edition, and has been considerably enlarged in the process. The author, Mr. F. C. Edwards, of Leeds, is a well-known horticulturist, and deals with his subject tersely, yet fully to the point. He emphasises the necessity for watchful care in the matter of moisture whilst the infant Cyclamen are cradled in the seed pan; and dwells upon the fallacy which obtains among many as to the treatment of the plant at the third and final potting. Mr. Edwards certainly makes out a good case for the better cultivation of the Cyclamen, and we doubt not his present edition will be as widely in request as the two former issues. The book is published at 1s., and may be had from the author, Sholebroke View, Leeds.

Mr. John Weathers resigns.—We were very much surprised ten days ago on hearing that the assistant secretary of the Royal Horticultural Society had resigned his situation. He has done good work for the society during the eight years he has been its officer. Many a time we believe during the illness of his chief he had to conduct the affairs of the society unaided, and we doubt if as capable a successor can be found. The improvements in the library, the success of the Society's Journal, and the smooth and easy run of the affairs of the society generally have been largely due to his exertions. He was just the man for the post and it is a pity he is going. Incidentally, however, we hear that no successor is wanted. We shall see. Meantime we hope that Mr. Weathers will soon find some fitting and remunerative occupation for his talent and energy.

The Tobacco Plant Perennial.—For the last three centuries the Tobacco plant has been known in Europe, but during that time has been cultivated as an annual only. The seeds have been sown in heat, and the seedlings, after having attained some size, were planted in the open ground. The *Journal of the Society of Arts* says that hotanists and Tobacco planters have been mistaken. Wilhelm Daroezi, of Budapest, the editor of a Hungarian Tobacco journal, has proved that Tobacco is a perennial plant, which may be kept in full vigour for years, and that it then has fresh leaves every year. Should the leaves be of service for smoking the discovery will reduce the annual expense of raising fresh batches of seedlings annually. Two German manufacturers have kept Tobacco plants over winter, and one of them has had a plant for seven years. We ourselves have proved that *Nicotiana affinis* is a perennial. In many parts of the south of England it lives over winter in the open air, and springs up again from the roots in spring. *Tropaeolum majus*, *T. minus*, and Scarlet Runners (*Phaseolus multiflorus*) have been proved to be perennials. It is also a fact that although the Castor Oil Plant (*Ricinus communis*) is grown as an annual only in this country, it becomes a small tree in the tropics.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, October 12th, in the Drill Hall, James Street, Victoria Street, Westminster, 1 to 5 p.m. A lecture on "Some Curiosities of Orchid Breeding" will be given by Mr. C. C. Hurst at 3 p.m.

Severe Thunderstorm.—Between seven and nine o'clock on the evening of Wednesday, the 29th ult., a severe thunderstorm raged over several of the southern counties of England, including Middlesex, Surrey, and Kent. A tremendous downpour of rain and hail flooded many parts of London and other places, doing considerable damage to autumn flowers and plants in gardens.

Monster Cabbage.—In the shop of Mr. T. Oliver, merchant, Buccleuch Street, Hawick, there is at present on view a Cabbage weighing 49 lbs, which was grown by Mr. Horne, head forester to the Duke of Buccleuch, in his garden at Newmill-on-Teviot. It was weighed several times in the presence of several people, and when growing measured about 6 ft across. Mr. Horne is famed in the neighbourhood as a most enthusiastic and successful cultivator of vegetables. The above Cabbage was, of course, in the pink of condition, and not in any way hurt when cut.

Serious Illness of Mr. H. J. Jones.—We were grieved to hear on Thursday of last week that our good friend, Mr. Jones, of Ryecroft fame, had, upon his return from a Continental tour, been seized with a serious affection of the throat, and was very seriously ill. Enquiries and expressions of sympathy were numerous, particularly from many of his friends who missed him from the Palace Show last week. In response to a telegraphic enquiry made just prior to going to press we have before us a telegram stating that the patient is past danger and steadily improving. We are fully sure that our readers will join us in wishing Mr. Jones a speedy convalescence, and a rapid recovery of his usual good health.

Corbridge and District Gardeners' Mutual Improvement Society.—A meeting of this society was held in the Town Hall on Tuesday evening, Mr. Irving, Dipton Gardens, presiding. The minutes of the preceding meeting having been read and approved, the chairman called upon Mr. Cameron, Byethorne Gardens, to deliver his address, the subject being "The extension or restriction systems of Vine culture." The writer dealt very exhaustively with both systems. A good discussion followed the reading of the paper, the chairman remarking that the meeting was the most interesting and successful held by the society, an opinion endorsed by the older members present, and due to the excellent paper by Mr. Cameron. A hearty vote of thanks was accorded to him, and also to the chairman for presiding, which brought a successful meeting to a close.

Victoria Jubilee Championship.—We note from the prize schedule of the Ulster Horticultural Society that seven prizes amounting to £100 are offered for competition in one class on the occasion of their grand show of Chrysanthemums to be held in St. George's Covered Market, Belfast, on Tuesday and Wednesday, 16th and 17th November, 1897. This class is termed the Victoria Jubilee Championship of £100 and three medals, which are presented by the Lady Mayoress of Belfast and the ladies of Ulster, for forty-eight Japanese Chrysanthemum blooms, at least thirty-six varieties, not more than two of any variety, all of which must be in commerce. A Gold Medal goes with the first prize of £40; a Silver Medal and £25 goes with the second; a Bronze Medal and £15 with the third; and £10, £5, £3, and £2 make up the remainder of the seven prizes respectively. The size of the stands and the classification of the flowers are to be governed by the regulations of the National Chrysanthemum Society. Altogether prizes are offered in 139 classes, so that the show promises to be a fine one. Entries are free, and must be made to the secretary, Mr. J. MacBride, on or before Tuesday, 9th November, on the Society's forms. All particulars may be obtained from Mr. J. MacBride, 2, Victoria Square, Belfast.

Nearly £300 daily passes across the counters of fashionable West-End florists.

Hawick Working Men's Horticultural Society.—The treasurer of this society, Mr. Geo. Davidson, is to be made the recipient of a handsome timepiece to-night (October 9th) at the hands of his fellow members.

Ealing Gardeners' Society.—The ninth annual general meeting of this society was held on the 31st ult., in the Municipal Buildings, Ealing. Mr. Chas. Jones, C.E., presided over a large attendance of members, the report and balance sheet being of a very satisfactory character. While the report stated that "the society was in a healthy and progressive condition," the balance sheet showed a result of £6 18s. 6d. on the year's work. The chairman said the report was in every way an admirable one, and proved that the society was very successful and useful. He recommended the younger members, especially, to enter into the spirit of research, which the writing of essays and papers necessarily involved. The following officers were then elected:—President, J. Harris, Esq., F.R.H.S.; vice-presidents, Messrs. R. Callard, R. Dawes, H. C. Green, J. Hughes, H. W. Peal, Chas. Jones, Mrs. Slade, S. A. Sewell, Rev. Dr. Oliver, W. Owen, and W. W. Richardson; committee:—Mr. C. B. Green (chairman), Mr. H. Burgess (vice-chairman), and Messrs. J. Baird, D. Cooper, H. J. Cox, C. Edwards, R. Green, C. F. Harding, A. Hawkins, H. Stiles, and W. J. Simpson; W. W. Richardson, Esq. (hon. treasurer), and Mr. W. Roberts (hon. secretary).

Royal Horticultural Society at the Crystal Palace.—Sir Trevor Lawrence presided at the gardeners' luncheon which took place, as usual, in the Garden Hall on the opening day of the fruit show. After the toast of "The Queen" had been honoured at the invitation of the president the toast of the "Crystal Palace Company" was given. Mr. Rait, the chairman of the company responded. He alluded, in the course of his remarks, to the rumour that had been circulated that the Palace was to be sold to a syndicate. This he said was untrue, for beyond an attempt to induce the London County Council to buy it nothing had been done, and the company's flag still flew from Sydenham Hill. He thought, however, that the Palace should be a national institution. The jubilee year had been a very trying one to them but the directors did not intend to shirk what they believed to be their duty. In conclusion he was pleased in the name of his brother directors to welcome the Royal Horticultural Society to the Crystal Palace, and should be pleased to welcome them on future occasions. The last toast, which was also proposed from the chair, was that of the judges, coupled with the name of Mr. Owen Thomas, the Queens' gardener at Frogmore. Mr. Owen Thomas responded.

Dutch Horticultural and Botanical Society.—At a meeting of this society on the 11th ult., the Floral Committee awarded First-class Certificates to Messrs. Corn. Ottolander & Son, of Apeldoorn, for *Abies concolor fastigiata*, *Aucuba japonica longifolia dentata*, and *Pseudotsuga Douglasii pendula*; to Mr. C. G. van Tubergen, Junr., of Haarlem, for *Cactus Dahlia Harry Stredwick*, and *Cactus Dahlia Ensigne*; to Mr. K. Wezelenburg, of Hazerswoude, for *Daphne Laureola foliis atropurpureis*, and *Physalis Francheti*; to Mr. A. T. Hendriksen, of Zeist for *Pennisetum macrurum*; and to Mr. D. Keuchenius of Hoogeveen for *Rosa Gloire de Deventer*. Certificates of Merit were accorded on the same occasion to Mr. Jac. P. R. Galesloot, of Amsterdam, for *Callistephus sinensis aureus*; to Mr. C. H. B. Alsche, of Velp, for *Medeola asparagoides* var.; to Mr. G. T. Hemerik, of Leiden, for *Cactus Dahlia Beatrice*, and *Dahlia Mahala Sheriff*; to Mr. C. G. van Tubergen, Junr., of Haarlem, for *Cactus Dahlia Beatrice*, and *Cactus Dahlia Miss Webster*; to Mr. W. van Veen, of Leiden, for *Cactus Dahlia Beatrice*; and to Messrs. J. W. Wigman & Son, of Zutphen, for the *Cactus Dahlias, Miss Webster, Crimson King, Green's Gem, Jessie, Mrs. Allhusen and Princess Ena*. The Vegetable Committee awarded Certificates of Merit to Messrs. Sluis Brothers, of Enkhuizen, for *Bean, Hollandsche Witte Reuzen*; and to Mr. A. Wulfsche, of Zwijndrecht, for a collection of *Tomatos* in fourteen varieties.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, has been awarded a Gold Medal at the Hamburg Exhibition on the 17th September last, for a splendid collection of tuberous Begonias and Dahlias.

West Wickham Nurseries.—Mr. John R. Box, of Croydon, continues to develop and organise his new nurseries at West Wickham, about four miles from Croydon. In the open ground he plants about 250,000 tuberous Begonias, which remain in the open from May to October, and continue in bloom from August till well into October. Several greenhouses are monopolised by the cream of the collection in pots, including many fine named varieties. The Begonias occupy about two acres, and since the rain came and long, dewy nights prevailed, the Begonias have made wonderful growth, and kept up a fine display. He grows a large collection of Roses, which have also been more or less floriferous during the autumn months. Herbaceous and alpine plants occupy several acres of the nursery. Ornamental and forest trees, Conifers, evergreen and deciduous flowering shrubs and fruit trees also make up a large and varied assortment. The nurseries are reached from Charing Cross to West Wickham station, breaking the journey or changing trains at Elmer's End, which is the terminus of the branch line at the end towards London.

The King of Siam at the Crystal Palace.—It was arranged that the King of Siam was to dine at the Crystal Palace at 7.30 p.m. on Friday, October 1st, but the time was altered to 7 p.m. to meet his Majesty's convenience. The table was laid by Messrs. Bertram & Co., of the Palace, and we had the pleasure of inspecting the table just before the arrival of the King. On the table were some magnificent Pineapples from the Royal Gardens, Windsor. Other fruits were Grapes, Durondeau Pears, Bananas, &c. Some large vases along the centre of the table were filled with flowers in season, including Chrysanthemums and *Pancreatum fragrans*, the latter diffusing a strong fragrance through the room. The table and all parts of the room were covered with red cloth. The room itself was situated immediately behind the Royal boxes, facing the grand organ in the central transept. At ten minutes past 7 the King and his party, including the Crown Prince of Siam, and some of his Majesty's eldest sons and nephews, made their appearance and were ushered into the dining-room. This must have been his last dinner before leaving this country; for he left the Siamese Legation in four of the Queen's landaus on Saturday morning at 10.45, travelling by Victoria and Dover on his way to Brussels. He will reach Paris on the 9th, after which he will visit Spain and Portugal.

"The House" (Horace Cox; sixpence monthly), a Magazine of Domestic Art, in its October issue, covers an exceptionally wide field. Leading off with a lengthy illustrated review of "The Arts and Crafts" exhibition at Lancaster—with admirable full-page portrait of the Countess of Bective, the President of the Council—it touches upon almost every phase of applied art. Lovers of needlework are appealed to in a chapter on Ecclesiastical Embroidery; the amateur worker will find much to interest and instruct in "Hints on Decorative Wood-staining," and the production of "A Carved Jewel Casket;" for collectors there are articles on "Chinese Porcelain," "A Piece of Pepys' Silver," "Heppelwhite Furniture," and "Bookbindings;" the theatre-goer will appreciate "A Scene from 'Rosemary,'" and by those to whom James Russell Lowell has become a "fireside friend," a plate illustrating an incident in "An Interview with Miles Standish" will be highly treasured. "Trafalgar Day" is not forgotten, for in "Some Furniture Associated with Lord Nelson" appears the great Admiral's portrait; his picturesque birthplace; the "Nelson" Room at the Star Inn, Yarmouth, and his table from the "Victory." The lady of the house will find her anxieties lightened by the recipes and menus fully set forth in "The Cook's Instructions," as also by the "Scheme for Table Decoration for the Month," and even serviette folding is not forgotten. The ventilation and warming of the home are exhaustively dealt with; door and window draping for the winter is illustrated and explained; the overcoming of "Household Difficulties" is made easy; "Chess Problems" are set and solved, and the humours of amateur cabinet-making have a

page to themselves. Last, but not least, in "Illustrated Answers to Correspondents," the editor acts as guide, counsellor, and friend to all in trouble with reference to matters of furnishing, decoration, household management, and the like.

Pat's Early Potatos—Pat was up one morning digging Potatos when the Laird came up and began conversation. Laird: "What sort of Potatos are those you're digging?" Pat: "They're raw ones, sir." Laird: "But I mean are they early or late?" Pat: "Sure sir, I think they must be early, for I've been up since four o'clock this morning at them."—*David Paton, Montrose, in The People's Journal.*

Mushroom Picking a Felony.—At Wrexham, on Monday, the 27th ult., a collier named Joseph Hughes, was charged with stealing Mushrooms, the property of Mr. William Charles Hughes, Pennant, Ruabon, agent to the Mayor of Wrexham. Accused was also charged with assaulting the agent, who, in explaining his case, stated that he cultivated the Mushrooms by dressing the field with salt. The Chairman (Captain Griffith Boscawen) asserted that a decision had recently been made to the effect that the gathering of cultivated Mushrooms was stealing. The defendant was fined 10s., with 15s. 6d. costs. At the same time the son of a collier, Thos. Williams by name, was fined 9s., including costs for a similar offence.

ORCHID NOTES & GLEANINGS.

Cypripedium Charlesworthii Clarke's var. *Nov. var.*—We are in receipt of a magnificent flower of this variety from Mr. J. O. Clarke, gardener to Ludwig Mond, Esq., The Poplars, 20, Avenue Road, Regent's Park, N.W. The dorsal sepal is the feature of the flower, and for that alone we think it well merits a distinctive name. It is orbicular, measuring $2\frac{1}{2}$ in. across, either way; and is of a rich dark purple, intensified along the centre and faintly tessellated with white towards the edges. The flower had been cut more than a week when these notes were made, and was, of course, much darker when it first expanded. The petals are dark brownish-purple and netted, while the lip is a shade or two paler. The staminode is white, the conical boss in the centre being tipped with yellow. Both owner and grower may well feel proud of it. The variety is named in compliment to the grower.

A FEW GOOD CREEPERS OR WALL PLANTS.

PAYING a visit a few weeks ago to an old friend and tutor, I was particularly struck with the charming appearance of the creepers and wall plants around the house. Many people who detest the sight of bare walls and fences fail at the same time to beautify these ugly spots and blanks, not because of a lack of suitable material surely, nor because of prohibitive prices. Why it is that more creeping and wall plants are not planted I cannot imagine. Nothing adds more to the charm of a garden, however small, than this class of plants; perhaps a simple arch or screen, or even a pole adorned with a Hop plant.

Every device and form of training these creepers was to be found in this garden, and many a pretty picture presented itself. Walking around the house on the terrace, the first to catch my eye was a magnificent plant of *Chimonanthus fragrans*, which as its name implies, is a winter flowering shrub. The plant in question, neatly trained to the wall having a south-western aspect, was at least 20 ft. high and covered a good breadth. Some fine fruits I noticed at the top caused me to break the tenth commandment. The highly fragrant flowers are greatly esteemed in winter and may be gathered at any time except, perhaps, in severest weather from November to March. A good way of arranging these tiny but bright and fragrant flowers is to fill a shallow vessel with moss, green and fresh if possible, and stick the flowers in the moss upright; and an occasional damping will give a pretty and sweet dish of flowers for several days. Side by side with the foregoing native of Japan, was an equally vigorous North American subject *Teucoma radicans* apparently in perfect harmony, no political question of annexation disturbing their atmosphere; but having filled its

allotted space it threw out for our admiration, from amongst its ample and healthy foliage, long shoots here and there, terminated with bunches of large orange or scarlet-red, trumpet-shaped flowers. I was quite lost in admiration of this beautiful creeper. A peculiarity is its mode of climbing by aerial rootlets, as does the Ivy.

Berberidopsis corallina growing on the same house front, is more generally seen under glass, and considering its attraction not cultivated nearly so much as it deserves; but here for fifteen or twenty years this plant has graced the wall, suffering slightly perhaps in very severe winters, and shooting forth vigorously each spring to recover lost ground. At the time of my visit, August 14th, it was clothed with its pretty pendant, coral-coloured flowers, resembling bunches of fruit at first sight. This, a native of Cbili, is an evergreen with handsome foliage.

A fine old plant of *Clematis montana* had suffered severely, apparently from old age. I was sorry to see this veteran so enfeebled. It used to divide honours with an equally fine plant of *Jasminum officinale* in covering a large bay window, or rather three windows connected by stone pillars, and each pillar clothed with these creepers alternating.

Fortune's Yellow Rose does not flower freely, although a fair growth of wood is evident; perhaps, with age, greater floriferousness will manifest itself. This fault cannot be found with a glorious old Banksian Rose on the same wall. I have seen shoots 6 ft. to 10 ft. long, clothed with clusters of this small but lovely Rose; and charming is the sight in early summer of a wall clothed with this hitherto-seldom-seen plant. 'Tis, I believe, not everybody who succeeds in flowering Banksian Roses; but here it seldom or never fails to flower. One little secret may not be amiss regarding its culture, that is, in this instance the knife is never used to shorten growths, and not too freely to thin them out. An attempt was made to intermingle with this the Chinese Wistaria; but although the effect was a charming contrast, the rampant Wistaria overgrew the Rose, and it was found necessary to check the rapacious Chinaman, or rather direct its energy in another channel. In this direction a rather novel idea is carried out. Within a few yards of the house stands a stout Scotch Fir into the top of which a strong wire is led from the end of the wall; and along this wire growths of Wistaria are led into the tree; and very charming it looks in spring, I should think, although I have not seen it in bloom since this departure has been made.

Magnolia grandiflora is a fine subject for covering a wall; and here on a western wall was a splendid specimen in perfect health, bristling with flower buds.—A. P.

KINVER SPECIALITIES IN FLOWERS, BULBS, VEGETABLES, &c.

FLOWERS.

In a visit to the Kinver Trial Grounds of Messrs. Webb & Sons, Wordsley, Stourbridge, some time since, when flower beds gave a charming display, I made acquaintance with certain specialities which Messrs. Webb have brought to a high degree of perfection. Some of them no doubt ought to be better known, and many an amateur will probably be glad to have brief descriptions of them.

Cross-breeding and high selection combined have certainly produced marvellous results in the Kinver Trial Grounds. Wehbs' new Sunbeam Calliopsis must be regarded as a grand result of it. The flowers are very handsome, and indeed brilliant for cutting purposes, and the equally new Royal Rose *Eschscholtzia* must be esteemed a great novelty, its bright rose-coloured flowers being very attractive. I found another decided novelty in Wehbs' new May Queen Stock, an exceedingly handsome variety of the intermediate race, and indeed a very early one. Wehbs' new Empress Larkspur has proved to be one of their most striking novelties. The plants branch out freely, and afford a pleasing effect with their spikes of chaste, rose-coloured bloom. There is also a new *Lobelia* called Magpie, because of its chaste, pretty blue and white blossoms, which have a charming effect when utilised for the edgings of beds. China Asters, Sweet Peas, Hollyhocks, and Poppies all have their special varieties at Kinver, and there is a new attractive *Convolvulus* which is well appreciated. Wehbs' Snowflake Candytuft, with its prolific spikes

of beautiful bloom, naturally excites attention. But there is a still newer pink-pearl variety of remarkably chaste, delicate hue. The new *Diadem Aquilegia* seems of a very choice strain, its colours being varied no less than lovely.

The Starlight *Dianthus* is also a charming novelty, having dense bushes covered with bright bloom. There are, however, extremely variegated flowers of almost every shade on the equally profuse spikes of the dense hushes of Wehbs' new Supreme *Antirrhinum*, one of the most *recherché* of the Kinver new novelties. And to be classified therewith, as equally grand successes, must be placed Wehbs' new *Cyclamen Vesuvius* and Wehbs' Mont Blanc *Cyclamen*. Apparently, Wehbs' exhibition *Zinnia* surpasses most of its order, with which the Kinver expert has yet become acquainted for brilliant double flowers of different colours. Moreover, it appears that Wehbs' new annual *Chrysanthemum* for handsome, showy flowers actually surpasses those older, highly-esteemed Kinver specialities, Golden Cloud and White Pearl.

BULBS.

As is perfectly well known, Messrs. Webb pay equal attention to bulbs and issue a special bulb catalogue, that for the present year containing many rare novelties in Tulips, Hyacinths, Lilliums, Amaryllis, Ranunculus, *Gladiolus*, *Begonia*s, and *Crocuses*. Nor are the *Tuberoses*, *Anemones*, *Snowdrops*, and *Ixias* less in repute.

VEGETABLES.

That gardeners have long been indebted to the great Wordsley firm for many of the rarest products raised for culinary purposes, is well-known. In fact, it is difficult to draw the line as to where the creative power of Messrs. Webb in supplying improved varieties of kitchen garden vegetables has not operated. They appear to have neglected no branch of horticulture, and the highly skilled gardeners of our nobility and country gentry are loud in their praises of some of the highly perfected rare things which have recently come from the Kinver Trial Grounds. The newest Potato appears to be a very valuable one, called Motor, so new, in fact, that it did not appear in their Spring Catalogue for 1897; but I understand that one grower has realised 13 tons per acre of its tubers, which are kidney-shaped, and would serve as a valuable second early variety. Among the other valuable kidney Potatoes which have been brought to a high state of perfection in the Kinver grounds are Wehbs' Express, Record, Surprise, Early Ashleaf, Stourbridge Glory, Discovery, Wordsley Pride, Kinver Hill, and Progress. Some of these are, no doubt, known, for they have elicited golden opinions from gardeners, and certainly the smooth-skinned highly-productive round kinds called Wehbs' Renown, Industry, and Goldfinder have done this. But their new round Potato for 1897 was styled Wehbs' Yeoman, the flesh of which was found to be beautifully white and of superb quality. All those named are heavy croppers likewise.

The Potatoes bearing Wehbs' name are very numerous and so are the Peas. It appears that there are no fewer than 160 different sorts of culinary Peas in the Kinver grounds, one of the latest of the highly perfected kinds being called Senator, which is a cross between Prince of Wales and Culverwell's Giant Marrow. The pods are produced mostly in pairs, and are roped very thickly on the Vines. They are also of good size, containing on an average nine large Peas each, and being of excellent flavour Senator is deemed a very great success. Amongst the earliest which have become famous are Wordsley Wonder, Kinver Gem, and Perfection, the second early comprising Kinver Marrow, Stourbridge Marrow, and Promotion, and we only mention those which have become most famous. The main crop specialities are well-nigh too numerous to mention, but we believe the most renowned besides Senator are Astronomer, Chancellor, Electric Light, Enterprise, Talisman, and Royal Standard; the latter a cross between Ne Plus Ultra and Telephone, is a blue wrinkled Marrow, not only very prolific in pods, but the latter are broad, large, and very handsome, and have consequently proved a great acquisition for exhibition purposes.

Carrots, so far from having been neglected at Kinver, comprise four new varieties for garden purposes, which bear the name of Webb, who have also brought into the market as many as five new field kinds. The former are Wehbs' Selected Scarlet

Shortborn, which comes very early, and being of beautiful shape and colour has been successful in many open competitions. The same may be said of Wehbs' Selected Altrincham, which is a general favourite for winter use. Wehbs' Market Favourite is of exceedingly rapid growth; but a sort which is now exciting very general attention is Wehbs' Giant Intermediate, said to be specially adapted for shallow soils, but it is of beautiful shape and rich colour and its flesh remarkably sweet and tender. Messrs. Webb have done so much in perfecting the Turnip for the farmer's use that no one will be surprised at their having brought to high perfection some very choice garden kinds. Wehbs' Prizetaker Turnip is not only of splendid quality, with sweet white flesh of nice flavour, but its elegant shape causes it to be valuable for exhibition purposes. Wehbs' Early Six Weeks Turnip is also exceedingly handsome and very rapid growing. Wehbs' Early Purple Top has also won golden opinions, while Wehbs' Climax has deep yellow flesh, and being suitable for either winter or summer cultivation is also highly approved.

Among the newest and best kinds of French Beans must be numbered Wehbs' New Dwarf Hundredfold, which is remarkably prolific, and the pods have been found to be of the finest flavour. Wehbs' Victoria Dwarf is a great favourite with many gardeners, the pods being very lengthy and symmetrical. There is also Wehbs' Negro Long Pod which is a great cropper, valuable for the main crop. Runner Beans have three special kinds. Wehbs' Selected Scarlet Runner has long been very famous, but even this is considered to be surpassed by Wehbs' Eclipse. There is also Wehbs' Giant White Runner, the pods of which are of great length, and all possess excellent cooking properties. Specialities have also been brought out in Wehbs' Golden King and Golden Queen Wax Pod. Wehbs' Kinver Mammoth Longpod Bean, from having won so many prizes at shows, is tolerably well-known, and it has become exceedingly popular. Wehbs' Selected Longpod is also a favourite of many gardeners. Wehbs' Improved Windsor is also beginning to be highly appreciated on account of its great size, and the great length of time it lasts, ready for use.

In Broccoli, Cauliflowers, Cabbages proper, and Savoys, Brussels Sprouts, and Kale, Kinver has done its best to bring every kind to the greatest perfection. Wehbs' Snowdrift, Perfection, and May Queen Broccoli all have their favourites among gardeners. Their Early Mammoth Cauliflower is simply magnificent, while Kinver Monarch for early crops has its advocates. Several kinds of Cabbage have been created and perfected for garden and field, but for general purposes there is scarcely a better one than Wehbs' Emperor, which has attained to such high reputation that orders for its seed doubled themselves last season. Gardeners declare that Wehbs' Little Wonder Savoy deserves its name, and Kinver Globe for early use is well approved. In Cabbage Lettuces—Summerhill, Hardy Green, Magnet, and Model, are all favourites of gardeners, yet scarcely more so than the new exhibition, Wordsley Gem, Monstrous White, and Winter White, of the Cos kind. Kinver Onions for several years past, have been equally renowned, gardeners having been loud in their praise of Wehbs' Improved Banbury, Masterpiece, New Reliance, Monster White, and several others. The Giant Curled, and Exquisite Garnishing Parsleys deserve mention, as well as the Colossal Leek, and specialities in Endive and Spinach. Nor must the Kinver Tomatoes and Vegetable Marrows be overlooked, Wehbs' Sensation and Viceroy among the former, and Wehbs' Large White of the latter, having been brought to high perfection.

The Radishes to be found in the Kinver Gardens are beautifully modelled, their smooth, thin skins and single tap-roots denoting high quality. The Purple and Crimson Globes and the new variety Favourite are alike valuable. The Kinver-created Cucumbers ought not to be overlooked, the most popular frame kinds being Wehbs' Bountiful, which yields handsome, straight, smooth fruit, 24 in. long. Wehbs' Perpetual Bearer, which well deserves its name, has won numerous prizes; Wehbs' Improved Telegraph, for some years a great favourite; and Stourbridge Gem, a cross between Telegraph and Prince of Wales, which has a remarkably clear, symmetrical shape. There is also Wehbs' Prolific

Ridge Cucumber, the good-yielding properties of which are well appreciated by market gardeners. Success in perfecting Celeries has been great, there being six choice varieties bearing the name of Webb, of which the Giant White and Pink Perfection are newest; but the Mammoth Red and Webbs' Pearl White are still prime favourites.

Messrs. Webbs' Melons have been magnificently perfected. Their International, a cross between President and Hero of Lockinge, yields remarkably fine, handsome fruits, some Melons having weighed 6 lbs. or 7 lbs. each. President, Pride of Stourbridge, Queen Victoria, and Royal Warrant are also beautiful specialities; in fact, there is no garden plant which can be mentioned that has not been taken in hand by the expert at Kinver with the endeavour to create better kinds by cross-breeding and high selection. Nor do Messrs. Webbs' services to horticulturists end here, as they supply them with excellent chemical manures in packets of from 2 lbs to 10 lbs., if so little is required, or in bags containing qrs., cwt., or more. Farmers, of course, have it several tons at a time, for Messrs. Webb do an extensive trade in artificial manures, their chemical works at Saltney, Cheshire, covering five acres of ground.

As to the gigantic tradings of the great Wordsley firm, their Kinver farms, in the south of Staffordshire, are 1½ miles in length, covering about 2,000 acres. These farms are devoted to raising stock seeds, which are sent to occupiers of some 18,000 acres in England and the best districts of the Continent, this being the large quantity of land required to annually supply seeds to Messrs. Webbs' customers. Their increase of business is such that a new warehouse has had to be erected during the past year, and the Wordsley Warehouses are now said to have nearly four acres of floor space. Marvellous as this seems, their gigantic tradings are demonstrated in a still fuller degree by certain counting house statistics the firm has supplied. They claim that it costs them £8,000 a year in postages, and £19,000 in carriage to railways; that the tasteful covers of their various seed catalogues require two tons of paper; the issues of their Farm Catalogue running to nearly 100,000 yearly; their corn catalogue to about 50,000; that they buy half a million of envelopes for a six-month's supply and that it takes 650 books to keep their accounts, the entries in which will be found to run from 70,000 to 80,000. But it must be remembered that they are large artificial manure manufacturers and dealers in Hops and wool as well as being seedsmen.

They are about to bring out an entirely new Wheat in the coming season which will be offered for the first time. The great success of their Stand-up White Wheat, which the most furious storms failed to dislodge when almost every other kind went down, induced them to endeavour to create a red Wheat which should be its counterpart. They believe that they have succeeded beyond their most sanguine expectations. They name it the Standard.—*J. D.*

TRIALS AT CHISWICK.

EARLY CHRYSANTHEMUMS.

The Floral Committee of the Royal Horticultural Society met at Chiswick on Monday, the 4th inst., for the purpose of finally reviewing the early Chrysanthemums on trial in the open border, and which were not in bloom on the occasion of the previous meeting on the 17th ult. The varieties in full bloom on the 4th inst. may be regarded as late September and October flowering Chrysanthemums, earlier or later according to the nature of the season. The collection has really grown and flowered splendidly, but the plantation loses considerably in effect owing to the dwarf and tall varieties being mixed together for the sake of comparison. Three XXX were awarded to each of the following:—

EADIE WRIGHT.—This is a Japanese variety growing about 2½ ft. high, and producing a profusion of rosy-purple flowers. Messrs. Dobbie & Co., Rothesay; and Mr. H. J. Jones, Ryecroft Nursery, Lewisham.

LA VIERGE.—Plant about 18 in. high, bushy, and producing a profusion of white flowers, slightly tinted with blush in the open air. The blooms are rather late, few being open at this date. It is a Japanese sort. Messrs. Dobbie & Co.

ALICE BUTCHER.—This pompon grows about 2½ ft.

high, and produces bronzy glowing crimson flowers that are very effective at a distance for bedding purposes. Messrs. Dobbie & Co.; and Messrs. Barr and Sons, Long Ditton, Surrey.

ORANGE CHILD.—Plant 2 ft. high and freely-producing golden-yellow flowers, tinted with buff, and belonging to the Japanese type. The blooms are very useful for cutting. Messrs. Dobbie & Co.

MADAME EDOUARD LEFORT.—Plant 18 ins. to 20 ins. high, and producing a profusion of bronzy-gold flowers, with closely imbricated florets. It is a pompon. Messrs. Barr & Sons; and Mr. W. H. Divers, Belvoir Castle Gardens.

LADY FITZWIGRAM.—Flowers pure white, freely produced, large, and belonging to the Japanese type. Plant bushy, 20 ins. high. Messrs. H. Cannell & Sons, Swanley, Kent; and Mr. W. H. Divers.

IVY STARK.—This is similar to Source d'Or in many respects, but the flowers are darker when they open, ultimately fading to a paler hue, and flowering earlier than that well-known Japanese favourite. Mr. H. J. Jones.

BRONZE PRINCE.—Plant 2½ ft. high, and producing in profusion large bronzy-salmon flowers of the Japanese type. Mr. H. J. Jones.

MILLE GUINDEAU.—A Japanese variety, 2 ft. high, and bearing a profusion of large pink flowers, fading slightly, but rather late in expanding. Mr. H. J. Jones.

FIBERTA.—A golden-yellow pompon, about 2 ft. high, flowering profusely and very showy. Mr. W. H. Divers; and Messrs. Barr & Sons.

MARTINMAS.—A very pretty and attractive pompon, about 2½ ft. high, and bearing a profusion of soft, lilac-pink flowers. Messrs. Barr & Sons.

HARVEST HOME.—Flowers large, loosely built, crimson, tipped with yellow, and having a yellow reverse to the florets. Plant about 18 in. to 2 ft. high, and belonging to the Japanese type. Messrs. Barr & Sons.

PLANCHE COLOMB.—A Japanese type, bearing a profusion of medium-sized, creamy, compactly built flowers of a pleasing appearance. Plant about 18 in. to 20 in. in height. Messrs. Barr & Sons.

ZONAL PELARGONIUMS.

A houseful of pot plants was examined, and XXX were awarded to the three undermentioned varieties.

REV. H. H. D'OMBRAIN.—The plant is of dwarf compact habit, and bears huge trusses and large, well-formed flowers of a rich salmon fading towards the edges. The leaves are marked with a dark zone.

JULES LEMAITRE.—Flowers huge, well formed, glowing crimson-scarlet. The leaves are large and faintly zoned. M. Lemoine, Nancy, France.

ADOLPHE BRISSON.—Flowers large, of a rich carmine-pink, with a white blotch at the base of the two upper petals, and certainly amongst the best of this particular type. The plant is of sturdy, dwarf habit. M. Lemoine.

VEGETABLE CALENDAR.

THE present is a good season to commence a regular system of dealing with the refuse matter out of the kitchen garden and turn it to profitable account. Fire is the best agent to reduce it to a useful state, and a pit 6 ft. deep, 10 ft. wide, and 12 ft. long may be dug out at the present time. In the bottom of this pit a good body of fire should be made of old wood, and, on this, all matter capable of being reduced to ashes should be wheeled. It will be found that a fire formed in this way burns more sharply than when formed on the surface of the ground. This fire should be kept constantly going through the autumn and early winter months, when the pit should be cleared out and the contents may be applied to many uses in the kitchen garden. The rakings of weeds and earth combined should be placed in a separate heap to allow the weeds to decay; this may then be turned, and if a portion of the burnt ashes out of the pit and some lime be added a good useful compost will be secured.

CAULIFLOWERS.—The young plants for spring crops will now need attention in pricking them into positions where they can receive protection during the winter. The method of potting a portion of the plants into 60-size pots is a good one to secure an early lot that can be handled and planted without receiving any check. In all cases it is advisable to keep the plants exposed to all but severe weather

during the next three months and as near the glass as possible.

BROCCOLI.—This crop is in a very soft state since the late rains, and a check now would do the plants good. Where time can be given to the work these should be lifted and laid in with their heads facing north, at the same time burying the stems and packing the soil about the base of the heart of the plants for protection.

TOMATOS.—The mildness of the weather has helped this crop to swell up a fine lot of fruit, and as much of this is still green, the earliest may be gathered and placed in a dry house to ripen. After gathering the most forward fruits, the plants may be carefully lifted, securing all the roots possible, and should be planted against the back walls of any warm houses. A good watering at the time of planting, and a little shade during sunshine will help the plants to make new roots quickly and much useful fruit will be secured for another two months from plants treated in this way.—*J. R.*

The Orchid Grower's Calendar.

WORK IN THE HOUSES.—The Phalaenopsis pushing up their spikes will require every attention to save them from the slugs and other pests, if they are still standing on inverted pots on the stage. A good plan would be to suspend them from the roof, using long hangers so that the baskets in which they are growing are only just clear of the stages. This will prevent them drying up too quickly, and at the same time obviate the damage likely to accrue by their being up too near the roof glass, where the temperature fluctuates most.

DENDROBIUM PHALAENOPSIS SCHRODERIANUM.—This is a most valuable Orchid indeed. Its flowering season extends over such a lengthened period that we could hardly do without it. Grown in this, the warmest division, the plants make splendid growths. Small shallow pans seem to be about the best thing in which to establish them, using plenty of small crocks amongst the peat and Moss in which they are potted. They like a fair amount of shade when growing, but from now onward they must receive as much light as possible by being put where the shading, if any, is of the thinnest description. The moisture too about them should be gradually reduced. This will induce those that are large enough, to flower, and the small ones to take a rest. A crop of flowers may sometimes be had from the old stems, but if the future of the plant is to be considered it is not desirable that they should be allowed to carry them all.

SEEDLING ORCHIDS.—We are all of us trying to outstep each other in hybridising this most interesting family, by working in different directions, some working on Cypripediums alone, others making the gorgeous Cattleyas their study, whilst the Dendrobiums have most charms with those that make them a speciality. In any case it is most interesting, and if we have to wait years to see the result of our own labours, we have the satisfaction in knowing that the hybridists have given us some of the most magnificent Orchids it is possible to behold. But what I want to point out is the treatment of these diminutive little chaps. It is easy enough to get a fine fat seed pod but not so easy to find the place that facilitates germination. Prepared pots we have tried with anything but satisfactory results. The best place we have found for raising Cattleyas, &c., has been baskets with fresh compost and a healthy plant growing therein. We have a nice batch all potted off singly in large thumbs and small sixty-size pots, which we are going over; and now, at this season, the new growths are making up; and as they are for the most part putting out some nice fat roots from the base, we take this opportunity of affording them some fresh material, and where required, a larger pot. Some people, no doubt, would hesitate to disturb them at this time of the year, but we have found that, with established plants so with seedlings, the best time is when new roots are active, as above stated. After the shift they will require very little water. Just keep the moss alive and the small plants from shrivelling. This will induce a slight rest to be followed by renewed vigour in the spring. We have a nice batch of Odontoglossum seedlings which are being treated in the same way.—*C.*

HINTS FOR AMATEURS.

Bedding Pelargoniums.—We may, perhaps, be pardoned for referring to these again so soon, but the present is such a "ticklish" time with them that a few words of advice respecting their treatment will not be likely to come amiss.

Cuttings.—These first of all claim attention as being the bulk of the stock for next year's supply. Up till now cuttings that have been inserted in pots and baskets have been rejoicing out of doors, but that period has now passed, and they must be at once removed to a place of safety. Usually the soil in both pots and boxes is wet enough to preclude the necessity of watering for a protracted period after housing. From the present time up to the turn of Christmas the greatest care must be observed in watering. Probably one good watering will be sufficient to last the plants if they are in boxes, and we have not infrequently kept them without water at all through the period mentioned, the moisture in the soil proving sufficient for them.

Bearing in mind how great an enemy damp is, and how many scores of plants are carried off by its agency each autumn the structure in which the plants are to winter must be supplied with sufficient piping to keep the atmosphere fairly dry. A high temperature is not required, for if the thermometer stands at about 45° Fahr. it will be alright. Plenty of light is an essential to success, and those amateurs who have their greenhouses fitted with shelves will find the latter very handy at this juncture, for the pots may be stood quite close to each other, and thus a lot may be packed away in a little space. In the greenhouse should be placed the tenderer varieties such as Crystal Palace Gem, Robert Fish, Creed's Seedling, Mrs. Pollock, and Mrs. Henry Cox. Flower of Spring, although a variegated variety, is fairly strong in constitution, and will pass through the winter better in a low temperature than the other varieties mentioned.

The general bulk of the plants, if there is no room for them in the greenhouse, may be consigned to a frame which can be heated a little when severe frost endangers the safety of the inmates. Here they are brought up close to the glass, and enjoy the maximum of light during the dull months. Heated pits such as those employed for Melons and Cucumbers are capital structures in which to winter bedding plants, but their great depth when cleared out would take the plants too far from the light, and drawn and weakly specimens would result. It will be necessary, therefore, in such a case to erect a temporary staging of boards in order to bring the plants up close to the glass.

Cuttings Rooted Out-of-doors.—We have previously spoken of this method of rooting zonal Pelargonium cuttings as being a very favourite one with not a few people. If the cuttings were inserted about the end of August they will now have formed a fair quantity of roots, and will thus lift well. Even if they have not rooted, however, they will have to come up, as they cannot safely be allowed to remain outside any longer. On looking at some of the cuttings that have not rooted, it will be found that the bases of the stems have hardened (callused) over. No fears need be entertained of such cuttings doing well.

Six cuttings will go well into a 48-sized pot, five being placed round the sides and one in the middle. The soil is not a matter of much consequence. We have always gone to the old soil heap for this purpose. Old soil that has grown Chrysanthemums, Fuchsias, or other greenhouse plants contains quite enough goodness. All that is required is to run it through a sieve to clear it of corks and other rubbish. Pot moderately firmly, but do not ram the soil, pressure with the fingers and a few smart taps upon the bench being quite sufficient to impart the requisite firmness. Water will not be required for some time after potting if the soil is fairly moist. It is a mistake often committed by amateurs, viz., to deluge such newly-potted plants with water.

Violets.—Of all the plants which are cultivated under glass during the winter none give a better return for the space they occupy or the labour expended upon them than the double Violets. As easy of cultivation as anything that can be mentioned, many amateurs with very limited conveniences

grow Violets both in pots and frames year by year with conspicuous success, and there is no reason why the number should not be materially augmented.

The present is a capital time to see about making up the beds for the winter. At the conclusion of their flowering season the old plants were split up and the divisions planted out in an open border. From these little pieces, fine, sturdy plants, with great width of crown and vigorous foliage, and with a correspondingly vigorous root action, have sprung. Assiduous attention has been given to the cutting back of runners as fast as they made their appearance, and the plants are already giving earnest of what they are capable of doing in the coming six months by producing a few flowers now. Beneath the clustering leaves, if we take a peep, we shall find scores of fat buds only waiting for a little stimulus in the shape of bright weather to develop into flowers.

The plants themselves are hardy enough, but a spell of cold weather naturally puts a stop to the expansion of the flowers, and the continuity of blooming is thus interrupted. Again, showers of rain in mild weather wash all the perfume out of the blooms, and sully their bright daintiness with mud. Under glass both these difficulties are obviated.

First as to the beds—good brick pits 4 ft. or 5 ft. in depth are the best structures in which to make them up. Fallen leaves may be packed into the lower part, trodden down tightly, and brought up to within about 18 in. of the glass. Upon this 1 ft. of soil may be placed. The latter should consist in bulk of good, mellow loam, with which may be mixed a third or fourth part of leaf soil, or short, well-rotted stable manure. When first consigned to their new quarters the leaves are thus close to, and in some cases touching, the glass, but this is of little moment, for as the mass of leaves below decays so will it sink, and before the winter is half over an appreciable lowering is the result. The amount of space given the plants must depend on their size, but in no case should they be too crowded. In lifting the plants from their nursery beds some little care will be needed to preserve good balls of earth. If lifted thus and planted straight away but little check will be observed. A watering in may be given if desired after planting is finished, and this watering will last the plants for a long time. Keep the frame close for a week after planting, as this will give the plants a start.

Violets in Pots.—This system of culture recommends itself to those who want plants for the decoration of conservatory or dwelling rooms, and in careful hands may be made to yield excellent results. For an ordinary sized plant a 6-in. pot will be large enough, although the finer specimens will require a 7-in. size. Make the soil a little richer than that given to the plants in the frame, for they require it, seeing that their root run is more circumscribed. Do not keep the plants in too warm a house or colourless, nearly scentless, flowers scarce worth looking at will ensue. The cool greenhouse is amply warm enough, and if the atmosphere is not too laden with moisture will answer admirably. Wherever they may be placed, however, take care that they are given the maximum of light, and after they are once established in their pots given plenty of air in the same way as to their relatives in the frames.

Varieties.—Here the difficulty of having numbers of varieties from which to pick and choose does not present itself, for there are not many varieties. Without question the best blue one is Marie Louise, but the Neapolitan is good, and as it is a few weeks later in flowering than the former variety may well find a corner in the frame, or a light or frame to itself according to the size of the establishment. The best white is Swanley White, often met with under the name of Comte de Brazza, a very free blooming form with large pure white flowers. Queen, a white variety striped with violet-rose is somewhat of a novelty and may be grown for the sake of the variety obtained.

Ericas.—Not another day should be lost in getting these under cover. The sojourn out of doors is a capital thing to improve the colour of the flowers but it must not be carried too far. Give the pots a nice washing, clean any moss that may be present from the surface of the soil, and transfer the pots to a light corner of the greenhouse where they will be shielded from draughts which are such fruitful causes of mildew. This does not mean that the house is to be

kept closed, for abundance of air may still be given by the top ventilators during the day.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Seakale.—Would you tell me what to do with Seakale, as it is the first time I have grown any? Whether it stands the winter without covering? And what covering I should give it in case of its requiring any?—*H. B.*

The Seakale itself is hardy enough, and may be left without covering through the winter if it is not required for forcing. But we assume you intend to force, and therefore it will have to be covered at some time. After the leaves have died down you may go over the crowns and cover them with a little stable litter or a few leaves. This will serve them until it is time to put the pots on, the time at which this is done being, of course, decided by your requirements. The pots once on, fallen leaves of this year's growth should be heaped round, and over them to a depth of about 10 in. or a foot. This means that the bed of leaves will be a little over 3 ft. in height. These remarks apply to forcing the plants as they stand, which you will observe means a good deal of trouble. Your better way would be to lift the roots, cut off the small side roots and lay them aside for cuttings, and pot the thick main roots in leaf mould or other light soil. Place these pots in a Mushroom house or dark cellar, and with a temperature of from 55° to 60° Fabr. you will have Kale fit to cut within six or seven weeks of the time of lifting the crowns.

Stokesia cyanea.—*Saxenby*: This plant, which is commonly known as Stokes' Aster, was named in honour of Jonathan Stokes M.D., who assisted Withering in his arrangement of British plants. It is a native of North America. The plant flowers well enough in the open border but it forms a charming subject for the cool conservatory if lifted and potted up carefully. By dint of a little careful management it may be had in bloom quite late in the autumn, and the large bright blue flowers are then doubly welcome by reason of the scarcity of blue at that period of the year.

Strawberries.—*Forcing*: You may certainly force Strawberries in an early vinery, along with the Vines, but this is a course that we should not advise. You will find by experience that Strawberries are capital things for breeding red spider, and if the latter gets on your Vines you will be likely to regret that you attempted to kill the two birds with one stone.

Freesias.—A space of about six weeks has now elapsed from the time of potting the bulbs, and it is high time, therefore, that the plants should be taken out of the plunging bed. Uncover them carefully, for the young leaves are very tender and easily damaged. A place in a cold frame, on an ash bottom, will be a good place, for here the plants may gradually be inured to the light. Afterwards they may be given a place on a shelf in the greenhouse.

Tomatos.—*Alex. Lambourne*: The Tomatos will not ripen now, as we may expect frost at any time, and that means death to the plants. Leave the fruit on for as long as possible, and when the frost comes cut off all the largest and take them indoors. They will ripen off gradually if hung up in a warm dry room.

Winter Flowering Carnations.—*C.L.O.*: You will find the flowering varieties some of the very best for winter flowering, and you should try and grow as many of them as possible:—Mrs. Leopold de Rothschild, Uriah Pike, Winter Cheer, La Neige, Canary Bird, Miss Mary Godfrey, Zenobia, Mrs. H. Cannell, and Reginald Godfrey. If you want another crimson you cannot do better than choose William Robinson.

Cyclamen persicum.—*Rowan*: The attempt to grow Cyclamen in a dry, parching atmosphere is almost sure to result in failure. You will find your plants will do all right if they are stood on a bottom of ashes, shingle, breeze, or other material that will hold moisture well. We think the middle of October will be quite late enough for you to leave the

plants in the frames. They should be shifted into safer quarters before then. You will find a night temperature of about 50° Fahr. suit them well.

Nerines.—*Amateur*: After flowering, the Scarborough Lilies should be kept growing on vigorously. Give a dose of Guano about twice a week. Repotting will not be necessary. Keep the plants well supplied with water until the leaves show signs of becoming shabby, thus demonstrating that growth is nearly finished.

THE HOP-TREE.

STRANGE as it may seem, the Hop-tree (*Ptelea trifoliata*) is a member of the same family as the Orange, though belonging to a different tribe. It is a highly ornamental subject for the shrubbery, and for weeks past its flattened and circular fruits have been swaying in the breeze and giving to the tree an unwonted appearance—we say unwonted, because it is anything but so common as it might be. It forms a large bush or small tree, ranging from 4 ft. to 8 ft. high, branching freely on the top and bearing a profusion of its light green samaræ or winged fruits that make themselves conspicuous against the dark green foliage. It is well adapted for town and suburban gardens, thriving even in the heart of London when it makes its appearance in the crowded courts and squares. Even here, however, it is rare, the greenish-



HOP-TREE (*PTOLEA TRIFOLIATA*).

yellow flowers commending themselves to very few people though the fruits are striking. All the six species are natives of temperate North America. The accompanying illustration of a spray will give an idea of *P. trifoliata*. There is a golden-leaved variety of it in cultivation

ANEMONE CORONARIA FL. PL. THE BRIDE.

IN our last volume, p. 652, we gave a description of this highly interesting and beautiful Anemone, which is now being issued amongst their novelties for this year by Messrs. E. H. Krelage & Son, Bloembhof Nurseries, Haarlem, Holland, who have placed the accompanying illustration at our disposal. The flowers are white, and, as will be seen, they are made up of an enormous number of narrow petals, such as are usually met with amongst double Anemones. Hitherto a double white Anemone has been unknown, and that under notice originated from the well-known single white *A. coronaria* The Bride, in the nurseries of Messrs. Krelage & Son. It belongs to the same species from which the various garden races of Poppy Anemones and St. Brigid's Anemones have sprung. The double forms usually flower in spring, but the singles may often be seen flowering a second time in autumn both in Great

Britain and Ireland. The silvery white flowers of this beautiful white variety will be welcomed by lovers of this class of plants, and we hope the variety will soon become established here, as an inmate of the spring garden and rockery, as well as a pot plant for greenhouse and conservatory work.



ANEMONE CORONARIA FL. PL. THE BRIDE.

GLADIOLUS QUEEN WILHELMINA.

IN this country early-flowering Gladioli are usually grown in pots, though there are a few exceptions to be met with occasionally. Queen Wilhelmina is one of the novelties being issued by Messrs. E. H. Krelage & Son, Bloembhof Nurseries, Haarlem, Holland, and is a delicately pretty variety with flowers of good average size for this section of the Gladiolus. The flowers are produced in one-sided racemes, as is customary in the genus, and are very acceptable either for conservatory decoration in pots, or as cut flowers. The three upper segments of the flower are elliptic, acute, and of a charming pale flesh colour. The three lower segments are smaller, and of the same delicate ground colour, but rendered particularly handsome by the rosy-carmine band which surrounds the central pale yellow blotch. The throat of the flower is also decorated with a reddish-orange blotch. Early flowering Gladioli, being the result of the hybridisation of several species, present a mixed appearance, but are separable into several groups or races according to the parents from which they have descended. Queen Wilhelmina belongs to the cardinalis section, and is a most graceful and elegant variety when in bloom. It has been dedicated to the young Queen of the Netherlands with Her Mother, the Queen Regent's consent and approval. It has already received a First-class Certificate from the Royal Netherlands Horticultural and Botanical Society at Amsterdam, and distinguished notice at the Hamburg International Exhibition. The accompanying illustration, put at our disposal by Messrs. Krelage & Son, will give an idea of a spray of blossom.

CACTUS DAHLIA MR. MOORE.

IN no section of Dahlias is the improvement that has been effected of late years more marked than in the Cactus. Whilst the show, fancy, and pompon divisions are practically at a standstill, each season brings with it numbers of new Cactus forms, some of which are good, some indifferent, and many of them no improvement upon existing varieties. Besides the narrow-pointed florets which go to make up a true Cactus flower, there is another point that might well receive more attention than it does, having regard to the value of the flowers for cut purposes, and that is the length and strength of the flower stems. The autumn months are almost sure to bring in their train storms of wind and rain, before the force of which even the stoutest flower stems have to bow their heads, but let us shake the load of water from the flower, and if the stem supporting the latter is fairly stout, the flower soon assumes its erect position. In the variety under notice, which, by the way, is one of the richest and most intense crimsons yet introduced, we find a long stout stem that lifts the flower well above the foliage, and right into the glint of the sunlight, and the full view of those who wish to

admire, thereby marking a great and important advance upon Juarezi, and others of that class whose flowers, from the shortness of the stems, were kept shrouded in foliage. Dahlia Mr. Moore is a recent acquisition for which cultivators are indebted to Mr. John Green, Norfolk Nurseries, Dereham. It was exhibited by him at the show of the National Chrysanthemum Society, on the 7th, 8th, and 9th inst. at the Royal Aquarium.

BRITISH GROWN FRUIT AT THE CRYSTAL PALACE.

THE great exhibition of British grown fruit, held under the auspices of the Royal Horticultural Society, was opened at the Crystal Palace, Sydenham, on the 30th ult., and continued during Friday and Saturday the 1st and 2nd inst. In spite of the reputed scarcity of fruit, there was little evidence of this at the Crystal Palace, except, indeed, in the case of Pears, which were excellent in quality, but very moderate in quantity as far as the large collections were concerned. The Pears had the most of the show to themselves about two years ago, and on this occasion the Apples were the most prominent feature as far as fruit was concerned. The Grapes were more plentiful than we have been accustomed to see at past shows generally, in connection with the Palace.



EARLY GLADIOLUS QUEEN WILHELMINA.

They were also much better displayed on long continuous tables, and thereby rendered more effective. The whole of the fruit on this occasion was tabled in the central transept or the immediate vicinity, and the visitors and others were of opinion that the show was in that respect an improvement on former years. The Nerines, Dahlias, and various other miscellaneous exhibits of flowers were certainly a bright feature of the show.

FRUITS GROWN UNDER GLASS OR OTHERWISE.

GARDENERS.

The premier award for a collection of twelve dishes of ripe dessert fruit was secured by Lady H. Somerset (gardener, Mr. F. Harris), Eastnor Castle, Ledbury. Gros Maroc and Muscat of Alexandria Grapes were beautifully finished. Other dishes in this stand were Smooth Cayenne Pineapple, Seedling Melon, Pitmaston Duchess Pear, Prince of Wales and Sea Eagle Peaches, Rihston Pippin, and King of Pippins Apples, Alhert Victor Nectarine, Brunswick Fig, and Coe's Golden Drop Plum. The whole had a very tempting appearance; every dish of its kind being good. The second prize went to the Earl of Harrington (gardener, Mr. J. H. Goodacre), Elvaston Castle, Derby, who had good Muscat of Alexandria Grapes, and grand samples of Souvenir du Congrès and Pitmaston Duchess Pears. Sir J. W. Pease, Bart., M. P. (gardener, Mr. McIndoe), Hutton Hall, Guishorough, was a very good third, his Apples, Pears, Peaches, Melon and Grapes being fine.

Messrs. de Rothschild (gardener, Mr. Geo. Reynolds), Gunnersbury Park, Acton, staged the best collection of eight dishes of ripe dessert fruit. Very finely coloured were Muscat of Alexandria Grapes, Pineapple Nectarine, and Ribston Pippin Apple. The bunches of Gros Maroc Grape were very large in berry. Mrs. Wingfield (gardener, Mr. W. J. Empson), Amptill House, Amptill, took the second place with good samples of Golden Queen and Alicante Grapes, &c. W. K. D'Arcy, Esq. (gardener, Mr. W. Tidy), Stanmore Hall, Middlesex, took the third award. He had a dish of *Passiflora edulis* amongst other things.

Messrs. de Rothschild again came to the front for six distinct varieties of Grapes, two bunches of each. They had grand samples of Chasselas Napoleon, Gros Maroc, Muscat of Alexandria, and Buckland's Sweetwater. C. Bayer, Esq. (gardener, Mr. W. Taylor), Tewkesbury Lodge, Forest Hill, S.E., took the second place with good bunches of Trebbiano, Madresfield Court, and Muscat of Alexandria. The third award went to the Earl of Harrington, who had some very good bunches.

Sir George Russell, Bart., M. P. (gardener, Mr. F. Cole), Swallowfield Park, Reading, secured the leading award for three varieties of Grapes, showing very nice bunches of Black Alicante, Foster's Seedling, and Muscat of Alexandria. Mr. J. Jones, Ridgway Vineries, Cradley, Malvern, was a good second, his berries of Gros Colman being magnificent. Lady H. Somerset came in third.

J. W. Fleming, Esq. (gardener, Mr. W. W. Mitchell), Chilworth Manor, Romsey, took the lead for Black Hamburg Grapes; and was followed by C. Bayer, Esq., and Messrs. de Rothschild in the order given. C. Bayer, Esq., came to the front for Madresfield Court. The bunches were small in all the entries for this class. Mr. J. Jones had the best Gros Colman, the berries being of enormous size. Finely formed bunches were shown by Messrs. de Rothschild, who came second. Sir George Russell, Bart., took the third place with finely coloured bunches of moderate size.

Sir George Russell, Bart., was again successful in the class for three bunches of Alicante, the bunches being large and beautiful in form. Mr. J. Bury, Petersham Vineries, Byfleet, Surrey, was a very good second; and Henry Tate, Esq. (gardener, Mr. W. Howe), Park Hill, Streatham Common, S.W., was a good third. There was great uniformity and excellence in all the entries of this class. W. K. D'Arcy, Esq., took the lead for three bunches of Lady Downes; and was followed by Mrs. Wingfield and C. R. Scrase Dickens, Esq. (gardener, Mr. A. Kemp), Coolhurst, Horsham, in this order. T. W. Fleming, Esq., took the lead for any other Black Grape, showing three grand bunches of Mrs. Pince's Black Muscat. R. Ovey, Esq. (gardener, Mr. W. Smith), Badgemore House, Henley-on-Thames, was second with Alnwick Seedling; and W. K. D'Arcy, Esq., was third.

Sir George Russell, Bart., M.P., took the premier honour for three bunches of Muscat of Alexandria, bunches and berries alike being very creditable. The Earl of Harrington was second with well built bunches, nicely coloured, as were those of Messrs. de Rothschild, who were third. The latter came to the front for three bunches of any other white Grape, showing Chasselas Napoleon, in fine form, the bunches taking a fine amber tint in some cases. C. Bayer, Esq., was second with Buckland Sweetwater; and Miss Ridge (gardener, Mr. G. Lane), Highfield, Englefield Green, Surrey, came in third with large bunches of Chasselas Napoleon.

C. H. Berners, Esq. (gardener, Mr. W. Messenger,) Wolverstone Park, Ipswich, had the best dish of Figs showing nicely coloured Brown Turkey. C. E. Strachan, Esq. (gardener, Mr. H. Folkes), Gaddesden Place, Hemel Hempstead, came in second; and J. W. Fleming, Esq., took the third place.

The leading position for a collection of fifty dishes of hardy fruit grown in the open was taken by Earl Percy (gardener, Mr. G. Wythes), Syon House, Brentford. Apples and Pears were most numerous, but he also had Grapes, Cherries, Plums, Peaches, Walnuts, Damsons, Filberts, &c. The table was decorated with fruits of *Physalis Franchetti* and sprays of *Ampelopsis*. Col. Brymer, M.P. (gardener, Mr. J. Powell), Islington House, Dorchester, took the second place with magnificent Apples, Pears, &c. Lord Foley (gardener, Mr. Miller), Ruxley Lodge, Esher, was third, showing Apples, Pears, and Quinces.

Sir Mark W. Collett Bart. (gardener, Mr. R. Potter), St. Clere, Kemsing, Sevenoaks, Kent, took the leading award for thirty-six dishes of hardy fruit grown under glass to illustrate orchard house culture. His Apples and Pears were grand samples of their kind, clean-skinned and well coloured. Sir J. W. Pease, Bart., M.P., took the second place, his Grapes being even-sized bunches, beautifully finished.

NURSERYMEN.

Messrs. T. Rivers & Son, Sawbridgeworth, were awarded the first prize for a collection of fruit trees bearing fruit in pots. Apples, Pears, Plums, Red Siberian Crab, and Peaches were grown in pots, while large quantities of Pears, Apples, Peaches, Plums, Grapes, &c., were shown in boxes and baskets. The fruiting trees were most attractive to visitors.

Messrs. George Bunyard & Co., The Royal Nurseries, Maidstone, have again triumphed in the class for a collection of hardy fruits grown partly or entirely under glass to illustrate orchard house culture, taking the first prize, a Silver Gilt Medal. Along the centre of the table were Apple, Pear, and Fig trees, and pot Vines, all in fruit. On either side of these were baskets and plates of these fruits. They had large and magnificently coloured samples of Alexander, Peasgood's Nonsuch, Mother, Washington, Cox's Pomona, The Queen, Gascoigne's Seedling, King of Tomkin's County, Belle de Pontoise, and other Apples. Messrs. Geo. Bunyard & Co. also had the first award for a collection of seventy-five to one hundred dishes of hardy fruit, grown in the open air, which consisted of magnificent samples of Apples and Pears supplemented with Plums, Crabs, and other highly coloured sorts for decorative purposes. In the centre of the table was a pyramidal mound of Apples, with smaller conical baskets at either end and at the corners. The clear and polished skins of the fruit and the high colour of many varieties were notable features of this magnificent collection. Mr. H. Berwick, Sidmouth, Devon, took the second award with a richly coloured collection of Apples neatly put up in baskets and boxes.

Mr. J. Colwill, Sidmouth, Devon, secured the first prize for a collection of fifty dishes of hardy fruits grown entirely in the open air. The high colour of Devonshire grown fruit was here very well displayed. He also staged some Plums, Peaches, Medlars. Mr. A. Wyatt, Hatton, Middlesex, was second in this class.

Mr. H. Berwick, secured the leading award for fifty dishes of Pears grown entirely in the open air.

Mr. John Basham, Barsaleg, Newport, Monmouth, took the lead in the class for a collection of fifty dishes of Apples grown in the open air. The fruits were shown in baskets and plates and were very superior.

GARDENERS' AND AMATEURS' CLASSES.

THERE were seven competitors for the prizes offered for twenty-four dishes of Apples, to consist of sixteen dishes of cooking and eight of dessert varieties. Mr. George Woodward, gardener to R. Leigh, Esq., Barham Court, Maidstone, headed the list with a grand lot of fruit. *Mère de Menage*, Washington, Bismarck, Warner's King, Spencer's Favourite, Colville Rouge, Praecox, Cox's Pomona, and Cox's Orange Pippin were some of his strongest varieties. Mr. C. A. Bayford, gardener to C. Lee Campbell, Esq., Glewstone Court, Ross, Hereford, was second, also with a good lot; whilst the third prize fell to the lot of Mr. G. Goldsmith, gardener to Sir E. G. Loder, Bart., Leonardslee, Horsham.

In the smaller class for twelve dishes distinct, eight culinary and four dessert varieties to be represented, Mr. W. G. Pragnell, gardener to J. K. Wingfield Digby, Esq., Sherborne Castle, Sherborne, carried off chief honours. He had excellent samples of Emperor Alexander, Peasgood's Nonsuch, Ribston Pippin, and Alfriston. Mr. B. Miller, gardener to T. W. Startup, Esq., West Farleigh, Maidstone, received the second award for some well-coloured and even-sized fruit. Mr. J. Hill, gardener to C. R. W. Adeane, Esq., Babraham Hall, Cambridge, was third.

Mr. Wm. Slogrove, gardener to Mrs. Crawford, Gatton Cottage, Reigate, was credited with the chief award for nine dishes of Apples, consisting of six cooking and three dessert varieties. Mr. Slogrove's fruit was remarkably clean and well-coloured. The second prize fell to the lot of Mr. T. W. Herbert,

gardener to J. T. Charlesworth, Esq., Nutfield Court, Redhill.

Six dishes of cooking Apples were best shown by Mr. George Woodward, who had magnificent samples of *Mère de Menage*, Stone's, Lord Derby, Peasgood's Nonsuch, Emperor Alexander, and Warner's King. Mr. W. Lewis, gardener to T. Oliverson, Esq., East Sutton Park, near Maidstone, received the second award.

Mr. Goldsmith had the best three dishes of cooking Apples, showing Peasgood's, Warner's King, and Lord Derby in first-class condition. Mr. J. Powell, gardener to Col. Brymer, M.P., Islington House, Dorchester, was second, and Mr. A. Brook, Latter's Farm, Mereworth, Kent, third.

There were three entries for six dishes of Apple Bramley's Seedling. Mr. W. King, gardener to J. Colman, Esq., Gatton Park, Reigate, was first; Mr. T. Turton, gardener to J. Hargreaves, Esq., Maiden Erleigh, received the second award.

There were eight entries for six dishes of dessert Apples. This was a popular class, the fruit was in capital condition, and the competition keen. Mr. G. Woodward occupied the premier position with splendid dishes of Washington, American Mother, Cox's Orange Pippin, Ribston Pippin, Baumann's Red Winter Reinette, and Gascoigne's Scarlet Seedling. Second came Mr. B. Miller, and third Mr. G. Goldsmith.

Eleven entries were staged in the smaller class for three dishes of dessert Apples. Mr. C. A. Bayford was the most successful exhibitor here, and was followed in order of mention by Mr. A. Kemp, gardener to C. R. Scrase Dickens, Esq., Coolhurst, Horsham; and Mr. R. Potter, gardener to Sir Mark W. Collett, Bart., St. Clere, Kemsing, Sevenoaks, Kent.

Six entries were registered for twelve dishes of dessert Pears, distinct, the first award going to Mr. Woodman whose fruit was large, weighty, and well coloured. Pitmaston Duchess, Doyenné de Merode, Beurré Superfin, Beurré Baltet, Beurré Hardy, and Durondeau were especially well shown by him. Mr. G. Goldsmith won the second prize with a lot of fruit that was but little behind that of the first prize winner. Mr. J. Powell was awarded the third prize with even and well coloured but smaller samples.

Mr. W. Cotterell, gardener to Sir W. N. M. Geary, Bart, Oxon Hoath Park, Tonbridge, sent the best nine dishes, distinct, of dessert Pears, showing amongst other good fruit brightly coloured samples of Louise Bonne of Jersey. Mr. W. Jones, gardener to G. Brougham, Esq., Wallington Bridge, Carshalton, was second; and Mr. A. H. Rickwood, gardener to the Dowager Lady Freake, Fulwell Park, Twickenham, was third. Mr. W. Messenger, gardener to C. H. Berners, Esq., Woolverstone Park, Ipswich, showed the best six dishes of dessert Pears, having good samples of Durondeau and Beurré Hardy. Mr. W. Slogrove was second; and Mr. A. Basile, gardener to the Rev. O. L. Powels, Woburn Park, Weybridge, third. Eight lots of three dishes each of dessert Pears were staged, the first award going to Mr. R. Edwards, gardener to G. N. Field, Esq., Beechy Lees, Sevenoaks. Mr. Geo. Fennell, gardener to W. M. Cazalet, Esq., Fairlawn, Tonbridge, Kent, was second; and Mr. C. Harris, gardener to O. A. Smith, Esq., Hammerwood, East Grinstead, third.

Three dishes of cooking Pears, distinct, were best shown by Mr. Geo. Woodward. He had large fine samples of Catillac, Triomphe de Jodoigne and Grosse Calabasse. Mr. G. Goldsmith received the second prize; and Mr. R. Chamberlain followed in the third place. The premier single dish of cooking Pears came from Mr. C. Harris, who showed enormous fruits of Catillac, the six fruits composing the dish weighing 8 lbs. H. Stock, Esq., Rutland Lodge, Petersham, came in second with Uvedale's St. Germain.

There were ten entries for three dishes of Peaches, distinct. Here Mr. George Woodward was the most successful competitor. He had Sea Eagle, Nectarine Peach, and Princess of Wales, very large and fine. He was followed by Mr. F. Harris, gardener to Lady H. Somerset, Eastnor Castle, Ledbury; and Mr. W. Mancey, gardener to Mrs. Druce, Upper Gatton, Merstham, Surrey, to whom fell the second and third prizes respectively. The premier single dish of Peaches came from Mr. W. Mitchell, gardener to J. W. Fleming, Esq., Chilworth Manor, Romsey, the variety shown being Sea Eagle. Mr.

G. Lane, gardener to Miss Ridge, Highfield, Englefield Green, Surrey, was second. Three dishes of Nectarines were not so well represented there being only a single entry. This was made by Mr. F. Harris, to whom the first prize was given. Elruge, Albert Victor, and Pineapple were the varieties exhibited. There was better competition in the class for a single dish of Nectarines, the first award going to Mr. P. Bradley, gardener to F. W. Morter, Esq., Lake House, Byfleet, Surrey.

Mr. H. Folks, gardener to C. E. Strachan, Esq., Hemel Hempstead, staged the finest four dishes of dessert Plums. His varieties were Coe's Golden Drop, Reine Claude de Bavay, Late Transparent Gage, and Cloth of Gold. Mr. J. Vert, gardener to Lord Braybrooke, Audley End, Saffron Walden, won the second award.

There were no fewer than twenty-two competitors for a single dish of dessert Plums. Ultimately Mr. J. Vert was placed first with a superb lot of Coe's Golden Drop. Second came Mr. T. Turton with the same variety, and third, Mr. W. Lewis with Monarch.

The premier exhibit of four dishes of cooking Plums, distinct, was contributed by Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby. Monarch, Pond's Seedling, Goliath, and Archduke were the varieties shown. Mr. C. Sim, gardener to Thos. Gooch, Esq., Bovington, Hemel Hempstead, and Mr. James Day won the second and third prizes respectively.

Mr. B. Osborne led the way for one dish of Cooking Plums with Le Mott Sang. Mr. C. Sim was second with Monarch, and Mr. J. H. Goodacre third with Prince Englebert. Mr. W. Messenger contributed a fine dish of Gage Plums, winning thereby the first award in its class. The variety was Reine Claude de Bavay. Mr. C. Herrin was second with Brynstone Green Gage. Mr. Geo. Fennell's four dishes of Damsons, Prunes, and Bullaces was the only entry in its class, and received the premier award.

SINGLE DISHES.

APPLES.

The following is the list of the chief prize-winners in their respective classes:—

DESSERT VARIETIES.—Blenheim Orange—first, Mr. W. H. Godden, gardener to the Hon. F. W. Buxton, Cashiobury, Sawbridgeworth; second, Mr. G. Chambers, Moorcocks Farm, Mereworth, Maidstone; third, Mr. W. King, gardener to J. Colman, Esq., Gatton Court, Reigate. Brownlee's Russet—first, Mr. Geo. Woodward; second, Mr. H. C. Prinsep, gardener to Viscountess Portman, Buxted Park, Uckfield. Claygate Pearmain—first, Mr. Geo. Woodward; second, Mr. H. C. Prinsep; third, Mr. W. H. Godden. Court Pendu Plat—first, Mr. J. C. Tallack, gardener to E. Dresden, Esq., Livermere Park, Bury St. Edmunds; second, Mr. H. C. Ross, gardener to Captain A. J. Carstairs, Welford Park, Newbury; third, Mr. R. Chamberlain, gardener to F. M. Lonergan, Esq., Cressingham Park, Reading. Cox's Orange Pippin—first, Mr. W. Messenger, gardener to Capt. H. Berners, Esq., Woolverstone Park, Ipswich; second, Mr. W. King; third, Mr. Geo. Woodward. Egremont Russet—first, Mr. B. Miller; second, Mr. G. Goldsmith. Fearn's Pippin—first, Mr. J. C. Tallack; second, Mr. J. McKenzie; third, Mr. W. Jones, gardener to G. R. Brougham, Esq., Wallington Bridge, Carshalton. Gascoigne's Scarlet—first, Mr. J. McKenzie; second, Mr. J. Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton; third, Mr. G. Woodward. King of the Pippins—first, Mr. J. C. Tallack; second, Mr. J. Powell; third, Mr. C. A. Bayford. King of Tomkins County—first, Mr. T. Turton, gardener to J. Hargreaves, Esq., Maiden Erlegh, Reading; Mabbot's Pearmain—first, Mr. J. McKenzie; second, Mr. J. C. Tallack. Mannington's Pearmain—first (name lost); second, Mr. J. McKenzie; Margil—first, Mr. G. Woodward; second, Mr. J. McKenzie; third, Mr. C. A. Bayford. American Mother—first, Mr. C. A. Bayford; second, Mr. J. McKenzie; third, Mr. G. Goldsmith. Ribston Pippin—first, Mr. Geo. Woodward; second, Mr. J. McKenzie; third, Mr. C. A. Bayford. Scarlet Nonpareil—first, Mr. J. Hudson; second, Mr. C. Ross; Sturmer Pippin—first, Mr. W. G. Pragnell, gardener to J. K. D. Wingfield, Esq., Digby Castle, Sherborne; second, Mr. R. Chamberlain. William's Favourite—third, Mr. J. Powell (there was only a single entry in this class); Worcester Pearmain—first, Mr. W. King; second,

Mr. Geo. Woodward; third, Mr. W. Messenger; Any other variety—first, Mr. J. McKenzie, with St. Edmund's Pippin; second, Mr. G. Goldsmith, with Gravenstein. Adam's Pearmain—first, Mr. M. Camm, gardener to the Duchess of Cleveland, Battle Abbey, Sussex; second, Mr. G. Goldsmith. Allen's Everlasting—first, Mr. J. Powell; Baumann's Red Winter Reinette—first, Mr. J. McKenzie; second, Mr. C. Ross; third, Mr. H. C. Prinsep.

CULINARY VARIETIES.—Bramley's Seedling—first, Mr. C. A. Bayford; second, Mr. S. Syon, gardener to J. H. Salmon, Esq., Holly Bank, Rowton, Chester. Cellini—first, Mr. G. Goldsmith; second, Mr. C. A. Bayford; third, Mr. J. Powell. Cox's Pomona—first, Mr. J. McKenzie, gardener to F. S. W. Cornwallis, Esq., Linton Park, Maidstone; second, Mr. J. Powell; third, Mr. G. Goldsmith. Duchess of Oldenhury—first, Mr. James Coulton, Dildawn Gardens, Castle Douglas, N.B.; second, Mr. T. W. Herbert, gardener to J. T. Charlesworth, Esq., Nutfield Court, Redhill. Alfriston—first, Mr. J. McKenzie; second, Mr. George Woodward; third, Mr. W. Lewis, gardener to T. Oliverson, Esq., Earl Sutton's Park, near Maidstone, Kent. Beauty of Kent—first, Mr. R. Chamberlain; second, Mr. Geo. Woodward; third, Mr. A. Basile. Bismarck—first, Mr. J. McKenzie; second, Mr. George Woodward; third, Mr. C. Ross. Dumelow's Seedling—first, Mr. J. McKenzie; second, Mr. W. G. Pragnell; third, Mr. C. A. Bayford. Ecklinville Seedling—first, Mr. J. McKenzie; second, Mr. J. Spottiswood, Queen's Park, Brighton; third, Mr. George Woodward. Emperor Alexander—first, Mr. J. McKenzie; second, Mr. George Woodward; third, Mr. G. Goldsmith. Frogmore Prolific—first, Mr. J. McKenzie; second, Mr. C. A. Bayford. Golden Noble—first, Mr. G. Chambers; second, Mr. George Woodward; third, Mr. J. McKenzie. Golden Spire—first, Mr. George Woodward; second, Mr. G. Goldsmith. Grenadier—first, Mr. C. Herrin; second, Mr. A. Brooks, Mereworth, Kent; third, Mr. T. W. Herbert. Hornead Pearmain—first, Mr. J. McKenzie. Lane's Prince Albert—first, Mr. C. Ross; second, Mr. C. A. Bayford; third, Mr. Geo. Woodward. Lord Derby—first, Mr. George Fennell, gardener to W. M. Cazalet, Esq., Fairlawn, Tonbridge, Kent; second, Mr. R. Edwards; Lord Grosvenor—first, Mr. George Woodward; second, Mr. C. Herrin. Lord Suffield—first, Mr. J. McKenzie; second, Mr. George Woodward; third, Mr. R. Chamberlain. Mère de Menage—first, Mr. J. McKenzie; second, Mr. C. Ross; third, Mr. George Woodward. New Northern Greening—first, Mr. A. Brooks. Peasgood's Nonsuch—first, Mr. J. McKenzie; second, Mr. W. A. Mackenzie, gardener to the Right Rev. the Lord Bishop of Bath and Wells, The Palace, Wells, Somerset; third, F. G. Powell, Esq., The Horticultural College, Swanley. Pott's Seedling—first, Mr. C. Ross; second, Mr. George Woodward; third, Mr. J. Hudson. Royal Jubilee (one entry only)—first, Mr. C. Ross. Sandringham—first, Mr. J. McKenzie; second, Mr. George Wythes, gardener to Earl Percy, Syon House, Brentford. Spencer's Favourite—first, Mr. George Woodward; Stirling Castle—first, Mr. J. McKenzie; second, Mr. W. Strugnell, gardener to the Right Hon. W. H. Long, M.P., Rood Ashton, Trowbridge. Stone's—first, Mr. J. McKenzie; The Queen—first, Mr. C. Herrin; second, Mr. George Woodward. Tower of Glamis—first, Mr. J. McKenzie; second, Mr. A. Brooks. Tyler's Kernel—first, Mr. J. McKenzie. Warner's King—first, Mr. J. McKenzie; second, Mr. G. Chambers. Any other variety—first, Mr. J. McKenzie, with Dutch Codlin.

MESSRS. J. R. PEARSON & SONS' PRIZES.—In a class for Newtown Wonder, open only to exhibitors living in Cardigan, Radnor, Shropshire, Stafford, Warwick, Bedford, Cambridge, Essex, or counties farther north, Mr. J. Hill, gardener, to C. R. W. Adeane Esq., Bahraham Hall, Cambridge, was placed first. In a class for the same variety open to exhibitors hailing from the south of the counties above named Mr. R. Edwards, gardener to G. N. Field Esq., Beechy Lees, Sevenoaks, Kent, was awarded the chief prizes.

PEARS.

DESSERT VARIETIES.—The prizelist was as follows:—Bergamotte d'Esperen—first Mr. J. Powell; second Mr. C. Ross.—Beurré Bosc—first, Mr. G. Goldsmith; second Mr. W. Cotterill, gardener to Sir W.

N. M. Geary, Bart, Oxon Hoath Park Tonbridge. Beurré d'Anjou (one entry only)—first Mr. Geo. Woodward. Beurré Diel—first Mr. Geo. Woodward; second, Mr. G. Wythes. Beurré Dumont—first, Mr. Geo. Woodward. Beurré Hardy—first, Mr. Geo. Woodward; second Mr. H. C. Prinsep. Beurré Superfin—first, Mr. G. Woodward; second, Mr. G. Goldsmith. William's Bon Chrétien—first, Mr. James Day, gardener to the Earl of Galloway, Galloway House, Garliestown. Comte du Lamy;—first, Mr. T. Turton. Conference—first, Mr. Geo. Woodward; second, Mr. W. Slogrove, gardener to Mrs. Crawford, Gatton Cottage, Reigate. Conseiller de la Cour—first Mr. J. C. Tallack; second, Mr. A. Basile. Doyenné du Comice—first, Mr. J. Powell; second, Mr. B. Calvert, gardener to Col. Archer Houlblon, Hallingbury Place, Bishop Stortford. Duchesse de Bordeaux—first, Mr. G. Goldsmith. Durondeau—first, Mr. Geo. Woodward; second, Mr. W. G. Pragnell. Easter Beurré—first, Mr. B. Calvert; second, Mr. Geo. Woodward. Emile d'Heyst—first, Mr. Geo. Woodward; Fondante d'Automne—first, Mr. A. Basile. Fondante de Thiriote—first, Mr. Geo. Woodward; second, Mr. W. Messenger. Glou Morceau—first Mr. J. Powell; second, Mr. Geo. Woodward. Joséphine de Malines—first, Mr. J. Powell; second, Mr. T. W. Herbert. Louise Bonne of Jersey—first, Mr. J. Coles, gardener to H. F. Walker Esq., Highley Balcombe, Sussex; second, Mr. W. Messenger. Marie Benoist—first, Mr. Geo. Woodward. Marie Louise—first, Mr. B. Osborn, gardener to Rev. H. Golding Palmer, Holme Park, Reading; second, Mr. G. Woodward. Marie Louise d'Uccle—first, Mr. W. Cotterill; second, Mr. Geo. Woodward. Marguerite Marillat—first, Mr. G. Goldsmith. Nouvelle Fulvie—first, Mr. Geo. Woodward. Olivier de Serres—first, Mr. G. Goldsmith. Pitmaston Duchess—first, Mr. W. Cotterill; second, Mr. Geo. Woodward; third, Mr. C. Harris, gardener to O. A. Smith Esq., Hammerwood, East Grinstead. Seckle—first, Mr. C. Ross. Souvenir du Congrès—first, Mr. G. Goldsmith. Thompsons—first, Mr. J. Powell. Winter Nelis—first, Mr. Geo. Woodward. Any other variety—first, Mr. W. Woodward with Gansel's Bergamot; second, Mr. J. Spottiswood with Duchesse d'Angoulême; third, Mr. G. Goldsmith with Rivers' Princess.

VEITCH FLAVOUR PRIZES.—A great number of dishes of Apples and Pears were submitted in competition for the Veitch flavour prizes. Upwards of forty dishes of Apples were shown, Mr. H. C. Prinsep taking the first place with some fine Ribstons. Mr. C. Herrin was second with Cox's Orange Pippin.

Over thirty dishes of Pears were forthcoming. Mr. B. Osborne won the chief prize with capital samples of Louise Bonne of Jersey. Mr. Cotterill was second with Fondante d'Automne.

NON-COMPETITIVE EXHIBITS.

Messrs. Sutton & Sons, Reading, had a fine exhibit of Tomatos, not so extensive as in former years, but for quality and finish the fruits have never been better. Several of the varieties were new, including Sutton's Eclipse, a brilliant red variety, not so large as Perfection, but much deeper, smooth and handsome. It crops very heavily either outside or under glass, those staged being grown in the open-air. A First-class Certificate has been accorded it by the Royal Horticultural Society. A novel colour in Tomatos was the new Peachblow, reminding one of American Peach, but larger and better. Sutton's Pomegranate is also new and notable for the bright colour of its fruits, which resemble the flower of the Pomegranate. Sutton's Prince of Wales is a globular fruit of useful size for dessert, and assuming a rich golden hue when ripe. Sutton's Golden Queen is a large, flattened, yellow fruit, which ripens early and well in the open-air, and is valuable on that account. A charming variety is Sutton's Sunbeam, like a Magnum Bonum Plum, but much deeper golden yellow. Sutton's Perfection is so well-known as to need no recommendation. Sutton's A 1 bears fruit in large bunches, and is excellent for outdoor work. The fruits are of great depth and of a rich shining red.

Her Majesty The Queen (gardener, Mr. Owen Thomas), Windsor, exhibited a trophy of fruit on a square table. The centre was occupied with a high pyramid of the new Tomato Golden Jubilee, the stems bearing the fruit as it grew, being used. It was surmounted by three large Pineapple fruits, and at the four corners were groups of three, making

fifteen magnificent fruits on the table. Baskets of Muscat of Alexandria, Raisin de Calabre, Black Alicante and Lady Downe's Grapes were placed on the four sides of the pyramid. Amongst the Pears were magnificent fruits of Calebasse Grosse, Beurre Bosc, Marie Louise, Catillac, Beurré Diel, Huyshe's Victoria, and handsomely coloured Louise Bonne of Jersey. Amongst Apples, Annie Elizabeth, Stone's, Peasgood's Nonsuch, Hoary Morning, Warner's King, Blenheim Orange, Newton Wonder, Cox's Orange Pippin, and a seedling were in grand form.

Messrs. Jas. Veitch & Sons, Ltd., Chelsea, filled a large table with superb samples of hardy fruit. The centre of the table was occupied by a long line of large dishes of Apples, and was flanked on either side by a double row of Apples and Pears, mixed, making in all 170 dishes. Two trays filled with the handsome *Physalis Alkekengi* and *P. Franchetti* were very bright. The look of the table was also improved by well-berried sprays of *Rosa rugosa* interspersed with the fruit. Apples throughout were large and well coloured, particularly in the case of such varieties as King Harry, Tyler's Kernel, Warner's King, Egremont Russet, Cox's Pomona, Peasgood's Nonsuch, Red Hollambury, and King of the Pippins. Pears were admirably represented by Louise Bonne of Jersey, Beurré Clairgeau, Beurré Baltet Père, Doyenne du Comice, and Marie Louise d'Uccle among a host of others. A verdict of very highly commended was given. Close to their exhibit of fruit the Messrs. Veitch staged a grand lot of *Nerine Fothergilli* major. The large umbels of brilliant scarlet flowers were set off to great advantage by the setting of Maidenhair Fern. The Horticultural College, Swanley (principal, Mr. H. G. Powell) was highly commended for a comprehensive exhibit of fruit, including samples of various bottled fruits in an excellent state of preservation.

Messrs. B. S. Williams & Son, Upper Holloway, N., set up an effective group of stove fine foliage plants. The *Dracaenas*, *Crotons*, and *Aralias* which composed the group in a large measure were in capital condition.

Messrs. J. Cheal & Sons, Crawley, Sussex, demonstrated their undenied skill as fruit cultivators by a rich and varied assortment of Apples and Pears that mustered close upon 200 dishes. The central feature was a huge conical pile of that well-known variety Bismarck. Forge, Duchess of Gloucester, Hereford Beefing, and Cowan's Victoria, although only small varieties, were remarkable for their high colour. Hoary Morning, Jubilee, Thomason, King of the Pippins, and Frogmore Prolific were also very beautifully coloured. In the centre of the table was a row of dwarf cordon Apples on the Paradise stock well loaded with fruit. Of Pears there were some splendid dishes including Pitmaston Duchesse, Doyenné Boussoch, Beurré Hardy, General Tottleben, and Durondeau (very highly commended). From the same firm came a charming display of single, Cactus, pompon, and show Dahlias. The blooms were all bright and good for the now advanced season.

Messrs. W. Gaymer & Son showed bottles of Norfolk Cider and Cider Apples on a gay conical stand of considerable height.

Upwards of eighty dishes of Apples and Pears, chiefly the former, were contributed by Messrs. Fisher, Son, & Sibray, Ltd., The Royal Nurseries, Handsworth, Sheffield. Many of the leading varieties of Apples were represented, and amongst these we noted Loddington, Gloria Mundi, Peasgood's Nonsuch, Lane's Prince Albert, The Queen, and Emperor Alexander. In the back-ground were samples of fruit trees lifted from the open such as those that are supplied in quantity to customers all over the country.

A comprehensive collection of fruits to the tune of some 130 dishes came from the nurseries of Messrs. John Peed & Sons, at Streatham. The fruit throughout was clean and handsome, and consisted of Grapes, Apples, and Pears in variety. Plants of various kinds were employed to bedeck the table with excellent effect (highly commended).

On the right-hand side of the big organ Messrs. John Laing & Sons, Forest Hill, S.E., put up a showy group of miscellaneous plants. Palms were employed for the background, and *Crotons* and *Dracaenas* flanked the group on either side, whilst single and double tuberous *Begonias* occupied the centre. In the front ranks were some small *Caladiums* and *Streptocarpus*. The outline of the group described a large semi-circle, the edging being of

Isolepis gracilis. On the left-hand side of the organ, too, the Messrs. Laing had placed some of their fine strains of single tuberous *Begonias*. White, crimson, yellow, bronze-yellow, and rose-pink were prominent. In the body of the building appeared another large table filled with cut hardy flowers in gay profusion by the Messrs. Laing. Following on the end of the cut flowers came a grand lot of fruit grown and staged by the Forest Hill firm. There were no fewer than 150 dishes of Apples and Pears, all in first-class condition. Beauty of Kent, Gloria Mundi, Loddington's Seedling, Hollambury, Mère de Menage, Cox's Pomona, Peasgood's Nonsuch, Warner's King and Golden Noble were some of the best Apples, and Pitmaston Duchess, Louise Bonne of Jersey, Durondeau, and Beurré Clairgeau, the best Pears.

Messrs. Wood & Sons, Wood Green, N., had a stand of horticultural requisites. A highly decorative appearance had been imparted to the stand by numbers of feathery plumes of dried grasses, tall tapering bamboos, etc. A special feature was a patent lawn sweeper, which worked both speedily and effectively. Manures of various kinds were well shown.

Messrs. A. W. Young & Co., Stevenage, Herts, were commended for an exhibit of Tomatos and fancy Gourds. The former were medium-sized well-coloured samples of that useful variety "Young's Eclipse." A table of cut hardy flowers, consisting in the bulk of Dahlias, Lilies, and perennial Asters was likewise shown by this firm.

A table of fruit from the Royal Horticultural Society's gardens at Chiswick (superintendent, Mr. S. T. Wright), was highly commended. There were some medium-sized, but clean and handsome Apples and Pears here, although the special feature was Grapes. In addition to two huge bunches of Gros Guillaume, one of which turned the scale at 7½ lbs., and the other at 8 lbs., there were nice bunches of Mrs. Pearson, Mrs. Pince, Muscat of Alexandria, Black Hambro, Muscat Hambro, and Gros Maroc, as well as the small but exquisitely flavoured Chasselas Rose.

Messrs. S. Spooner & Sons, Hounslow, were highly commended for a comprehensive collection of Apples. Stone's Hoary Morning, King of the Pippins, Blenheim Orange, Colonel Vaughan, Manx Codlin, Yorkshire Beauty, and Duchess of York's Favourite, were a few of the more notable varieties.

Mr. R. Pinches, Brown Street, Camberwell, had a stand displaying his patent labels, which were commended.

Messrs. Wm. Paul & Son, Waltham Cross, had a remarkably fine lot of cut Roses, considering the lateness of the season. Marie Van Houtte, Caroline Testout, Mrs John Laing, Queen Mab, and Maréchal Niel were some of the most noteworthy forms. Heavily flowered sprays of the little *Gloire des Polyantha* were showy, and amply testified to the floriferousness of the variety.

Messrs. Harkness & Sons, Bedale, Yorks., had a grand display of cut hardy flowers, chiefly *Gladioli*. Mr. W. Horne, Perry Hill, Cliffe, had a small collection of choice and well grown Apples; conspicuous amongst which was a dish of some four dozen of the pretty little Yellow Ingestre. Mr. W. Wells, Earlswood Nurseries, Red Hill, Surrey, had a stand of cut early *Chrysanthemums*.

A highly effective exhibit from a decorative point of view was that made by Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N. Tuberous *Begonias* and cut Dahlias, of the Cactus section, constituted the bulk of the exhibit. The exhibit rose in the centre to a height of about 3 ft., from the level of the table, thus presenting a bank of glowing colours on either side and at the ends. A row of Palms and *Dracaenas* along the centre put a finish to the display. At one end appeared a quantity of cut blooms of fine double *Begonias*, arranged with Maiden-hair Fern.

A splendid semi-circular group of Cannas was put up by Messrs. H. Cannell & Sons, Swanley, Kent. Although the plants were only in 5 in. pots they were all carrying large trusses of brilliant flowers, and throughout were in the pink of condition. Cannas are evidently understood at Swanley. Cut sprays of *Physalis Franchetti*, with highly-coloured and large fruits, were also sent from Swanley.

Messrs. Paul & Son, the Old Nurseries, Cheshunt, set up a miscellaneous group, that contained both flowers and fruit. Pot Roses formed a large percentage of the latter, and cut hardy flowers were

well and cleanly shown. The fruit, too, was good and shapely, although not highly coloured.

THE LECTURES.

FRUIT CULTURE IN HER MAJESTY'S REIGN.

A series of lectures had been arranged for, one to be given on each day of the show. It was intended that they should be held in the Garden Hall, but as the luncheon was laid in that place, and the tables were not cleared until late in the afternoon, another room close by was devoted to the lecture on the first day, when Mr. George Bunyard, of Maidstone, discoursed upon "Fruit culture in Her Majesty's Reign, 1837—1897." Unfortunately there was a deal of racket going on overhead, and Mr. Bunyard had to speak under difficulties in consequence. Sir Trevor Lawrence, Bart., occupied the chair during the first part of the proceedings.

In opening the subject Mr. Bunyard asked his audience to go with him in fancy into a garden in the year 1837, and take note of the varieties of fruits that found a place in it. The garden would probably be from two to three acres in extent, square in form and walled in all round. In the centre would be an unheated, very ornamental structure, covered on the outside with Roses of the Ayrshire type, Magnolias, and Vines, and containing Oranges, Fuchsias, Bays, and Pomegranates.

In the garden itself they would find such Apples as Court Pendu Plat, Gooseberry Pippin, Manx Codlin, Wellington, and Norfolk Pippin, whilst amongst Pears they would find Beurré Diel, Easter Beurré, Citron des Carmes, and Williams' Bon Chrétien. On a wall facing south would be seen Peaches, Nectarines and Vines, whilst Apricots were relegated to a west wall. On the east and west walls Pears and Plums were to be found. Of the former some of the most conspicuous would be Jargonelle, with plenty of leaves and very few fruits. Chaumontelle would be observed carrying enormous spurs, with a few fruits on the tips of them. All old trees were heavily pruned in those days. Great pains, too, were taken with Peaches and Nectarines. Each year they were taken away from the wall, and the latter limewashed, the trees themselves being cleaned before being put back. In training them the branches were secured to the wall by the direction of a plumb line.

Strawberries were represented by Keens' Seedling, Black Prince, and several Hautbois and Alpine varieties. Much progress has been made in these, and the introduction of British Queen in 1840, and President a little later were notable events.

The heating of glass-houses was a great step. The upright tubular boiler was sent out in 1839, and the duty was taken off glass in 1840. Steam saws and planes for the manipulation of the timber for houses, and railways for its quick transit have worked wonders in horticultural building, and an idea of the change that has been effected is obtained from the fact that at the present time there is a firm of brothers who grow for market who possess 134 acres of glass.

Since Mr. T. Rivers, of Sawbridgeworth, commenced to use the Quince stock for Pears the saying about "planting Pears for your heirs" has become obsolete. Mr. Rivers also introduced the Paradise stock for Apples, and these two items have largely helped to make our British fruit what it is to-day. Root-pruning has been added to the culture routine, and thus the balance between the branches and fibrous roots is maintained to the no small benefit of the trees. Root-pruning, in addition to liberal mulchings of manure, to trees bearing heavy crops are the chief improvements in fruit culture that mark the Victorian era. Another earnest of the progress made is afforded by the Grape. Grapes that can now be purchased for 2s. 6d. per lb. could not formerly have been bought for less than 25s. per lb. New varieties of various fruits have been brought to light at various times, and most of the old ones have been forgotten. Thus out of 130 varieties of Apples grown in gardens in 1837 only thirty are now cultivated. Dessert Apples, too, were much smaller at the earlier date than they are now.

Much of our knowledge, continued Mr. Bunyard, is due to the press, in which may be included the various publications of the Royal Horticultural Society. No fewer than 224 First-class Certificates have been awarded by this society to fruits, exclusive of Melons, since 1837, and it speaks well for the judgment with which these certificates have been bestowed when we consider that only fifty of the

varieties receiving them have been superseded. Besides those that have been superseded led directly to those improvements which took their places.

Mr. Bunyard was of opinion that the 1883 conference at Chiswick was of the greatest benefit to fruit culture, the list of synonyms then drawn up and subsequently published being of inestimable value. The show held at the Guildhall in 1890 served to convince Londoners that first-class fruit could be grown in the old country. Conferences on fruit have been held at Exeter, Hereford, Chester, Pershore, and Worcester, and have all helped the cause. County Councils have during the last few years engaged experts to teach the people in their various spheres of operation the way to grow fruit well, and what varieties to invest in. Sir H. Stanhope, of Holme Lacy, might be regarded as the fore-runner of hardy fruit culture, whilst Messrs. Rivers, of Sawbridgeworth, Pearson, of Chilwell, Wildsmith, of Heckfield, Ford, of Leonardslee, Ross, of Welford, Ingram, Jones, Dr. Robert Hogg, and Robert Thomson were all men who had rendered yeoman service.

The tendency to popularise fruit and fruit-growing is doubtless largely responsible for the improved state of health in our large towns and cities.

In summing up Mr. Bunyard averred that the rate of progress in horticulture during the Victorian era had been fully as great as in the case of other industries.

In the appendix to Mr. Bunyard's paper, which was not read, appeared (a) a list of varieties of fruits cultivated in 1837, and comprising Apples, Pears, Plums, Cherries, Nectarines, Peaches, Apricots, Figs, and Strawberries; (b) a list of the varieties introduced to commerce between the years 1837 and 1897, with the respective dates; (c) a list of those varieties likely to prove permanent additions.

Sir Trevor Lawrence rose to open the discussion at the close of the reading of the paper. He stated that while on a visit to South Wales he had bought good Muscat Grapes at 1s. 6d., and 2s. per lb., which twenty-five or thirty years ago would have fetched 7s. 6d., 10s., or even 15s. per lb. He further remarked that first-class fruit was hardly to be found out of the British Isles, or bought at reasonable prices. Speaking of the improvement in size, he stated that mere size should not be sacrificed to quality. Sir Trevor was very emphatic upon the point that we ought to guard against the idea that anybody can grow good fruit and find a market for it. Fruit growing is a skilled industry, and it was like showing a Will o' the Wisp to farmers, who could not learn quickly, to try to induce them to plant fruit instead of grain. We are very much obliged to gentlemen like Mr. Bunyard for bringing so much energy and skill to bear upon the industry.

Mr. C. Lee Campbell, of Glewstone Court, Ross, Hereford, was of opinion that fifteen sorts of Apples were enough for everything. Gardeners come to their work with too much prejudice. They send samples to market carelessly and fraudulently packed, and grumbled at the result. He always graded and packed his fruit in the same way, and found that the bales went like hot rolls. He should advise others to do the same if only as a matter of common honesty. In Mr. S. T. Wright he had had the pleasure of supplying the Royal Horticultural Society with a superintendent for their gardens at Chiswick.

Mr. E. Pool, The Gardens, Cleve Hall, near Bristol, gave some of his experiences, and spoke of the success that had attended his practice of replanting old orchards with young trees.

Mr. Pearson did not believe in this system, and stated that he had never known Apples to do well when planted on the site of old orchards.

Mr. Roupell stated that all the old Apples were of a russet character. He disagreed with the remarks of the president anent fruit culture by farmers. He believed that it could be made to pay. Strawberries, for instance, were grown by hundreds of broad acres. Tomatos again were one of the marvels of the age. The best varieties were those bearing fruits which went about five to the lb., and were perfectly smooth, and not corrugated. He could remember the time when market growers' carts used to run from Battersea, Clapham, and Camberwell. These districts have long been given up to building purposes however, and the radius has consequently extended.

Mr. John Wright in rising to propose a vote of thanks to the lecturer spoke of the Guildhall Fruit Show of 1890 as being mainly due to Mr. Bunyard's

efforts and influence, for when it was almost decided to abandon the idea of holding a show Mr. A. H. Smee, of Carshalton, offered to fill half of the hall by the help of his friends, and amidst cheers Mr. Bunyard rose and offered to fill the other half.

Mr. Bunyard acknowledged the vote of thanks in suitable terms, and spoke of the necessity of reducing the number of varieties of Apples grown for market purposes.

GARDENING MISCELLANY.

PEAR BEURRE HARDY.

THIS is classed as an October Pear, but was in excellent condition for the table by the end of September with Mr. H. C. Prinsep, gardener to the Hon. Mrs. Portman, Buxted Park, Uckfield. The fruits are pyriform or obovate, and of a greenish-yellow, more or less heavily overlaid with brown russet on the exposed side. The flesh is greenish-white, very tender, melting and very juicy. The gritty flesh, characteristic of such as Beurré Diel, is imperceptible here, Beurré Hardy, on the contrary, possessing a richly-flavoured and tender, melting flesh. If the fruit growers of Kent and Sussex would grow the variety in quantity to meet the home demand the British public could well afford to be independent of the Californian or any other foreign supply. Hitherto, of course, we have been indebted to California for a supply of excellent quality, but the individual fruits are not by any means larger than those grown in the southern counties of England at least.

COLCHICUM PARKINSONI.

IN this we have one of the finest of the Colchicums. The flower is much larger and more heavily tessellated than that of *C. variegatum*, but is not so hardy as the latter species since very hard winters endangers its existence. The flower is stellate in form with lanceolate-acuminate segments. The ground colour is flesh-pink and the markings are of light purple. Where a sheltered position can be given it, *C. Parkinsoni* will render a capital account of itself, although being so close to the ground the flowers are apt to get splashed and spoiled with mud as the result of heavy rains. Messrs. Barr & Sons have a fine stock of it at Long Ditton, where it is thought very highly of.

CHRYSANTHEMUM LADY FITZWIGRAM.

THE fine group of this grand early-flowering Chrysanthemum sent to the Drill Hall at the last meeting of the Royal Horticultural Society by Mr. George Wythes, of Syon House Gardens, amply demonstrated the value of the variety when grown in pots for early work. The habit of the plants is dwarf and symmetrical, and the height is a little over 2 ft. The flowers are pure white and produced in abundance. It is indeed a great improvement on Madame C. Desgranges as far as habit, floriferousness and purity of colour goes. The flowers come well when the plants are out-of-doors, and the variety is thus an acquisition for border work. We recently observed a batch of plants flowering out-of-doors at Messrs. Barr & Sons' nursery at Long Ditton, and in every case the bushy and shapely habit of the plants was well-demonstrated. The flowers, too, were remarkable for their purity.

ONION SHOW AT BANBURY.

H. DEVERILL, florist, seed-grower, and Onion specialist, Banbury, held his annual Onion show in his business premises, Cornhill, Banbury, on Thursday, 16th ult. There was a large turnout of exhibits, and the competition was very keen. Mr. Deverill had on exhibition a very large collection of herbaceous flowers, Gladioli, and Dahlias, which enhanced the appearance of the show, and proved a very great attraction.

The great attraction of the show, however, was the magnificent Onions staged by Mr. James Bowerman, Hackwood Park Gardens, Basingstoke, whose specimens were of perfect shape and large size, his champion six weighing 14½ lbs., and his dozen weighing 26 lbs., both of the now famous Ailsa Craig variety. The collections of vegetables shown in the open and confined classes were exceptionally good,

and it would be hard to equal them at some of the largest shows in the country. Some magnificent Leeks were also shown, those by Mr. R. Lye, Sydmonton Court Gardens, Newbury, taking first place. The show was open to the public from 12.30 to 8 p.m., and it is estimated that it was visited by upwards of 3,000 people. Mr. R. Dean, Ealing, London, and Mr. G. Inglefield, Tedworth House Gardens, Marlborough, acted as judges, and whose decisions gave every satisfaction. The prize list is as follows:—

The Champion Prize for six Onions was taken by Mr. James Bowerman, Hackwood Park Gardens, Basingstoke (variety, Ailsa Craig; weight, 14½ lbs.). In the class for twelve Onions, Ailsa Craig or Coconut, Mr. J. Bowerman was again first, showing Ailsa Craig, weight 26 lbs. Mr. N. Kneller, Mals-hanger Gardens, Basingstoke, was second with Ailsa Craig, weight, 25½ lbs. Mr. J. Masterson, Weston Park Gardens, Shipston-on-Stour, came in third with Ailsa Craig, weight 23½ lbs. Mr. R. Lye, Sydmonton Court Gardens, Newbury, was fourth, showing Ailsa Craig, weight 20½ lbs. For twelve Onions, either Anglo-Spanish, The Lord Keeper, Royal Jubilee, or Rousham Park Hero, Mr. Keep, Faringdon House Gardens, Faringdon, took the lead with Rousham Park Hero, weight 21½ lbs.; Mr. R. Lye took the second place; Mr. C. J. Waite, Glenhurst Gardens, Esher, the third; and Mr. R. Horton, Tysoe, the fourth. For twelve Improved Wroxton Onions, Mr. E. Thorne, Oxford, had the best lot, weighing 12½ lbs., and Mr. R. Lye followed. In Class V., twelve Challenge Onions, Mr. R. Lye and Mr. C. J. Waite, were first and second respectively. For a single specimen of any of Deverill's pedigree Onions, Mr. J. Bowerman, was first with Ailsa Craig (weight, 2 lbs. 13 ozs.); Mr. N. Kneller, second with Anglo-Spanish (weight, 2 lbs. 7½ ozs.); and Mr. R. Lye, third with Ailsa Craig (weight, 2 lbs. 1 oz.). In the class for twelve Onions, open to amateurs and cottagers, Mr. H. Elmer, Cuckfield, Sussex, took the lead with Ailsa Craig (weight, 18½ lbs.). He was followed by Mr. W. Woodcraft, Nuthrop, Banbury, and Mr. R. Horton, respectively. Extra prizes were awarded to Mr. W. Goodwin, Adderbury, Banbury; Mr. W. Butcher, Tysoe, Warwick; and Mr. E. Cove, Falfield, Gloucestershire.

For six Deverill's Oxonion Leek, Mr. R. Lye took the lead, followed by Mr. James Bowerman, and Mr. N. Kneller respectively. In the class for a collection of vegetables, open, eight distinct kinds, Mr. R. Lye was to the fore, and was succeeded by Mr. C. J. Waite, and Mr. George Wells, Tysoe, in this order. For a collection of vegetables, eight distinct kinds open to amateurs and cottagers only, Mr. George Wells took the first award. Mr. H. Ellmer and Mr. W. Butcher were second and third respectively; and Mr. R. Horton and Mr. D. Wilson, Keighley, Yorks, were equal fourth.

QUESTIONS AND ANSWERS

Muscat of Alexandria Grape.—*Allan Cameron*: We do not think that any advantage is to be gained by inarching Muscat of Alexandria upon Black Hamburg. In the former case the variety is naturally a late Grape, whereas Black Hamburg is early. We doubt if this, however, is the true cause of the berries shanking. In the first place you should ascertain whether the drainage is good, and, secondly, the roots should have an abundance of moisture during the growing season. The border may be kept drier in winter, but not so dry as to kill the roots. If the latter are in good condition, then see that the border is thoroughly supplied with moisture during summer as well as plenty of nourishment. See that the aspect of the vinery is to the south or south-east. By close observation you should soon be able to detect what is the root of the evil. Your own experience and observation, as you have admitted, shows that Muscat of Alexandria does better on its own roots than on the Black Hamburg.

Gardener's Directory.—*Daniel Campbell*: The Garden Annual is published at the "Garden" Office, 37, Southampton Street, Covent Garden, London, W.C. The Horticultural Directory is published at the office of the "Journal of Horticulture," 171, Fleet Street, London.

Raising Dog Roses.—*J. T. Thurston*: There is no difficulty as a rule in raising these, if the seed is good, and you exercise a little patience. As soon as the fruits are perfectly ripe rub them out of the hews and sow them at once. Prepare a bed or beds in a situation where the ground will not be disturbed for two years. Spread a quantity of old potting soil from under the benches upon the ground, adding a quantity of leaf soil and sand, unless there is already

a good proportion of these ingredients in the potting soil. Dig this into the natural soil, level the ground and rake it fine. Then make little furrows about half-an-inch deep and 9 ins. apart. Sow the seeds, cover them up, and press down the soil with the back of the rake. Then rake the soil lightly and the operation is complete. Nothing further will be necessary than to keep the ground clean. You can hoe between the lines after the Roses have germinated. A good proportion of the seedlings should come up in spring, or during the course of the summer, but they will remain small the first year. Probably the remainder will not germinate till the spring of the second year, but you need not disturb the soil, as the Roses may be left in position till the third autumn from now.

Covering Vine Borders.—*Allan Cameron*: If the Vine border you mention contains the roots of Vines that are to be forced early, a good mulching of cow manure would be beneficial, by keeping the soil in a warmer condition during frosty weather. On the other hand we think it would be disadvantageous to borders for late and general crops. Frost improves the condition and fertility of the soil, to which it should have access wherever possible, except in the case of early Vine borders. We think, however, that in your western district, the heavy rainfall is more likely to do injury than frost. This being so it might be advantageous to place a layer of dry leaves over the border, and then place the zinc covering you mention a little above the leaves so as to admit a free play of air. You should ascertain whether the border is properly drained, and that superfluous moisture has proper facilities for passing away by a drain if necessary. Good cultivators nowadays generally leave their Vine borders perfectly bare during winter, and mulch with manure in summer, as the practice allows the frost to pulverise and ameliorate the soil. The summer mulching should be put on after the Vines get into full leaf.

Feeding of goldfish.—Will some kind reader tell me as to the kind of food and the best with which to feed goldfish? They are in an aquatic house which is kept at stove temperature. The tanks are full of aquatic plants. I have been feeding them on bread and worms from the garden. Trusting some kind reader will reply, I remain—*Anxious to know*.

Double berry of Lycium europaeum.—*J. T. Thurston*: This was an interesting case. We do not remember seeing it in this species, but it occasionally occurs in several other things, and too often in the Tomato, as it spoils the fruit.

Names of Fruits.—*J. C. S.*: The conical Apple is Mabbot's Pearmain; the flattened variety is Red Winter Pearmain.—*Polton*: 1, Ecklinville; 2, Dutch Codlin; 3, Cellini; 4, Scarlet Nonpareil; 5, not recognised.—*P. McCowan*: 1, Claygate Pearmain; 2, Dumelow's Seedling; 3, Pott's Seedling; 4, Blenheim Orange; 5, White Paradise; 6, Mère de Ménage; 7 and 8, not recognised. They arrived in good condition, being well packed.—*Allan Cameron*: Plum Sultan.

Wires on the Wall of a House.—*J. H. W.*: It is a very uncommon practice to fasten wires to a wall in an upright or perpendicular fashion. The usual and the best way, in our opinion, is to stretch the wires horizontally along the wall at convenient distances apart. They should be about 9 in. to 1 ft. apart. Plants are more easily tied to such wires, because the ties are not liable to slip down, as in the case of upright wires. It is also more easy to fix and strain the wires tight when they are run horizontally along the wall (especially if there is a plate of iron, having eyes or holes for the wires, at either end of the building) than if they were perpendicular.

Names of Plants.—*J. Mayne*: The Fern not recognised. Could you send a portion of frond with spores? The other plant is Phyllanthus (Xylophylla) speciosus.—*J. C. S.*: Nicandra physaloides.—*J. T. Thurston*: 1, Oxalis corniculata rubra, a doubtful British plant, but naturalised in many places, and a determined weed in gardens, where it has once been used as a bedding plant; 2, Achillea Ptarmica.—*J. C.*: 1, Catleya gaskelliana; 2, Pleione Lagenaria; 3, Masdevallia tovarensis; 4, Oncidium varicosum.—*R. Howard*: 1, Aster Novi-Belgii densus; 2, Aster Novae-Angliae roseus; 3, Aster ptarmicoides; 4, Solidago canadensis; 5, Helianthus decapetalus; 6, Helianthus rigidus.—*W. H.*: 1, Pteris quadriaurita argyrea; 2, Selaginella Martensii variegata; 3, Fuchsia gracilis variegata; 4, Ligustrum vulgare; 5, Symphoricarpos racemosus.—*Omega*: The Rigid Sunflower (Helianthus rigidus); 2, The Double Feverfew (Matricaria Parthenium flore pleno).

Communications Received.—*W. S. Sandon* (see next week).—*A. P., Kelso*.—*W. E. B.*—*Omega*.—*A. D. Webster*.—*F. Davids*.—*Coila*.—*M. Temple*.—*H. Harwood Smith*.—*G. Gaskell*.—*J. Sullivan*.—*R. Sims*.—*Geo. Wencroft*.—*Mayflower*.—*L. T.*.—*A. B.*.—*J.*.—*F. C. W.*.—*Thames' Parks*.

TRADE CATALOGUES RECEIVED.

WILLIAM RUMSEY, Joynings Nurseries, Waltham Cross.—Catalogue of Roses, Fruit Trees, Ornamental Trees, Shrubs, &c.
JOHN TURNER, Wetherby, Yorks.—Catalogue of Bulbs, and other Flower Roots, Fruit Trees, &c.
LAING & MATHER, Kelso-on-Tweed.—Carnations.

COVENT GARDEN MARKET.

October 6th, 1897.

FRUIT.—AVERAGE WHOLESALE PRICES.

| | | | | |
|------------------------|---------|------------------------|---------|---------|
| Apples..... per bushel | 2 6 7 0 | Grapes, per lb | | 0 9 1 6 |
| Black Currants ½ sieve | | Pine-apples | | |
| Red " ½ sieve | | —St. Michael's each | 2 6 8 0 | |
| Cherries " half sieve | | Plums per ½ sieve..... | | |
| Nova Scotia Apples | | Strawberries, per lb. | | |
| per barrel | | Tasmanian Apples | | |
| Filberts..... | | per case | | |
| Cobbs 21 0 22 6 | | | | |
| per 100lbs. | | | | |

VEGETABLES.—AVERAGE WHOLESALE PRICES

| | | | |
|------------------------|---------|------------------------|---------|
| Artichokes Globe doz. | 2 0 3 0 | Herbs per bunch | 0 2 |
| Asparagus, per bundle | | Horse Radish, bundle | 2 0 4 0 |
| Beans, French, per | | Lettuces ... per dozen | 1 3 |
| per half sieve | 4 0 5 0 | Mushrooms, p. basket | 1 0 |
| Beet..... per dozen | 2 0 | Onions..... per bunch | 4 0 6 |
| Brussel Sprouts, | | Parsley ... per bunch | 0 3 |
| per half sieve | | Radishes... per dozen | 1 0 1 3 |
| Cabbages ... per doz. | 1 0 1 3 | Seakale... per basket | |
| Carrots ... per bunch | 0 3 | Small salad, punnet | 0 4 |
| Caullflowers..... doz. | 2 0 3 0 | Splnach per bushel | 3 0 4 0 |
| Celery..... per bundle | 1 0 1 6 | Tomatoes..... per lb. | 0 6 1 0 |
| Cucumbers per doz. | 2 0 3 0 | Turnips per bun. | 0 3 |
| Endive, French, doz. | 1 0 2 0 | | |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| | | | |
|-------------------------|---------|-------------------------|----------|
| Arum Lilies, 12 blms. | 5 0 6 0 | Marguerites, 12 bun. | 2 0 4 0 |
| Asparagus Fern, bun. | 1 6 3 0 | Maidenhair Fern, 12bs. | 4 0 8 0 |
| Asters (French) per | | Orchids, doz. blooms | 1 6 12 0 |
| bunch | 0 9 1 0 | Primula, double, doz | |
| Asters, various, doz. | | sprays | 0 6 0 6 |
| bunches | 2 0 5 0 | Pelargoniums, 12 bun. | 4 0 6 0 |
| Bouvardias, per bun. | 0 6 0 8 | Pyrethrum doz. bun. | 1 6 3 0 |
| Carnations doz. blms. | 0 6 3 0 | Roses (Indoor), doz. | 6 1 0 |
| Carnations, doz. bun. | 3 0 6 0 | " Tea, white, doz. | 0 9 2 0 |
| Chrysanthemums | | " Niels 1 6 4 0 | |
| dozen blooms | 1 0 3 0 | " Safrano 1 0 2 0 | |
| Cornflower, doz. bun. | 1 0 2 0 | (English), | |
| Eucharis ... per doz | 1 6 3 0 | Red Roses, doz. | 1 0 2 0 |
| Gardenias ... per doz. | 2 0 4 0 | Pink Roses, doz. | 2 0 4 0 |
| Geranium, scarlet, | | Roses, doz. bun. | 3 0 9 0 |
| doz. bunches | 4 0 6 0 | Smilax, per bunch ... | 1 6 3 0 |
| Lilium longiflorum | | Tuberose, doz. | |
| per doz. | 3 0 4 0 | blooms | 0 3 0 4 |
| Lily of the Valley doz. | | | |
| sprays | 1 0 2 0 | | |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

| | | | | | |
|-------------------------|-----------|------------------------|-----------------------|------|---------|
| Arbor Vitae | per doz. | 12 0 36 0 | Foliage Plants, var., | each | 1 0 5 0 |
| Aspidistra, doz..... | 18 0 36 0 | Fuchsias, per doz. ... | 4 0 6 0 | | |
| " specimen | 5 0 10 0 | Heliotrope... per doz. | 3 0 4 0 | | |
| Asters, doz. pots..... | 2 0 4 0 | Hydrangeas per doz. | 8 0 12 0 | | |
| Chrysanthemum, per | | Ivy-leaved Geranium, | | | |
| doz. pots... | 6 0 30 0 | per doz. | 3 0 6 0 | | |
| Cockscombs, doz. pots | 2 0 3 0 | Lilium Harrissii, | | | |
| Coleus, doz. pots..... | 2 0 4 0 | per pot | 1 0 2 0 | | |
| Dracaena, various, | | Lycopodiums, doz. | 3 0 4 0 | | |
| per doz. | 12 0 30 0 | Marguerite Daisy doz | 4 0 9 0 | | |
| Dracaena viridis, doz. | 9 0 18 0 | Marguerite Yellow, | | | |
| Buonymus, var. doz. | 6 0 18 0 | per doz. | 5 0 9 0 | | |
| Evsrgreens, invar. doz | 6 0 24 0 | Myrtles, doz. | 6 0 9 0 | | |
| Ferns, invar., per doz. | 4 0 12 0 | Palms in variety, each | 1 0 15 0 | | |
| Ferns, small, per 100 | 4 0 6 0 | Palms, Specimen ... | 21 0 63 0 | | |
| Ficus elastica, each | 1 0 5 0 | Pelargoniums ... doz | 6 0 10 0 | | |
| | | Scarlets per doz | 1 4 0 | | |

GARDENING BOOKS.

HARDY ORNAMENTAL FLOWERING TREES AND SHRUBS, by A. D. WEBSTER. A valuable guide to planters of beautiful trees and shrubs for the adornment of parks and gardens. Second and cheap edition now ready. Price, 2s.; post free, 2s. 3d.

CHRYSANTHEMUMS AND THEIR CULTURE. By Edwin Molyneux. Ninth Edition. By far the best practical work yet written on this subject. Price, 1s.; post free, 1s. 2d.

VINES & VINE CULTURE.—The best book on Grapes. By Archibald F. Barron, late Superintendent of the Royal Horticultural Society's Garden, Chiswick, and Secretary of the Fruit Committee.—A New and Cheaper Edition, Revised and Enlarged. Demy 8vo, Handsomely Bound in Cloth. Price, 5s.; post free, 5s. 3d.

THE CARNATION: ITS HISTORY, PROPERTIES, AND MANAGEMENT; with a descriptive list of the best varieties in cultivation. By E. S. Dodwell. Third edition, with supplementary chapter on the yellow ground. Price, 1s. 6d.; post free, 1s. 7d.

FERNS & FERN CULTURE. By J. Birkenhead, F.R.H.S.—How to grow Ferns, with selections for stove, warm, cool and cold greenhouses; for baskets, walls, wardian cases, dwelling houses, &c. Price, 1s.; by post, 1s. 3d.

THE AMATEUR ORCHID GROWER'S GUIDE BOOK. By H. A. Burberry (Orchid Grower to the Rt. Hon. J. Chamberlain, M.P.). Second Edition, with coloured plates. Containing sound, practical information and advice for Amateurs, giving a List with Cultural Descriptions of those most suitable for Cool-house, Intermediate-house, and Warm-house Culture, together with a Calendar of Operations and Treatment for each Month of the Year. In Cloth. Price 5s.; post free, 5s. 3d.

Postal and money orders should be made payable at the East Strand Post Office to F. A. COBOLD "GARDENING WORLD" Office, 1, Clement's Inn, Strand, London, W.C.

FIXTURES FOR 1897.

OCTOBER.

- 12.—R.H.S. Committees and Lecture.
- 12, 13, 14.—N.C.S. at Royal Aquarium.
- 26.—R.H.S. Committees and Lecture.

NOVEMBER.

- 2, 3.—Watford Chrysanthemum Show.
- 2, 3.—Coventry Show.
- 2, 3.—Brighton Chrysanthemum Show.
- 2, 3.—Borough of Croydon Chrysanthemum Show.
- 2, 3.—Southampton Chrysanthemum Show.
- 2, 3.—West of England Chrysanthemum Show at Plymouth.
- 3.—Ealing Show.
- 3, 4.—R.H.S. of Ireland Chrysanthemum Show.
- 3, 4.—Ascot, Sunninghill, Sunningdale and District Chrysanthemum Show.
- 3, 4.—Isle of Thanet Chrysanthemum Show.
- 3, 4, 5, 6.—North Peckham Chrysanthemum Show.
- 3.—Teignmouth Chrysanthemum Show.
- 4.—Colchester Show.
- 4, 5.—Highgate Chrysanthemum Show.
- 4, 5.—Devon and Exeter Fruit and Chrysanthemum Show.
- 9, 10, 11.—N.C.S. at Royal Aquarium
- 9, 10, 11.—Birmingham Chrysanthemum and Fruit Show.
- 9, 10.—Kingston and Surbiton Chrysanthemum Show.
- 9, 10.—Leeds Paxton Chrysanthemum Show.
- 9.—R.H.S. Committees and Lecture.
- 10.—Bodmin Chrysanthemum Show.
- 10, 11.—Liverpool Chrysanthemum Show.
- 10, 11.—Chesterfield and District Chrysanthemum Show.
- 10, 11.—Birmingham Chrysanthemum Show.
- 10.—Brixton Chrysanthemum Show.
- 11.—Reigate Show.
- 11.—Jersey Gardeners' Society's Chrysanthemum Show.
- 11.—Spalding Chrysanthemum Show.
- 11, 12.—Putney Show.
- 12, 13.—Eccles, Patricroft, Pendleton and District Chrysanthemum Show.
- 12, 13.—Bradford Chrysanthemum Show.
- 12, 13.—Hanley Chrysanthemum Show.
- 12, 13.—Sheffield Chrysanthemum Show.
- 12, 13.—Nottingham Show.
- 16, 17.—Ipswich Chrysanthemum Show.
- 16, 17.—Manchester Chrysanthemum Show.
- 16, 17.—Belfast Chrysanthemum Show.
- 16, 17.—Chester Paxton Chrysanthemum Show
- 16, 17.—Folkestone Show.
- 17, 18.—Hull Chrysanthemum Show.
- 17, 18, 19.—York Chrysanthemum Show.
- 17, 18.—South Shields and Northern Counties' Chrysanthemum Show.
- 17, 18.—Bristol Chrysanthemum Show.
- 17.—Rugby Chrysanthemum Society.
- 18, 19, 20.—Edinburgh Chrysanthemum Show.
- 19, 20.—Stockport Chrysanthemum Show.
- 23.—R.H.S. Committees and Lecture.
- 25, 26, 27.—Dundee Chrysanthemum Carnival.
- 26, 27.—Aberdeen Chrysanthemum Show.

A Special Offer to Readers of
THE GARDENING WORLD.
25/- BOOK for 8/-
NO HOME SHOULD BE WITHOUT ONE
Ogilvie's Encyclopædia
OF
USEFUL INFORMATION
AND WORLD'S ATLAS.
No Single Book ever before contained such a Wealth of Knowledge.

91097. **COUPON.**
OGILVIE'S ENCYCLOPÆDIA OF
USEFUL INFORMATION,
AND WORLD'S ATLAS,
PRICE 25s.
16 COUPONS, AND 6d. WITH EACH.
Name _____
Address _____

Postal Orders or ½d. stamps may be sent.
COUPONS AND CONTRIBUTIONS MAY BE LEFT at or SENT TO the Office for
THE PUBLISHER OF
THE GARDENING WORLD.
COPIES OF THIS BOOK CANNOT BE BOUGHT. They can be obtained only by using these Coupons.

WARE'S

Tulips. Hyacinths.
Crocuses. Lilies. Irises.
Begonias. Anemones.
Gladioli. Spiraeas.

Daffodils to clear, viz:—

| | per 100 | | per 100 |
|------------------|---------|-------------------|---------|
| Annie Baden .. | 6/- | Obvallaris .. | 12/- |
| Barri Conspicua | 30/- | Odorus | |
| | | (Campernelle) | 2/6 |
| Burbidgei .. | 2/6 | Poeticus Ornatus | 4/6 |
| " Mary .. | 6/- | " Plenus .. | 4/- |
| Cynosure .. | 3/- | Princeps .. | 6/0 |
| Double Daffodils | 4/6 | Pseudo .. | 3/- |
| Emperor .. | 30/- | Sir Watkin .. | 30/- |
| Golden Spur .. | 21/- | Stella .. | 3/6 |
| Leedsii .. | 3/- | Mixed Narcissus.. | 3/- |

Carnations. Picotees.
New and Other Roses.
Clematis.
Hardy Climbers. Pinks.
Paeonies.
Pansies. Primroses, &c.

Catalogues have been posted to all Customers, and may be had free upon application to:—

THOMAS S. WARE,

Hale Farm Nurseries,
TOTTENHAM, LONDON.

Typhoid in Maidstone.

GEORGE BUNYARD & Co. beg to state that visitors can safely inspect their Nurseries (for Fruit Trees, Shrubs, and Roses) as they are on high ground, Two Miles from the Town, and in no way connected therewith by Drainage or Water Supply. Book to Barming Station (in the Nursery), Chatham and Dover Railway; or Aylesford, South Eastern Railway, via North Kent—where Carriages will meet visitors if desired.
 THE ROYAL NURSERIES, October, 1897.

J. J. THOOLEN,

BULB AND PLANT GROWER,
 Overveen, near Haarlem, Holland,

Has the honour to inform his clients that his Illustrated Price List in English, Autumn, 1897, at lowest prices, will be sent post free on application. NO CHARGES FOR PACKING. ORDERS OF 10S. AND ABOVE ENTIRELY FREE TO DESTINATIONS in England, Scotland, and Ireland, &c.

Some sorts of Bulbs noted in our Price List.

| | Per 100. | 1,000. |
|--|----------|--------|
| | s. d. | s. d. |
| Single Anemones, The Bride, pure white | ... 1 4 | 12 6 |
| Single Anemones, in finest mixture | ... 1 2 | 11 0 |
| Crocus, in finest mixture, second size | ... c 8 | 6 3 |
| Crocus, in finest mixture, first size | ... 1 4 | 10 2 |
| Hyacinths, mixed, for hedding or forcing | ... 8 10 | 83 4 |
| Hyacinths, single, first size, named, in several best leading sorts, red, white, and blue varieties equal quantities, my selection | ... 16 0 | — |
| Iris Kaempferi (Japan Iris), in finest mixture | ... 5 0 | 40 0 |
| Iris Germanica (Flag Iris), in finest mixture | ... 6 8 | 60 0 |
| Iris sibirica, all sorts mixed | ... 5 0 | 40 0 |
| Spanish Iris, in the finest mixture | ... 0 6 | 4 2 |
| Lilium tigrinum splendens, rich red-black spots | ... 8 0 | 70 0 |
| Lilium candidum, single, pure white | ... 10 0 | — |
| Montbretia crocosmiaeflora, orange-scarlet | ... 1 6 | — |
| Narcissus Polvanthus, in the finest mixture | ... 2 6 | 23 4 |
| Narcissus poeticus Pheasant's-eye | ... 1 0 | 8 4 |
| Narcissus campernelle (Jonquill) | ... 1 2 | 10 0 |
| Narcissus double incomparable, primrose | ... 1 6 | 14 0 |
| Narcissus Van Slon, single yellow trumpet | ... 2 6 | 23 4 |
| Narcissus Stella, white, yellow cup | ... 1 4 | 12 6 |
| Narcissus alho-pleno (dbl. poeticus), pure white | ... 1 6 | 14 0 |
| Gladiolus Marie Lemoine | ... 3 6 | — |
| Scilla sibirica praecox, intense blue | ... 1 0 | 8 4 |
| Ixias, in the finest mixture | ... 0 6 | 4 6 |
| Single early Tulips, in the finest mixture | ... 1 0 | 9 6 |
| Double early Tulips, in the finest mixture | ... 1 4 | 12 6 |
| Duc Van Thol Tulips, in fine mixture, excellent for early forcing | ... 2 6 | 20 0 |
| Grape Hyacinth, blue | ... 0 7 | 5 4 |
| Anemone Japonica, pure white, Wind-flower | ... 5 0 | — |
| Anemone japonica, rose Wind-flower | ... 6 0 | — |
| Hemerocallis (Day Lily), mixed | ... 10 0 | — |
| Gladiolus Brencleyensis, deep scarlet... | ... 2 0 | 19 0 |
| Oenothera Youngi, pure yellow bells | ... 10 0 | — |
| Allium magicum, white sweet-scented | ... 3 0 | — |
| Pyrethrum Bridesmaid, with fine double pure white flowers | ... 15 0 | — |
| Sedum Selfsklanum, with many pure yellow flowers | ... 10 6 | — |
| Tritoma Uvaria grandiflorum (Red-hot Poker) | ... 14 6 | — |

250 bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.
 COLLECTION D for spring garden, containing 1,370 bulbs, £1 1s.; half of this, 11s.
 COLLECTION B for indoor, containing 529 bulbs for 92 pots or glasses, £1 1s.; half of this, 11s.



EMPEROR, a magnificent variety, with deep primrose-coloured perianth, and rich full yellow trumpet, very large flower. *Extra strong Bulbs*, per 100 30s., per doz. 4s. 6d.

OBVALLARIS, the Tenby Daffodil, very early, perianth and trumpet deep yellow, a charmingly graceful daffodil. *Extra Strong Bulbs*, per 100 14s. 6d., per doz. 2s.

SIR WATKIN, the Giant of the Chalice Cupped Daffodils, perianth rich sulphur, cup yellow slightly tinged with orange. *Extra strong bulbs*, per 100 25s., per doz. 3s. 6d.

BARRII CONSPICUUS, a flower of great beauty and refinement, a favourite with all, large broad spreading yellow perianth, broad short cup, conspicuously edged bright orange-scarlet. *Extra strong bulbs*, per 100 21s., per doz. 3s.

ALL BULBS SENT CARRIAGE PAID ON RECEIPT OF REMITTANCE.

Send for BARR'S ILLUSTRATED CATALOGUE of all the most beautiful DAFFODILS, with full particulars of collections for Amateurs and Exhibitors, Free on Application to:—

BARR & SONS,

12 & 13, KING ST.,
 COVENT GARDEN, LONDON.
 Nurseries:—Long Ditton, Surrey.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, OCTOBER 16th, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, October 18th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 TUESDAY, October 19th.—Sale of Dutch bulbs, Lilies and Palm seeds by Messrs. Protheroe & Morris.
 WEDNESDAY, October 20th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 THURSDAY, October 21st.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 FRIDAY, October 22nd.—Sale of Dutch bulbs and imported and established Orchids by Messrs. Protheroe & Morris.

GUNNERSBURY HOUSE, ACTON.—In August last while inspecting the grand collection of Water Lilies in the pond at Gunnersbury House, one of the seats of Leopold de Rothschild, Esq., we also made a general inspection of the place, but time and space prevented us from recording what we then saw. Fruit rather than plants is the great speciality of the indoor department at this establishment. Many of our readers will remember the time when Mr. James Hudson, the gardener, made the place famous as the home of large specimens of stove and greenhouse plants that made their presence felt at many an exhibition. He is now an equally successful exhibitor of fruit and fruiting trees.

The first orchard house we entered was that in which the fine collection of Peach and Nectarine trees, which received the Gold Medal at the last Temple Show, was grown. The house was started on the 1st. December last. The growth of the trees was completed in the house before being placed in the open air. At the time of our visit, the house was devoted to Melons, the fruits of which were newly set. The plants were remarkably vigorous, for though a foot of soil had been added to the bench about twelve days previously, the roots had thoroughly permeated it and were showing outside. The favourite varieties were Sutton's Triumph, Eureka, Scarlet, A1, Empress, Invincible, and others.

The next division of the house had been devoted to Peaches, Nectarines, and Plums, which were started on the 1st January last. A second batch of Figs occupied the house on the occasion of our visit. Fourteen days was allotted them in which to ripen their wood, after which they were stood outside. About the middle of next November, Pingo de Mel and St. John Figs will be started for the first early crop. These two varieties for early work cannot be beaten. The second batch will consist of the above two and Brown Turkey. For the third batch the trees are cut back in the first weeks of March; and other batches for succession are cut back at intervals of three weeks. This keeps up an unbroken supply of fruit. The fruits from the first batch of cut back trees had mostly been gathered by the 8th August last, while the second batch of cut back trees commenced to ripen in September, and will keep up a supply to the end of the present month, or thereby, subject to variations of weather. It will thus be seen that great cultural skill is necessary to keep up a regular supply of Figs.

A feature of the place is a houseful of small berried, finely flavoured Frontignan Grapes which are highly esteemed by the lady of the house. The Vines are kept under a north wall from February till the end of May to retard them. They are then brought indoors and grown cool. Altogether we noted twenty-five of these pot Vines in the house, each rod carrying about ten bunches of Grapes. The varieties included Strawberry, Black, White and Grizzly Frontignan, Gradiska, Dr. Hogg, Chasselas Vibert, the stoneless Black Monukka, and Muscat Hamburgh. The next vinery entered contained splendidly coloured Foster's Seedling and Madresfield Court Grapes. Air was kept on at night with a little heat in the pipes, and water was being given twice a week by means of the hose, because the border inside the house is narrow. With this treatment no cracking of the berries resulted. The next division passed through was entirely devoted to one patriarchal tree of Lord Napier Nectarine. It is about twenty years old, yet remains remarkably healthy, although 400 fine fruits were gathered from it. A third vinery was occupied with a fine crop of well finished bunches of Alnwick Seedling and Muscat of Alexandria. In the next division the whole of the fruit had been cut. The Grapes in the fifth vinery were just colouring up. The varieties here were Alicante, Alnwick Seedling, and Appley Towers inarched upon West St. Peters. The berries of Appley Towers look intermediate between Alicante and Madresfield Court, while the flavour resembles that of Gros Colman. The bunches were compact and tapering.

The staging in the Strawberry house is constructed quite differently from that which we usually see. The shelves are highest next to the front glass, and slope towards the central pathway of the span-

roofed structure. The Strawberries give as much satisfaction with this arrangement, as if the shelves were sloped the other way. The watering of the plants is a more pleasant and satisfactory occupation, because the pots are easy to get at. The second division of this same structure is known as the Cherry house. The trees are grown in pots and shifted outside when the fruits are gathered.

At the time of our visit, the house was occupied by the latest batch of Peaches and Nectarines to furnish a supply in October, after the crop on the walls outside has been harvested. An abundance of ventilation at the bottom of the house was being given to prevent rapid ripening of the fruit, and by such means a supply can be maintained for ten days longer than the latest varieties on the open walls. Here also were some Pears in pots. The third division was monopolised by the fifth and sixth (the latest) batches of Figs in pots, for fruiting during October and November. Another span-roofed house—all these orchard houses are new—was filled with Apples and Plums in pots to furnish a late supply during September and October. The Plums included Monarch, Grand Duke, Late Transparent Gage, Golden Transparent, Late Rivers, Ickworth Imperatrice, and Coe's Golden Drop.

The western aspect of the high wall separating the garden from the public highway is worthily occupied with a collection of Peach and Nectarine trees. We noted only those bearing a heavy or satisfactory crop of fruit. The first Peach to ripen outside is Hales Early, a clingstone variety, though rich and juicy. Princess of Wales is almost, if not equally, as early. Fine crops were also borne by Alexandra Noblesse, Violette Hâtive, Dymond, and Rivers' Early York. The latter succeeds Hales Early in the order of ripening. The method of obtaining late supplies of Strawberries here might well be adopted elsewhere. The plants of Vicomtesse Hericart de Thury, which have been forced and the fruits gathered, are turned out of the pots and planted in front of the Peach wall in April. The flowers afterwards produced are picked off till the second week in July. After that they are allowed to develop fruit, and a supply is obtained till October, or till frost stops growth. Pickings have been obtained as late as the 26th October by this method of treatment. Plantations of Alpine Strawberries afford pickings all the season, and the flavour of the fruit is relished. The fruits are aromatic and agreeably acidulated. The Apple trees have borne an average crop of fruit. Some of the Pear trees have borne heavily while others were barren.

In passing across the well kept lawn we noted a floriferous mass of Montbretia around a large clump of Rhododendrons. The huge specimens of scented leaved Pelargoniums on the terrace in front of the mansion were in splendid condition, although many of them had recently been brought back from the London residence of the family, where they often get black with soot. The next tier of leaves hides or obliterates all trace of the soot. On the pillars of the verandah were fruiting vines of the Chasselas Vibert and Esperone varieties which ripen their bunches. Myrtles, Sweet Scented Verbenas, and Pomegranates, grown as pyramids and standards in tubs, gave the place a quaint and unique appearance. Magnolia grandiflora was flowering grandly on the house. In the flower garden two oval beds of the crimson-red Begonia Corbeille de Feu were flowering grandly, though shaded by trees after 3 p.m. Heliotrope Piciola, with dark flowers in huge trusses, and Madame Tillay, with lilac

flowers, are both new and noble looking varieties. Cameleon, with blue buds and dark lilac flowers, blooms more profusely than either, and is better adapted for pots and bedding purposes on that account. All are new and, we believe, bound to become popular.

There is a fine collection of the Crozy strain of Cannas in the best named varieties, such as Koenigin Charlotte, Anton Barton and Eglendale, which flower freely in the open. Many of the best of the new Cactus Dahlias are also well cared for. Another uncommon feature was a collection of shrubby Veronicas, grown as tall-stemmed standards for autumn flowering. They included Andersoni, Hendersoni, Dieffenbachii, Lewisii, and Macrocarpa alba. A grand batch of 100 plants of *Salvia splendens grandiflora* has already given a magnificent account of itself.

The Queen of Greece is excessively fond of flowers, and delights in sharing her pleasure in them by ordering large quantities to be distributed amongst the hospitals at Athens.

Mutual Improvement Society, Woolton.—On Thursday of last week the first meeting of this season was held in the Mechanics' Institution, Mr. J. Glover presiding. The subject for consideration was "Pears," more especially for wall culture, by Mr. J. Fairhurst, of Allerton. The lecture was the outcome of the essayist's own experience of a wall some 180 ft. long by 10 ft. high. Ample drainage was recommended on which slates should be placed to keep the roots from penetrating the rubble, good turfy loam with wood ashes being the most suitable for building fruit-bearing wood. The form of tree most suitable was the cordon with five rods trained at an angle of 45°, which would give an increased length of rod, and allow the fruit to hang clear of the foliage, a consideration of practical importance in this district. Pruning root and limb was fully detailed, with watering, especially manure watering in winter. Mr. Fairhurst, in addition to his lecture, gave practical illustrations of his success by a collection of well-grown fruit. A discussion and questioning followed, in which Messrs. Todd, Carling, McColl, and Waterman took part. A cordial vote of thanks was tendered to Mr. Fairhurst for his excellent paper. A new feature at these meetings was announced, in which slides would be prepared for the microscope, and Mr. H. Corlett showed specimens of *Zea*, *Hoya carnososa*, and the twig of two-year-old Lime, which proved both interesting and instructive.

Presentation.—As noticed in these columns last week, the members and friends of the Hawick Working Men's Horticultural Society, met in the large room of the Crown Hotel, on Saturday night, to present Mr. George Davidson their esteemed treasurer with a very handsome marble timepiece, as a token of their regard and appreciation of his services rendered gratuitously to the Society. Mr. Alex. Kyle, vice-president was called to the chair, and after supper, suitably referred to the object of their meeting that night, to honour their friend. He called upon Mr. Donald Brydon, president, to make the presentation, who in doing so referred to the many good qualities of Mr. Davidson, whose obliging and modest disposition had gained him many friends. They were met to show that friendship in a tangible form, and as a mark of their appreciation of his services, he asked Mr. Davidson in the name of the Society to accept the timepiece, and hoped he would be long spared to continue his labours amongst them. Mr. Davidson, in his own modest way feelingly replied he had done nothing, he thought, to merit such a kindness. He gladly gave his services to the society for the future as in the past; he would only be pleased to further the interests of the society to the best of his ability, and would always look back on the present occasion as the proudest night of his life. The health of Mr. Davidson was pledged with three times three, the whole company rising and singing "For he's a jolly good fellow." Other toasts followed, along with songs and recitations. Altogether it was voted by one and all to be a night to be long remembered with pleasure.

The Fund for the Relief of Essex Farmers, who suffered on the occasion of the terrible hailstorm in June last, has now reached £43,000.

Free distribution of Hyacinths.—Councillor Crossfield, of Walton Lee, has distributed free a quantity of Hyacinth bulbs to working men and working women living within the borough of Warrington.

Will of the Late Mr. Alfred Sutton.—It will be remembered that this gentleman, who retired from the firm of Messrs. Sutton & Sons, Reading, about nine years ago, died on the 7th August last, at his residence, Greenlands, Reading, at the age of 79 years. His will, which bears the date 31st January, 1895, has just been declared. Mr. Alfred Sutton, J.P., leaves personal estate valued at £114,388. His executors are his sons, John and Herbert Sutton, power being reserved to grant probate also to the widow, Mrs. Ellen Sutton, to whom he bequeathed £1,000, his furniture and household effects, greenhouse plants, outdoor effects, horses, carriages, the use of the freehold house at Reading, and the income during her life of his residuary estate, which, subject to Mrs. Sutton's life interest, he leaves in trust to pay after her death, namely, certain specified sums to each of his three daughters, Alice, Ellen, and Edith, and likewise to each of his six sons, John, Samuel, Francis, Edwin, Henry, and Hugh Reginald. Having admitted his son, Herbert, to partnership in his business, he considered it unnecessary to make further provision for him.

Orchids at the Sale Rooms.—There was some lively bidding for the rare or very choice things which turned up at the Sale Rooms of Messrs. Protheroe & Morris, Cheapside, on the 8th inst. A very distinct and handsome variety of *Laelia pumila praestans* was knocked down at 56 gs. The lip had a large, rich purple blotch on either side of the lamina, the rest of the flower being pure white. *Dendrobium Phalaenopsis schroderianum album*, a pure white form, fetched 30 gs. H. T. Pitt, Esq., Rosslyn, Stamford Hill, secured a handsome yellow variety of *Odontoglossum grande* for 40 gs. The usual brown blotches were reduced to pale green ones, the rest of the flower being bright yellow. Six plants of *Laelia pumila alba* fetched 20 gs. to 30 gs. each. The bigeneric hybrid *Laeliocattleya superba* × *elegans* reached 15 gs.; and *Laeliocattleya Harrisoniae* × *elegans* was secured for 10 gs. A healthy piece of *Cattleya Wageneri* of moderate size did not change hands, although 48 gs. was offered for it. *Cattleya Mossiae reineckiana* found a bidder at 24 gs. *Sohralia kienastiana* and *Cymbidium winnianum* were sold for 12 gs. each. Evidently, good things have no difficulty in finding bidders at high prices.

Mr. W. Swan, of Bystock.—We regret very much to hear of the intended break up of Bystock, Exmouth, Devon, the beautiful residence of J. P. Bryce, Esq., who has taken a house about Prince's Gate, London, where he is coming to reside about the middle of November next. He intends selling off everything in the gardens and stables and to shut up Bystock, leaving merely a caretaker in charge. By this proceeding some twenty-six men will be thrown out of work, including Mr. W. Swan, the gardener, who has had charge of the gardens for the last five and a half years, at the same time superintending all work on the estate, which employed its own carpenters, masons, painters, and smiths, besides woodmen, gardeners, &c. The beauty of this private residence, with its varied scenery of wood, water, hill and dale so peculiar to Devonshire, is known far and wide. The place has never looked better, nor more neatly kept than it is at the present time. The hot-houses are still filled with their varied and interesting occupants. The rockeries, hardy open air ferneries, grottoes, streams, and cascades with various ornamental ponds at different levels has made this place one of a few in East Devon. It is rather a serious outlook for Mr. Swan, being so suddenly turned out of a situation on the edge of winter; but with his varied experience Mr. Swan should not have long to wait for a fresh appointment. He has long been noted as an Orchid grower of first-class cultural skill, though Bystock has not offered much opportunity for displaying talent in this direction. Moreover, Mr. Swan is an all-round gardener of first-rate ability.

The Potato Crop in Connemara is said to be utterly ruined, and that the rumours regarding it are absolutely true.

An Interesting Ceremony took place on October 6th at the nurseries of Messrs. Balchin & Sons, Hassocks. Mr. Richardson, who has been manager here for many years, was presented with a handsome time-piece suitably inscribed by the employees, as a wedding present, also a case of silver spoons, which came as an appreciable surprise to the recipient. I wish him long life and happiness.—A.O.

In Loving Memory.—In connection with the late Mr. James Cocker, of Aberdeen, we note what seems to us rather novel or uncommon in the way of memorial cards. Mrs. Cocker and family, in returning thanks for sympathy on an ordinary address card send out a neatly finished, folded card, bearing on the left hand half the words: "In loving memory of James Cocker, Nurseryman and Seedsman, Aberdeen. Died, 15th September, 1897, aged 64 years. Interred in Spital churchyard." On the right hand half of the card is the portrait of the deceased, Mr. James Cocker, and a good likeness it is.

Dundee Chrysanthemum Carnival.—The Jubilee celebrations have not yet been completed, for the Dundee Chrysanthemum Society intend to make their annual exhibition worthy of the great event by the holding of a Chrysanthemum carnival on the 25th, 26th and 27th November next. The society intends putting forth every effort to make the show a success, and calls upon every grower of the popular "queen of winter flowers" in the district for hearty co-operation towards the end in view. It is felt that if every owner of an establishment were to give his gardener permission to exhibit in the various classes scheduled by the society the result would be a memorable display, worthy of the city and district, and form a living record of the great advancement in Chrysanthemum culture that has taken place during Her Majesty's reign. Mr. Norman Davis is to act as one of the judges of plants and flowers; while the displays for effect are to be entrusted to lady judges for the placing of the awards. A leading London band is to supply the music, and to lovers of music the orchestral and instrumental concerts arranged for by the council, will undoubtedly prove highly attractive. A largely increased membership is confidently anticipated in view of the superior attractions offered and the general excellence of the show. It is to be held in the spacious Drill Hall, Dundee. Further particulars may be obtained from the secretary, Mr. W. P. Laird, Netbergate, Dundee.

Devon and Exeter Gardeners' Association.—The annual business meeting of this society was held on September 30th, in the council room of the Guildhall, Exeter, under the presidency of Mr. E. A. Saunders, J.P. There was a capital attendance which included the Mayor of Exeter (Mr. Alderman R. Pople), Messrs. P. C. M. Veitch, J.P., G. D. Cann, Andrew Hope (Hon. Secretary), W. Mackay, R. J. Mills, and W. Andrews. The report for the year 1896-7, which was submitted by Mr. Andrew Hope, gave a brief review of the autumn session, and stated that the attendances were good throughout both sessions. The flower show in March was larger and better in every way than its predecessors, and assumed the proportions of a really first-class spring show, but the small annual subscription of the members and the fewness of the honorary subscribers to the prize fund do not warrant a continuance of the exhibition. By means of the essays read and the discussions that followed, a large amount of knowledge must have been imparted to those present at the meetings. The chairman on rising to move the formal adoption of the report, was very cordially received. Happily, said he, there was nothing political with the Gardeners' Association, and he was sure they were acting wisely in following out such lines. The Mayor seconded. The election of the president was the next business. The nomination fell to the lot of Mr. Andrew Hope who, in again proposing Mr. Saunders, reminded them of the services he had rendered them. On being put to the meeting, Mr. Hope's motion was carried with unanimity. Mr. Andrew Hope, and Mr. W. Mackay were re-elected Hon. Secretary, and Hon. Treasurer, respectively, on the motion of Mr. Weeks, seconded by Mr. W. R. Baker.

Sycamore on a Church Tower.—Until recently at least there existed a Sycamore on the tower of the church at Clannaborough, in North Devon. It was known to be 50 years old, and the swelling of the trunk and roots was beginning to force the stones of the tower asunder.



MR. DAVID AIRDRIE.

The Hove Industrial and Horticultural Society.—The twentieth annual exhibition of this society, lately held in the Hove Town Hall was a great success. The display of fruits, flowers, and vegetables contributed by gardeners was a very creditable one, Grapes being especially fine. The heaviest Potato, weighing 1 lb. 5½ ozs., came from Mr. Purey, 9, Westbourne Mews. Messrs. Balchin & Sons, offered a special prize for six varieties of vegetables grown by allotment holders. Mr. Holmes, 5, Westbourne Mews, was the successful candidate in this class. Mr. Payne, 4, Freeman's Court, Portslade, took the first prize for the neatest and best cultivated plot or allotment. The neatest and best cultivated cottage garden was adjudged to be that of Mr. C. A. Martlew, 8, Connaught Road. Mrs. M. F. Coates, 67, Landsdowne Place, sent the best epergne, and Miss F. Cooper, 18, Eaton Gardens, received the first prize for a basket of flowers.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Cattleya Warscewiczii (gigas) Pitho. *Nov. var.*—Some time ago an importation of *C. Warscewiczii* was added to the collection of T. McMeekin, Esq., Falkland Park, South Norwood Hill. By and by they made vigorous growth, set their sheaths, and in due time two dozen of them bore open flowers all at one time. The variety under notice was one of them, and proved to be the most distinct amongst them, being very conspicuous on that account. The sepals and elliptic petals are of a warm rose, and of great length, the flowers measuring 8 in. across the petals. The distinctive character lies in the lip, which has a dark purple tube, and a richer purple lamina, giving place to a lilac border at the wavy, crisped margin. The eye-like blotches characterising the type have so extended in this variety that they nearly cover the side lobes, which are white with a narrow, pale rosy-lilac margin. Yellow takes the place of the white in the throat of the flower, and this yellow area has a few purple lines. The interior of the tube is almost wholly rich purple. The middle portion of the lip, therefore, including the side lobes, is unusually pale, and toning down the dark colour at either end gives the whole flower a subdued and pleasing effect. Mr. A. Wright, the gardener, succeeds very well in the culture of *Cattleyas* of all the popular types.

PEOPLE WE HAVE MET.

MR. DAVID AIRDRIE.

The accompanying is a portrait of Mr. David Airdrie, gardener at Larbert House, Stirlingshire, who is so well known at Northern exhibitions as a "Hero in the strife," with plants, cut flowers, and fruits. This has been strongly in evidence at Glasgow autumn show, where this formidable competitor tabled some of the best fruits ever seen at St. Mungo's.

Mr. Airdrie's all-round experience was gained from tuition of the highest order! After serving an apprenticeship at Pitlour, Fifeshire, he went to the gardens at Delvine, Dunkeld; Balbirnie, Fordell; and was at two places near Paisley, acting in these gardens in the capacity of journeyman and foreman. He then went to the United States as head gardener, where his zeal led him to compete on a large scale with specimen plants. He then had a grand collection under his charge at Worcester, Boston, Mass. This was followed by fruits, vegetables, and cut flowers, with such a success as young Airdrie might justly have been proud of.

After four years active gardening in the far west, Mr. Airdrie was induced to return to bonnie Scotland, where his prowess was soon exemplified at horticultural exhibitions. At Stirling (a district famous for many generations past for "warriors" meeting foemen "worthy of their steel") Mr. David Airdrie, on the occasion of the Queen's Jubilee, 1887, won a silver cup for a table of plants, along with fourteen first prizes and seven others.

Some years ago he went as gardener at Larbert House, where he has been so well backed in his enthusiasm to maintain high class gardening by his estimable employers, Mr. and Mrs. Grabam, who have long given proof in a tangible form of their desire to maintain first rate gardening.

The improvements which have been made in the grounds, and the erection of glass are creditable to their liberal spirit, good taste, and opulence. Mr. Airdrie has been an extensive cultivator of Chrysanthemums, and tabled, at different times, most creditable collections of cut blooms. He captured two Silver Cups for collections of plants, besides three other Silver Cups, three Silver and one Gold Medal. He raised a Chrysanthemum named Mrs. Airdrie, which has come well to the front of late years, and aided him in his exhibits at Edinburgh and Glasgow. Begonias and Crotons are also among the plants specially well done at Larbert.

Mr. Airdrie is still in the prime of life, and his enthusiasm in performing his duties should entitle him to the cognomen "Excelsior."

SEED FARM AT EYNSFORD.

AWAY back in the summer time when sunshine was plentiful and the days were lengthy we made a hurried inspection of the extensive seed farm of Messrs. H. Cannell & Sons, Swanley, and now take the opportunity of recalling some of the many things we saw. The men on the farm were busy harvesting Oats for the horses and straw for packing, the latter being scarce and at a premium in this part of the country. The earlier flowers and vegetables were maturing a rich crop of seeds; but some were in full bloom and others advancing to that stage.

A trial was made of all the most popular varieties of garden Peas, and the crop was almost ready for harvesting. Broad Beans were also doing well on the chalky soil, the pods of a seedling named Cannell's Best of All being 1 ft. in length. Parsley and Parsnips were also in seed.

Close by the above on the hill side was a grand collection of eighty-four varieties of all the best Sweet Peas on trial. Most of them were heavily laden with pods, so that we noted only a few of those in bloom. The brilliant pink of Lady Penzance makes this a choice thing for cut flowers. Those of Royal Robe are of a uniform rosy-pink and very pleasing. Little Dorrit with rose standards and blush wings is also choice, and in the same vein as Painted Lady but quite different. New Countess has darker blue flowers than the type. Maid of Honour is pretty with its blue-edged wings. Cupid and Pink Cupid also do as well here as anywhere.

Florists' flowers receive a large amount of attention including the very dwarf strain of Antirrhinums, which form pyramidal little tufts full of bloom. Queen of the North is pure white, very free

flowering, and belongs to a race that is intermediate in height, and very useful for a variety of purposes. Other varieties rejoice in yellow, crimson, gold, purple, and other colours. Ten Weeks Stocks were flowering profusely; and the same may be said of a hybrid race of Aquilegias between *A. chrysantha* and *A. caerulea*. The double white *Papaver somniferum* Snowdrift was very pure and conspicuous. The dark foliage and brilliant scarlet flowers of *Tropaeolum King of Tom Thumb* was highly effective.

On the lower side of the road running through the farm we came upon a plantation of the new *Senecio elegans pomponicus* with creamy-yellow flowers. A dwarf variety of *Papaver somniferum* named Cardinal rejoiced in bright scarlet flowers. Another sort named Cramoise Superieur had crimson and yellow flowers. The varieties of *Dianthus Hedewigii* were notable for the great size and gorgeous colours of their flowers. The China Asters were just making for bloom, a white variety of the strain Queen of the Market being at its best. This strain is the earliest in cultivation. The crimson-red *Linum grandiflorum rubrum* was in the height of its glory. The glowing red flowers of *Papaver glaucum* (the Tulip Poppy) were handsomely marked with four black blotches at the base. Very pretty also were the blue and pink varieties of *Centaurea Cyanus Victoria*.

Clarkia elegans Salmon Queen is a double variety with salmon flowers and very constant, every flower being double. Here we came across another plantation of the Scotch striped *Antirrhinums* in a great variety of colours. At some distance off was a plantation of the Tom Thumb strain, in yellow, white, purple, crimson, yellow with a purple tube, and bronzy colours. A bright yellow variety named Golden Gem, and grown separately was very handsome, and might be used for bedding purposes. A large plantation of the Comet strain of China Asters rejoiced in blue, pink and white colours. A collection of *Verbenas* raised from seed, and in half a dozen colours, was gorgeous in glowing as well as soft and pleasing colours.

Carnations grown from seed were remarkable for the quantity of flowers they produced. *Salpiglossis* in many colours rejoiced in the dry weather of the period of which we speak. The same may be said of French Marigolds. A pretty and uncommon annual was *Arnebia cornuta* bearing a profusion of yellow flowers with five prominent black spots like the Prophet Flower. The pleasing and ornamental annual, *Statice Sewerzowi* has now sported into lilac, purple-pink and other shades. *Cosmos sulphureus*, with dark and finely divided foliage, and golden yellow flowers is the best of the genus for vases and floral decorations. Very distinct and curious in its way is *Lobelia Duplex*, with dark blue, double flowers, and dark foliage; it is dwarf in habit. *Nemesia strumosa Suttoni* rejoiced in several very pretty colours. All the leading varieties of *Violas* for bedding and otherwise are grown at Eynsford. A large plantation of *Pentstemons* was flowering profusely. A collection of *Roses* is grown here, and amongst them we noted the *White Marechal Niel* grown as standards.

Amongst vegetables we noted a good breadth of spring sown Onions of the large varieties suitable for exhibition. They are well cared for at Eynsford and repay the attention they receive with large and heavy bulbs. Ailsa Craig, Cannell's Globe, Cranston's Excelsior and others of that type were much in evidence, and must have weighed well when harvested. Plantations of Carrots, Beet, and Parsley Beauty of Eynsford, were maturing fine crops of seed.

On the hill side above the road a block of low, span-roofed houses, each 100 ft. in length has been built. A hasty survey of the contents was made, and we were particularly pleased with a houseful of Melon, Anthony's Favourite (Empson). The plants were growing on ridges of soil on the high and solid benches on either side of the pathway. The fruits were about half grown and abundantly produced. Pot Vines in a single row on either side, occupied another house and were making splendid growth. A third house was filled with Tomato Cannell's King, a variety noted for its short stems, dwarf habit and prolific character. Elsewhere was a collection of Tomatos all raised at the same time, and including Conference, Chiswick Red about 5 ft. high, and Marvel, only 1½ ft. to 2 ft. high. The latter is admirably adapted for pot work. Other varieties we noted were Duke of York, New Zealand Peach (reddish-

pink), Sunset (golden yellow and egg-shaped), Frogmore Selected and Golden Nugget, most of them being popular varieties bearing heavy crops. Two houses were entirely occupied with Climbing and other Tea Roses in pots, making capital stuff for present planting. Beneath the Roses in one house was a collection of various Stocks being grown for seed. One of the duties to which these houses are applied is the drying of seeds collected on the farm. One was entirely filled with seeds of various kinds, and others were being prepared for the reception of more recently harvested kinds.

NOTES FROM DUNOON.

THE auld clachan o' Dun-Umhain is now known as one of the most fashionable watering places on the Firth of Clyde. But the modern Dunoon, fashionable and fascinating though it be, is not yet quite replete with all the exacting requirements of these latter days. But, why should it be? As a matter of fact, this very *déshabille* condition renders the place, to my mind, all the more interesting, all the more worth visiting. It will, then, be gathered from these remarks that Dunoon is in a transition state, *i.e.*, compounded of the old and the new, and, therefore, lacking, so to speak, the gilding and ostentatiousness of some of its southern sisters. But while these questionable graces may be said to be absent in this right little Scotch town, it possesses what they do not—a passive beauty and a quiet charm, in addition to the splendours of mountain, moor, and loch.

Moreover, steamers, numerous and well-appointed, ply the pier from morn to misty eve. Invigorating air and pure water are other inestimable advantages which Dunoon enjoys. All these things, however, are demanded of the authorities; they *must* be supplied, within reason, or visitors would soon cease to patronise the place. Lovers of Burns will be gratified to hear that, according to local tradition, Mary Campbell, or "Highland Mary," was born here, and that a noble statue has been erected to her memory on the old castle hill. She is looking with earnest eyes across the Clyde towards Ayr, the birthplace of the poet, and yet he asks in feeling tones

"Oh, Mary! dear departed shade,
Where is thy place of blissful rest?"

"The art that mendeth nature"—in a horticultural sense, I regret to say—is not much in vogue here. Gardens there are, it is true, but their beauty is veiled. Professionals hold their own, but amateurs are not in evidence. Perchance the latter think the cultivated charms of Flora are inferior to her wild and natural graces, or that want of time and inclination check the ardour of the class. 'Tis pity that these things militate against the "gentle-art," for a garden-town is the prettiest of all towns; and, I think, the most attractive too. We Saxons have been brought up to believe that canny Scots are great gardeners. This may be true professionally, but not otherwise; else we should see the amateur in greater force. Still, there are some amateurs on the Firth of Clyde, for I noted several pretty combinations of nature and art.

Ferns, alpine, and herbaceous plants do well in this moist clime, while such things as *Fuchsia Riccartoni*, *Veronica Traversii*, *Escallonia macrantha*, *Berberis Aquifolium*, *Pernettya mucronata*, *Desfontainea spinosa*, and many others, including Conifers, seem to revel in the moisture and the equability of the air.

On the shore are the Sea pink, or Thrift (*Armeria maritima*), the Sea Plantain (*Plantago maritima*), and the common Feverfew (*Matricaria inodora*), which descends almost down to the water line. Along the road the pretty pink Storks'-bill (*Geranium dissectum*) crops up for admiration; while up the mountain sides in boggy places dwell the Bog Asphodel, (*Narthecium ossifragum*), the Marsh Red-Rattle (*Pedicularis palustris*), and one of the choicest of our autumn flowering plants, *viz.*, *Parnassia palustris*, commonly known as "Grass of Parnassus."

If we ascend still higher a large variety of mosses will demand attention, the very useful *Sphagnum* being amongst the number:—

And here and there, in wild ravine,
Where water runneth by,
Cool Filices, in emerald-green,
Will fascinate the eye.

If, too, one gets tired roaming about, there is the

"Bishops' Seat" 1,651 ft. above sea level, which may be had for the climb, and which will afford not only a rest, but a magnificent prospect of surrounding hills, mountains, moors and lochs.

Black peat is much in evidence on the upward track, and will doubtless appeal to the horticulturist as well as the poor cotter in his lonely hut. Perhaps one may be pardoned particular sentiments at so great an elevation, ecclesiastic and otherwise; but I have reason to believe that Dunoon is much affected by this mountain, and that if it could be removed—an Herculean operation I admit—Dunoon would enjoy softer suns and less dubious days. On the whole, however, I gather from the native plants that Dunoon has a splendid climate, and that old Sol must shine sweetly—*when it doesn't rain.*—C. B. G., Acton, W.

EARLY CHRYSANTHEMUMS FROM ROTHESAY.

THE mild and equable climate of Bute, particularly around the beautiful and sheltered Bay of Rothesay, is admirably adapted for the production of flowers in the open air. We are in receipt of a large boxful of cut sprays of early flowering Chrysanthemums from Messrs. Dobbie & Co., of Rothesay. All were cut from an open field on the 7th inst. Being now in the pink of condition, they are evidently a little later than in the neighbourhood of London; but considering the northern latitude of Rothesay, they flower sufficiently early to make them of great importance for cut flowers. Some of the varieties at least, were in bloom early in September, so that their period of duration is of considerable length.

POMPONS.

The flowers of this type are in no way inferior to those grown under similar conditions in the south. Mostly all of them have recently received XXX from the Floral Committee of the Royal Horticultural Society as a mark of approbation indicating their value for early work. As all of them have been recorded in recent issues of THE GARDENING WORLD, we need not here point them out again but refer our readers to the recorded lists. The flowers of Piercy's Seedling and La Luxembourg are of a lovely bronze; those of Scarlet Gem, crimson-red; Précocité, clear yellow; J. B. Duvoir, pink; Mrs. Cullingford, handsome blush-white; Flora, golden-yellow; Petillant and Yellow l'Ami Conderchet, clear soft yellow; Bronze Bride, globular, rich dark bronze; Toreador, glowing red with yellow edges; Mr. Selly, salmon-pink; and White St. Crouts, white with pink and yellow tints. The lovely Martinmas needs only to be seen in the growing condition to be appreciated; its finely built flowers are several shades darker than Blushing Bride, equally valuable and popular. Early Blush is smaller and less compactly built, but the flowers are now well advanced, Strathmeath has dark rosy-purple flowers of fine proportions. Longfellow is a pleasing blush-white; and Madame Zephir Lionet is a rich bronzy-orange fading at the margins, but very pretty.

JAPANESE.

What has been said as to the recognised value of the Pompons, applies equally to the early flowering Japanese types, so that Messrs. Dobbie & Co. must have sent only a selection of the very best of each group and colour from their extensive collection at Rothesay, which we know to be of many years standing, and to which the best continue to be added as they are put into commerce. The self clear yellow G. Wermig is as popular and useful as ever, and the same may be said of Madame C. Desgranges, the parent from which it sported. Its white flowers are much purer than we have seen them for some time past in the open air. Mrs. Pitcher is another lovely white, slightly tinted with blush in the younger stages. Baronne G. C. de Briailles opens rosy and fades to a beautiful cream when at its best. Viscountess d'Avène and Rene Chandon de Briailles are of different shades of rich rose-carmine. Maria is more of a dark purple hue. Madame Marie Masse is also rose-purple, of large size, and very popular as an early market variety in America. The silvery-pink Mons. Gustave Grunerwald is a lovely flower, but rather paler than in summer in the southern counties. The rich orange of Mons. Dupuis is lovely indeed. The rich rose of Le Poete des Chrysanthemes is handsome either in daylight or by artificial light. The long and slender salmon-pink florets of Mons. L. Lionet give the blooms a graceful and pleasing

appearance. The dark carmine flowers of Edith Syrratt are also very handsome and the darkest of the collection sent us.

In the open ground the plants are allowed to grow naturally, without any disbudding whatever; and they form bushy masses laden with flowers of various sizes and colours, but all handsome and useful for cut flower purposes. Most of the above were represented by sprays, bearing practically a handful of flowers in various stages of development, but each the complement of the other and forming a harmonious whole. The durability of these flowers when cut and placed in water is well known and a strong recommendation in their favour.

LIVERPOOL FARMERS' CLUB.

THE eighth annual exhibition of the above was held on the 9th inst. in the North Haymarket, Liverpool, under most favourable auspices. The exhibits were fully up to the usual high standard and proved of considerable interest to the gardener, the Potatoes being always of wide scope, including numerous varieties and garnered from many kinds of soil. Cauliflowers were of immense size and consisted of thirty-seven entries. Carrots were a most important feature, the roots being symmetrical and of large size. Owing to the extent of the schedule only first prize-winners can be given.

In the class for early white kidney Potatoes, Mr. G. Ashley, Manchester, scored with nice clean tubers of Duke of York. For Sutton's Early Regents, Mr. J. R. Newton, Warrington, led the way. For an early round sort, Sir Patrick Talbot, Esher, Surrey, secured first and a special award with fine specimens of Windsor Castle. For second early kidneys, Mr. G. Ashley won with International. In the class for second early round Potatoes, Mr. Peter Davies, Warrington, led with Royal Standard. For a second early of any other shape, Mr. John Halsall, Burscough, won with Goldfinder. Mr. Owen Roberts, Tarporley, Cheshire, had the best exhibit of Snow-drop kidney. Mr. J. R. Newton was first with a fine lot of Reading Giant. For Sutton's Abundance, Mr. Jas. Johnson, Scarisbrick, was first. Mr. Edwin Clarke, Warrington, was to the fore for Up-to-Date, amongst a grand lot. Mr. Robert Blezard, Ruthin, led the way with pretty pear-shaped samples of Late Drone. Mr. John Halsall was the winner out of eighteen entries of Maincrop. First prizes were taken for Late Bruce by Mr. J. Johnson; and Fidler's Colossal by Mr. G. Ashley, large and of good form. For any other late kidney, Mr. J. R. Newton took first honours and special with large tubers of Reliance.

For a late round, any variety, Mr. P. Davies scored with Saxon. For a late sort of any other shape except kidney or round, Mr. R. Blezard was first with Mainstay. For an early or second early coloured kidney or any other shape, except round, Mr. P. Davies won with Peerless Rose. For an early or second early round, Mr. B. Berwen, Ludlow, won with Pink Perfection. For a red or coloured kidney, late, Mr. J. Johnson scored with Leda. For a red or coloured round, Mr. P. Davies led with The Dean. For the heaviest old or new, Mr. James Smith, Birkenhead was first. For early or second early new varieties of any colour, Mr. James Johnson took the first place with Queen of the North. For a late kidney, Mr. W. Daine, Huyton, Liverpool, scored with Langworthy. Mr. J. Read, Burton-on-Trent, had the best late round with well shaped Carter's Snowball.

Special prizes were offered by Messrs. Sutton & Sons, Reading, and for three dishes Mr. J. Johnson took the first place with Satisfaction, Abundance, and Windsor Castle. For nine tubers (prizes offered by Messrs. Sutton) Mr. B. R. Raymond, Ludlow, won with large smooth tubers, unnamed. For six kidneys (prizes offered by Mr. W. L. Hutton, Ormskirk) Canon Blundell, Halsall, was first and special with Kerr's Hough Giant. For six round sorts (Mr. W. L. Hutton) Mr. T. Wilkins, Blandford, won with Snowball. For six tubers of Kerr's General Roberts (Mr. W. Kerr, Dumfries) Mr. J. Johnson took the first place.

Mr. Thos. Jackson, Lydiate, was first for two Red Cabbages, with heavy specimens. Sir Patrick Talbot had the best Brussels Sprouts. For two Cauliflowers, Mr. J. Walker was first with a grand pair, securing also the special prize of Mr. J.

Gertrey, Liverpool. Mr. J. Johnson was first for White Celery; and Mr. T. Smith for Red. Mr. Thos. Shepherd, Rossett, N. Wales, took first for six long Carrots. Mr. J. R. Carter, Chester, took the lead for Intermediate Carrots. For Beet, Mr. B. Ashton, Lathom, Ormskirk, was to the fore with Hathaway's Prize. Mr. J. R. Carter was first for Parsnips. Sir Patrick Talbot had the best six Onions, with splendid bulbs. Mr. E. Alty, Lathom, had the best Leeks. For two Cucumbers, Mr. A. Bruckshaw, Tarporley, was first. For six Tomatos, Mr. G. Garraway, Bath, led with fine fruit. For any other root or vegetable, Mr. B. Ashton won with good Peas.

Canon Blundell showed the best culinary Apples, in very fine Warner's King. For six dessert Apples, Sir Patrick Talbot led with Blenheim Orange. Mr. G. Garraway had the best culinary Pears. For six dessert Pears, first and special prizes were won by Mr. G. Colin, Ludlow, with Pitmaston Duchess. For any other variety of fruit Mr. B. Ashton was first with Muscat of Alexandria Grapes; Mr. J. Stephenson, Woolton, was second with Alicante Grapes. In this class good lots of Red Currants, Plums, Melons, and Peaches were staged. Exhibitors should be pressed to name their specimens; for with the exception of Potatoes the exhibits were nearly all unnamed.

The following exhibits were staged not for competition:—Messrs. Dickson & Robinson, Manchester, Potatoes and Kohl Rabi; Mr. G. Garraway, Bath, cut Roses, superbly coloured Apples, Pears, and Tomatos; Messrs. W. Ker & Co., Liverpool, vegetables in variety; Messrs. W. Clibran & Son, Altrincham, Apples and Pears; Messrs. Dicksons, Chester, Potatoes, Apples, &c.

FRUIT UNDER GLASS.

JUST now the greater part of the fruit houses is occupied with the Chrysanthemums, and it is a matter of some difficulty to see to the trees properly on that account. In every case it is advisable to stand the 'Mums on boards or trellises rather than on the border, and trampling on the border should be avoided as far as possible. All Peach houses should now be thrown widely open during favourable weather to facilitate the ripening process. Houses that are not filled with Chrysanthemums, Salvias, Richardias, or other winter-flowering stuff may be shut up at night if the weather turns out frosty, but will not require any artificial heating.

THE EARLIEST PEACH HOUSE.—The time of the year will soon be here for this to be started again, and the usual cleansing will soon have to be given. Meanwhile the house should be cleared of any plants that may be in it, with a view to cleaning the house and pruning the trees some time before the end of the month. There are very few leaves left on the trees now, and another week or two should see the last of them.

LATE VINES.—In vinerias in which the Grapes have been grown with very little artificial heat the Vines will need a little fire heat now to ripen the wood off properly. Keep a good circulation of air by day, and the bottom ventilators may be left open all night, while the top ones should only be quite closed in case of frost.

POT FRUIT TREES.—These have all been divested of their fruit, and may with the exception of the Figs be left out-of-doors for the present. The Figs should be kept in a cool house, and allowed to drop their leaves gradually. A frost would not permit them to do this.

STRAWBERRIES.—Very soon the pot Strawberries should be got under cover. Some cultivators plunge their plants in the open, but it is preferable to put them under a shelter of some kind that will protect them at least from rain or snow. Frost will not matter if the pots are plunged well to the rims. But little water will be needed now, for most of the plants are wet enough. Any plants that have gone blind should be singled out and thrown away, since it would be only waste of time to force them. The question of what variety to employ for forcing need not cause much trouble, for while Vicomtesse, President, Sir Joseph Paxton, and Laxton's Noble are all valuable, Royal Sovereign is the best of them all for general purposes.—A. S. G.

THE FLOWER GARDEN.

UP to the present time the month of October has been all that could be desired, for the weather has been very good to us indeed. An open and dry autumn is of considerable importance to the gardener, for there is always a pressure of work on hand; work that can be better attended to now than at any other time.

PLANTING EVERGREENS.—With the soil in a workable condition the opportunity should be seized of getting at least some of the shifting or planting of evergreens done. In gardens where evergreens are fairly well represented there is always some shifting to be done, for in making shrubberies it is necessary to plant pretty thickly, and subsequent growth calls for the removal of some of the plants, often for a more or less complete readjustment. Lift the plants with good balls of earth attached, and water them after they are properly fixed in their new quarters.

HOUSING TENDER PLANTS.—In comparatively few years does it happen that the tender plants have had their stay out of doors lengthened to such an extent as they have this season. Now, however, prudence says that the limits of time consistent with safety have been reached and the dictates of prudence must be obeyed. Of late years the practice of utilising Palms, Ferns, Dracaenas, and other stove subjects for the decoration of the outdoor garden has been growing in favour. We see it adopted to a considerable extent in our public parks, and private establishments have not been slow to strike out in the same direction. The removal of heavy plants of those employed (they have to be large and heavy to be effective) is a serious item, and needs time, plenty of help, and, above all, daylight to perform properly. Accordingly, it is not advisable to put off getting the plants under cover until a severe frost threatens some night.

The beauty of the flower beds will not be disturbed until the last moment, for as the stock of most of them is under cover already, in the way of cuttings, the old plants are but of comparatively little value. As soon as frost has blackened and spoilt them, the work of demolition must be begun; the beds cleared, and the winter occupants shifted in.

TUBEROUS BEGONIAS.—The few slight frosts we have had, and the wild weather at the end of September have put a veto on these for the season. As soon as the old stems have fallen off, the tubers should be dug up and transferred to the storehouse. We have found them to keep best if laid in layers in boxes and covered with sand. Seedlings which have flowered for the first time this year and have been marked according to their colour will have to be dug up carefully, as the tubers are rather small and may easily escape observation. These small tubers should be stored by themselves.

THE HERBACEOUS BORDER will need constant attention. There is much cutting down of old plants, and removal of rubbish to be seen to. Clumps of Colchicum autumnale, and the autumn flowering Crocuses, chief of which is *C. speciosus*, have been doing much of late to enliven matters. Seeds of anything that it is desired to save, should be picked without delay, if ripe. Sprays of *Physalis Franchetti*, and *P. Alkekengi* should be gathered for winter decoration before they are too weatherworn.

WALLFLOWERS.—The advantage of sowing early will now be fully manifest, for where this practice has been followed, good sturdy plants are the result. The wet of September did not suit them well, as it conduced to too rank and sappy growth, but matters have improved during the last fortnight. It will be well to transfer the plants to their flowering quarters soon (within the next week if possible), for the soil is in capital condition and we know not how long it will remain so. See that good balls of earth are attached to the plants, and if the nursery beds are far from the proposed flowering quarters, use the handbarrow as the means of transit, rather than the wheelbarrow, for the jolting of the latter will shake the balls to pieces. With the larger plants, a spade will be found to be necessary for planting expeditiously, although the trowel may serve for the smaller ones. Wallflowers have this advantage over bulbous subjects that they give the beds a furnished appearance with their lively green foliage, a point that is worth consideration when deciding where and to what extent they shall be employed.—A. S. G.

HINTS FOR AMATEURS.

The Colchicums.—With the end of September the Colchicums come to us, just when the wear and tear of time is telling appreciably upon the occupants of the herbaceous border, when the cold, often frosty and dewy nights speak to us of summer gone and the glory of the year well advanced upon the down grade. At such a time the fresh beauty of the flowers cannot be other than refreshing, and we welcome them as eagerly as we do the golden glint of the perennial Sunflowers, or the starry sparkle of the Michaelmas Daisies. Possibly the appearance of the plants, with their bunches or clusters of flowers pushed out of the bare ground, and destitute of even a suspicion of foliage, endows them with an attraction peculiar to themselves. The leaves make their appearance in the spring, and live their life and pass away by the end of June or the beginning of July, according to the special character of the season. The flowers follow after the heat of the summer has spent itself, and practically last until the advent of severe frost puts a stop to the existence of flowers in the open border. Not only are the flowers charming when growing naturally in the open ground, but they last and look well in vases within doors, and, indeed, are well worth growing for this reason alone.

The cultivation of the plant is exceedingly simple, and chiefly consists in letting them alone once they are planted. Annual lifting is not to be recommended, and the probable reason why some people are not so successful with them as they could wish and expect is that they are far too fidgety with them. Often enough we see in old-fashioned gardens which have herbaceous borders dating back to a time prior to the "hedding-out" rage, clumps of the common Meadow Saffron, *Colchicum autumnale*, in splendid condition, and this when the corms are not lifted for years together.

One would imagine that a policy of "let alone" would be easy enough to follow. The most important point is to choose a suitable position for them in a rather moist situation. The soil should be a light, sandy loam for preference, enriched with thoroughly rotted manure. The best time for lifting and re-planting is after the leaves have died down and the corms are resting for the summer. There is a considerable number of species, but the following species and varieties recommend themselves most strongly to notice.

Colchicum autumnale, the common Meadow Saffron, comes first on the list by reason of its cheapness, which is, after, all a matter of no little import to the would-be cultivator whose means are not above the average. Apart from the undeniable beauty of the plant and the several varieties which have sprung from it, it is a native of these Islands, and this fact should be sufficient to endear it to those who are lovers of home productions. *C. autumnale* has a fairly wide geographical range, for in the "Illustrated Handbook of the British Flora," Bentham says "that it is to be found in moist meadows and pastures over the greater part of Europe, but rare in the north, and scarcely extends into Asia. Very abundant in some parts of England and Ireland, and a very doubtful inhabitant of Scotland." The species itself has bright purple flowers.

C. a. album, as the varietal name signifies, has white flowers, which are, moreover, of great size, and very effective in the mass.

C. a. album longipetalum has a long name as well as long petals or perianth segments. The tubes of the flowers are much shorter than in *C. a. album*, but although the flowers look pretty enough, nearly sitting as it were upon the ground, a shower of rain is sure to spoil them.

C. a. atropurpureum furnishes a distinct shade of deep purple, with various stripes or blotches of pale pink. It is one of the best of its colour, and well worth growing.

C. a. roseum.—In this we have a medium-sized flower, exhibiting a charming shade of rosy-lilac, very delicate and pretty.

C. a. album plenum.—The forms mentioned above are all common and correspondingly cheap, but this double white form, although hugely pretty, is both scarce and dear.

C. a. roseum plenum.—This is the cheapest of the

double-flowered forms. It is the counterpart of the single form with regard to colour.

C. Parkinsoni.—Here the flowers are white, charmingly chequered with rose-lilac. They are stellate in form, very large, and of great substance. The flower tube itself is of moderate length, but very thick and strong. This species was introduced from the Greek Archipelago in 1874. Comparing it with the commoner *C. variegatum* we see that the chequerings or mottlings are fainter, and that there is less colour in the flower as a whole.

C. variegatum.—While discussing the relative merits of *C. Parkinsoni* and *C. variegatum* it may be stated that in one important point, viz., that of hardiness, *C. variegatum* excels. A very severe winter will work havoc with the former species, but the latter will stand almost anything with impunity. The corm is very large and egg-shaped, and the flowers are of medium size, deep rosy pink in hue, chequered with dull purple. *C. variegatum* was introduced to this country from Greece as far back as 1629, so that it has had longer time in which to get accustomed to the severity of our winters. Possibly by the time that *C. Parkinsoni* has been in cultivation here for as long it may develop greater cold resisting qualities.

C. Sibthorpii is an exceedingly handsome form introduced by Leichtlin about three years ago. When well grown it is the largest and finest of all the Colchicums. We had an opportunity of seeing it growing in Messrs. Barr & Sons' nursery at Long Ditton, where Colchicums, in common with other bulbous and hardy plants, are carefully looked after, and the finer forms eagerly selected. The flowers are almost globular in shape, rosy-pink in colour, and heavily tessellated with dark purple. It is well deserving of extensive cultivation, although at the present time the price is high.

C. speciosum rubrum.—There is no doubt that among all the darker-flowered forms this is the best. The flowers are very large, globular in shape, and rich rose-crimson in colour. There are a few faint chequerings of light pink, but so faint as to be scarcely noticeable. In the centre of the flower about half way down there is a white band of medium width, which gives it a very distinct appearance. Messrs. Barr & Sons have a very fine stock of it at Long Ditton, and during a visit we were struck with the grand effect produced by bright sunlight upon the flowers.

Shrubby Calceolarias.—The value of the shrubby yellow Calceolaria as a bedding plant for the outdoor garden is pretty generally recognised, although it is but seldom that we see it grown as a pot plant for the greenhouse or conservatory; and yet there are many plants, thus grown, that are neither so easy to manage nor so ornamental. Two or three of the sturdiest of the plants which have been doing duty in the flower garden through the summer, may be lifted before the frost cripples them, and potted up into as small pots as will comfortably contain them. A little coddling for a week or so after the shift will set them to rights again. Grow them on steadily through the winter, pinching out the points of any unduly gross shoots that may threaten to disturb the balance of the heads, and the labour will be rewarded next spring by plenty of flowers, which, as bright yellow is comparatively scarce at that time, will be doubly welcome.—*Rex*.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Gymnogramme schizophylla.—*Reader*: Although an undeniably beautiful Fern this is an exceptionally tender one. There is very little doubt that the death of your plant is due to its having been over-looked for water. Soaking it with water afterwards in the endeavour to bring up the fronds again is of very little use, for the plant seems to get its death-blow in the few hours of neglect. The younger plants you speak about should not be potted now. Leave them as they are until about the end of next February, and pot them then.

Platyserium alaicorne.—*Thames*: There is a popular but mistaken idea extant that this Fern requires tropical heat to grow it, and that it will not

grow in a cool house. You will find, however, that your plant will be all right in the cooler house. The temperature of 45° by night will suit it well enough.

Pitting Potatos.—*A. O. B.*: We should not advise you to adopt this plan of keeping your Potatos unless you are obliged to by lack of other means. With the wet autumn there is sure to be a prevalence of disease, and although tubers on being dug up may appear to be perfectly sound to the eye and touch they are in reality infected with the disease, and sooner or later will go rotten. Now if a rotten tuber is in contact with other sound tubers it soon spreads decay on all sides. For obvious reasons the pit is not opened very often and it is almost impossible to give its occupants the looking over that is required to remove the bad ones, hence the work of destruction goes on unchecked. If you must make the pit, however, dig a hole about a couple of feet deep in some sheltered spot, line the sides and bottom thickly with clean hay and straw—the latter for preference—lay the Potatos in, cover them with straw, and then with earth. Finally over all lay a few boards or a sheet of galvanised iron to throw off the rain and keep the pit and its occupants dry.

Dahlias.—*F. C.*: Leave the Dahlias out of doors for the present, and until the tops are blackened by frost. Then they may be cut down, and the roots dug up and removed to a shed or storehouse before the advent of severe frost. The roots ought generally to be under cover by the beginning of November.

Zonal Pelargoniums.—*F. C.*: With your lack of conveniences you will not be able to do anything with the plants as they stand. The succulent shoots would soon commence to damp off, and we question if you would save the plants. Cut them hard back, leaving only a few of the lower leaves on them, giving the longest roots a trim at the same time. This will admit of their being put into comparatively little space. They may indeed be potted two or three in a large 60-size pot. Do not give any water, and snip off with sharp scissors any pieces that may damp off.

Herbaceous Calceolarias.—*F. C. W.*: The stuff on the western side of the greenhouse will suit the Calceolarias admirably through the winter. Tepid water is not necessary for watering them with. It may be as cold as you like, but not hard. We have broken the ice to take water out to water the plants and have found that it suited them capitally.

Battersea Park.—You are wrong *Parks*, Battersea Park is not so large as Victoria Park, for the former has an acreage of 250, and the latter is 300 acres in extent. Regent's Park and Primrose Hill together contain 450 acres.

Pear Citron des Carmes.—About the only qualification that this Pear has *Geo. Wencroft*, is its earliness. From the points of flavour and appearance it is worthless, and we should advise you to devote the space to a good September or October variety. We are sure you would then be better satisfied with the results. William's Bon Chrétien for a September variety, and Louise Bonne of Jersey, or Marie Louise for an October sort.

Tacsonia Van Volxemii.—*Toby*: You will do well to cut out about 70 per cent. of the growths, and shorten those that are left. If you leave the *Tacsonia* as it is, so much growth will spoil any chances that the plants on the stage below may have.

Chrysanthemums.—I want to house my Chrysanthemums, but I have only a Peach house available, and as the fruit has only just been plucked from them, the leaves are yet green. Can I do anything to hasten the fall of the leaves, or may I pull some of them off in order to admit of a little more light, for at present the house is very dark.—*Rob*.

On no account must you pull off the leaves from the shoots that are to bear the fruit next year. The only way in which you may mitigate the conditions you name is to remove boldly those shoots which have borne fruit this year. This will also give the next year's fruit-bearing growths a better chance. If this thinning out has already been given (you say nothing

about it in your letter) you can do nothing beyond throwing the house wide open and thus try to induce the trees to mature their growth expeditiously. In the meantime your 'Mums must remain outside unless you choose to submit them to the somewhat trying experience that a curtailed supply of light would entail. Cannot you rig up a temporary shelter for the Chrysanthemums until a few of the leaves have fallen from the Peaches. Another fortnight or three weeks should make a great difference.

Pear Catillac never does get soft until it is cooked, *Merodac*. It is simply a stewing variety, and a very good one, but of no use for dessert.

ORCHIDS AT CRAIGCLOWAN, PERTH, N.B.

NESTLING in the hills about two miles south, and commanding a splendid view of the town of Perth, being as it is almost surrounded by the range of hills, with the River Tay winding its way through it, is situated the residence of Thomas Roy, Esq., who has within the last few years developed into not only a great lover of Orchids but one of the most successful cultivators in Scotland.

It is not yet five years since Mr. Roy first turned his attention to this interesting class of plants, but his success has been nothing short of marvellous, as everyone who has had opportunities of watching the progress must admit.

The houses devoted to them are mostly what are termed lean-to, and three-quarter span, having east, south and south-western aspects.

Taking first the house facing east, his plants of *Odontoglossum crispum* are to be found; and these are "crispums" indeed. They are plants which do one good to look at; for without exception all are pieces which were bought less than five years ago for a few shillings each, in the imported condition, with four and five small pseudobulbs, but now manipulated into specimens requiring nine and ten inch pots, showing, by the immense pseudobulbs, each new one almost double the size of the last. The thick leathery leaves are an indication of health and vigour so dear to the eye of an Orchidist, from which may be expected fine strong flower spikes too. Neither are these disappointing in that respect, nor as some people expect, are fine growths made at the expense of few flowers; for Mr. Roy informed me that he has had twenty good flowers on a spike.

In the same house *Oncidium macranthum* is looking perfectly at home, making grand spikes again for next season. The accompanying photograph is of a plant exhibited this spring at the Perth Horticultural show with sixty-two flowers. Here also are fine plants of *Oncidium lamelligerum*, which carried 100 flowers on a spike last year, and *O. concolor* in teak wood baskets on the roof, with pseudobulbs as large as ducks' eggs.

A nice specimen of *Odontoglossum andersonianum* in a nine inch pot with four grand growths, which is also a good variety, is noteworthy. *O. Uro-skinneri*, *O. Edwardi* and *O. Halli* are full of vigour, and *O. grande* is carrying spikes with five and six flowers each. *Mesospinidium vulcanicum* in seven inch baskets, literally covered with flower spikes, is showing how all these varieties revel in the treatment they are receiving.

In another house facing south are to be found about two hundred *Odontoglossum vexillarium*. Although this species has not been taken in hand quite so long as *O. crispum* the success is even greater perhaps, for the plants are really a masterpiece of cultivation. New growths that remind one of Leeks more than *O. vexillarium*, and not a thrip mark to be seen, are a sight worth coming a long way to see. Mr. Roy drew my attention to a number of smaller plants in 4 in. pots, and asked if there was any difference since I saw them last. Although it is not more than six months ago that he showed me these in quite small pots and scarcely established, I could hardly realise that I was looking at the same plants again. Evidently *O. vexillarium* never was happier in its native habitat at Antioquia than at Craiggclowan.

In another house, this one with a south-western aspect, are to be found the warmer section; though, no doubt, the natural condition of the climate in this district and the altitude, will considerably tend to assist the requirements of the cool species. One has

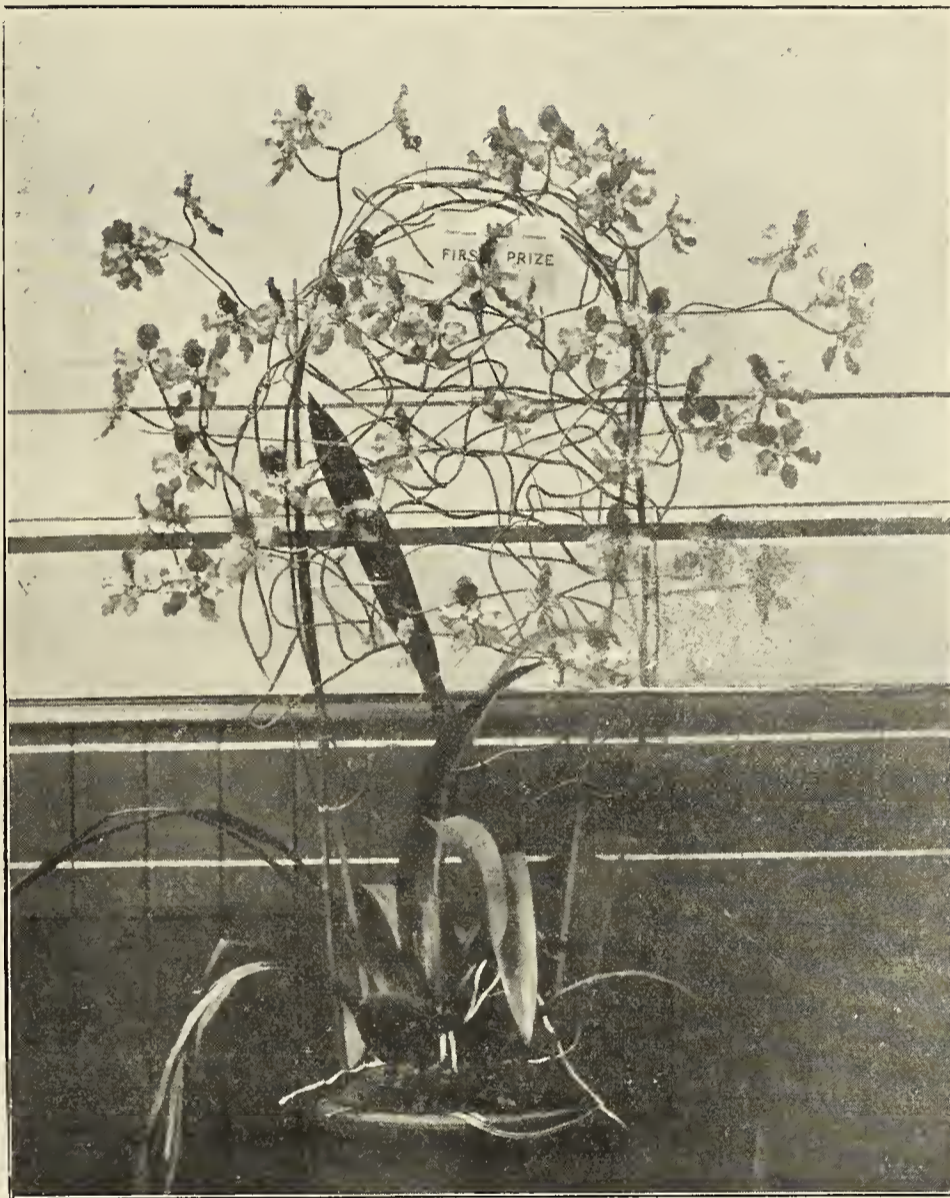
to stop and consider when looking at these warmer ones; for here we find *Cattleya lawrenceana*, *C. gigas*, *C. Trianaei*, &c., all doing well, with evidence of abundance of flower. Phalaeopses, in variety, are making most luxuriant growth and strong flower spikes. *Dendrobiums*, *Cypripediums*, *Miltonias*, and *Brassias* are just as happy, which goes to prove that the natural love of plants, together with the careful study of their little requirements, has a great deal more to do with the successful cultivation of Orchids than all the hard and fast rules sometimes laid down for the beginner.

Mr. Roy is to be highly congratulated on the rapid success he has already attained, and which bids fair to make this one of the most extensive and interesting collections in the North, under the very able care of his enthusiastic and persevering gardener, Mr. F. Nicoll. This is another instance of that amicable feeling existing between employer and

EARNOCK, HAMILTON, N.B.

EARNOCK, the beautiful seat of Sir John Watson, Bart., is about two miles from Hamilton Station, and is one of the best kept and most beautiful spots in the west of Scotland. The entrance is through a pair of fine gates, with a neat lodge on the left. The carriage drive is two miles long, and well kept. The graceful curves in the drive, the neatly kept grass edging through a beautiful park, where noble specimens of trees stand out majestically, and the herd of Guernsey and Jersey cows, all convince one that the owner is interested in that which makes an impression upon the visitor, that everything is well done and well cared for. The mansion is a noble one and stands surrounded by large clumps of *Rhododendrons*, 15 ft. to 20 ft. high, of all the best named varieties, well set with buds, which next season will give a good account of themselves.

I once visited Earnock when *Rhododendrons* were



ONCIDIUM MACRANTHUM AT CRAIGCLOWAN.

employee, which if more often seen, would, I think, help to make these particular plants even greater favourites and a more interesting study than at present.—H. H. S.

BACTERIA AND LIVING PLANTS.

MR. ZINSSER has made experiments on the eventual presence of bacteria in living vegetable tissues, which experiments are described in the *Naturwissenschaftliche Wochenschrift*. These experiments, made with great care, demonstrated that the germs of plants do not contain any bacteria. In the case of germs, of which the outer surface has been thoroughly sterilised, in soil likewise sterilised, there are never bacteria in the plant. Other experiments demonstrated that infection could only be produced from outside, and is not possible through the living tissues, roots for example. Mr. Zinsser also observed that bacteria introduced into living vegetable tissues perish, almost without exception, in a very short time, as also their spores. The cause of this rapid destruction is ascribable to secretion of bactericidal substances and the acid reaction of the cellular sap.—*Revue Scientifique*, September 18th, 1897.

in full glory, and the sight has never left my memory. Standing on the steps of the mansion a grand picture presents itself. The noble specimens of trees, of which there are some wonderfully fine purple Beeches, noble Chestnuts, &c., a fountain of water that throws up a fine plume, with the beautifully undulated grounds, and the splendid Coniferae make a glorious picture.

In making a move to the houses, we find ourselves amidst many interesting objects, and grand examples of cultivation in the various departments. There is a grand stove of ornamental foliage plants. Young Palms, *Dracaenas*, *Crotons*, *Aralias*, and many other plants are well coloured and well grown. From the roof hang gracefully many well grown Pitcher Plants, well pitched and well coloured. *Caladiums* make a show also. There is a large Palm house containing gigantic specimens of *Kentias*, *Areca*, *Rhapis*, *Latania*, *Coryphas*, *Cycas*, and *Phoenix*, which are useful for the decoration of the princely mansion. Of greenhouses there are several, which contain everything in season suitable for cutting purposes and decorative work, all in the pink of perfection. The Fern house contains a splendid collection of old and new Ferns. Noticeable are some grand specimens of *Gymnogramme*

schizophylla and other novelties; also a splendid batch of Maidenhair for cutting purposes. Another house is complete with a fine collection of young Palms. Noticeable also is a fine batch of Gloxinias and Cannas, which from their bright colours attract one's attention.

There is a fine range of vineries occupied with young Vines, of which all the leading sorts are grown, and giving a good account of themselves; for grand bunches, fine in berry, and well coloured, meet the eye. Peaches and Nectarines receive the best of attention, and reward the trouble with fine crops of fruit. There is a good house of Pineapples in extra strong plants, throwing up fine fruit, of which one may be proud. Melons do well; fine crops of grand fruits in succession are here. Figs are grown likewise, in pots, fruiting freely. Some splendidly fruited. Oranges in pots are very ornamental for decorative work. Other pits and frames are full of useful winter-flowering plants. A grand batch of Chrysanthemums will be useful for months to come. These, with forced Azaleas, Lilacs, Viburnums, Hydrangeas, well grown Cyclamens, and Solanums will keep the houses gay during winter and spring. Zonal Pelargoniums come in useful for the decoration of the noble conservatory, which stands in a prominent position in the pleasure grounds. It is a noble building of a most ornamental design, and most suitable for its position. It was very gay at the time of my visit, noble Tree Ferns and Palms, &c., stand down the centre, with chairs and tables underneath. The side stages were gay with early Chrysanthemums, Tuberous Begonias, Cannas, well done, various Lilliums and zonal Pelargoniums, all combined, making a bright and most pleasant display.

The picture from the conservatory is charming, the beautifully-undulated grounds, the streams of water, the choice trees and shrubs, the various kinds of bedding—carpet and ribbon, and massed beds—and the autumn tints upon the woods and trees produce such a picture that no words of mine can describe. There are many acres of pleasure grounds, including the lawn tennis ground, with every modern convenience. The splendid walks, all well kept—at every turn you meet something pleasant and fresh—convince one that the place has been well studied in every way. There is a picture of wealth, combined with good taste, assisted by a practical gardener's skill, and backed up by the principal factor in the case, a gentleman who believes in doing everything well; for Sir John is a thorough believer in this, and carries out his ideas to the letter. He is a gentleman of broad views, and a great lover of everything that is beautiful.

In addition to what I have mentioned a grand kitchen garden is in a sheltered position and well stocked. A fruit wall covered with young trees is noteworthy. The demand all round is great, but the gardener-in-chief is equal to the occasion. A word in praise of a gardener's comfort. How often we see gardeners' houses located in some out of the way spot with no convenience. Sir John's gardener's house is a model, built of stone with some ten or twelve fine lofty rooms, having every convenience in a commanding position in its own grounds. Being well planted it is more like a palace than a gardener's house. May many follow the example, I say. Mr. James Moir is the gardener, and he fully appreciates the kindness of his noble employer. I congratulate Mr. Moir upon his all round abilities, as a thoroughly practical man. To walk round his lovely estate with its liberal owner, accompanied by his enthusiastic gardener, is a great treat to any one like myself interested in horticulture; for Sir John is greatly interested and willing to make any improvements that will suit his taste for the benefit of his beautiful estate.—*Alfred Outram, F.R.H.S., 7, Moore Park Road, Fulham, London.*

Californian Oranges.—The American liner St. Paul, which brought up at Southampton on the morning of Wednesday, 22nd ult., had a cargo of 4,403 cases of Californian Oranges. The St. Paul docked at 10 a.m., the fruit was discharged, loaded into railway vans, and delivered by 7 p.m., nine hours after the steamer docked at Plymouth, and seven days four hours after leaving New York. The fruit was ultimately placed on the market in capital condition.

THE PROGRESS IN VEGETABLE CULTIVATION DURING QUEEN VICTORIA'S REIGN.*

PROBABLY no more fitting subject could be chosen for one of the papers to be read at a Conference of the R.H.S. in the sixtieth year of Her Majesty's Reign. And yet, though the subject is so appropriate, I cannot but think that our worthy secretary might have made a far happier choice when selecting a speaker. It is manifestly impossible for anyone of my age to tell you from personal knowledge what the condition of the vegetable garden was in 1837, and consequently it is impossible for me to say from my own knowledge what progress has been made.

Mr. Wilks invited my father (now in his 83rd year) to contribute a paper on this subject, but like many others whose memory carries them back over the past sixty years, his physical powers are not equal to his mental activity, and he was compelled to decline. Although yielding to Mr. Wilks' somewhat pressing request that I would myself prepare a paper, I feel I owe this assembly an apology for attempting what others could do so much better. It was only possible for me to glean the necessary information from those who were actively engaged in horticultural pursuits at the time when our Gracious Sovereign came to the throne, and though I have met with the greatest willingness to impart knowledge, it is a somewhat striking fact that my correspondents had a far clearer recollection of fruits, methods of culture, and even the scale of garden wages, than they had of the vegetables grown in 1837. I can only conclude that, as was no doubt the case, there was nothing very noteworthy about the vegetables in use at that time, at least as regards their intrinsic merit.

It will be noticed that the title speaks of "Progress in Vegetable Cultivation," but I do not suppose I was intended to speak so much of the cultivation as of the improvement of the vegetables cultivated. Had it been otherwise, I cannot doubt that one of the many able gardeners connected with the Society would have been invited to read a paper rather than myself.

In sketching the outline of my paper I therefore felt that I could not do better than take the leading vegetables, enumerating the kinds in cultivation in 1837, and then briefly mention the improvements that have since followed. It is obvious that unless there had been a very marked advance in the vegetables grown the progress in cultivation would have been comparatively insignificant. In saying this, I do not for a moment suggest that the gardeners of to-day are not far in advance of those of 1837, but that whatever method of culture might be adopted, no very great advance would be possible without improved vegetables to work upon. Without further introduction I will proceed at once to the all-important subject of the

GARDEN PEA.

Without hesitation I may say that the progress made during the last sixty years in the improvement of the Garden Pea has been fully commensurate with the position this vegetable occupies, and which may fairly be called the Prince of all Vegetables. I think also I am correct in saying that this proud position has been attained solely through the progress made in its improvement since 1837; an evolution truly marvellous, as I think all will admit when we compare the Peas of 1897 with those of 1837. In the thirties and for many subsequent years the gentleman's garden—as well as the market garden—was dependent upon such varieties as Woodford's, Bedman's Imperial, Scimitar, Early Charlton, Warner's Emperor, Early May, McCormick's Prince Albert, and Early Warwick, the other principal sorts cultivated being Blue Prussian, Bishop's Early Dwarf, and Auvergne. These are Peas which we, with more cultured taste and better varieties at our disposal, now look upon as chiefly suitable for boiling in a dry state. Knight's Tall Green Marrow, a wrinkled Pea, was certainly available at this time but was not so generally grown as the round-seeded sorts, which an old gardener now living informs me were so hard and dry when cooked that they were known as Buckshot Peas.

During the next decade a few varieties, such as Sangster's No. 1, Champion of England, British Queen, and Hair's Dwarf Mammoth, were added to

the list, the first three of which are still largely grown by those who have had no opportunity of testing better sorts; but no considerable interest was awakened until the advent of that popular favourite, "Ne Plus Ultra," which was introduced under three or four names in as many successive seasons. Even at the present day when testing year by year all the so-called novelties as they appear, we frequently find that still another name has been added to the already long list under which "Ne Plus Ultra" is offered. Of its class as a tall late marrow Pea it is doubtful if any later introduction has ever shown, comparatively, a greater advance on previous kinds.

In passing it may be of interest to some to know that three of the principal Peas distributed by my house in 1841 were Blue Prussian, Woodfords, and Scimitar, from which we may form a fairly correct idea of the class of Peas then grown by gardeners.

Up to 1857 there had been introduced Daniel O'Rourke and our Early Champion as representing improved types of early Peas; and Glory, Climax, Dickson's Favourite, Prizetaker, and Epps's Lord Raglan.

In 1859 that popular Pea, Veitch's Perfection, was introduced, and in the same year also the first selections of Dr. McLean's Seedlings were put on the market by Mr. Charles Turner, including Princess Royal, followed a few years later by Little Gem, and these continued to be favourites for a quarter of a century. This was the commencement of that period of activity which has extended with increased vigour till the present day,—the skilful hand of the hybridiser in conjunction with the keen eye of the expert producing such Peas as Her Majesty's gardener never dreamt of in 1837. Here I may remark that the work of selecting is in no degree less important than that of hybridising. This will be better understood when I explain that a seedling Pea is now generally the result of so much inter-breeding that very many distinct types will often be represented in the ultimate cross. This will give a pod containing from six to ten or more seeds, and it is at this point the work of the hybridist ceases and that of the selector commences, but it is only a commencement.

When sown the following year these seeds will in all probability produce as many distinct seedling Peas, some partaking of the character of the parents and some not, but the difficulty increases when we find that seed saved from each of these plants very frequently varies in each case to such an extent that the greatest patience is required in order to secure any fixed type at all. Let me make my meaning still clearer if possible. The first year we start with, say, six seeds in the one pod.

The second year we have six seedling plants.

The third year we have six rows, short or long, the produce of the six plants of the preceding year, but we also find in each of these six rows Peas of all sorts and types, some tall, some dwarf; some early, others later; some large podded, some small; some pale green in colour, some dark; some curved in the pod, some straight; some pointed at the end, and some square (this difference alone being sufficient in some cases to distinguish two popular garden varieties); and last, but not least, some may be round-seeded and some wrinkled-seeded. It is clear the selector must commence again and starting from the most promising plant in each row endeavour to build up a seedling Pea which will reproduce itself from seed without variation, a task often extending over many years. In scarcely any instance known to me has a seedling Pea been put on the market direct from the hybridist's hand.

Between 1860 and 1880 many varieties raised by McLean and Laxton were introduced; amongst them being Prince of Wales, Dr. McLean, Omega, William the First, and William Hurst, all of which are more or less popular at the present day. During the same period the first results attained by the veteran William Culverwell—whose excellent work deserves grateful recognition from all who value Marrowfat Peas—came to light in Telegraph, Telephone, Stratagem, and Pride of the Market, which varieties were introduced by Messrs. Carter. By this time Henry Eckford was endeavouring, and with considerable success, to infuse the blood of Ne Plus Ultra into a dwarfer race of Peas. From various sources appeared during the next few years Autocrat, Duke of Albany (which is certainly one of the most popular Peas of the present day), Sharpe's Queen, Webb's Wordsley Wonder, and others. In 1881 my house introduced American

*A paper read by Mr. Arthur W. Sutton, of Messrs. Sutton & Sons, Reading, at the Crystal Palace Conference of the Royal Horticultural Society, 1st. October, 1897.

Wonder, which is still more extensively grown than any other early dwarf wrinkled Pea.

I should have preferred on this occasion to have made no allusion to the work of my firm in connection with the Pea, but I think all present will agree with me that no sketch would be complete without referring to the first early wrinkled Marrowfat sorts which have been introduced during the past few years, and in the selection of which I have personally been so much interested; I allude especially to May Queen, Ar, Empress of India, Seedling, Excelsior, and Forcing, which have attracted so much attention at recent Temple Shows.

Our aim has been to replace the small, hard, round-seeded sorts, upon which the public had been obliged to depend so much for their first supply, with Peas of dwarf growth, but equally as early, and producing pods as large as Telephone, Duke of Albany, and Peas of that class, containing large wrinkled Peas of Marrowfat flavour, and we have succeeded beyond our most sanguine expectations. In Peas of a later class we have introduced other popular kinds such as Royal Jubilee, Perfection, Windsor Castle, Exhibition, Magnum Bonum, Late Queen, and others. The eagerness with which all these new Peas have been sought after as soon as they had been tried, attests their value, and it is personally gratifying to me to know that Her Majesty—in whose honour we are met to-day—allowed the collection of Peas staged at the Temple show in 1896 to be placed in the Entrance Hall at Windsor Castle for her personal examination, and that some of the Peas appeared the same evening upon the Royal table; Mr. Thomas perhaps will also allow me to mention that this year Her Majesty was so pleased with the Peas he had grown at Windsor that she telegraphed for a supply to be sent daily by post to Balmoral, and that in June last the Empress Frederick wished seed sent at once to the gardens at Friedrichshof in order to have Marrowfat Peas in the autumn.

During recent years the list of good Peas has also been added to by such excellent sorts as Daisy, Veitch's Maincrop, Alderman, Laxton's Gradus, and many others.

It may be as well to remark here that the improvement of Peas, as well as other vegetables, has doubtless received considerable impetus from the keen competition upon the exhibition table—a bobby which our older gardening friends seldom, if ever, indulged in. This competition has likewise had a very marked effect upon the cultivation of Peas and other vegetables, so that, with the fine types now procurable and the improved systems adopted by growers, results are obtained which are really marvellous.

Before leaving this section reference must be made to the careful work done in the Chiswick Gardens in making trials of Peas for many years past. The value of these trials, great as it is, would be considerably enhanced had circumstances rendered it possible to grow a larger number of older sorts alongside the new varieties for the sake of comparison. I may mention that in order to make our Pea trials comprehensive enough to determine the value of new seedlings, and to fully test the older varieties offered, etc., it is necessary to sow from 600 to 700 rows annually.

MICHAELMAS DAISIES AT LONG DITTON.

THE autumnal garden would lose much were the twinkling Starworts in all their wealth of range and beauty absent. Whether we regard their decorative value to the garden as they stand *in situ* or whether we consider the service they are capable of rendering as cut flowers for the decoration of bower and hall it matters not, we are obliged to confess that we could not well do without them. This much the ordinary person would confess, but it is only when we see a collection of the plants together in one place that we are able to judge of the immense range of habit and general appearance that there is included in the genus. Then again, we must not lose sight of the grand weather-resisting qualities possessed by these autumn-flowering plants. Rain, wind, and cold come all alike to them, and they stand the oft-recurrent and malevolent changes of a British autumn with unqualified equanimity, whilst other flowers of less rude health are in a state of more or less complete collapse.

The Starworts naturally fall into three sections, according to their periods of blooming. First we have those commencing to flower about the end of July, and continuing in bloom until the middle of September. Second come those forms which commence to bloom in September, and third those which commence to flower in October and carry their beauty well into the frosts of winter. We paid a visit to the Long Ditton Nurseries of Messrs. Barr & Son the last week in September, and in spite of the cold and wet, found the Michaelmas Daisies much in evidence. The day was bright and warm, and amidst the bright rays of the sun and the busy and contented humming of the bees among the "Daisies," we found it hard to realise that the pbeasants in the distant coverts were nearly in condition, and would enjoy only a few more days of respite, whilst the ladders and baskets were busy in many a British orchard reaping the golden and russet harvest of the glowing year. An Indian summer day is almost as delusive as it is delightful!

But to turn our attention more particularly to the flowers themselves, we found a grand collection awaiting our inspection and admiration. The former was given readily, and the latter was by no means withheld, for Messrs. Barr & Sons are to be congratulated on the comprehensive character of their representation of the genus Aster. The following are some of the most striking and useful forms:—

A. DUMOSIS.—This is a charming dwarf form from 1 ft. to 15 in. in height, and of a dense, bushy habit. The leaves are small and linear in shape, while the flowers are about half an inch in diameter, the ray florets being of a delicate mauve, and the disc florets rosy-red. As a subject for the front rank of the herbaceous border, or for nooks in the rock-garden, or for bedding purposes, it is perfection. As a pot plant, too, it may be turned to good account.

A. SHORTII is about 3½ ft. in height. The flowers are ½ in. in diameter and bright lilac in hue. The habit of the plant is distinct, for it throws up stout stems which are clothed to the bottom with graceful sub-pendulous side branches, thus furnishing a graceful pyramidal spray that is perfection for the filling of vases. If we had to make a selection of six varieties, A. Shortii should be one of them.

A. PTARMICOIDES is some 2 ft. in height and has small pure white flowers. In habit it is stiff and erect. It belongs to the earliest section and was therefore well on the road that leads to the decay of splendour when we saw it.

A. LINOSYRIS (Goldilocks) is both a handsome and distinct plant with flax-like foliage and showy yellow flowers. Its height is from 18 in. to 2 ft., and as it is fairly bushy in habit, it should be of value for the decoration of the conservatory when grown in pots.

A. NOVAE-ANGLIAE has given rise to several fine varieties, in all of which may be seen the tall, erect, and vigorous habit of the type, and the hispid stems. In all of them, too, the flowers are produced in terminal clusters. The leaves are linear lanceolate in shape, and clasp the stems with their bases. The species was brought from North America in the year 1710.

A. N.-A. ROSEUS is one of the finest forms. The flowers are large, and of a bright rose shade. The height is from 5 ft. to 6 ft.

A. N.-A. PULCHELLUS is a little shorter than the last-named being from 4 ft. to 5 ft. in height. The flowers, however, are fully as large, and exhibit a beautiful violet-blue.

A. N.-A. PRAECOX may well be included. The flowers are fully as large as the others, but crimson-purple in hue, so that it may be looked upon as an intermediate colour between A. N.-A. roseus, and A. N.-A. pulchellus. Its stature is about 4 ft. in ordinary seasons.

A. UMBELLATUS is a species that is very distinct with regard to habit. The flowers are produced in large, loose, terminal corymbs, not umbels as the name would suggest. They are of medium size with rather long, white, reflexing ray florets and bright yellow discs. The leaves are lanceolate in shape. The plant is apt to develop a rather ragged look about its lower parts, so it should be relegated to the back row in the border; still, it is a pretty and meritorious form, and we should advise its inclusion in every collection.

A. ACRIIS is one of the most popular early species, and is largely grown. The bright lilac-purple, and rather loosely built flowers are remarkably tenacious

of life, and given anything like fair weather, last well into the autumn.

A. A. DRACUNCULOIDES is a variety chiefly differing from the type in its greater stature, that is on the older plants. In the case of spring struck cuttings this increased height is not apparent, for the plants flower when little more than 18 in. in height.

A. AMELLUS, with its large purple-blue, solitary flowers, is one of the very finest border kinds.

A. A. BESSARABICUS has deep violet-blue flowers, and is rather taller than the species, whilst the flower heads are a trifle larger. Both of these forms are indispensable to a good collection.

A. NOVI-BELGII represents the most numerous section having given rise to a great number of varieties, many of which are of surpassing merit. The leaves are broader than in the case of the Novae-Angliae forms, and do not so distinctly clasp the stems. The stems, too, are smooth, and not coarsely hispid, as are the latter varieties. The species was brought from North America in 1710.

A. N-B CERES is one of the gems of this section. It is rather tall (5 ft. to 6 ft.), and has large pure white flowers; in fact, it is the best of its kind.

A. N-B FANNY has large lilac flowers, and is very free and showy.

A. N-B COTTAGE MAID is a new variety with blush-pink flowers about an inch in diameter, very free in blooming, and vigorous in constitution. The height is 4 ft.

A. N-B ST. BRIDGID.—This is another new variety with rather smaller flowers than, but of the same colour, as those of the last-named. It is taller, too, in stature. Both may well be grown, as they are quite distinct.

A. N-B DAPHNAE is a new seedling of home origin, included in the Messrs. Barrs' catalogue for the first time. The flowers are large (1½ in. in diameter), and deep blue in colour. The leaves are ovate to ovate-lanceolate in shape, and of substantial texture. The chief feature, however, consists in the black shining stems, which are, moreover, very stout and strong. The height is 4 ft.

A. N. A. WOOLSTON.—Whilst speaking of new varieties, we may mention this one. The habit is that of a variety of A. NOVAE-ANGLIAE. The stems are pink, and coarsely hispid, whilst the leaves are sub-amplexicaul, auricled at the base, and lanceolate in shape. The flowers are very large (1½ in. in diameter), but this is chiefly due to the very long ray florets, for the disc is very small. The colour is bright purple. The height is from 5 ft. to 6 ft.

A. VERSICOLOR THEMIS runs to about 2½ ft. in stature. The flowers are white, changing to delicate rose.

A. ERICOIDES.—The Heatb-like Aster is a general favourite, and needs no further description. It must suffice to say that we have never seen it looking happier than at the Long Ditton establishment.

A. ERICOIDES CLIO is a charming form of the same height (3 ft.) with bluish instead of white flowers. The habit is dense and bushy, the individual sprays being long and graceful. It is also rather earlier than the type.

SOCIETIES.

ROYAL HORTICULTURAL.—October 12th.

THERE was again a fine display of various subjects at the meeting on Tuesday last, including large collections of perennial Asters, Begonia La Lorraine, stove and greenhouse plants, Chrysanthemums, and Orchids. The latter was indeed in much stronger force than they have been for some time past.

Messrs. J. Veitch & Sons, Ltd., Chelsea, staged a large group of Orchids, including a tall and well-flowered plant of the bold and striking *Dendrobium taurinum amboinense*, also grand pieces of *Coelogyne Veitchii*, *Oncidium praetextum*, *O. divaricatum*, *O. tigrinum*, *O. pbymatocbilum*, and other species. *Cattleya labiata* was abundant and in great variety. *Dendrobium Dearei* and *D. Stratiotes* were represented by well-flowered pieces. *Odontoglossums*, *Cypripedium arthurianum*, *C. oenanthum superbum*, *C. Charlesworthii*, *C. T. B. Haywood*, and various others were well-represented by finely flowered pieces. The Orchids were set off with Palms and Maidenhair Ferns (Silver Gilt Flora Medal).

Messrs. Hugh Low & Co., Clapton, staged a varied and profusely flowered group of Orchids set up with Palms and Asparagus. Choice and noteworthy were

Laelia praestans Low's var., *Cypripedium insigne* Laura Kimball, C. i. William Millie Dow, C. Mrs. Tautz, and others. *Oncidium incurvum*, *Vanda caerulea*, *Odontoglossum grande*, *O. crispum*, *Cattleya labiata*, *Laelia pumila*, and various others made up an interesting display. A small piece of the beautiful *Cypripedium Madame Georges Truffaut* bore four flowers (Silver Flora Medal).

Messrs. F. Sander & Co., St. Alban's, exhibited a group of *Cattleya labiata* in variety, and richly-coloured forms of *C. bowringiana*. A piece of *Cattleya labiata* in a pan bore twenty-eight flowers.

Messrs. B. S. Williams & Son, Upper Holloway, staged a group of *Cattleya labiata* in variety, as well as *Odontoglossum cristatum*, *O. purum*, *Mesospidium vulcanicum*, *Pescatorea Lehmanni*, and *Cypripediums* in variety (Silver Banksian Medal).

R. I. Measures, Esq. (gardener, Mr. H. J. Chapman), Cambridge Lodge, Flodden Road, Camberwell, showed a fine group of *Cattleya labiata* in considerable variety, C. i. *superba* being grand. He had a new hybrid named *Cypripedium callosomastersianum*, the compound name of which indicates the parentage. Other well grown or interesting pieces were *C. Charlesworthii*, *C. allanianum*, *C. Chapmani* and various others (Silver Flora Medal).

The Duke of Westminster (gardener, Mr. N. F. Barnes), Eaton Hall Gardens, Chester, exhibited a magnificent variety of *Dendrobium Phalaenopsis schroderianum*. *Zygopetalum jorisianum* was shown by Walter Cobb, Esq. (gardener, Mr. Howse), Tunbridge Wells. A grandly flowered piece of *Cryptophoranthus dayanus* was exhibited by Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking. C. L. N. Ingram, Esq. (gardener, Mr. T. Bond), Elstead House, Godalming, exhibited the hybrid *Cattleya Eclipse*, and the bigeneric hybrids, *Laeliocattleya Firefly*, *L. Odorata*, *L. Illustris* and others. A natural hybrid named *Vanda Moorei* was exhibited by Mr. J. W. Moore, Eldon Place Nursery, Bradford. H. T. Pitt, Esq. (gardener, R. Aldous), Rosslyn, Stamford Hill, staged the magnificent *Odontoglossum grande pittianum* with yellow flowers. Mr. T. Rochford, Turnford Hall Nurseries, Herts, exhibited the pretty *Vanda caerulea-rochfordiana*. J. Bradshaw, Esq. (gardener, Mr. H. Whiffen), The Grange, Southgate, exhibited a grand piece of *Cattleya Mantinii Nobilior*, having large, well-expanded and richly coloured flowers.

On the left hand side of the entrance a grand group of Michaelmas Daisies was set up by Messrs. Jas. Veitch & Sons, Limited, Chelsea. There were upwards of sixty plants, and about thirty species and varieties. The plants were all in pots and showed off to great advantage being fresh and exceptionally full of flower. *A. formosissimus*, *A. horizontalis*, *A. candidus*, *A. vimineus*, *A. Amellus bessarabicus*, *A. cordifolius*, *A. Novi-Belgi floribundus*, and *A. N-B Archer Hind* were some of the most notable samples (Silver Gilt Banksian Medal).

On the opposite side of the entrance was a semi-circular group of berried plants contributed by Messrs. Cutbush & Son, Highgate. The central and most bulky feature was a hatch of pot plants of the bright *Crataegus Pyracantha Lelandii*. Next came a ring of healthy samples of the Otahete Orange, then a zone of well berried plants of *Skimmia japonica*, and lastly an edging of *Ophiopogon Jahuran variegatus*.

Messrs. Paul & Son, The Old Nurseries, Cheshunt, had a remarkably bright group of Roses and berried plants. The former consisted of both plants in pots and cut blooms. Some large and well berried *Pernettyas* were a prime feature. For the time of year this was a really brilliant display (Silver Gilt Banksian Medal). Mr. E. Becket, gardener to Lord Aldenham, Aldenham House, Elstree, staged a fine collection of perennial Asters, which comprised upwards of seventy forms. These covered a wide range, and formed an excellent representation of a useful and easily-grown class of plants. Such forms as *A. Amellus*, *A. Novi-Belgii Robert Parker*, *A. sagittifolius*, *A. umbellatus*, *A. punicens pulcherrimus*, *A. paniculatus blandus*, and *A. cordifolius elegans* were represented by bunches of exceptionally well-flowered sprays. Mr. Becket's collection is a first-class one (Silver Gilt Banksian Medal).

Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., had a neat lot of the charming *Begonia Gloire de Lorraine*. Small plants of *Pilea muscosa* formed a suitable edging. Several

Palms scattered over the group served to remove any appearance of stiffness.

Cut, hardy flowers in quantity were shown by Mr. H. Deverill, Cornhill, Banbury. Michaelmas Daisies were present in quantity, and amongst others appeared bold and telling bunches of *Aster acris*, *A. Amellus Riverslea*, *A. Robert Parker*, and several varieties of *A. Novae-Angliae*. The pretty *Boltonia asteroides*, *Helianthus rigidus semiplenus*, and *Veronica longifolia* were likewise attractively staged (Silver Banksian Medal).

A magnificent group of *Begonia Gloire de Lorriane* was forthcoming from Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton. The plants were large, although only in 48-sized pots, and remarkably good specimens of first-class culture. Ferns in variety formed both a background and an edging (Silver Flora Medal).

Mr. Robert Owen, Maidenhead, had cut *Chrysanthemums*, many of which were seedlings, and *Cannas*.

The hardy plants shown by Messrs. Jas. Veitch & Sons, Ltd., consisted of a basket each of *Crataegus orientalis*, *Vitis vinifera purpurea*, and two baskets of well-coloured pieces of *Vitis Coignetiae*. From the same firm came an exhibit of hybrid *Rhododendrons* of the *Javanico-jasminiflorum* section in the development of which this firm has done so much.

Mr. G. Wythes, gardener to Earl Percy, Syon House, Brentford, set up a nice lot of cut *Chrysanthemums*. Such varieties as *Louise*, *John Lightfoot*, *Louise Boehmer*, *W. H. Fowler*, *M. Ch. Molin*, *Wm. reward*, *Mrs. Geo. Rundle*, *W. H. Lincoln*, *Reine d'Angleterre*, and *M. R. Bahuant* were all represented by capital samples (Silver Flora Medal).

Messrs. Hawkins & Bennet, Lily Gardens, Twickenham, showed baskets full of the new double zonal *Pelargonium Duke of Fife*. Mr. W. J. Penton, gardener to Mr. Harris, Bowden Hill House, Chippenham, sent sixteen grand bunches of *Czar Violets*. Mr. Bain, gardener to Sir Trevor Lawrence, Burford Lodge, Dorking, sent a batch of crested single *Begonias*. Mr. Empson, gardener to Mrs. Wingfield, Amptill, Bucks, had half a dozen neat plants of the seedling *Chrysanthemum Mrs. Wingfield*.

Messrs. B. S. Williams & Son, Upper Holloway, N, received a Silver Banksian Medal for an exhibit of well coloured *Crotons*. Many of the leading forms were on view and all demonstrated culture of no mean order.

Mr. William Potten, Camden Nurseries, Cranbrook, Kent, sent a small collection of cut Michaelmas Daisies.

Mr. George Prince, 14, Market Street, Oxford, staged a lot of splendid, cut *Roses*. Some of the blooms were arranged with sprays of foliage on a large conical stand fitted with tiers of shelves (Silver Banksian Medal).

Mr. W. J. Godfrey, Exmouth, Devon, sent two dozen grand, cut blooms of *Chrysanthemums*. *M. Gustave Henry*, *M. Hoste*, *Red Warrior*, *Elthorne Beauty*, *Pride of Exmouth*, and *Admiral Ito* were the cream of the varieties.

Seventy-five dishes of Apples and Pears were shown by Mr. A. H. Rickwood, gardener to the Dowager Lady Freak, Fulwell Park, Twickenham. *Ribston Pippin*, *Beauty of Kent*, *King of the Pippins*, and *Peasgood's Nonsuch* were some of the best Apples, and *Beurre Bosc*, *Pitmaston Duchess*, and *Beurré Hardy* the best Pears (Silver Banksian Medal).

A hundred dishes of superb Apples and Pears came from Mr. G. Woodward, gardener to Roger Leigh, Esq., Barham Court, Maidstone. Such Pears as *Emile d'Heyst*, *Durondeau*, *Princess*, *Conference*, *Doyenné Boussoch*, and *Doyenné du Comice*; and Apples like *Bismarck*, *Beauty of Kent*, *Mère de Menage*, *Cox's Orange Pippin*, *Tyler's Kernel*, *Wellington Pippin*, *Waltham Abbey*, *Yorkshire Beauty*, and *Crimson Queening* were grand samples (Gold Medal).

Mr. A. Offer, gardener to John Warren, Esq., Handcross Park, Crawley, sent sixty dishes of medium-sized but clean and good fruit. *Doyenné Boussoch*, *Beurré de Capiaumont*, and *General Todleben* were some of the best Pears; and *Gascoigne's Scarlet*, *King of the Pippins*, *Wealthy*, *American Mother*, *Calville Rouge Precoce*, and *Golden Reinette* Apples were splendidly coloured and in capital condition (Silver Knightian Medal).

The Swanley Horticultural College (principal, F. Graham Powell, Esq.), sent bottles of preserved fruits.

John Ester, Esq., Wakefield, sent a small collection of Apples (Silver Banksian Medal).

There were nine dishes of Apples submitted for the Veitch flavour prizes. Mr. Geo. Woodward was first with *Cox's Orange Pippin*; and Col. Brymer, M.P., Islington House, Dorchester, second with *Rihstons*.

There were seven dishes of Pears shown. Col. Brymer was first with *Thompson's*; and Mr. B. Osborne, gardener to the Rev. H. Golding Palmer, Holme Park, Berks, second with *Marie Louise*.

A collection of ornamental gourds came from Messrs. A. W. Young & Co., Stevenage Nurseries, Herts (Bronze Knightian Medal).

Messrs. J. Carter & Co., High Holborn, sent a fine collection of Cabbages. The heads for the most part were weighty and sound, some of them also reaching a large size. *Early Red Pickling*, *White Prizetaker*, *Cocanut*, *Wakefield*, and *Wheeler's Imperial* were a few of the most noteworthy varieties (Silver Knightian Medal).

NATIONAL CHRYSANTHEMUM.—October 12th, 13th, and 14th.

The autumn exhibition of *Chrysanthemums* took place at the Royal Aquarium on the above dates. *Chrysanthemums* were in grand form, and better blooms have never before been staged so early in the season. Some varieties, particularly, that have hitherto been regarded as purely mid-summer varieties were shown in magnificent condition. The competition in most of the classes was good, and in the leading ones very keen.

The first award for a group of *Chrysanthemums* and foliage plants arranged for effect, occupying a space of 72 superficial feet fell to Mr. Norman Davis, who had a superb exhibit. It included fine flowers of *Geo. Seward*, *Simplicity*, and *Mutual Friend*, among a host of other grand flowers. The second prize fell to Mr. J. H. Witty, Nunhead Cemetery, S.E. The blooms were for the most part of medium size, but there were plenty of them. Mr. W. Howe, gardener to Henry Tate, Esq., Park Hill, Streatham Common, was third. He had fewer, but much larger-sized blooms in his exhibit.

In the chief class, which was for twenty-four cut blooms of Japanese, in not less than eighteen varieties, and not more than two blooms of any one variety, there were seven entries, in all of which the material was above the average. Mr. C. Penford, gardener to Sir F. Fitzwygram, Bart., Leigh Park, Havant, had *Beauty of Teignmouth*, *Modisto*, *Madme. Gustave Henry*, *W. H. Lees*, *M. Chénon de Léché*, *Phoebus*, *Edith Tabor*, *Surprise*, *Mutual Friend*, *Alice M. Love*, *Reine d'Angleterre*, *Emily Silsbury*, *Mrs. C. H. Payne*, which were the strongest blooms. Mr. James Agate, Havant, Hants, was second, also with a grand lot. *Milano*, *Edwin Molyneux*, *Surprise*, and *M. Chénon de Léché*, were splendidly shown here. The third award fell to the lot of Mr. Norman Davis, The Vineries, Framfield, Sussex. An extra prize was given to Mr. R. Jones, gardener to C. A. Smith Ryland, Esq., Barford Hill, Warwick. In the smaller class for twelve Japanese there were six entries. Mr. E. G. Foster, Brockhampton Nurseries, Havant, was first. He had capital samples of *Edith Tabor*, *Mutual Friend*, *Louise*, *Mrs. J. Lewis*, *Vicomtesse Roger de Chezelles*, *Phoebus*, *E. G. Hill*, *W. Seward*, *Zealandia*, and *Emily Silsbury*. Mr. R. Jones was second. An extra prize was given to Mr. C. Cox, gardener to John Trotter, Esq., Bickendon Grange, Hereford.

There was only one entry for twelve bunches of pompons, the first award falling to Mr. E. F. Such, Maidenhead. The same exhibitor was credited with the first award in the smaller class for six bunches of pompons.

The class for two epergnes brought forth five entries. Mr. James Brocks, gardener to W. J. Newham, Esq., Totteridge Park, Totteridge, Herts, was first. Second came Mr. Norman Davis, The Vineries, Framfield, Sussex; and an extra prize was granted to Mr. James Watt, gardener to Henry Bell, Esq., Fitzjohn's Avenue, Hampstead.

AMATEURS' CLASSES.—The best twelve Japanese came from Mr. R. Gladwell, gardener to Sydney Smith, Esq., The Gardens, Werndee Hall, South Norwood, *Mutual Friend*, *President Borel*, *Perle Dauphinoise*, *Mrs. C. H. Payne*, *Mdlle. Thersee*

Rey, and Louise were the strongest blooms. Second came Mr. J. Knapp, gardener to F. W. Amsden, Esq., 22, Chichester Road, Croydon.

Six hlooms of Japanese were also hest shown by Mr. R. Gladwell, who had grand samples of Phoebus and Edwin Molyneux in this class. Mr. W. Perrin, gardener to C. W. Richardson, Esq., Sawbridge-worth, Herts, was second. Mr. Martin Silsbury, Providence, Shanklin, Isle of Wight, staged the best six Japanese in another class, and also the best twelve blooms of the same section. Mr. Henry Love, Melville Terrace, Sandown, Isle of Wight, was second.

OPEN CLASSES.—There were two entries for the table of bouquets, wreaths, sprays, buttonholes, &c., illustrating the decorative value of the Chrysanthemum. Miss Nellie Erlebach, Chard's, Stoke Newington, was an easy first with a grand arrangement; Mr. E. F. Such was second.

There was a very brisk competition for three epergnes, no fewer than seven entries being submitted. First came Mr. D. B. Crane, 4, Woodview Terrace, Archway Road, Highgate; Miss C. B. Cole, The Vineyard, Feltham, Middlesex, was second; Mr. W. Green, Junr., Harold Wood, Essex, third; and Mrs. W. Green, and Mr. T. S. Williams, 4a, Asford Road, Ealing, were awarded an extra prize each.

Mr. T. Tullett, gardener to G. Alexander, Esq., Warley Lodge, Brentwood, secured the first award for a single vase of Chrysanthemums. Mr. D. B. Crane was second.

The miscellaneous exhibits were both numerous and effective. They comprised flowers (including Chrysanthemums), foliage plants, and fruit.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., received a Silver Medal for a handsomely arranged miscellaneous group. The central mound was composed of *Bambusa aurea*, *Lilium neilgherrense*, and *L. sulphureum*. Nerines, cut Chrysanthemums and Tritomas constituted the bulk of the flowering element. Maidenhair Fern was freely employed, and *Crataegus Pyracantha* was very showy. Mr. Ware also showed another large group of Michaelmas Daisies.

Mr. John Pinches, 3, Crown Buildings, Crown Street, Camberwell, S.E., showed samples of highly finished and ingeniously contrived garden labels.

Mr. H. Berwick, Sidmouth Nurseries, Sidmouth, Devon, contributed a grand table of varied fruit, for which a Silver-Gilt Medal was voted. Apples Hollandbury, Annie Elizabeth, Bismarck, Cox's Pomona, The Queen, Wellington, Gravenstein, Gascoigne's Pearmain, and Tyler's Kernel were represented by large basketfuls of highly-coloured fruit. Pears, Durondeau, Uvedale's St. Germain, and Beurré Bosc were also well shown.

Messrs. Osman & Co., 132, Commercial Street, had a stand of horticultural sundries.

Messrs. S. Spooner & Sons, Hounslow Nurseries, Middlesex, sent a table of excellent fruit, for which a Silver-Gilt Medal was given.

A similar award was made to Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., for a table of Apples; Golden Noble, King of Pippins, Blenheim Orange, and Yorkshire Beauty were some of the finest samples.

A magnificent circular group of Chrysanthemums contributed by Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey, received a Gold Medal. Of the finer varieties of the Autumn Queen shown Madame Gustave Henry, Surprise, Madame G. Bruant, and M. Hoste were shown in large size on the plants. Superb cut hlooms of Emily Silsbury, Le Moucherte, Baronne Ad. de Rothschild, Oceana, Edith Tabor, Australia, Phoebus, and Thos. Wilkin were also forthcoming. The decorative varieties, Nellie Brown, a sport from Ryecroft Glory, and Amhrose Thomas were also much in evidence. Mr. James Williams had a table decorated with Chrysanthemums and foliage, but too light to be effective.

A Silver Medal went to Messrs. H. Cannell & Sons, Swanley, Kent, for a bright and handsome group of Cannas. Although the plants were only in 5 in. pots, the foliage was stout and vigorous and the flower trusses large and substantial. From the same firm came a splendid collection of vegetables for which a Silver Gilt Medal was noted. Onions Ailsa Craig, Cranston's Excelsior, Anglo Spanish, and Reading Improved were of great size and weight. Cannell's first prize Carrot was in great form, and amply demonstrated its high merit. There were some

excellent cut Chrysanthemums on view, also from the Swanley Nurseries.

Mr. H. J. Jones, Ryecroft Nursery, Lewisham, S.E., made an extensive exhibit of cut Chrysanthemums and zonal Pelargoniums. Four or five tall vases filled with 'mums, that stood in the centre served to give height to the group which was otherwise rather flat. Maidenhair Ferns constituted an effective ground work (Silver Medal).

Mr. E. F. Such had a table of cut Chrysanthemums, but no award was made.

Mr. Norman Davis also had a table of similar material, the chief feature in which was the grand new yellow decorative variety, Klondike.

Mr. W. J. Godfrey, Exmouth, Devon, had one of the most noteworthy miscellaneous exhibits in the show as far as cut Chrysanthemums were concerned. Upwards of twelve dozen grand blooms found a place on the stands. The best of them were the samples of Admiral Ito, Red Warrior, Rose Owen, M. Hoste, John Seward, George Seward, Mme. Gustave Henry, Australian Gold, Australia, M. Chenon de Léché, T. B. Haywood, Mrs. Tucker Pain, Mr. W. J. Godfrey, and Baron A. de Rothschild. Bunches of some fine winter flowering Carnations were also exhibited by Mr. Godfrey (Silver Gilt Medal).

The Ichthemic Guano Co., Ipswich, had their now celebrated decorative stand, more handsomely trimmed than ever with cut flowers and sprays of autumn foliage, and Ferns, and setting forth the virtues of their renowned specific.

Mr. Thos. Robinson, gardener to W. Lawrence, Esq., Elefield House, Hollingbourne, sent three dozen good Chrysanthemum hlooms, but not for competition.

A superb table of fruit came from Messrs. John Laing & Sons, Forest Hill, S.E. It comprised 150 dishes of Apples and Pears, all in first-class condition. Of the former, Lane's Prince Albert, Cellini, Pineapple Russet, Fearn's Pippin, Colonel Vaughan, and Calville Rouge Precoce were specially noteworthy. Beurré Clairgeau, Doyenné du Comice, Beurré Bosc, Marie Louise d'Uccle, and Durondeau were capital Pears. (Silver Gilt Medal.) By the side of the fruit was staged a collection of hardy, cut flowers, but as these were in a had light their beauty was not fully apparent. Perennial Asters were strong. In another place the Messrs. Laing had staged a batch of the pretty little *Begonia Gloire de Lorraine*.

Messrs. Hawkins and Bennett, Twickenham, showed three basketfuls of the new zonal Pelargonium Duke of Fife—a grand winter flowerer and fog resister.

Miss C. B. Cole received a Bronze Medal for two non-competitive epergnes, the one fitted with Chrysanthemums, and autumn foliage, and the other filled with coloured foliage alone.

The Lawes Chemical Company had a stand of manures, as had the Permanent Nitrate Committee, 3, Gracechurch Street, E. C.

GARDENING MISCELLANY.

BEGONIA FOLIOSA.

THE finest plant of this beautifully leafy *Begonia* we have ever seen is growing in the conservatory at Gunnersbury House, Acton, the seat of Leopold de Rothschild, Esq. The plant was originally a tiny tuft in a small 60-size pot. As it increased in size it was placed in a large wire basket, and suspended from the roof of the house. It is now a shapely specimen of living greenery, about 3 ft. to 3½ ft. in diameter. The leaves are the smallest of any *Begonia* in cultivation, being like those of a *Vaccinium* rather than a *Begonia*; and they thickly clothe the much ramified drooping branches and branchlets. The flowers are pale, and not very conspicuous owing to their small size; but the plant is well worth growing for its foliage alone, which is highly ornamental. Mr. James Hudson succeeds well with the most diversified kinds of stove and greenhouse plants.

MINA LOBATA.

I WAS pleased to come across several well grown and freely flowered plants of this at Solna, the well kept place of Mrs. Egerton, Roehampton. They are planted out in the garden, and are growing up sticks

8 ft. to 10 ft. high, being one mass of orange and scarlet flowers. Mr. Knowles informed me the seed was sown in April the seedlings planted out in May, and the plants have been flowering all the summer. It is a beautiful plant as seen here and should be more generally cultivated. *Mina lobata* is a very unique member of the *Convolvulus* family; hence the reason for making a separate genus of it, but according to good modern authorities the correct name is *Ipomoea versicolor*.—A. Outram, F.R.H.S.

FUCHSIAS IN TUBS.

IN the gardens of Mrs. Egerton, Solna, Roehampton, standing in front of the mansion are some splendid specimen Fuchsias, 5 ft. to 6 ft. high, and as much through—splendid objects as full of flower as one could wish for. They are most useful grown in this way, as they can every now and then be moved to different quarters, thereby producing fresh effects.—A. Outram, F.R.H.S.

QUESTIONS AND ANSWERS

Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Feeding of Goldfish.—Bread is the worst thing that you can possibly give to fish; in fact, all farinaceous food is distinctly bad, since it turns sour either in the water or in the stomachs of the fish. Had your pets been living in a comparatively confined space, such as in a glass bowl, you would have had a practical demonstration of this ere now, for they would have been dead. I have seen numbers of fish killed in this way, to the no small puzzlement of their owners, who could not imagine a reason. The best food to give fish is the pupae of ants, popularly known as "ants' eggs." These may be purchased very cheaply indeed at a seedsman's or at the stores. Two or three of the "eggs" daily will be enough for small fish, and you can obtain quite a quantity for a penny.—A. S. G.

Grub in Chrysanthemum Leaves.—W. E. B.: Your Chrysanthemums are being tormented by the grubs of a small black fly named *Phytophaga nigricornis*. The grub of the Frog Hopper never hurrows into the interior of the leaf, but nestles on the surface, usually in the axil of a leaf, and in a mass of froth, like spittle, so that it is not the cause of the mischief under notice. The perfectly developed and winged female fly lays its eggs upon the leaves, and the grub on becoming hatched out hurrows its way into the interior of the leaf, destroying the latter by feeding on the soft tissue. Keep an eye upon the plants in early summer, and whenever you detect the grub in a leaf pull the latter off and burn it, or, if you can find the position of the grub squeeze it between the finger and thumb. Badly-infested leaves should always be burnt to destroy the grubs and prevent them from reaching the winged state. There are several broods each season, so that you should persevere in destroying the grubs from their earliest appearance. They are usually far more destructive to the leaves of *Chrysanthemum coronaria*, *C. carinatum*, and other annual species than to the late flowering and perennial *C. sinense*. You could syringe the leaves occasionally with weak tobacco water with the view of preventing the female flies from laying their eggs there. Your experience with the pest is a very common one in the South.

Spotting of Orchid Leaves.—Alex. Logan: We have no doubt that the black and gray spots on the leaves of *Lycaste aromatica*, *Dendrobium nobile*, and *Eria* have been caused by the fungus known as Orchid Leaf Rust (*Glaeosporium cinctum*) described in the "Journal of the Royal Horticultural Society," Vol. xxi., Part I, pp. 82, 83, and 84. We have some doubt about the spotting of the leaves of *Odontoglossum incurvum*; but it may merely have been an earlier stage of the fungus. You are advised to spray the plants with potassic sulphide solution to kill the germinating spores of the fungus. Prevention, however, is better than cure; and we should advise you to keep the temperature of the house a little higher at the same time giving a suitable amount of air to dispel moisture. If the air of the house is kept dry and warm, especially when the leaves are being developed you will be able to a large extent to prevent the growth of the fungus, by hindering or altogether preventing the germination of the spores. You will lose nothing by giving this method a good and earnest trial. Spotting is generally largely developed and encouraged by the low temperatures with an excess of moisture in the atmosphere and on the leaves.

Iris susiana.—M. M. L.: The chief source of difficulty with this species lies in the fact that it commences to grow just before winter when it should be

resting. For that reason a little protection in winter is necessary to shelter it and ward off snow and rain. For outdoor culture you might try it in some warm, sheltered position, placing a hand light or cloche over it at all times when the weather is severe, but at other times ventilating freely. We doubt very much whether it would thrive in a pot owing to the fluctuations of temperature and moisture under those conditions. The best way would be to grow it in a cold frame in rich sandy soil, placing plenty of river sand about and amongst the roots to keep them dry in winter. After the plant has flowered and completed its growth keep it as dry as possible till next spring when it begins to move, after which, in mild weather it should receive a liberal supply of water to enable it to grow freely and get strong.

Names of Plants.—*W. S. Sandon*: 1, *Hedychium spicatum acuminatum* (would you be willing to send us a rooted crown of this plant for the Kew collection, as it is not in the gardens there?); 2, *Cypripedium Sedeni* (deformed flower); 3, *Hibbertia volubilis*; 4, *Oxalis scandens*; 5, *Swainsonia galegifolia alba*; 6, *Polypodium (Niphobolus) Lingua*; 7, *Gymnogramme japonica* (apparently, but you should send spore bearing fronds of all Ferns); 8, *Adiantum venustum*.—*G. C.*: *Salvia Horminum*.—*G. Thom*: 1, *Salix alba*; 2, *Salix alba vitellina*; 3, *Salix purpurea*.—*W. S.*: 1, *Crataegus tanacetifolia*; 2, *Cupressus nutkaensis*; 3, *Thuopsis dolabrata*; 4, *Libocedrus decurrens*.—*A. Wood*: 1, *Pyrus pinnatifida*; 2, *Pyrus Aria*; 3, *Jasminum revolutum*; 4, *Aspidium angulare proliferum*; 5, *Lygodium palmatum*; 6, *Phragmites communis*.—*T. Reid*: 1, *Ledum palustre*; 2, *Rhododendron ferrugineum*; 3, *Lonicera sempervirens*.—*Alister*: 1 and 2, *Chrysanthemum Blushing Bride*; 3, *Chrysanthemum Mrs. J. R. Pitcher*, probably; 4, *Chrysanthemum Précocité*; 5 and 6, herbaceous *Calceolarias*, not recognised; 7, *Trachelium caeruleum*.

Carnation Maud Dean.—*M. M'L.*: It is a new tree variety, and as far as we know is not yet in commerce on this side of the Atlantic. You might try Mr. W. J. Godfrey, Rolle Street, Exmouth, Devon. You must remember that it is not a florists' flower, and therefore not judged by the same rules; but for cut flower purposes it is handsome and useful when well-grown.

Address of Firm.—*Alister*: The address you ask for is Messrs. Adam and Charles Black, Publishers, 4, Soho Square, London.

Tarred Frames and Asparagus.—*Omega*: For forcing purposes we do not think that any harm would result to the Asparagus seeing that it has not to put forth tender leaves. But in any case the tar should be dry before you commence forcing. Do not on any account tar the hot water pipes, if you employ the latter for forcing, as the fumes would probably prove too great for healthy Asparagus to be produced. A better plan, however, would be to tar the outside of the frame, and paint the inside, in case you might at any time want to grow plants in the pits.

Botanical Term.—*Omega*: The term employed to denote a single flower is *simplex*.

Seeming disease on Cypripedium leaves.—*A. P.*: We have no doubt that the damage was all done by thrips. Even now we can find specimens of small yellow thrips in the sheaths of the leaves at their present advanced stage. The thrips secrete or hide themselves between the folds of the young and developing leaves, and long before the eye can detect the thrips the damage is done. We should advise you to keep a sharp eye on the plants all through the summer, examining the young leaves at short intervals, especially during dry weather. Make a solution of Gishurst Compound or soft soap and water of moderate strength. Tie a small piece of sponge on the end of a thin label or similar piece of wood for the purpose of washing out the interior of the folded leaves, and even the outside, if need be. It is only by persevering in this way that good cultivators succeed in eradicating or checking the pest after it gets a foothold. Instead of Gishurst Compound or soft soap, you may use Fir-tree Oil or Lemon Oil, whichever you like best. Attention and perseverance will certainly enable you to succeed in keeping the pest at bay.

Communications Received.—*B. L.*—John Plummer.—*African Critic*.—*M. T.*—Coila.—*J. Mayne*.—*Omega*.—*D. E.*—*J. O.*—*Wm. T. J.*—*Sassapas*.—*E. L.*—*P.*—*C. Bransdon*.—*Oral*.—*Reader*.—*Inquirer*.

TRADE CATALOGUES RECEIVED.

W. P. LAIRD & SINCLAIR, Dundee and Cupar-Fife, Scotland.—Catalogue of Ornamental Trees and Shrubs, Forest Trees, Coniferae, Fruit Trees &c.

H. CANNELL & SONS, Swanley, Kent.—A valuable Book of Reference in Horticulture—Descriptive Catalogue.

JAMES GRIEVE & SONS, Redbraes, Broughton Road, Edinburgh.—New Catalogue of Pansies, Violas, General Florist Flowers, Greenhouse and Bedding Plants, Flower and Vegetable Seeds, &c.

DICKSONS & Co., 1 Waterloo Place, Edinburgh.—Select Catalogue of Fruit Trees.

ARTHUR ROBINSON, F.R.H.S., 1a, Bishopsgate Without, City.—Flower Roots, Rose and Fruit Trees, Paeonies, Shrubs, Garden Sundries &c; also the Patent Silicate Manure and How to Use it.

COVENT GARDEN MARKET.

October 13th, 1897.

FRUIT.—AVERAGE WHOLESALE PRICES.

| s. d. s. d. | | s. d. s. d. | |
|------------------------|---------|------------------------|---------|
| Apples.....per bushel | 2 6 7 0 | Grapes, per lb | 0 9 1 6 |
| Black Currants ½ sieve | | Pine-apples | |
| Red " ½ sieve | | —St. Michael's each | 2 6 8 0 |
| Cherries half sieve | | Plums per ½ sieve..... | |
| Nova Scotia Apples | | Strawberries, per lb. | |
| per barrel | | Tasmaulan Apples | |
| Filberts..... | | per case | |
| Cobbs 22 6 24 0 | | | |
| per roolbs. | | | |

VEGETABLES.—AVERAGE WHOLESALE PRICES

| s. d. s. d. | | s. d. s. d. | |
|-----------------------|---------|-----------------------|---------|
| Artichokes Globe doz. | 2 0 3 0 | Herbsper bunch | 0 2 |
| Asparagus, per bundle | | Horse Radish, bundle | 2 0 4 0 |
| Beans, French, per | | Lettuces ...per dozen | 1 3 |
| per half sieve | 4 0 5 0 | Mushrooms, p. basket | 1 0 |
| Beet..... per dozen | 2 0 | Onions.....per bunch | 0 4 0 6 |
| Brussel Sprouts, | | Parsley ... per bunch | 0 3 |
| per half sieve | | Radishes... per dozen | 1 0 1 3 |
| Cabbages ... per doz. | 1 0 1 3 | Seakale...per basket | |
| Carrots ... per bunch | 0 3 | Small salad, punnet | 0 4 |
| Cauliflowers.....doz. | 2 0 3 0 | Spluach per bushel | 3 0 4 0 |
| Celery.....per bundle | 1 0 1 6 | Tomatos..... per lb. | 0 6 1 0 |
| Cncnbers per doz. | 2 0 3 0 | Turnipsper hun. | 0 3 |
| Endive, French, doz. | 1 0 2 0 | | |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| s. d. s. d. | | s. d. s. d. | |
|-------------------------|---------|-------------------------------|----------|
| Arum Lilies, 12 blms. | 5 0 6 0 | Marguerites, 12 bnn. | 2 0 4 0 |
| Asparagus Fern, bun. | 1 6 3 0 | Ma. jenhalf Fern, 12bs. | 4 0 8 0 |
| Asters (French) per | | Orchids, doz. blooms | 1 6 12 0 |
| bunch | 0 9 1 0 | Primula, double, doz | |
| Asters, various, doz. | | sprays | 0 6 0 6 |
| bunches | 2 0 5 0 | Pelargoniums, 12 bun. | 4 0 6 0 |
| Bouvardias, per bun. | 0 6 0 8 | Pyrethrum doz. bun. | 1 6 3 0 |
| Carnations doz. blms. | 0 6 3 0 | Roses (Indoor), doz. | 6 1 0 |
| Carnations, doz. bun. | 3 0 6 0 | „ Tea, white, doz. | 0 9 2 0 |
| Chrysanthemums | | „ Niels 1 6 4 0 | |
| dozen blooms | 1 0 3 0 | „ Safrano 1 0 2 0 | |
| Cornflower, doz. bun. | 1 0 2 0 | „ (Englshb), | |
| Eucharis ...per doz | 1 6 3 0 | Red Roses, doz. 1 0 2 0 | |
| Gardenias ...per doz. | 2 0 4 0 | Pink Roses, doz. 2 0 4 0 | |
| Geranium, scarlet, | | Roses, doz. bun. 3 0 9 0 | |
| doz. bunches | 4 0 6 0 | Smilax, per bunch ... 1 6 3 0 | |
| Lilium longiflorum | | Tuberoses, doz. | |
| per doz. | 3 0 4 0 | blooms 0 3 0 4 | |
| Lily of the Valley doz. | | | |
| sprays | 1 0 2 0 | | |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

| s. d. s. d. | | s. d. s. d. | |
|-------------------------|-----------|-------------------------------|----------|
| Arbor Vitae | | Follage Plants, var., | |
| per doz. | 12 0 36 0 | each | 1 0 5 0 |
| Aspidistra, doz..... | 18 0 36 0 | Fuchsias, per doz. ... | 4 0 6 0 |
| „ speolmen | 5 0 10 0 | Heliotrope...per doz. | 3 0 4 0 |
| Asters, doz. pots..... | 2 0 4 0 | Hydrangeas per doz. | 8 0 12 0 |
| Chrysanthemum, per | | Ivy-leaved Geranium, | |
| doz. pots... 6 0 30 0 | | per doz. | 3 0 6 0 |
| Cockscombs, doz. pots | 2 0 3 0 | Lilium Harrissii, | |
| Colens, doz. pots..... | 2 0 4 0 | per pot | 1 0 2 0 |
| Dracaena, various, | | Lycopodiums, doz. | 3 0 4 0 |
| per doz. | 12 0 30 0 | Marguerite Daisy doz | 4 0 9 0 |
| Dracaena virdis, doz. | 9 0 18 0 | Marguerite Yellow, | |
| Euonymus, var. doz. | 6 0 18 0 | per doz. | 5 0 9 0 |
| Evergreens, invar. doz. | 6 0 24 0 | Myrtles, doz. 6 0 9 0 | |
| Ferns, invar, per doz. | 4 0 12 0 | Palms in variety, each | 1 0 15 0 |
| Ferns, small, per 100 | 4 0 6 0 | Palms, Specimen ... 21 0 63 0 | |
| Ficus elastica, each | 1 0 5 0 | Pelargoniums ...doz | 6 0 10 0 |
| | | Scarletsper doz | 1 4 0 |

GARDENING BOOKS.

HARDY ORNAMENTAL FLOWERING TREES AND SHRUBS, by A. D. WEBSTER. A valuable guide to planters of beautiful trees and shrubs for the adornment of parks and gardens. Second and cheap edition now ready. Price, 2s.; post free, 2s. 3d.

CHRYSANTHEMUMS AND THEIR CULTURE. By Edwin Molyneux. Ninth Edition. By far the best practical work yet written on this subject, Price, 1s.; post free, 1s. 2d.

VINES & VINE CULTURE.—The best book on Grapes. By Archibald F. Barron, late Superintendent of the Royal Horticultural Society's Garden, Chiswick, and Secretary of the Fruit Committee.—A New and Cheaper Edition, Revised and Enlarged. Demy 8vo, Handsomely Bound in Cloth. Price, 5s.; post free, 5s. 3d.

THE CARNATION: ITS HISTORY, PROPERTIES, AND MANAGEMENT; with a descriptive list of the best varieties in cultivation. By E. S. Dodwell, Third edition, with supplementary chapter on the yellow ground. Price, 1s. 6d.; post free, 1s. 7d.

FERNS & FERN CULTURE. By J. Birkenhead, F.R.H.S.—How to grow Ferns, with selections for stove, warm, cool and cold greenhouses; for baskets, walls, wardian cases, dwelling houses, &c. Price, 1s.; by post, 1s. 3d.

THE AMATEUR ORCHID GROWER'S GUIDE BOOK. By H. A. Burberry (Orchid Grower to the Rt. Hon. J. Chamberlain, M.P.). Second Edition, with coloured plates. Containing sound, practical information and advice for Amateurs, giving a List with Cultural Descriptions of those most suitable for Cool-house, Intermediate-house, and Warm-house Culture, together with a Calendar of Operations and Treatment for each Month of the Year. In Cloth. Price 5s.; post free, 5s. 3d.

Postal and money orders should be made payable at the East Strand Post Office to F. A. COBBOLD "GARDENING WORLD" Office, 1, Clement's Inn, Strand, London, W.C.

FIXTURES FOR 1897.

OCTOBER.

- 26.—R.H.S. Committees and Lecture.
- NOVEMBER.
- 2, 3.—Watford Chrysanthemum Show.
- 2, 3.—Coventry Show.
- 2, 3.—Brighton Chrysanthemum Show.
- 2, 3.—Borough of Croydon Chrysanthemum Show.
- 2, 3.—Southampton Chrysanthemum Show.
- 2, 3.—West of England Chrysanthemum Show at Plymouth.
- 3.—Ealing Show.
- 3, 4.—R.H.S. of Ireland Chrysanthemum Show.
- 3, 4.—Ascot, Sunninghill, Sunningdale and District Chrysanthemum Show.
- 3, 4.—Isle of Thanet Chrysanthemum Show.
- 3, 4, 5, 6.—North Peckham Chrysanthemum Show.
- 3.—Teignmouth Chrysanthemum Show.
- 4.—Colchester Show.
- 4, 5.—Highgate Chrysanthemum Show.
- 4, 5.—Devon and Exeter Fruit and Chrysanthemum Show.
- 9, 10, 11.—N.C.S. at Royal Aquarium
- 9, 10, 11.—Birmingham Chrysanthemum and Fruit Show.
- 9, 10.—Kingston and Surbiton Chrysanthemum Show.
- 9, 10.—Leeds Paxton Chrysanthemum Show.
- 9.—R.H.S. Committees and Lecture.
- 10.—Bodmin Chrysanthemum Show.
- 10, 11.—Carlisle Chrysanthemum and Fruit Show.
- 10, 11.—Liverpool Chrysanthemum Show.
- 10, 11.—Chesterfield and District Chrysanthemum Show.
- 10, 11.—Birmingham Chrysanthemum Show.
- 10.—Brixton Chrysanthemum Show.
- 11.—Reigate Show.
- 11.—Jersey Gardeners' Society's Chrysanthemum Show.
- 11.—Hammersmith Show.
- 11.—Spalding Chrysanthemum Show.
- 11, 12.—Putney Show.
- 12, 13.—Eccles, Patricroft, Pendleton and District Chrysanthemum Show.
- 12, 13.—Bradford Chrysanthemum Show.
- 12, 13.—Hanley Chrysanthemum Show.
- 12, 13.—Sheffield Chrysanthemum Show.
- 12, 13.—Nottingham Show.
- 16, 17.—Ipswich Chrysanthemum Show.
- 16, 17.—Manchester Chrysanthemum Show.
- 16, 17.—Belfast Chrysanthemum Show.
- 16, 17.—Chester Paxton Chrysanthemum Show
- 16, 17.—Folkestone Show.
- 17.—Buxton Chrysanthemum Show.
- 17, 18.—Hull Chrysanthemum Show.
- 17, 18, 19.—York Chrysanthemum Show.
- 17, 18.—South Shields and Northern Counties' Chrysanthemum Show.
- 17, 18.—Bristol Chrysanthemum Show.
- 17.—Rugby Chrysanthemum Society.
- 18, 19, 20.—Edinburgh Chrysanthemum Show.
- 19, 20.—Stockport Chrysanthemum Show.
- 23.—R.H.S. Committees and Lecture.
- 25, 26, 27.—Dundee Chrysanthemum Carnival.
- 26, 27.—Aberdeen Chrysanthemum Show.

A Special Offer to Readers of

THE GARDENING WORLD.
25/- BOOK for 8/-

NO HOME SHOULD BE WITHOUT ONE

Ogilvie's Encyclopædia

OF
USEFUL INFORMATION
AND WORLD'S ATLAS.

No Single Book ever before contained such a Wealth of Knowledge.

161097. **COUPON.**

Ogilvie's Encyclopædia of Useful Information, and World's Atlas, Price 25s.

16 COUPONS, AND 6D. WITH EACH.

Name _____

Address _____

Postal Orders or ½d. stamps may be sent. COUPONS AND CONTRIBUTIONS MAY BE LEFT at or SENT TO the Office for THE PUBLISHER OF **THE GARDENING WORLD.** COPIES OF THIS BOOK CANNOT BE BOUGHT. They can be obtained only by using these Coupons.

WARE'S

Tulips. Hyacinths.
Crocuses. Lilies. Irises.
Begonias. Anemones.
Gladioli. Spiraeas.

Daffodils to clear, viz:—

| | per 100 | | per 100 |
|------------------|---------|-------------------|---------|
| Annie Baden .. | 6/- | Obvallaris .. | 12/- |
| Barri Conspicua | 30/- | Odorus | |
| | | (Campernelle) | 2/6 |
| Burbidgei .. | 2/6 | Poeticus Ornatus | 4/6 |
| " Mary .. | 6/- | " Plenus .. | 4/- |
| Cynsure .. | 3/- | Priniceps .. | 6/0 |
| Double Daffodils | 4/6 | Pseudo .. | 3/- |
| Emperor .. | 30/- | Sir Watkin .. | 30/- |
| Golden Spur .. | 21/- | Stella .. | 3/6 |
| Leedsi .. | 3/- | Mixed Narcissus.. | 3/- |

Carnations. Picotees.
New and Other Roses.
Clematis.
Hardy Climbers. Pinks.
Paeonies.
Pansies. Primroses, &c.

Catalogues have been posted to all Customers, and may be had free upon application to:—

THOMAS S. WARE,
 Hale Farm Nurseries,
TOTTENHAM, LONDON.

Typheid in Maidstone.

GEORGE BUNYARD & Co. beg to state that visitors can safely inspect their Nurseries (for Fruit Trees, Shrubs, and Roses) as they are on high ground, Two Miles from the Town, and in no way connected therewith by Drainage or Water Supply. Book to Barming Station (in the Nursery), Chatham and Dover Railway; or Aylesford, South Eastern Railway, via North Kent—where Carriages will meet visitors if desired.
 THE ROYAL NURSERIES, October, 1897.

J. J. THOOLEN,
 BULB AND PLANT GROWER,
 Overveen, near Haarlem, Holland,

Has the honour to inform his clients that his illustrated Price List in English, Autumn, 1897, at lowest prices, will be sent post free on application. NO CHARGES FOR PACKING. ORDERS OF 10S. AND ABOVE ENTIRELY FREE TO DESTINATIONS IN England, Scotland, and Ireland, &c.

Some sorts of Bulbs noted in our Price List.

| | Per 100. | 1,000. |
|---|----------|--------|
| | s. d. | s. d. |
| Single Anemones, The Bride, pure white | 1 4 | 12 6 |
| Single Anemones, in finest mixture | 1 2 | 11 0 |
| Crocus, in finest mixture, second size | 8 6 | 6 3 |
| Crocus, in finest mixture, first size | 1 4 | 10 2 |
| Hyacinths, mixed, for bedding or forcing | 8 10 | 83 4 |
| Hyacinths, single, first size, named, in several best leading sorts red, white, and blue varieties equal quantities, my selection | 16 0 | — |
| Iris Kaempferi (Japan Iris), in finest mixture | 5 0 | 40 0 |
| Iris Germanica (Flag Iris), in finest mixture | 6 8 | 60 0 |
| Iris sibirica, all sorts mixed | 5 0 | 40 0 |
| Spanish Iris, in the finest mixture | 0 6 | 4 2 |
| Lilium tigrinum splendens, rich red-black spots | 8 0 | 70 0 |
| Lilium candidum, single, pure white | 10 0 | — |
| Montbretia crocosmiaeflora, orange-scarlet | 1 6 | — |
| Narcissus Polvanthus, in the finest mixture | 2 6 | 23 4 |
| Narcissus poeticus Pheasant's-eye | 1 0 | 8 4 |
| Narcissus campernelle (Jonquill) | 1 2 | 10 0 |
| Narcissus double incomparable, primrose | 1 6 | 14 0 |
| Narcissus Van Slon, single yellow trumpet | 2 6 | 23 4 |
| Narcissus Stella, white, yellow cup | 1 4 | 12 6 |
| Narcissus albo-pleno (dbl. poeticus), pure white | 1 6 | 14 0 |
| Gladiolus Marie Lemoine | 5 6 | — |
| Scilla sibirica praecox, intense blue | 1 0 | 8 4 |
| Lxias, in the finest mixture | 0 6 | 4 6 |
| Single early Tulips, in the finest mixture | 1 0 | 9 6 |
| Double early Tulips, in the finest mixture | 1 4 | 12 6 |
| Duc Van Tbol Tulips, in fine mixture, excellent for early forcing | 2 6 | 20 0 |
| Grape Hyacinth, blue | 0 7 | 5 4 |
| Anemone Japonica, pure white. Wind-flower | 5 0 | — |
| Anemone japonica, rose Wind-flower | 6 0 | — |
| Hemerocallis (Day Lily), mixed | 10 0 | — |
| Gladiolus Brechleyensis, deep scarlet | 2 0 | 19 0 |
| Oenothera Youngi, pure yellow bells | 10 0 | — |
| Allium magicum, white sweet-scented | 3 0 | — |
| Pyretbrum Bridesmaid, with fine double pure white flowers | 15 0 | — |
| Sedum Selfskianum, with many pure yellow flowers | 10 6 | — |
| Tritoma Uvaria grandiflorum (Red-hot Poker) | 14 6 | — |

250 bulbs of the same kind will be charged at the 1,000 rate; 25 at the price per 100; 6 at the price per 12.
 COLLECTION D for spring garden, containing 1,370 bulbs, £1 1s.; half of this, 11s.
 COLLECTION B for indoor, containing 529 bulbs for 92 pots or glasses, £1 1s.; half of this, 11s.



EMPEROR, a magnificent variety, with deep primrose-coloured perianth, and rich full yellow trumpet, very large flower. *Extra strong Bulbs*, per 100 30s., per doz. 4s. 6d.

OBVALLARIS, the Tenby Daffodil, very early, perianth and trumpet deep yellow, a charmingly graceful daffodil. *Extra Strong Bulbs*, per 100 14s. 6d., per doz. 2s.

SIR WATKIN, the Giant of the Chalice Cupped Daffodils, perianth rich sulphur, cup yellow slightly tinged with orange. *Extra strong bulbs*, per 100 25s., per doz. 3s. 6d.

BARRII CONSPICUUS, a flower of great beauty and refinement, a favourite with all, large broad spreading yellow perianth, broad short cup, conspicuously edged bright orange-scarlet. *Extra strong bulbs*, per 100 21s., per doz. 3s.

ALL BULBS SENT CARRIAGE PAID ON RECEIPT OF REMITTANCE.

Send for BARR'S ILLUSTRATED CATALOGUE of all the most beautiful DAFFODILS, with full particulars of collections for Amateurs and Exhibitors, *Free on Application to:—*

BARR & SONS,
 12 & 13, KING ST.,
 COVENT GARDEN, LONDON.
 Nurseries:—Long Ditton, Surrey.



"Gardening is the prnest of hman pleasres, and the greatest retrebtment to the spirit of man."—Bacon.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, OCTOBER 23rd, 1897.

NEXT WEEK'S ENGAGEMENTS.

- MONDAY, October 25th.—Meeting of the Floral Committee of the National Cbrysantbemum Society at the Royal Aquarium.
- TUESDAY, October 26th.—Royal Horticultural Society; meeting of committees at 12 o'clock.
- WEDNESDAY, October 27th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
- THURSDAY, October 28th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
- FRIDAY, October 29th.—Sale of Dutch bulbs and imported and established Orchids by Messrs. Protheroe & Morris.

THE NEAPOLITAN CYCLAMEN.—By this name we refer to *Cyclamen neapolitanum* described by the Italian botanist Tenore in his *Prodromus Florae Neapolitanae* p. LXVI, and which is a native of Central and Southern Europe, including the district of Naples from which it takes its name. We are aware that for many years past horticulturists have been accustomed to speak of it as *C. hederaceum*, and under that name it is recorded in the earlier editions, at least, of the *Student's Flora of the British Islands*, but the original description applies in part only to the

species under notice. The names *C. hederaceum* and *C. hederacefolium* have both been applied to the so-called Persian Cyclamen (*C. latifolium*). *Sim's Botanical Magazine* applies *C. hederacefolium* to *C. vernale*, another Italian species. The *Index Kewensis* refers the *C. hederacefolium* of Willdenow to *C. neapolitanum* with a doubt, and retains the same name as used in *Aiton's Hortus Kewensis* for a South European species. Thus, therefore, the name *C. hederacefolium* has been applied by different authors to four different species, and *C. hederaceum* as a variant of it to a fifth species. Mr. J. G. Baker, keeper of the Herbarium at Kew, and other good modern authorities are agreed that the plant under cultivation, and naturalised in various parts of Britain is *C. neapolitanum*, and for botanical purposes at least, we have no fault to find with that decision. For many years past, even before the advent of the *Index Kewensis*, we were aware that this was the correct name of the plant, and ascribe all the confusion in gardens to the blundering of the older botanists including the great Linnaeus himself.

Every succeeding year serves to impress upon us the value of *C. neapolitanum* for horticultural purposes. It is perfectly hardy, flowers and fruits abundantly in the open air without any special care beyond planting it under conditions congenial to its welfare. In other words it must be planted under the shade of deciduous trees, and as far as we have observed it does best under Elms, though other trees answer the purpose admirably, so long as they are deciduous. The largest and finest plantation of it we have seen is in the Broxbourne Nurseries, of Messrs. Paul & Son, of the Old Nurseries, Cheshunt. The Cyclamen has been planted at different times in an undulated border of varying width, reaching from the main entrance near the Broxbourne Railway Station along the side of the rockery, and under the shelter of a row of tall Elms forming the boundary of the nursery on that side. The plantation is to be continued until it reaches the New River which flows past another side. The parent bed from which the ever extending plantation has been made contains corms which are sixteen years old. There is no degeneracy and as little evidence of the plants dying out. During the months of August, September, and October, the plants have been flowering most profusely. Just before we paid the visit of inspection 20,000 flowers had been pulled, and yet there was no visible evidence that any had been gathered. The corms of the older plants are of large size, producing broad tufts of flowers and foliage, while the smaller and younger are just as profuse, and quite equal to the Persian Cyclamen in this respect. The flowers, of course, are smaller and the stalks shorter; but surely the species is capable of improvement and only awaits the influence of some guiding and skilful hand.

Seed pods are being developed in place of the earlier flowers, and the coiled up foot-stalks are burying the seed pods in the soil where they will remain all the winter, and ripen the seed which will be fit to gather in May and June next year. The flowers vary from purple to rosy-purple, rose, white with a purple mouth, and almost pure white in some cases. The foliage is equally if not more variable and very handsome indeed. Some plants bear small leaves, and others notably large ones. Many of them are silvery-gray with a green zone in the middle of fanciful shape. Others have a green centre with gray margin. Some are so lobed as to have five nearly equal sides, while others are hastate or sometimes almost the shape of an arrow. Another

pretty pattern consists of a light green centre, surrounded by a dark zone, to be bounded by a double margin of gray and green. A Fern-leaved variety, with deeply cut leaves was picked up in a batch of seedlings. A peculiarly noticeable feature of this species is the prominent auricles at the base of each segment of the corolla, and which leads us to hope that a race of handsome varieties could be raised from it, differing completely from the better known Persian Cyclamen. The culture is of the simplest possible description. The natural soil is a heavy brick earth, and the surface is simply covered with cocoanut fibre and kept clean. The flowers are the first to appear, followed by the foliage while the flowers are yet in perfection.

We have also seen a smaller but very fine bed of this Cyclamen under the shade of Elm trees in the gardens of Messrs. de Rothschild, Gunnersbury Park, Acton; and Mr. G. Reynolds has no difficulty in flowering and fruiting the plants profusely every autumn. On the edge of the wild garden near the Cumberland Gate of Kew Gardens, numerous corms are planted amongst the hardy Ferns under the shade of Elms and Limes. Here the plants have been most successful, though they refuse to thrive when planted amongst the grass, in the same way as Daffodils.

Diamond Jubilee Medal for Sir Trevor Lawrence, Bart.—I have the honour to inform you that Her Majesty has been graciously pleased to confer the Diamond Jubilee Medal upon Sir Trevor Lawrence, Bart., President of the Royal Horticultural Society; Her Majesty being herself Patron of the Society.—*W. Wilks, Sec., R. H. S.*

Victorian Era Exhibition.—The Awards Jury of the Victorian Era Exhibition at Earl's Court has just awarded Messrs. J. Laing & Sons, Forest Hill, London, a Diploma and a Gold Medal in recognition of the meritorious way in which they have planted the numerous beds in their extensive gardens with flowering plants and shrubs.

Royal Horticultural Society.—The next meeting of the committees will be held on Tuesday, October 26th, at the Drill Hall, for fruit, vegetables, flowers, and Orchids. At 1.30 punctually, the President and Council entertain at luncheon the 60 recipients of the Victoria Medal of Honour granted by Her Majesty's gracious permission in celebration of the completion of the 60th year of her reign. The lecture announced for the 26th will be postponed, and instead thereof at 3 o'clock the sixty medals will be distributed to the recipients by the President in the Drill Hall.

Death of Mr. Isaac Davies.—On Sunday, the 10th inst., there passed away one of the old school of nurserymen, viz., Mr. Isaac Davies, of Brook Lane Nurseries, Ormskirk, at the ripe old age of 85. The deceased gentleman was the raiser of many good *Calceolarias* and *Pelargoniums* forty years ago, and many good *Azaleas*, hardy and greenhouse *Rhododendrons*. He also raised several things which will live for many years amongst the best productions in this way, including *Azalea Daviesi*, *A. Avalanche*, and *Rhododendron praecox elegantissimum*. The greenhouse varieties, *Countess of Derby*, *Countess of Sefton*, *Lady Skelmersdale*, and many others were the result of his work.—*A. O.*

Birmingham Amateur Gardeners' Association.—Mr. W. Sanderson read a paper on "Old Time Gardening" before the members of this society, at a meeting held at the Technical School, Birmingham, on the evening of Tuesday, October 5th. The essayist treated the subject in a very full and lengthy way, and said that the present day system of growing flowers for pleasure or beauty was comparatively new, for plants in the middle ages were cultivated either for food or medicine. He also described the various forms of old gardens, and stated that our ancestors favoured the arrangement of growing their plants in straight rows in square or oblong beds. Mr. Cornwell occupied the chair.

Death from eating Laburnum seeds.—Bella Jane Cartney, the daughter of a farm servant residing in the neighbourhood of Strichen, Aberdeenshire, died on the 2nd inst. as the result of having eaten some seeds of Laburnum the previous afternoon. The girl was four and a half years old, and medical aid proved unavailing in the effort to ward off a fatal result.

Budleigh Salterton and East Budleigh Cottage Garden Society held its annual meeting on Tuesday, the 5th inst. The Rev. W. F. Green occupied the chair. Dr. Brushfield, the treasurer, reported receipts £58, and expenditure £48. This report was passed on the motion of Captain Astley Cooper, seconded by Mr. Kempson. A sub-committee, composed of ladies and gentlemen, was formed to revise the prize lists.

The Lozier Manufacturing Co.—This firm of manufacturers of the noted Cleveland bicycles has left its former offices at 18, Holborn Viaduct, and removed to 24, 25, 26, and 27, Orchard Street, Oxford Street, London, W., where a cycle depot is being fitted up, which is declared to be the most commodious in the United Kingdom. Besides a complete stock of Cleveland bicycles, the company has also a complete stock of parts for executing any and all kinds of repairs, and, if necessary, to build the machine complete. The headquarters of the firm are at Cleveland, Ohio.

Bristol Amateur Horticultural Society.—Mr. E. M. Dyer presided at the monthly meeting of this society over a large attendance. Mr. E. H. B. Chapman, F.R.H.S., M.S.A., of Frome, lectured on "Cacti and Succulent Plants." Mr. Chapman has devoted a good deal of time to the study of this interesting class of plants. He was one of the founders of the National Cactus Society. As was expected, he gave a most interesting lecture, illustrating the various points by means of living specimens, of which there were about 100. He gave in detail the characteristics of and the methods of culture for many selected kinds of Cacti, and fixed the attention of his audience throughout.

Rye Gardeners.—A remarkably good show rewarded the efforts of Rye gardeners on the 6th inst. The vegetables sent by both the cottagers and the professional gardeners were first-rate. Mr. F. W. E. Shrivell, F.L.S., lectured in the evening upon "Artificial and other manuring for garden produce." The facts and figures he presented were based upon practical and extensive experiments made in Kent, and were entirely in favour of the use of chemicals for producing much larger and better crops. The lecturer was "heckled" by a few of the members of the audience, although the experience of others went to show that Mr. Shrivell was right in his deductions. The Mayor (Alderman Fuller) presided.

Fordhook Farm, U.S.A.—There is no more widely known firm in the States than that of Atlee, Burpee & Co., and no prettier spot than the headquarters of the firm at Fordhook Farm, Doylestown, which is only an hour's easy run from Philadelphia. The methods in vogue at Fordhook are thorough and practical, as becomes an establishment that is such an important factor in the supplying of seed to the American continent. The greatest vigilance is observed as to the quality of seed supplied to customers. Both its vitality and its purity with regard to strain and name are fully tested before customers are supplied. An idea of what an important item the "purity" trials are may be gathered from the fact that over 5,000 of these trials took place last season. Vegetables and flowers are alike well looked after, and many, many acres of land are devoted to the plants which are to furnish the seed. Sweet Peas are a great speciality of the firm, and much interest is taken in them, so much so indeed that last summer Mr. Burpee made a journey of 13,000 miles in their behalf, including a visit to Britain for the purpose of visiting Mr. Henry Eckford's grand collection at Wem, in Shropshire, and seeing the plants in full bloom. There is very little glass at Fordhook, although a little is required to raise tender plants. Visitors are always welcome on any day except Sunday, although Wednesday is the usual visitors' day. Escort is in each case provided, and points of interest shown, and explained where necessary.

Tunbridge Wells Gardeners.—Mr. Berwick presided at the last meeting, when impromptu discussion was the order of the evening. The chairman introduced the question of the cultivation of the Apple, and gave his personal experiences as to soils, manures, and winter preservation of old and young trees. The following were the successful exhibitors:—Messrs. Greengoe, for Beet; Palmer, Nectarines; Bridger, Brussels Sprouts; March, Vegetable Marrows; and Verrall, Tomatos. Messrs. Verrall & Palmer were awarded Cultural Certificates.

The London Florists' Company, Limited.—This is the name of a new company recently floated with a capital of £30,000, and 17,000 shares were offered for public subscription. Preferential allotment was to be given to those living in the neighbourhood of the nine shops and businesses which the company proposes to carry on. The authors of the scheme point to the success of the Aerated Bread Company, Welford & Sons, Spiers & Pond, Crisp & Co., and T. R. Roberts, as evidence of what may be done by this method of working. The statement of profit submitted covers only one year's working, previous results being omitted, as some of the businesses were not established.

Scottish Horticultural Association.—A paper on "Horticultural Influences" was read at a meeting of the Scottish Horticultural Society on October 5th by Mr. R. W. Wilson, gardener at Murdison Castle, Newmains. The place of meeting was 5, St. Andrew's Square, Edinburgh, and Mr. M. Todd presided. It was not possible, said Mr. Wilson, for wealth or power to monopolise the blessings derived from horticulture, for the gilded-domed conservatory might not impart to its lordly owner as much satisfaction as the widow's modest plant grown in the loftiest tenement of any of the great cities did to her. Viewed from many points, they could not fail to realise the beneficence of horticulture as a far-reaching and divine creation. Mr. Wilson deprecated the way in which much of the surplus fruits, flowers, and vegetables from the gardens of the wealthy finds its way into the market in competition with the hard-working, industrious market gardener, and he suggested that much of it might be diverted into the wards of the hospitals and other institutions for the sick with beneficent effects. The immense influence for good caused by the laying out of flower beds at railway stations could not be estimated, for the practice let sunshine into the hearts of thousands of travellers daily. Mr. Wilson was heartily thanked for his paper. Among the exhibits made on this occasion were *Asters* from Mr. M. Todd, *Chrysanthemums* from Messrs. T. Methven & Sons, *Hollyhocks* from Ballikinrain Castle, and seedling *Carnations* from Messrs. Dickson & Co.

Preston and Fulwood Horticultural Society.—Mr. B. Ashton, of Lathom House, filled the chair on the occasion of the 79th monthly meeting of this society, which took place at the Old Legs of Man Hotel, Preston. He briefly introduced the lecturer for the evening, Mr. W. P. Roberts, Cuerdon Hall, Preston, who dealt with the subject of "Soil." In the course of his remarks, Mr. Roberts revealed an intimate knowledge of the teachings of science on the formation of the soil, and he also described very lucidly their good and bad qualities, and the various effects of the weather upon them. A good soil should contain from 50 per cent. to 70 per cent. of sand, 20 per cent. to 30 per cent. of clay, 5 per cent. to 10 per cent. of lime and the same proportion of humus. Such a soil had enough sand to make it warm and porous, and enough lime to decompose the inorganic substances present. A bad soil was just the reverse, for it contained a superabundance of sand, clay, or humus, either of which was hurtful. Standing water was hurtful in every way. It made the soil cold, for not only does water take longer to warm than the soil, but in evaporating cools the soil. By draining, the air was allowed to get in as the water was drawn out. Speaking of weeds, he described them as plants in the wrong place, and it was necessary to remove them. In the discussion that followed the reading of the paper Messrs. Payne, Sykes, and Wood took an active part. Mr. Roberts then replied to questions that were raised during the discussion. Votes of thanks to Mr. Roberts for reading his paper, and to Mr. Ashton for presiding brought the business to a close.

Death of Mr. E. J. Baillie.—As we go to press we learn of the death of Mr. E. J. Baillie, of the firm of Messrs. Dicksons, Limited, at his residence, Woodbine, Upton, on the 18th inst. We shall refer to the matter again in our next issue.

Oak on a Church Tower.—An evergreen Oak, supposed to be 200 years old, grows on the top of the tower of a church at Culmstock, Devon. How it manages to exist amongst the masonry, especially during droughty seasons, is a mystery.

The First Chrysanthemum in Cincinnati, U.S.A.—The earliest blooms to come to hand this year in America were those of Lady Fitzwygram, on the 23rd September, six days in advance of last year. The blooms fetched 6½d. each in the market.

Royal Appointment.—Messrs. Dobbie & Co., Seed Growers and Florists to the Queen, Rothesay, have been honoured with the following addition to their Royal Warrant of Appointment:—"The name of Andrew Mitchell is added to this warrant, as one of the firm of Dobbie & Co., by desire of the Lord Steward, The Earl of Pembroke.—Signed, T. C. March, Secretary, Board of Green Cloth, Buckingham Palace, October 16th, 1897.

Royal Horticultural Society.—The dates fixed for next year's meetings are as follows:—1898: January 11th, February 8th, March 8th and 22nd, April 12th and 26th, May 10th, Temple Show, May 25th, 26th and 27th, June 14th and 28th, July 12th and 26th, August 9th and 23rd, September 6th and 20th, Fruit Show, Crystal Palace, September 29th and 30th, and October 1st, October 11th and 25th, November 8th and 22nd, December 13th. Any gentleman willing to deliver a lecture on any of these dates would greatly oblige by communicating *at once* with the Secretary, 117, Victoria Street, S.W.

The New Colony at Pitsea.—The Fairview Building Estate, at Pitsea in Essex, according to experienced judges is said to contain some of the finest land in the county. The estate also possesses great advantages in the way of a good supply of water, and light tithes. It is situated on the main road to London, and is easy of access from the metropolis. Recently a powerful and wealthy syndicate has been formed with a view to promoting the formation of a colony at this favoured spot. The opening sale of land takes place on Monday, October 25th, when all purchasers will have an equal chance of securing plots of land according to their needs at low prices. We understand that the syndicate intends to relieve purchasers of the payment of all tithes. Arrangements are being made for the erection of factories, and Mr. J. W. Humm himself has had plans prepared for a factory capable of employing 500 hands. All those who sympathise with the dreary life of the East End worker, cooped up in the congested surroundings will welcome this practical attempt to improve the conditions of labour.

Nursery and Seed Trade Address List.—The value of an address list is of leading importance to everyone engaged in business of any description that necessitates much communication through the post. Various lists already exist, but need frequent overhauling, and even then it is difficult to make all the necessary corrections and alterations except one is in direct communication with the parties concerned, whose names are given in the list. With regard to the nursery and seed trade Mr. B. Wynne, 1, Danes Inn, Strand, W.C., is in this position; and it has occurred to him to get together and publish "The Nursery and Seed Trade Postal and Telegraphic Address List." The list is given in alphabetical order followed by abbreviations, which indicate whether the party addressed is a nurseryman, seedsman, florist, horticultural sundriesman, wholesale florist, or commission salesman. It should therefore be of value to a wide circle of business men in connection with commercial horticulture. Then follow the postal address and the telegraphic address, where there is one, in the same or the consecutive line. As one line usually contains the name and address, it follows that an enormous number of them are recorded in the book, which runs to 94 pages. The first list runs to 77 pages; then follows a list of telegraphic addresses written separately; and this in turn is followed by a third list consisting of the Metropolitan nurserymen, seedsmen, florists, &c., together making up the 94 pages. This useful list may be obtained from the author, 1, Danes Inn, Strand, W.C., for 1s., post free, 1s. 1½d.

Chrysanthemums at Battersea Park.—The eighth annual display of the autumn flower is now open to the public in Battersea Park, in the houses near the west lodge entrance. Mr. Coppin has increased the number of plants from 2,000 to 2,200, being an increase of 200 since last year. There are 250 varieties in the collection.

Shirley Gardeners' Mutual Improvement Association.—The monthly meeting was held at the Parish Room, Shirley, Southampton, on Monday 18th inst., the President, Mr. W. F. G. Spranger conducting the meeting. Mr. F. J. Crook, Assistant Hon. Sec. Winchester Gardeners' Association, gave an exhaustive paper on "Salads," his opinion being that our gardeners as a rule paid too little attention to this branch of their profession, and that a great number of employers also called for very little variety in this class of food. He enumerated quite a big array of vegetables suitable for the purpose, and gave the method of culture desirable for a number of the most useful varieties. A hearty vote of thanks was accorded to Mr. Crook at the close of a brief discussion on his paper. The annual outing of the members took place on the 3rd inst., the party going to the National Fruit Show at the Crystal Palace, and after inspecting the exhibits, a capital luncheon, provided by Messrs. Bertram & Co., was partaken of. After the luncheon a hearty vote of thanks was accorded to the president and members who had subscribed to the special fund for the outing, and the members separated, some finding their way to the London Parks and a few went to Messrs. Laing & Son's Nurseries, where they were courteously treated and shown round the establishment.

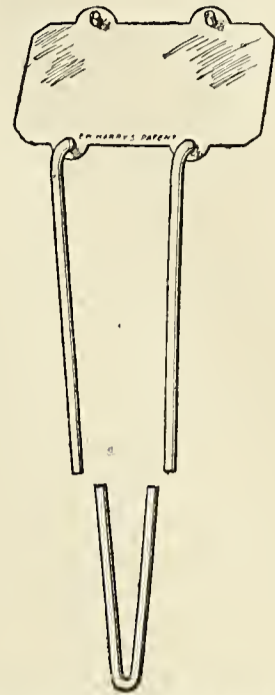
Beddington, Carshalton, and Wallington Horticultural Society.—The annual general meeting of the members of this society took place on the evening of Tuesday, October 5th. Dr. Cressy occupied the chair. The report for the year presented by the committee stated that the show held (by the kindness of J. H. Bridges, Esq., J.P.) in Beddington Park was a great success. The number of competitive entries was equal to former years; and there were many honorary exhibits of high quality. Notwithstanding the falling off in the subscriptions from various causes, a balance of over £53 was reported. The amount disbursed in the shape of prizes totalled £97 17s. 6d. The total receipts for the year were £335 14s. 9d., and the expenditure for the same period £282 7s. 3d. The chairman in moving the formal adoption of the report and balance sheet, spoke of the effect that the Jubilee year had had in lessening subscriptions. Mr. Brown seconded, and the motion was carried unanimously. Mr. G. W. Cummins was asked to refill the post of secretary, but said that he was compelled to decline the honour owing to his retirement from the office of gardener at The Grange. A vote of thanks and an honorarium of ten guineas was proposed as a recognition of Mr. Cummins' services. Mr. W. T. Toogood was elected secretary, and Mr. C. F. F. Hutchings assistant secretary.

IDEAL LABEL AND HOLDER.

The vexed question of durable labels for garden plants is always cropping up, and many kinds are brought forward from time to time. Mr. E. H. Harry has invented and patented a durable label of simple construction, the general features of which may be seen by reference to the accompanying illustration lent by the inventor. The label itself upon which the writing is done consists of a flat plate of zinc, with four holes for the reception of the stout wire holder. The latter consists of one piece bent in the middle, and three times bent near the ends to form a receptacle for the label.

The advantages claimed for this invention are several. It is less in price than any ordinary stem label. The label may be used twice, thus saving 50 per cent. on this item alone. The stem may be used any number of times for different labels. The latter may be taken off the stem to be written upon, which is a great convenience, as anyone who has had to write on the ordinary stem label will allow. It cannot face the wrong plant, as single stem labels are apt to do. It is far neater than any label of a similar character, as only the writing space hides the view of the plant. For amateurs, gentlemen's gardeners, and nurserymen, this label, the inventor thinks, will be a great boon. The patentee is having

the cast Acme Label made to fit the above, and is also making a zinc label of stouter substance with any desired name stamped in. Either of these two additions raises the price from 1s. to 3s. 6d. per dozen.



THE IDEAL LABEL AND HOLDER.

The patentee is also having the Ideal Label and Holder made in three sizes for placing in the ground or in pots. These labels are to be obtained from Mr. E. H. Harry, 36, Adelaide Road, Brockley, S.E.

CHINA ASTERS AT MORTLAKE.

CHINA ASTERS are amongst the most popular of annuals, and the assurance of this is found in the enormous number of varieties in existence, classified or grouped under numerous sections. Florists still keep straining every effort to raise new types and colours. There is also some evidence that they are being turned to account in a greater variety of ways than formerly.

During the fourth week of September we visited the Trial Grounds at Mortlake of Messrs. J. Carter & Co., High Holborn, London. At the north end of the grounds, close to the railway between Mortlake and Richmond, three long rows of beds were sown with China Asters in the first week of May, the seeds being committed to the ground where they were to bloom. About three-fourths of them were still in full bloom about the time of our visit. The strain known as Queen of the Market is the earliest, and was considerably past its prime. The blooms of this variety are relatively of large size, showy, and conspicuous. We noted rose, red, pink, white, blue, and violet-purple varieties amongst them. The Comet strain is now one of the most popular and admired. The white is an exceedingly fine form; but there are others of a beautiful mauve, rose, blue with a white edge, and pink with a white edge. This strain bears the same relation to the other Asters as the Japanese Chrysanthemum does to the incurved.

There are twenty-four different shades of colour in the Paeony-flowered section, including the ordinary type and Truffaut's strain, ranging from white to crimson. Truffaut's type of the strain is characterised by having incurved florets, and when well grown it is very pretty. The plants grow about 12 in. to 18 in. in height, branch freely, and produce a great quantity of flowers. The number of varieties is, amongst other things, an index to the utility and popularity of Paeony-flowered Asters. Very vigorous, upright, and branching are the plants of the strain known as Giant Branching. There are several colour varieties, and all are very late in coming into bloom compared with the rest. Many of the plants were only commencing to bloom on the 25th ult. Emperor Aster may be compared with the last two sections mentioned for the sake of contrast. The white and the blue varieties are the best, and produce only one or two blooms of huge size and handsome appearance upon a plant.

Very pretty is the new strain known as the Ray Aster, having long, quilled, loosely arranged florets of white and rose colours, much resembling the spidery Chrysanthemums. The Crown or Cockade

Aster exists in six colours, but in each case is characterised by having a white centre, being both fanciful and attractive. Dwarf Bouquet Asters, in many shades of colour, only grow about 3 in. to 6 in. high. They have a quilled centre, and bloom very early. As far as dwarfness is concerned this strain is beaten by Dwarf Shakespeare Aster, in six colours, and attaining a height only of 3 in. to 4 in., forming tufts hugging the ground. Pompon Asters grow about 12 in. high, forming neat, pyramidally branching plants. There are twelve colour varieties of them, having quilled centres and flat rays in several rows. This type is both pretty and useful for cut flowers.

The Dwarf Chrysanthemum Asters exist in eight varieties. The plants are bushy, producing large heads, and are about 9 in. high. The Victoria Asters, in six colours, grow 12 in. to 15 in. high, and produce a great quantity of closely and neatly imbricated heads. Both of these strains are very popular. The Needle Aster is after the style of the Ray Aster, but the blooms are smaller, and the quills are more compactly and neatly arranged. There are six varieties of this type, and they are very pretty both in form and colour. Bettridge's Quilled Asters in many colours are well known, and are models of neatness, even if more formal than most of the above. The new yellow Aster belongs to this section. The Ball Aster is also practically new, and closely resembles an incurved Chrysanthemum. There are dark purple, light blue, white, and other varieties, which add to the long list of useful forms of the popular China Aster.

REDBRAES NURSERY, EDINBURGH.

THOUGH the firm of Messrs. James Grieve & Sons is comparatively young, Mr. James Grieve, sen., has been a prominent figure in horticulture for over thirty years past, especially in connection with the raising and cultivation of Pansies, Violas, and other florists flowers. He is not unconnected with fruit growing as the Apple bearing his name, under "Plants Recently Certificated" in another column, will show. Mr. Grieve and his two sons carry on their business as nurserymen and florists at the Redhraes Nursery, Broughton Road, Edinburgh, which we had the pleasure of inspecting early in September.

GLASSHOUSES.

The first house we entered was a propagating pit used chiefly for rooting shrubs, such as Ivies, Ampelopsis Veitchi, A. hederacea, Choisya, Clematis, Laurustinus, Retinosporas, Thuyas, Yews, Skimmia oblata and others, the mere names of which will indicate the shrubs in request. Here also was a hatch of seedling zonal Pelargoniums. Another house had the roof covered with Tomatos, while the benches were occupied with Fuchsias, and seedling Pelargoniums, including *P. fragrans* and other scented leaved kinds. The third house also contained Tomatos in variety, including Comet, Sutton's A1, Austin's Eclipse and Honour Bright. The latter is an American variety, but little esteemed by comparison with the rest. A collection of Tulips, Hyacinths and other bulbs found temporary accommodation here.

Single tuberous Begonias in great variety made a portion of another house gay; while seedlings of various kinds showed that stock was being raised in quantity, including a fine hatch of the Japanese Wineberry (*Rubus phoenicolasius*). The Kangaroo Vine (*Vitis antarctica*) and many other rather uncommon subjects receive attention. We were interested in a collection of British Ferns, including the Mountain Parsley, the Oak Fern, *Aspidium angulare*, and *Scolopendrium*, in variety. The house next to this contained a collection of decorative Ferns of useful market size. The more conspicuous of them were *Pteris tremula*, *P. cretica cristata*, *P. c. albo-lineata*, *Lomaria gibba*, *Polystichum Drummondii*, *Cyrtomium falcatum*, *Scolopendrium vulgare crispum* and others. These were all grown in the new, machine made pots, which are neat, strong, useful, and like what are known as the small 32-size. There were also some hatches of Ferns of a smaller size.

The next house visited was filled with good market stuff, of which the more prominent were *Pteris serrulata plumosa*, *P. Wimsetti*, *P. nobilis*, *P. straminea*, *P. majus*, *P. tremula*, *P. serrulata cristata*, *P. Ouvrardi*, with very broad pinnae, *Davallia bullata*, *Phlebodium aureum*, *Asplenium*

biforme, *A. pumilum laxum*, *Adiantum cuneatum* for cutting, *Nephrolepis tuberosa*, and others of that useful class, which can always find a market. A mixture of *Pteris serrulata cristata* and *Adiantum* in the same pot sells well. The silvery-leaved *Sibthorpia europaea variegata* finds suitable conditions for its welfare amongst the Ferns. *Ficus elastica* and *Dracaena Bruanti* are also good market plants. The latter is similar to *D. rubra*, but is more erect in habit, and therefore more suitable for certain decorative work.

Ferns of many kinds were being reared in the next house entered, and could be seen in many sizes from newly germinated spores onwards, in pots, pans and boxes. Some of the species we noted were *Platylooma Browni*, *Pteris argyrea*, *Cyrtomium falcatum*, *Gymnogramme Mayi*, *Asplenium bulbiferum* and others. The broad pinnae of *Adiantum Capillus-Veneris imbricatum* render the variety as handsome as *A. farleyense*, but on a smaller scale. A collection of the more useful *Selaginellas* find accommodation with the Ferns. A fine hatch of seedlings of the new *Asparagus Sprengeri* will soon reach a useful decorative size. *Aspidistras* could hardly be omitted from any general collection of the nature above indicated.

The Tomatos in the early house were nearly all gathered. They were planted in the border of the house, and had attained a great height. In another division was a batch of Austin's Eclipse in boxes. Palms, *Smilax* and other subjects were also located in this tall house.

OUTDOOR DEPARTMENT.

Chrysanthemums are much in request for cut flowers and other purposes. Altogether about 5,000 are grown, 500 of them being in pots and the rest planted outside at the time of our visit. The latter were intended, of course, for lifting and taking indoors. Near the houses a select strain of Leeks was being grown for seed. A little further on we came upon a plantation of new Strawberries being grown for the sake of runners, including Prince and Princess of Wales and W. E. Gladstone. The latter has very dwarf foliage, and cockscomb-shaped fruit of very fine flavour.

Amongst florist's flowers was a fine strain of striped French Marigolds. A large plantation of East Lothian Stocks for Spring work had recently been planted out, and of Wallflowers there were several plantations. Some 2,000 to 3,000 *Hepatica angulosa* should be productive of a fine effect in spring. Such annuals as *Mignonette*, *Scabious*, *Larkspurs*, *Dianthus Heddegi*, *Gypsophila*, and *Godetia*, are grown for the sake of cut flowers.

The collection of Violas includes 130 of the best varieties; and although they had been much cut up to furnish the 40,000 cuttings inserted, numbers were still flowering freely. Joseph is a grand new one of a rich bronze on yellow, with a maroon centre. White Duchess, Countess of Hopetown, Blue Cloud, Goldfinch, and Duchess of Fife are as well known as they are fine. Mary Gilbert is a great improvement upon Bullion for size and shape. Marchioness is creamy white and of grand habit. Lady McDonald is larger and lighter in colour than Bullion. Accushla is white, heavily margined with dark purple. Other leading types are Archie Grant, Ariel, and the fragrant Violetta, all of which develop fine flowers of their kind. Fifteen new Violas are offered for this year, including Lavender King, which is the largest and finest lavender flower yet raised, and received a first-class Certificate from the National Viola Society. Princess Louise is considered the finest yellow Viola in cultivation for bedding purposes; it is almost rayless, and a profuse bloomer. Prince of Wales is rayless and similar to A. J. Rowberry, famous for exhibition, but is a more profuse bloomer than that variety. A striking flower is Sunset, with soft yellow flowers and a broad band of crimson on the two upper petals. Dr. Jim is a good yellow hedging variety. Many others could be named but it is needless to specify them, seeing that Messrs. Grieve & Sons keep such an extensive stock of the best and most popular. Eighty varieties of Fancy Pansies are kept in stock, besides 4,000 to 5,000 seedlings for massing.

Border Carnations are grown in quantity, including the well-known Old Clove, Duchess of Fife, Huntsman, Germania, and Mrs. Muir. Dundas Scarlet is of fiery brightness, and does not split the pod. Lady Sybil Primrose, a new sort, is buff, striped with scarlet, and grows and flowers freely. Amongst seedling Carnations we noted Mary C. Grieve, a lovely rich salmon variety. Over 100

seedlings from the plantation have been selected for trial next year. The famous Redhraes Picotee, with a heavy crimson edge, originated here. Pinks are also grown in some quantity.

The double white *Matricaria Parthenium plena* was still full of bloom, although it commenced flowering in April. Sweet Peas in variety were in full bloom. They as well as *Mignonette*, and Vicks Branching China Asters are grown for cutting. In the frames was a stock of bronze, tricolor and zonal *Pelargoniums*, all of which are in request in spring for bedding purposes.

A plantation of seedlings from *Viola Joseph* showed some interesting and beautiful variations. Near the frames were cuttings and young plants of various shrubs and Conifers; also plantations of border *Auriculas*, *Polyanthus*, and *Primula cashmeriana* in some quantity. *Genista tinctoria elatior*, 2 ft. to 3 ft. high, makes a useful and showy autumn flowering shrub with dark yellow flowers. Shrubby *Veronicas* are well grown for decorative purposes in pots and otherwise.

Herbaceous and alpine plants receive a fair share of attention. Amongst others we noted *Campanulas*, *Helianthus multiflorus plenus*, the fine leaved *Thalictrum adiantifolium*, *Achillea Ptarmica flore pleno*, *Mimulus cardinalis*, and the tiny evergreen shrub *Veronica salicornoides*, admirably adapted for rockwork. Very choice and useful are *Campanula G. F. Wilson*, *Thymus lanuginosus*, *T. coccinea*, and *Saxifraga Wallacei*, the latter grown in quantity for hedging purposes.

Amongst alpine plants, of which there is a collection in pots, prominence is given to *Saxifragas*, *Sedums*, *Auhrietias*, *Iberis*, *Campanulas*, *Phloxes* of the dwarf *P. subulata* type, *Alyssum saxatile* and a batch of *Mimulus*, raised between varieties of *M. luteus* and *M. cupreus*. The hybrids are intermediate between the parents. The golden-leaved *Thymus citriodorus aureus variegatus* is almost sure to find a place in general collections, for it is often used as edgings to flower borders in Scotland, and elsewhere is put to a variety of purposes.

We should have liked to have seen the collection at an earlier period of the season, before the general work of propagation had commenced, that is, before the season was so far advanced. In any case we wish Messrs. James Grieve & Sons a huge success for their enterprise in establishing a business on their own account.

PLANTS RECENTLY CERTIFICATED.

THE undermentioned awards were made by the Royal Horticultural Society on the 12th inst.

Orchid Committee

LAELIA PUMILA LOW'S VAR. *Nov. var.*—The sepals and petals of this beautiful variety are white, very softly and faintly tinted with blue. The tube of the lip is pure white externally and yellow internally, with numerous raised lines of the same colour. The lamina and side lobes are blue-purple. There is much difference of opinion amongst cultivators as to whether this variety should belong to *L. pumila* or to *L. p. praestans*. We incline to the former, though it does not entirely agree with the original descriptions of either. Award of Merit. It was shown by Messrs. Hugh Low & Co., Clapton, but passed into the collection of Sir Frederick Wigan, Clare Lawn, East Sheen, during the day.

ZYGOPETALUM JORISIANUM.—The sepals and petals of this beautiful species are heavily overlaid with shining brown on a green ground, the latter showing as narrow transverse bars at wide intervals. The three lobed lip is fringed all round the edges, the upper portion being white, the lateral lobes yellow, and the crest purple. Award of Merit. Walter Cobb, Esqr. (gardener, Mr. Howse), Dulcote, Tunbridge Wells.

ODONTOGLOSSUM GRANDE PITTIANUM. *Nov. var.*—This is the most distinct variety of the species which has yet turned up. The usual brown blotches and hands have been washed out leaving only yellow of different shades. The sepals are light yellow, with transverse golden bars upon them. The petals on the contrary are bright yellow with a large golden blotch covering about one-third of the base. The lip is creamy-white, with a few, slender yellow zones near the base. Award of Merit. H. T. Pitt, Esqr., (gardener, Mr. R. Aldous), Rosslyn, Stamford Hill.

VANDA CAERULEA ROCHFORDIANA. *Nov. var.*—The sepals and petals of this choice and pretty variety are white, faintly tinted with blue along the midrib. The lip is of a soft rosy colour, and quite unique in the species as far as we have seen. Award of Merit. Mr. Thos. Rochford, Turnford Hall Nurseries, Herts.

VANDA MOOREI, ROLFE. *Nov. hyb. nat.*—Whatever the history of this *Vanda* may be it has the appearance of being a natural hybrid between *Vanda caerulea* and *V. kimbaliiana*. The sepals and petals are oval, stalked, and pale bluish-lilac, the lateral sepals being oblique and much broader than the dorsal one. The wedge-shaped lip is bifid and deep purple-blue, with a long lilac spur. Award of Merit. Mr. J. W. Moore, Eldon Place Nursery, Bradford.

DENDROBIUM TAURINUM AMBOINENSE. *Nov. var.*—The stems of this variety vary from 4 ft. to 8 ft. in height and bear long dense erect racemes, of medium sized flowers towards the top. The sepals are overlaid with bronze; and the spatulate petals are of a rich shining brown. The lip is of a light coppery brown. Botanical Certificate. Messrs. J. Veitch & Sons, Limited, Chelsea.

CRYPTOPHORANTHUS DAYANUS.—This is very closely allied to the *Masdevallias*, but has its flowers closed at the top and open at the sides. The blooms are large and bear a remarkable resemblance to a snake's head. The upper sepal is heavily spotted brown, the markings showing on the outside. The inner face of the lateral ones is yellow. On the whole it is a most remarkable flower. Botanical Certificate. Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking.

Floral Committee.

VERONICA SILVER STAR.—The habit of this shrubby *Veronica* is very dwarf, bushy and densely leafy. The leaves are oblong, with a broad creamy margin, ultimately silvery-white. The variety is handsome, indeed, and must soon become very popular for greenhouse and conservatory decoration and other purposes. Award of Merit. The plants shown by Messrs. J. Veitch & Sons, Ltd., were only 3 in. to 6 in. high.

NANDINA DOMESTICA.—This uncommon shrub is a native of China and Japan, and belongs to the same natural order as the *Barberry*. The leaves are twice or thrice pinnatisect, with lance-shaped entire segments. During autumn they assume a deep, shining red beneath and slightly duller red above, the general appearance being very handsome. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

BEGONIA GRANDIFLORA ERECTA CRISTATA.—In this we have a bold and lengthy name for a crested strain of the tuberous race of *Begonias*. The flowers are large, circular, furnished with four crests arranged cross-wise on the petals, and already exist in all the leading colours. Award of Merit for the strain. Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain).

MARANTA PICTA.—The leaves of this plant attain a height of 9 in. to 12 in., and are oblong, velvety, olive-green, with light green blotches on either side of the midrib. It is a highly ornamental stove plant. Award of Merit. Mr. William Bull, 536, King's Road, Chelsea.

CHRYSANTHEMUM MADAME PAUL BRUANT.—In this we have a Japanese form, measuring some 8 in. across by 7 in. in depth. Most of the florets are tubular, drooping, of great length, and amaranth purple when grown exposed to sunshine. The centre is often white, or the whole bloom may be so if it opens in a shady position. Award of Merit. Messrs. J. R. Pearson & Sons, Chilwell, Notts.

CHRYSANTHEMUM MRS. WINGFIELD.—This is a small, Japanese and decorative variety of a charming blush-pink or blush white. The florets are revolute at the edges. It forms bushy plants, 18 in. high and very choice. Award of Merit. Mr. Empson, gardener to Mrs. Wingfield, Ampthill, Beds.

Fruit and Vegetable Committee.

PEAR DIRECTEUR HARDY.—The fruit of this variety is shortly pyriform, yellow, shaded with red on the exposed side, and covered with russet spots. The flesh is white, juicy and very melting. Award of Merit. Messrs. Geo. Bunyard & Co., The Royal Nurseries, Maidstone.

APPLE JAMES GRIEVE.—The fruit of this dessert variety is large for that section, shortly conical, and of a beautiful yellow, suffused and mottled with red on the exposed side. The flesh is yellow, richly

flavoured, and in every way excellent. The wonder is it has not previously received the recognition it deserves. Award of Merit. Messrs. Geo. Bunyard & Co., Maidstone.

MELON CROXTETH JUBILEE.—The fruits of this scarlet-fleshed Melon are roundly-oblong, with nine shallow furrows, and as many rounded ribs running longitudinally. Average fruits would weigh 5 lbs. to 6 lbs. each. The flesh is of great depth, rich, red, very juicy, and deliciously flavoured. It is, in fact, the best flavoured Melon which has been shown at the Drill Hall for a long time. Award of Merit. Mr. B. Barham, gardener to the Earl of Sefton, Croxteth Park, Liverpool.

THE undermentioned *Chrysanthemums* received First-class Certificates at the hands of the Floral Committee of the National *Chrysanthemum Society* at the early autumn show at the Royal Aquarium on October 12th.

AMBROSE THOMAS.—This is a very pretty decorative variety with chestnut-crimson flowers. The florets are long, narrow, revolute, and pointed. The plant is about 3 ft. in height and the foliage exceptionally sturdy. Mr. Wm. Wells, Earlswood Nurseries, Redhill, Surrey.

MADAME PAUL BRUANT.—This is a handsome Japanese variety of giant size. As the blooms stand they measure fully 7 in. in depth, and about 8 in. in diameter. When well developed there is a close resemblance to the colour of a good *Etoile de Lyon*, but the build of the bloom is totally different. The florets are long and drooping, the tips being upturned and more heavily suffused with rose than the rest. Messrs. Pearson & Sons, Chilwell, Notts.

VISCOUNTESS ROGER DE CHEZELLES.—Here we have another large Japanese flower of about 8 in. in diameter. The florets are of medium length, good substance, involute along their entire length, with lobed apices, and incurving at the tips. The colour is deep yellow. Mr. W. J. Godfrey, Exmouth, Devon.

VEGETABLE CALENDAR.

TENDER vegetables that have succumbed to the late sharp frosts should be cleared off the ground without delay. This will give freedom to deal with the ground for future crops. The positions for all next season's early crops ought to be decided upon at once. All warm borders suitable for early Potatoes, Lettuce, Cauliflowers, &c., should be thoroughly exposed to the beneficial effects of frost and other atmospheric influences. At the same time manures should be added suitable for each crop. Light leafy manures will answer best for Early Potato, Lettuce and Turnips; while burnt refuse and soot may be freely used for Carrots and Onions. In all cases a dressing of lime would prove useful, where the ground has been long under cultivation.

ASPARAGUS.—The beds of this should now be cleared and made tidy for the winter season. After the removal of all weeds and refuse, a dressing of soot and fine soil blended may be given over the rows. This will gradually get washed down to the roots during the winter rains, and prove stimulating when growth commences in early spring. Where the crowns are near the surface a few inches of pulverised soil will be better for a covering during winter than half-rotted dung, as the latter tends to keep the ground in a condition unsuitable to the roots of *Asparagus*. Plants intended for early forcing may be lifted and placed under a damp covering in readiness for introducing into warm frames and other structures.

SPINACH.—This will need attention in thinning, and the hoe should be freely used to induce rapid growth and an early supply. It is not good policy to over-thin winter *Spinach*, and the work should be done very carefully where the plants are very thick, otherwise the whole of the plants will be disturbed and checked, especially on light, sandy land. A dressing of soot and lime around the collars of the plants will ward off the attacks of slugs and other pests. Those who are fortunate enough to possess *Orchid houses* or glass cases would find this one of the most serviceable crops under glass during winter.

CAULIFLOWERS.—The potting up of a few hundreds of the strongest plants should not be delayed. These, when established, take up but little more room than

when pricked out in the ordinary way, and are much handier and give earlier produce when planted permanently in spring. Crops now maturing must be carefully watched at this season, and any getting overgrown or likely to suffer from sudden sharp frost may be lifted into sheds or other cool places for safety.

FRAMES.—These will require constant attention at this season, to keep up a succession of salading. Full-grown Lettuces that have been lifted, must be kept dry but well aired, and as soon as used, later sowings should be planted in the frames, so as to form a regular succession. A sowing of *Paris White Cos* should be made in a single light frame at the present time for early spring planting. Raise the soil, which should be light and sandy, to within a few inches of the glass, and sow broadcast. Keep the frame close until the plants appear, when liberal ventilation will be needed at all times except during severe frost. Bottom heat will not be needed. Where very slight hotbeds can be made, Radishes and Mustard and Cress will do well in frames, but the latter may be grown in any position indoors where the temperature ranges between 55° and 65°. Late crops of *French Beans* in frames should be kept as warm as possible, and may be closed early in the day to husband solar heat. Sowings of these should be made often at this season to keep up supplies, and it will be necessary to keep the young plants close to the glass in warm houses to ensure success.—*J. R.*

The Orchid Grower's Calendar.

CATTLEYA HOUSE.—If we had the making of the weather we could not improve on what we have been getting the last few weeks for the plants that are making up their newly-made growths, or for those developing their blossoms. Of the latter, *C. aurea* and *C. labiata autumnalis* take prominence over all others. These, when massed together, make an imposing show; but it is to those that come on later, such as *C. Trianaei* and *C. Mendelii* I wish to draw attention. We are going over ours now, sponging those that require it, and putting neat stakes to each, so that the new growths can be lightly tied up to prevent them from being damaged when shifting the plants about. The very moving them round seems to have a beneficial effect, and why should it not be so? This fact was brought most forcibly before my notice the other day when looking over an empty dwelling house. A few months before, when the people moved out, everything was apparently in good order, but in a very short time the place was in a most dilapidated state, simply because it was left to take care of itself. And so it is with our favourites: to be up and doing must be the gardener's motto if success is to crown his efforts.

POTTING.—Well, yes, there a few things that are best gone over at this season of the year. Of these the white *Laelia anceps* is one that makes more roots at this season than at any other time, so that should there be any that have missed flowering we would advise that they be afforded some fresh material.

WORKING OF THE HOUSE.—Gradually reduce the amount of moisture as the growths harden up, and at the same time afford plenty of fresh air through the bottom ventilators. The shading of this division may be almost entirely dispensed with after this date, only using it on very bright days for a few hours to keep the temperature from running up too high rather than to shade the plants.

COOL HOUSE.—While the bright and mild weather lasts the *Odontoglossums* may be syringed overhead with impunity. But with the advent of the dull November days this must of course be discontinued. So much, however, depends on the structure and the position of the same that no hard and fast rules can possibly be laid down for the guidance of cultivators.

SLUGS.—As the growths become matured the spikes will make their appearance, and these little fellows seem to know as soon as anyone when the spikes are coming up. It behoves us, therefore, to be first in the field by hanging up all the likely looking ones before the slugs have a chance to eat the sweet morsels.

FIRE HEAT.—Just warm the pipes. This helps to make the leaves and bulbs hard and better able to withstand the vicissitudes of our climate.—*C.*

HINTS FOR AMATEURS.

Chrysanthemum Notes.—The 'Mum season may now be said to have begun, and growers of all grades, from the proud possessor of half a dozen plants esconced in a corner of the back yard to the cultivator who is able to count his plants by the hundred or even the thousand, all are watching with ever increasing interest the development of the buds and the progress of the plants generally. The show fever can scarcely be said to have reached a critical stage yet, but by the time these notes are in print, the pulses of most of those interested will have commenced to quicken as they calculate their chances of success or failure. Meanwhile there are several varieties that we may draw the amateur's attention to amongst the early October varieties. It is in this section that the amateur with little or no glass stands the best chance of reaping a full measure of success.

Klondike.—Recent events have inseparably connected this name with the metal which the human strives for with a pertinacity that has extended through the ages, and seems to increase rather than diminish. Appropriately enough, the flower to which this auriferous name has been given, is of bright golden yellow hue. It is of rather large size for a decorative variety, but should prove of the greatest value where bold, striking blooms are required. The florets all reflex, the tips being bifid, and the margins slightly thorned. This variety was shown at a Floral Committee meeting of the National Chrysanthemum Society, on September 20th, by Mr. Norman Davis, The Vineries, Framfield, Sussex, at the Royal Aquarium, when it was awarded a First-class Certificate.

Nellie Brown.—Ryecroft Glory, sent out by Mr. H. J. Jones, has rendered a capital account of itself as a decorative variety of free-flowering qualities and dwarf bushy habit. In Nellie Brown we have a very handsome sport from it, which is identical with the parent plant in habit, constitution, and build of bloom. Comparing the two forms together, however, the difference is in the colour of the flower. Ryecroft Glory at its best has rich bronze-yellow flowers, whilst Nellie Brown exhibits a charming shade of chestnut-orange. Both these two varieties do wonderfully well if grown in the open ground, and then lifted as the buds are opening, and potted up. In favourable seasons when severe frost holds off until the middle or nearly the end of October, the plants flower well enough in warm corners of the flower garden. We have had instilled into us such a wholesome dread of autumn frosts that we do not attempt so much with October flowering Chrysanthemums in the open ground as we might. A few plants provided with the shelter of a wall or hedge will stand a good deal of cold, and if, when the night threatens to be too severe for such incomplete protection, a sheet of tiffany, or a mat of some kind is thrown over in such a way that it does not come into actual contact with the flowers, the beauty of the plants may be preserved until well on in the autumn. In the grand group of Chrysanthemums, both cut and in pots, that was staged by Mr. W. Wells, of the Earlswood Nurseries, Redhill, at the October show of the National Chrysanthemum Society, a batch of Nellie Brown was a distinctive and much admired feature. A sufficient quantity of plants was shown to demonstrate the fact that the sport was in every way fixed, and that it was as secure from further change as sported Chrysanthemums are generally.

Madame Marie Masse.—Referring again to the subject of flowering Chrysanthemums out of doors, and the way in which the front gardens of villas and cottagers might, by thus utilising some of the earlier varieties, be made to look a little less forlorn and cheerless than they usually do, we may well call attention to the merits of this variety. It is very dwarf in stature, being usually some 2 ft. in height. The best way to grow it is not to disbud at all, but to let the flowers come just as they please. This results in numbers of sprays of medium-sized flowers, each individual bloom having a stalk of fair length, so that in cutting, choice or necessity may be indulged as to whether the whole sprays or only single blooms are to be cut. The colour is a beautiful rose when the plants are grown in the full sun, but if shaded, a silvery-rose is the result. This variety received the XXX, indicating the highest degree of merit at the Chiswick trials of early-flowering Chrysanthemums, held towards the

end of September. On that occasion the plants were contributed by Messrs. Dobbie & Co.

Emily Silsbury.—There are so many good things among the ranks of white Japanese varieties that it is a matter of considerable difficulty to make a choice between them. Emily Silsbury, however, has much to recommend it to amateur cultivators. It is an early variety, and makes a capital October bloom. Though only certificated by the N.C.S. last year it made such a good impression then that it has been taken up eagerly, and this year has appeared on the show boards in surpassing style. The florets are long and drooping, and curl upwards gracefully at the tips. The bloom is of great size, and there is plenty of "stuff" in it, to use an ordinary expression. A great point in its favour is the easiness with which it can be grown. It is very little use recommending a fine flower to an amateur, if in addition to its fineness it possesses an intractable nature.

M. Chenon de Leche.—This represents the highest example of development in this direction. Like many another good variety it originally came from the Continent, and it is not too much to say that it is one of the finest seedlings ever sent out by M. Calvat, of Grenoble, France. In the year of its general introduction (1895) it created quite a sensation, and, of course, received the coveted F.C.C. The flower is of great size, and exhibits a charming shade of rosy buff. The florets are long, and droop over with a graceful curve. The tips of the florets are spoon shaped, and turn prettily upwards. In order to develop this lovely colour to the full, the flowers require to be exposed to the full light, any attempt at shading them resulting in a bloom of comparatively poor colour. Up to the present it has been generally regarded as a mid-season or November variety, and it was shown in not a few winning stands last year at that time. Some intrepid growers, however, have this season contrived to get it in magnificent condition at the beginning of October. In Mr. J. Agate's stand of twenty-four Japanese blooms at the Aquarium last week, it occupied a prominent position; indeed, it has never been better shown at any time. In addition to the remarkable beauties of the flower the plant is dwarf and sturdy in habit.

Crocus speciosus.—Increased attention is being paid year by year to the massing of hardy flowers in situations where the surroundings suggest that nature and not man has been the disseminating agent. This is done not only in our public parks but in many private establishments where individual enterprise is following the example of the pioneers of more artistic ideas in the embellishment of gardens and grounds. All these efforts, however, have chiefly to do with spring-flowering plants. Dutch bulbs, for instance, particularly Daffodils and spring-flowering Crocuses are planted in their thousands in beds, borders, sweeps of glossy lawn, or nooks in the wild garden. Nobody wants to alter this, we imagine, for the admiration bestowed upon spring gardening of this kind is pretty general. Still we may suggest that it seems a pity that spring and early summer are to have the benefit of all these beauties, and that very little or no effort is made to produce similar effects by following similar lines with autumn-flowering plants. True there is a comparative dearth of suitable subjects, but we may claim with truth that sufficient use is not made of suitable plants that do exist. Of these *Crocus speciosus* occupies a foremost position. It is every whit as fine a flower, and quite as beautiful either singly or in the mass, as its relatives who take the year when it is young. Do we want cheapness? then corms of this *Crocus* may be purchased by the thousand at a very reasonable rate. Do we call for hardiness, free-flowering qualities, and generally good behaviour? then *Crocus speciosus* will not be found lacking in any of these attributes. Why then is it not grown more frequently? some may ask. In answer we can only suggest that its merits are not known, or if known are not recognised. The flowers are bright blue, internally, and finely striped with deep purple lines. The much fringed orange-coloured stigmata are in themselves of great beauty, and in contrast with the blue of the flower segments are doubly so. Seen on a bright day towards the end of September or the beginning of October a bold plantation of this *Crocus* is wondrously effective, and needs only to be seen to be admired and copied. Such a break has been lately one of the distinctive features of Messrs. Barr's Nurseries at Long Ditton. The plants were growing beneath the shade of some tall trees, and it

was interesting to watch how after a dull morning the flowers opened with the bright sun, and closed again as the sun went down. The break in question was the result of some small corms which were left in the ground when the big ones were taken up, and they have been in that one place for several years, and flower regularly and profusely each autumn.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

New Chrysanthemum.—*Inquirer:* There are now so many good varieties in cultivation that a novelty has to be of exceptional merit to receive a certificate. We should advise you, therefore, to take the opinion of one or two practical men who can see the flowers before you go to the trouble and expense of sending them to London. The next floral committee meeting of the National Chrysanthemum Society is on Monday, October 25th. The rules of the society require that three blooms shall be sent, and you must also give the origin of the variety, if a sport, the name of the variety from which it was sported, and if a seedling, its parentage. Any other information that you can supply should also be given.

Peaches for a Wall.—I have a wall 10 ft. in height facing to the west. Can I grow Peaches in such a position, and if so, what varieties would you recommend.—*G. Bransdon.*

Yes, you may plant Peaches against a west wall, although a south aspect would have been better. With regard to a variety Alexander would probably suit you the best of any. The fruit is handsome in appearance, of large size, and brisk flavour. It ripens out of doors about the middle of July when planted against a south wall, but would be a little later on a west wall. Hale's Early is good and early. Waterloo is also a good early variety ripe from the middle to the end of July.

Dressing Chrysanthemums.—*Reader:* As a rule Japanese Chrysanthemums do not require much dressing. The blooms should be looked over for short florets, and if any of these are discovered they should be pulled out with the tweezers. After this has been done hold the flower head downwards, and give it a shake to bring the other florets into position. Beyond this very little is required. In the case of the incurved Japanese a good deal more trouble is required, in order to get the florets to lap nicely over each other.

Laying out a Front Garden.—*Sassafras:* We think the best plan would be to have a 3-ft. border all round the garden except on that side of it on which the gravel path lies. On the farther side of the latter, close against the fence, you may have a narrow border of a foot in width, edged with flints or edging tiles. This little border will do to accommodate creepers or other plants which may serve to cover the fence dividing your garden from the next. The 3-ft. border may be filled with bulbs and hardy herbaceous plants. On the boundary of the garden facing the road you might plant a hedge of Privet if you wish for a little privacy, or you might plant a row of tall-growing Michaelmas Daisies, but as the latter will be out of sight during the winter months, and will not have reached any height until the summer has come, the front of the garden would be open for half the year at least when the "Daisies" only were employed. We shall be pleased to give you a list of suitable herbaceous plants if you wish it. The central part of the garden should be laid down in grass, but you may have a bed of Roses in the centre. This bed may be round, square, or oblong in shape, according as your fancy suggests.

Shifting a Holly.—You may lift the Holly as soon as you like, *Oral.* A bush of its size will not have made any very deep roots, especially as you say it has only been in its present position for three years. Lift it with a good ball of earth attached, and if the soil is inclined to be dry water it in when you have got it fairly placed in its new position.

Coe's Golden Drop Plums.—*L. T.*: Wrap each fruit separately in tissue paper, and lay them in a shallow box holding only one layer. Cover up and consign to a cool dry room. You will find that the fruit will then keep for a considerable time.

Peaches.—*P.*: The rapid way in which the leaves have fallen from your Peaches is due in a great degree to the influence of the red spider. The leaves you sent here unmistakeable traces of the pest. It is too late to do anything with the foliage now, but we should advise you to give the trees a good cleaning after the winter pruning, especially the rougher bark of the old wood, in the crevices of which the spider will find a refuge.

HEDYSARUM MULTIJUGUM.

The French Honeysuckle (*Hedysarum coronarium*) is an old garden plant the cultivation of which for cut flowers seems to be reviving after a period of neglect. The heads of Pea-like flowers and the

trimmed back thus keeping it in small compass for situations on the rockery, or for the filling of small beds on the grass, or even dry banks that it may be desirable to clothe with vegetation. The rosy-purple flowers are borne on long-stalked racemes that may be utilised for mixing with other cut flowers to the advantage of both. The shrub is prettiest and most ornamental, however, when seen as it grows naturally.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

The eleventh anniversary dinner of this society, which was founded in 1865, was held on the 12th inst., in the Holborn Restaurant, London. Mr. H. B. May, of Dyson's Lane Nurseries, Upper Edmon-ton, presided over a record attendance of members and visitors, including many influential horticulturists.

After the toast of the Queen had been duly rendered, Mr. May rose to propose the "United

"This society was founded by gardeners, is conducted by gardeners for the welfare of gardeners, and so great is my admiration for its objects and particularly its methods, that I venture to think it is unsurpassed, if indeed it is equalled, by any similar institution in the kingdom. And the advantages it offers its members, especially its aged members, are certainly most liberal, and a happy combination of a benefit society and savings bank.

"It is not my intention to weary you with a long array of statistics, but with your permission I will mention a few particulars for the information of those unacquainted with the society. The benefited members are of two grades, those on the higher scale contributing 9d. and the lower 6d. per week to the sick and deposit fund, 3s. and 2s. per annum to the benevolent fund, and 2s. 6d. per annum by each class to the management fund. They are entitled to sick pay at 18s. and 12s. per week respectively, for a period of twenty-six weeks, and 9s. and 6s. for a further period of twenty-six weeks, and may then be transferred to the benevolent fund, and receive such



HEDYSARUM MULTIJUGUM.

growth of the plant, however, is coarse and ungainly compared with *H. multijugum*, which was introduced from South Mongolia in 1883. It is a shrub of most graceful habit, with slender arching branches, and pinnate leaves, made up of ten to twenty pairs of small, oblong leaflets that have a feathery appearance compared with those of the French Honeysuckle.

The accompanying illustration, prepared from a photograph sent us by Messrs. R. Veitch & Son, Exeter, shows the feathery appearance of a large bush on one of their rockeries in the Royal Nursery, New North Road, Exeter. The time was allowed to slip past until the plant was nearly out of flower before the photograph was taken, so that the latter hardly does justice to the plant as far as flowers are concerned, for it blooms most profusely, and the myriads of little twigs rising above the foliage are really the flower stalks of the fallen blooms, only a few of which still remain. The shrub is perfectly hardy not only at Exeter but much further north and east where the winters are colder than in the south-west of England. The shrub also fruits freely at Exeter and elsewhere, so that there is no difficulty in raising a stock of the species where a desire may exist for planting it in quantity. Though the shrub grows from 2 ft. to 5 ft. in height, it is more often seen as a dwarf spreading bush 18 in. to 2 ft. high, even in the case of plants of many years standing. In early spring the whole bush may be

Horticultural Benefit and Provident Society," and spoke as follows:—

"Were those present this evening unassociated with the world of gardening, I might be tempted to portray in somewhat lurid tints the difficulties under which gardeners pursue their vocation, the uncertainty of employment, the many ills to which they are subject from climatic changes, and the inability which too frequently precludes them from making provision for that time of which Longfellow sings:—

'the common fate of all
Into each life some rain must fall;
Some days must be dark and dreary.'

but composed as this assembly is of gardeners and their friends, to dilate upon such topics would be superfluous.

"It has been remarked that the position of the chairman at these anniversary dinners is a difficult one, there being so little for which to plead, and assuming that view to be substantially correct, on the other hand in surveying the beneficent work of the society, how much there is to admire! The society has for its motto "Unity is strength," but its pioneers, mindful that stability is not obtained by numbers alone, have raised its superstructure on the enduring basis of self-help. Democratic in its constitution, it is a notable example of the good work that may be achieved by earnest men, and the substantial progress made is brilliant testimony of its appreciation by those for whose benefit it was established.

weekly payment as the committee deem advisable. As an instance I may mention that a member who had exhausted his sick pay, has recently been granted 5s. per week from that fund during the remainder of his illness.

"The balance to the credit of the sick fund after deducting payments to members, is annually divided pro rata, and placed to the credit of each member, and this sum with compound interest at three per cent., is carried forward until he reaches the age of seventy, when he is entitled to withdraw the amount standing to his credit. He may also be awarded a weekly sum from the benevolent fund at the discretion of the committee, or in the event of death, the sum accumulated would be paid to his representatives. There is another provision I would direct your attention to, and one I think that is more generous than that of any other society with which I am acquainted; a member who has allowed his subscription to lapse, does not forfeit the amount, but is entitled on reaching the age of sixty to withdraw the sum standing to his credit at the time of his default, together with compound interest to date, or should he die before that age, it would be paid to his nominee.

"That the Society is progressing favourably is evidenced by the fact that 63 new members have joined since the last annual dinner, the total number now on the books being 684; but probably nothing I can say by way of commendation will be more

convincing than the concluding paragraph in the actuary's report at the quinquennial valuation in 1896, which reads thus: 'I have great pleasure in congratulating the committee and members on the prosperous condition of the society, and its substantial progress, both in growth of funds and public support during the period under observation. This progress is evidenced equally by the increase of membership from 291 to 535, the growth of funds from £4,933 to £9,533, the increase of income from £908 to £1,376, and the favourable experience of the society as to sickness in a period which included some severe and wide spread epidemics.'

'I have incidentally alluded to the democratic spirit of the society, but democracies have their senate; and I claim for this little republic, that it has what I shall assume to be an equivalent in its life and honorary members. It is my desire this evening to make a substantial addition to the names of those who already appear in that honourable capacity; first, because the subscriptions of life and honorary members materially assist in defraying the cost of management, and second, and what is perhaps of greater importance, they will receive annually the report of the executive committee, and thus a reminder to place before their employees the advantages accruing to benefited members of this admirably conducted society. There are other methods I desire to bring to your notice by which you may exercise your benevolence, viz., the benevolent fund, (the purport of which you will have gathered from my previous remarks), the management fund, and also the convalescent fund. The latter, as its name implies, is for assisting members on their recovery from illness, and was formed in 1895 on the initiative of our good friend Mr. Sherwood; and will, I am sure, prove of great advantage.

"Gentlemen, I have said there was but little for which to plead, and I am concerned lest that little should suffer from my feeble advocacy; but the pleasure derived from assisting those who endeavour to help themselves is proverbial, and I would ask you to add to the gratification you have experienced on occasions similar to the present, by helping this deserving society by one of the methods I have indicated, and thus, in some degree, tend to mitigate

'the weight of care,
That crushes into dumb despair,
One half the human race.'

Mr. James Hudson, the hon. treasurer, rose to reply, and corroborated what the chairman had said anent the prosperity of the society, by stating that he expected the society would invest about £1,200, or £100 per month during the course of the present year. In inviting more gardeners to become members, he urged the plea of the economy with which the affairs of the society are managed. All their meetings, committee and otherwise, were open to members, for nothing was held in secret. Mr. George Bunyard and Mr. B. Wynne, responded to the toasts of "The Honorary Life Members" and "Visitors," respectively. "The Chairman," and "Kindred Institutions" were also proposed, and in responding to the latter Mr. G. J. Ingram, pleaded the cause of the Gardeners' Royal Benevolent Institution. Before the close it was announced that Mr. George Bunyard had consented to preside at the dinner next year. The tables were profusely decorated with flowers, plants, and fruit, and the meeting on the whole was a hearty one.

MUSHROOMS AND BROCCOLI.

DOUBLE cropping and even treble cropping have very frequently been resorted to by those driven for space; and to those in like circumstances I would, were suitable conditions existent, recommend this particular method of double cropping. Having a piece of ground destined for a crop of winter Broccoli, it occurred to me that there was a possibility of securing a crop of Mushrooms between the rows; so measuring the ground off I lined it out for a row of Mushrooms between the Broccoli. I then dug out trenches in which was buried the freshest stable manure procurable steaming hot. This was trodden firm in the trenches, the spawn being put in at once. Some of the soil was thrown over it and then another treading given to make it as firm as possible. The soil was then levelled and trodden over again. I left the space vacant between the second and third rows of Broccoli, and so on throughout the plantation, in order to form an alley between the

rows of Mushrooms. This is quite necessary for conveniently getting at the Mushrooms to gather them. The manure and spawn were put in the trenches during the second week of June, and we have for some eight weeks been gathering a fine crop of good Mushrooms with every indication of being able to so for some time longer, should the weather remain open. The Broccoli having well covered the ground shelter the Mushrooms and keep up a moist atmosphere about them, a condition of things suitable to their requirements. There is just one drawback to those who demur to wetting their boots, that is, there are some days during which to get at the crop means a thorough wetting.—W. B. G.

PINKHILL NURSERIES, EDINBURGH.

THE nurseries of Messrs. R. B. Laird & Sons, Pinkhill, Murrayfield, Midlothian, are situated on the western outskirts of Edinburgh, and within easy distance of the warehouse, 17, South Frederick Street, Edinburgh. They are now very extensive and include several nurseries or pieces of ground, much of which has recently been added to the older portions of the establishment. On a glorious day in September last we had the pleasure of a drive to Pinkhill in full view of hills, rich agricultural land, and other scenery which has made the Scottish capital the annual rendezvous of tourists from all parts of the British dominions, and other countries throughout the world. At present we are concerned only with what we saw in the different parts of Messrs. Lairds' nurseries and give the details in the order we noted them.

BEECHWOOD MAINS.

This is an old farm which has been secured as a forest tree nursery, and includes some forty-five acres of rich and valuable land, well adapted for the purpose of raising trees of all kinds. It begins at the extreme western end of the city boundary and extends for three-quarters of a mile westward on the south side of the Edinburgh and Glasgow Road. The stock consists of the usual nature, including forest trees by the million. Larch seedlings and transplanted seedlings are very fine. A little further westward on the north or upper side of the road we noted fields of Potatos planted by way of preparing the ground, which is now to be filled with Larch entirely, for which the ground has proved to be very suitable. The natural lie of the land and the soil itself accounts for its suitability. Two years' seedling Larch is very scarce all over the country, but here we noted 1,000,000 of them in specially fine condition, on the south side of the road. About half a million of two years' transplanted Larch was equally fine, the trees of course being much larger. Other trees are grown here such as Spruce, Ash, Scots Fir, Thorns, Sycamore, Austrian Pine, &c.

THE NEW PREMISES, PINKHILL.

Within the last few years a fine range of glasshouses has been erected on the south side of the main road, to take the place of the winter garden which used to be at West Coates. The ground here, consisting of two acres, slopes to the south, so that the houses and offices next the main road have been raised to bring them on a level with the latter. The range of houses next the road have a hung cement floor, and underneath are potting sheds, stables, soil barns, joiner's shop, &c. A flight of steps leads from the main building down to the natural level of the ground, where twelve span-roofed houses have been built and filled with the usual run of nursery stock. The nursery offices facing the road are complete in every detail, including main office, private offices, telephone, and every other convenience. The whole place is kept in excellent order.

The first hothouse we entered is used as a forcing house in spring, but at the time of our visit was practically a conservatory, filled with *Ficus elastica*, *Aralia Sieboldi variegata*, *Dracaena rubra*, *Juniperus bermudiana*, &c. The latter in its juvenile stage makes a very neat and graceful decorative plant, otherwise desirable by way of a change from the usual run. A fine plant of *Stigmatophyllum ciliatum*, with yellow flowers like an *Oncidium* covers the roof.

The conservatory in the centre of the block on the level of the main road, was gay with *Lilium speciosum*, *Browallia speciosa major*, *Humeas*, and various other flowering plants. *Camellias*, *Eucalyptus globulus*, *Dracaenas* and *Ferns* were also con-

spicuous occupants of this cool house. Opening out of it the visitor passes into the New Holland House, filled with *Heaths*, *Acacias*, *Epacris*, *Polygala*, *Genethyllis*, *Tremandra*, *Kalosanthes coccinea*, and others of similar character. These plants not being in season, the house was brightened with *Lilium speciosum*, *L. s. album*, *Bouvardias*, and a small leaved *Myrtle* named *Jean Reichenbach*. The plants were just coming into bloom, being laden with buds and flowers, though they were only 12 in. to 15 in. high. This should be a boon for those who are fond of *Myrtles*, but cannot get them to bloom till of large size.

The *Pelargonium* house is a roomy structure and, when we saw it, was filled with zonal, show, fancy, Ivy-leaved, tricolor, and sweet-scented *Pelargoniums*. *Fuchsias* also found a place here, as well as *Clianthus puniceus* and *Myrtus obcordata*, a slender, twiggy species having small bronzy leaves. The *Azalea* house contained a large assortment of subjects independently of *Indian Azaleas* and greenhouse *Rhododendrons* which have always been well grown by Messrs. Laird. We noted a huge specimen of the popular pot plant *Rhododendron Countess of Haddington*. Tall *Tree Ferns* occupy the centre of the house, and *Lapagerias* do well on the roof. Many other greenhouse plants are accommodated here including *Mandevilla suaveolens*, *Hibbertia dentata*, *Kadsura japonica variegata*, with leaves closely similar to those of a *Camellia*, *Passiflora kermesina*, and other species. The *Kauri Pine* (*Dammara australis*) makes a distinct looking subject for greenhouse decoration. *Araucaria excelsa* also proves indispensable for this kind of work. All of the above houses constitute the range on the high level, each compartment being roomy, well ventilated, and worked with every modern appliance.

The span-roofed houses on the lower level are utilised for growing various stove and greenhouse subjects. One contains a collection of *Caladiums* of the best named sorts raised in France and in England. Suspended from the roof are fine plants of *Gymnogramme schizophylla gloriosa* and *Adiantum ciliatum*. Here also was a quantity of *Pteris serrulata*, *P. s. cristata*, and *P. hastata macrophylla* all of useful size. One house was monopolised with a collection of single and double tuberous *Begonias*, good husky plants, with dark green foliage. The plants were, in fact, still in perfection, notwithstanding the late period of the season. They presented the usual run of colours peculiar to this useful summer-flowering race. The fernery was very interesting; the sides all round being covered with wall tiles and planted with *Maidenhair Ferns*. There was also a fine batch of *Adiantum cuneatum* in first-class condition. The same may be said of *Pteris tremula*, *P. argyrea*, *Asplenium fabianum*, *Polypodium aureum*, *Cyrtomium falcatum*, and a dwarf and a useful variety of *Nephrolepis exaltata* in 48-sized pots, just suitable for table or other decorative purposes. *Smilax* is grown in pots and allowed to twine up strings, so that it may be cut or used in pots as required.

The large stove contained *Crotons* in the perfection of high colour, and amongst them we noticed grand batches of *Golden Ring*, rich golden-yellow and green; and *Aigburth Gem*, red, yellow, and green, all in first-rate condition. *Aralia Chabrieri*, in plants of fine size, shows that the plant retains its highly ornamental form, even after it has attained large dimensions. Some of the finest of the narrow-leaved *Dracaenas* now so popular and widely cultivated all over the country, originated with this firm. We allude to *Miss Glendinning*, *Mrs. Laird*, *Marchioness of Lothian*, and others of that class. The last-named is the most graceful of all, and has narrow bronzy-red leaves. There are fine plants of the bold and handsome *Licuala grandis*. Another handsome fan-leaved *Palm* is *Stevensonia grandifolia*, with amber veins and markings. Useful decorative plants also include *Maranta major*, *Delabechea rupestris*, with fingered leaves, *Peperomia metallica*, highly coloured *Reineckea carnea variegata*, *Tillandsia zonata*, *Aralia Veitchi*, *A. gracillima*, and others. The *Carex* known as *C. variegata* is as well grown here as we have seen it anywhere. *Alocasias* may also be seen in variety.

The intermediate house contains a collection of climbers as well as various other subjects, such as the upright growing *Allamanda Williamsii*, the golden *Lantana Drap d'Or*, and *Clerodendron fallax*, of a brilliant scarlet recalling *Nerine curvifolia*.

Asclepias curassavica was flowering and fruiting. *Bougainvillea Sanderi* flowers even in very small pots. The propagating pit was filled to repletion with a host of subjects, including thousands of Palms in the earlier stages of germination beneath the benches. Here also were *Crotons*, *Dracaena sanderiana* and other types, *Asparagus plumosus nanus*, and the usual cuttings and small plants in the propagating cases.

Passing into the Palm house we noted a fine batch of *Livistona rotundifolia* in plants of small size, and a magnificent specimen of *Phoenix Roebelinii*, one of the finest, if not the finest in Britain. *Ceroxylon niveum* (the Wax Palm) is very scarce in the country. Very unique in its way is *Kentia forsteriana variegata*, for which two guineas were paid when it was in a thumb pot. It is now 5 ft. high, with a well developed yellow variegation. Here also was a large batch of *Bambusa falcata variegata*, which proves very useful for decorative purposes. *Chamaedorea Hartwegii*, a Palm of most graceful habit, was 5 ft. high and flowering freely. Very ornamental but very spiny was a species of *Calamus*. Saddle boilers are used in these houses, the heating arrangements of which are perfect. There are water bars in the furnaces, and the pipes are all fixed with a steady rise of $\frac{1}{2}$ in. in every 9 ft.

MEADOW PARK NURSERY.

Immediately to the south of the above ranges of houses are ten acres of ground known as the Meadow Park Nursery. It is principally under fruit trees, Roses, Rhododendrons, Gooseberries, and small fruits generally. The soil is rich and well adapted for the cultivation of this class of nursery stock. A wall runs through several areas of ground providing a southern aspect for the cultivation of fruit trees. It is fully a mile in length, and must prove very serviceable. A portion of it is built of bricks, the rest is stone. Young trees are being trained upon it.

PINKHILL NURSERY.

This is the old original nucleus of the present extensive area of nursery land, and was taken in 1850. It is situated on the rather steep side of the hill above the main road already referred to, and overlooks the new ranges of glass on the south side of the road. This, therefore, is Pinkhill proper, and from its elevated site the visitor gets a grand view of the Pentland Hills, stretching away to the the southwest of Edinburgh through Midlothian into the counties of Peebles and Lanark. Numerous hills in this range rise to various elevations from 500 ft. to 1,898 ft. The situation overlooks the valley of the Water of Leith, which runs through Edinburgh; also 5,000 acres of the finest alluvial land in Scotland, and which was a bog or morass over 100 years ago, when it was drained and brought into cultivation. An open stank or ditch, three miles long, still drains the land and runs into the Water of Leith.

The Pinkhill Nursery only extends to six acres, but it contains the old ranges of houses, as well as a collection of all that is choicest in the way of ornamental shrubs and Conifers, and collections of the more useful florists' flowers. The latter were what made the name of the firm famous all over the country about a quarter of a century ago. The collections of Dahlias and Hollyhocks have been grown on the same brake of ground for nearly forty-five consecutive years, and yet the soil shows no sign of exhaustion. It is a well-known fact that good Scotch gardeners grow Onions and Carrots on the same ground year after year for indefinite periods of time. *Negundo aceroides variegata* thrives splendidly and is highly coloured. The same may be said of the Silver and Golden Elms, the latter being known as *Ulmus Dampieri aurea*.

Two wide borders are filled with the choicest of Conifers and shrubs, including the Golden Box, and the broad-leaved golden Privet. Lawson's Cypress is represented by *Cupressus lawsoniana lutea*, *C. l. argentea picta*; the handsome *C. l. Allumii*; fine specimens of *C. l. Fraseri*, of erect and beautiful habit, the best of the type; and *C. l. caerulea*, with nice habit and bluish hue. Other handsome subjects are *Retinospora plumosa aurea* and other varieties; *Thuyas*, Golden Yews, *Cedrus atlantica glauca*, the Colorado variety of the Douglas Fir, having blue foliage; the frosted-silver *Abies pungens argentea*, 2 ft. high; *Salisburia adiantifolia* (the Maidenhair Tree), and many others too numerous to mention. Close by we noted a brake of *Araucaria imbricata* in fine condition, while near Mr. David P. Laird's

private residence in the nursery is a specimen of the tree, 30 ft. high, and feathered to the ground.

Elsewhere we came upon twelve long beds of two years' old seedling Larches in the finest of healthy vigour, and numbering about half a million. A collection of the best Ivies is grown in pots. *Larix leptolepis* grows more strongly than the European species, but has not yet been sufficiently tested as to its hardiness in Scotland. There is a fine plantation of it here, the trees having made 24 in. of growth during the season, and they were still lengthening when we saw them. *Spiraea crispa* and *S. Bumalda* were flowering freely, though only 3 in. to 6 in. high. The neatly trimmed Beech hedges traversing the nursery in every direction, and furnishing shelter, are a characteristic feature of Pinkhill. Mr. Laird's private residence is admirably situated, commanding a wide prospect of mountain and agricultural land, yet is well sheltered from the north and east winds, as is the nursery generally. The house is fitted with a private telephone commanding all parts of the place. The front of the house is completely covered with climbers similar to those we see in the south.

Florists' flowers are not neglected, for in the course of our peregrinations we came across fine plantations of Carnations and Dahlias in all the leading show, fancy, and single types. The dwarf and sturdy habit of the plants is a characteristic feature of this class of plants in the latitude of Scotland. Violas, Pansies, and other florists' flowers are still extensively propagated. A plantation of summer-flowering Chrysanthemums was gay, as were brakes of Pansies, Antirrhinums, and Pentstemons grown for the purpose of seed-collecting and stock, all being very dwarf and floriferous.

GLASSHOUSES.

The Rose house in the Pinkhill Nursery is filled with a collection of Tea and other Roses in pots, while others, including Niphetos, are planted out and trained up under the roof. Tomatos are also grown here. Frames in convenient situations are filled with seedlings, cuttings of Conifers, etc. Two houses are filled with Vines and Figs in pots, the latter fruiting although the plants were small. The next house was monopolised by a collection of the finest varieties of Ivies in pots, including *Madeirensis*, the best variegated sort, and Mrs. Pollock, a beautiful sort showing three colours. *Euonymus japonicus* in many varieties is also popular. Palms of all sizes for decorative work are grown by the thousand, there being seven houses devoted to them alone. The hardy plant house is a roomy structure 200 ft. long, 30 ft. wide, and span-roofed. In the early part of the year it is occupied with flowering Rhododendrons. At present it contains Japanese Maples, Camellias, *Ampelopsis Veitchii*, Clematis in great variety, Chrysanthemums, standard specimens of *Hydrangea paniculata grandiflora*, &c. One vinery filled with young pot Vines will now be occupied with Chrysanthemums. The bothies and the foreman's house are situated close to the other houses; and are beautifully draped with *Ampelopsis*, Fuchsias, Ivies, Jasmine, &c. Passing on, we entered a house containing a fine strain of *Amaryllis*. In another was a collection of *Coelogyne cristata*, grown for the sake of cut flowers. A healthy collection of *Clivias* of the best varieties fills another house. Seedling *Amaryllis* appeared in another cool house, the back wall of which was covered with Roses in bloom and filling the place with their fragrance. The large old stock plants of *Araucaria excelsa* from which the cuttings are obtained are staged here, as well as tall and useful specimens of *Cordyline australis*. As in the case of the new ranges of houses on the south side of the road, so, likewise, the whole of the old houses are heated from one stokehole. The whole of the hotwater piping is thereby easily regulated and kept under control. The management of the whole of these nurseries, we may add, is up-to-date, and in keeping with modern requirements.

Tunbridge Wells Gardeners.—Mr. W. Berwick presided at a full meeting of Tunbridge Wells Gardeners on September 21st. Messrs. Bridger, May, and Goodwin were awarded the prizes for flowers and Ferns. Mr. Greengoe, of Ferndale, also showed some fine Ferns, and some capital Chrysanthemums came from Mr. Goacher, of the Tunbridge Wells Recreation Ground. Mr. T. Palmer was highly commended for Orchids, and Messrs. W. Berwick and R. J. Booth for Dahlias.

THE PROGRESS IN VEGETABLE CULTIVATION DURING QUEEN VICTORIA'S REIGN.

(Continued from p. 107.)

BROAD BEANS.

IN the early days of the Queen's Reign lovers of this vegetable were relatively better off than those who preferred Peas, and there already existed such kinds as Mazagan, Dwarf Fan, Early Longpod, and the White and Green Windsor. These have, of course, been greatly improved upon, but they all remain in use, though it is somewhat surprising that the Mazagan should be grown at the present time, as in every point it is surpassed by other greatly superior types.

The fact, however, that Beans in use sixty years ago are still grown seems to show that the advance has been less rapid than in the case of many other vegetables. The improvement that has been made is almost entirely the result of selection, although the crossing of Seville Longpod and White Windsor has produced a variety sent out by my house as Giant Windsor, which, as its name implies, is a much larger type of the Windsor section than previously existed.

During the fifties the Seville and the Aquadulce Longpods (very similar sorts) were introduced from the Continent, and on account of their earliness and length of pod have been and still are largely grown, although the constitution of the plant is not nearly so vigorous as our English sorts.

Beck's Green Gem, a sport from the Dwarf White Fan, was introduced in 1858, and some years afterwards the market gardeners in the neighbourhood of Harlington, Middlesex, set to work to improve the Windsor by selection, and as a result of their efforts we have the Harlington White and Green Windsors.

Painstaking selection has done much in the improvement of the Longpod section, the several strains known as Exhibition being fine and profitable types, the best selections of which both white and green-seeded sometimes contain as many as eight or nine beans in a pod, contrasting most favourably with the two or three beans found in the pods of the older kinds. The Broad Bean is not only greatly prized in private gardens, but is also an important article of food with the poorer classes, and the efforts made to increase its productiveness have been duly appreciated by all classes of Society.

DWARF FRENCH OR KIDNEY BEANS.

There were several sorts in use when the Queen ascended the throne, but the difference chiefly lay in the colour of the seed, a feature of little importance except to those who keep a collection of these diversely coloured and pretty seeds. In fact, they were in the main named after the colour of or markings on the seeds, to wit the Zebra, Light and Dark Dun, Red and Purple Speckled, Negro, etc., the chief exception being Fulmer's Forcing, which was also in use in 1837. The scope for improvement is limited to size of pod, earliness, and productiveness, and in the former respect Canadian Wonder as soon as introduced by us became very popular, while Ne Plus Ultra, an introduction of more recent date, fairly lays claim to being a marked advance over most sorts for earliness and also productiveness. Besides these such excellent varieties as Triumph, White-seeded, Forcing, Green Gem, Monster Negro, have appeared, and undoubtedly it may be said that they have come to stay. It was thought that the crossing of this section with the Scarlet Runner might produce useful results; but although many hybrids combining the broad massive pods of the Scarlet Runner, with the habit of the Dwarf Bean, are in the hands of one or two experts, little if any advance upon such favourites as Canadian Wonder and Ne Plus Ultra has been made.

CLIMBING FRENCH BEANS.

One of the most notable improvements made in vegetables during Her Majesty's reign has been the creation of an entirely new race of French or Kidney Beans, with a climbing habit of growth. There are several distinct types before the public, differing essentially in the size and colour of the seed, shape and size of pod, and in earliness also. Notable amongst these are Tender and True and Veitch's Climbing, both attaining a height of 4 ft. to 7 ft., according to cultivation; and more recently introduced is our own Excelsior—a Bean combining the delicacy and tenderness of the Canadian Wonder with the vigorous growth of the Scarlet Runner.

RUNNER BEANS

Were represented sixty years ago by the old Scarlet, the Painted Lady, and the Large White, and although one or two sorts of recent introduction are the result of artificial crossing, the majority of the improved types have been attained by selection. But even in some of these cases it is quite reasonable to suggest that they are natural crosses resulting from inoculation. Scarlet Runners producing pods $1\frac{3}{4}$ in. in length would have caused almost as great surprise amongst the gardening fraternity of 1837 as did the advent of the first motor-cab in the streets of London. That greater length will yet be attained I have no doubt, and with it an improvement in quality on some of the existing large podded kinds. The homely Scarlet Runner which Tradescant cultivated in his garden at Lambeth in the seventeenth century for the sake of its flowers, can now in its improved form boast of an almost unlimited number of attractive names—each chosen to indicate a type of greater size or length than any previously quoted.

ASPARAGUS.

Until quite recently English gardeners and their employers appeared to be quite satisfied with the kinds grown when the Queen came to the Throne, such as Giant and Battersea, but the greater facilities for reaching the Continent have resulted in the desire to cultivate the sorts which produce the massive sticks so well grown in France. The most popular strain of the latter is the best selection of Argenteuil, and when the English cook has learned to imitate more closely the methods of the French chef we shall doubtless find as delicate and delicious Asparagus in London restaurants as in those of Paris.

In like manner has the increased taste for Globe Artichokes been formed, a delicacy which was seldom grown fifty or sixty years ago.

The increased use also of Sugar Peas, Waxpod or Butter Beans, Celery, Chicory, Endive, Cardoons, Egg Plants, Silver or Seakale Beet, and other kindred subjects may be traced to the same cause.

We do not appreciate all the ways of railway companies, but they have undoubtedly been the means of introducing us to some of the more delicate and delicious vegetables of the Continent.

BEET.

Salads are much more popular now than sixty years ago, and as Beet perhaps comes next in importance to the Cucumber and Lettuce, the natural result has been a marked improvement in the varieties grown. In the early days of the Queen's reign "Dwarf Red," "Large Red," and "Turnip rooted" were the sorts in use. Seeing how difficult it is to obtain seed which will produce absolutely uniform results in colour of leaf, &c., it was a happy idea on the part of the seed seller of those days to protect himself by labelling the packets with such comprehensive names as "Large Red," "Dwarf Red," and "Turnip-rooted." It is quite certain that even now the former description would be very applicable to strains frequently seen growing. In 1841, "Whyte's Black" was introduced, a variety almost black in the flesh, but inclined to be coarse in texture as well as strong in growth, and with considerable variation in the colour of leaf. Notwithstanding these faults it is still to be found in nearly all seed lists, and presumably therefore has its admirers. Of late years a large number of improved types of this class have been seen, and those who fancy Beets with flesh almost black have no lack of choice.

Later introductions which remain popular were "Nutting's Dwarf," "Pine Apple," and "Dell's Black-leaved." Of the first and last, various selections have been made, resulting in uniform and excellent types.

Within recent years "Cheltenham Greentop" has also come to the front, although I understand it has long been grown in the neighbourhood from which it takes its name. It is an excellent Beet, although disliked by some on account of the colour of the leaves. The "Turnip-rooted" so useful for shallow soils has undergone great improvement, the flat type called Egyptian being almost superseded in English gardens by the introduction in 1891 of our Glohe, which is as perfect in form and clean in growth as a Snowball Turnip. Many types of Globe Beet have also been introduced from America, but generally speaking the colour of the flesh is not up to the English standard.

A strange development in the leaves of the Beet has lately been observed, and we may soon see in

our flower gardens a variety which produces a beautifully variegated foliage in addition to a very fine well flavoured root. A white Beet called Bassano was also grown in the thirties, but it never became very popular. In recent years efforts have been made to popularise a yellow-fleshed kind, but although I can vouch for the excellent flavour of this Beet, the general public do not appreciate it.

(To be continued.)

LAW NOTES.

ASHWORTH V. WELLS.

His Honour Judge Parry, delivered judgment in this case at the Manchester County Court on Wednesday the 13th day of October 1897. The case was originally heard on the 28th day of July 1897; and the Judge reserved judgment, as the parties considered the same as one of great importance. Mr. Twirdale, barrister, represented the plaintiff, and Mr. Newman, solicitor, the defendant.

The case arose out of an auction sale by the defendant of all his Orchids. Amongst the plants which he sold was a *Cattleya Acklandiae* alba described in the catalogue as the "only known plant." The plaintiff at the auction held on the 27th of June 1895, which was attended largely by Orchid growers from the North of England, bought the plant for 20 guineas.

He kept the plant in question with his other plants for 2 years and it blossomed and turned out to be a common Orchid and not worth more than 7s. 6d, thereupon he sued the defendant for £50 damages, being the maximum amount recoverable in the County Court. He and his witnesses who were very numerous, and some of whom had come long distances, gave evidence to the effect that such a plant, if it really had been a plant as originally described, would be worth at least 100 guineas.

Upon this evidence the plaintiff's counsel argued that he was entitled to be paid not only the amount he paid for the plant, but the amount it would have realised if it had turned out to be what the defendant had described it.

The contention on behalf of the defendant was that all the plaintiff could recover was the amount he paid and interest on that amount, and as that sum had been paid into Court it was further contended that he was entitled to judgment and payment of his costs.

In reply, it was stated on behalf of the plaintiff, that this was a very important case, as buyers of Orchids were constantly complaining of their treatment in the trade. An Orchid merchant would sell a number of plants, of which some probably died and others turned out to be not as described. They then offered to return to the purchaser the price of those which had turned out wrongly, at the same time pocketing the price of those which had died, and probably were equally faulty. It was contended that the purchaser was entitled to more than the bare price.

As above stated Judge Parry delivered judgment in this case on October 13th. After reciting the facts of the case His Honour stated that he had never found a case where prospective damages which were claimed by the plaintiff in this case had ever been allowed. He went carefully through the various cases which, in his opinion, had a bearing on the matter, and eventually decided that a claim for prospective damages such as was made in this case was not maintainable in law; and as defendant had paid into Court the price he had received for the Orchid, plus the interest which had accrued since the day it was bought, that was all that he was entitled to, and gave judgment for the defendant, allowing costs on the highest possible scale on the ground that the action was one of great interest and moment to the whole body of Orchid growers.

SOCIETIES.

HARROW AND ROXETH ALLOTMENT.—Oct. 8th. A splendid show of vegetables was furnished on this occasion by the allotment holders of Harrow and Roxeth. Mr. Deane, gardener to the Earl of Essex, at Cassiobury Park, was judge in the unavoidable absence of Mr. Dinsmore, of Harrow Weald.

Prizes were offered in three divisions, viz., the growers in Harrow, Roxeth, and in the two combined.

Mr. J. Smith, of Alma Road, was first in the open class for a collection of vegetables. This collection contained no fewer than twenty varieties, including Kale, Celery, Vegetable Marrows, Onions, Leeks, Potatos, Beet, Brussels Sprouts, and Cabbages in first-class condition. Mr. A. Rance was second, and Mr. H. Bristow, third. The prizes in this class were given by the Rev. F. Hayward Joyce and Mr. J. T. Horley.

Mr. Wm. Ludlow won the first prize for four kinds of vegetables in the classes set apart for Harrow growers only. Mr. W. H. Stiles was second. The prizes in this class were presented by Mrs. Rotch.

Mr. W. H. Stiles was the most successful competitor in the whole of this division, and won the prize offered by Mr. T. F. Blackwell.

In a similar class limited to competitors from Roxeth Mr. J. Ball was the most successful exhibitor, with Mr. D. Darville as a second. The prizes in this case were presented by Mr. F. E. Marshall.

Mr. A. Rance was the winner of the prize given by Mr. W. H. Cullen to the most successful competitor in this division.

The annual meeting was held in the lower room of the Mission House. Mr. F. E. Marshall occupied the chair, and was supported by Mr. Lewis S. Pawle and Mr. J. Smith, the hon. secretary. The report alluded to the acquisition of a field at Kingsfield, which had been let out in sixty-seven allotments, all of which, with a few exceptions, were under cultivation. The chairman, in moving the adoption of the report, said that it was a satisfactory one. There was a balance in hand of £6 14s., as against £7 19s. 8d. at the end of the previous year.

Mr. Marshall gave a detailed explanation of the various items in the accounts, and said it was apparent that the rent of the two grounds would be between £36 and £37 per annum.

Mr. D. Page seconded the adoption of the report, which, on being put to the meeting, was carried unanimously.

The election of the committee was then proceeded with. Finally, the choice rested upon Messrs. King, Hilton, Long, and Mascord, for Harrow; and Messrs. Page, Smith, Darville, and Asber, for Roxeth.

Prior to the distribution of prizes by Mrs. Horley, Mr. Horley addressed the meeting. He spoke of the great pleasure it gave him to be present, and spoke of his sympathy with the allotment system, and of the way in which it was appreciated by the people of Harrow and Roxeth. He hoped that in due time they would be able to hold Harrow up as a model of sobriety, respectability, and horticultural intelligence. He was glad to find from statistics that the allotment grounds were being taken full advantage of, so much so, indeed, that whereas in 1895 when they had an exhibition there were only two classes and ten entries for the prizes, this year there were 163 entries with twenty-nine classes. He was astonished during a recent visit to the grounds at Roxeth and at Kingsfield at the profusion of fine vegetables that he saw around him.

QUESTIONS AND ANSWERS

* * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Addresses of Horticultural Papers.—Meldrum, Largo: The Florists' Exchange is one dollar (4s. 2d.) per annum. Address, the publisher Florists' Exchange, P. O. Box, 1697, New York, U.S.A. The Bazaar Exchange and Mart is published three times a week and is 2d. for each issue. It is published by L. Upcott Gill, 170, Strand, London, W.C.

Gardeners' Lens.—Rid. Flanagan: If you ask for a gardener's or botanical lens you should have no difficulty in getting what you want for 2s. 6d., 3s., and upwards, for they are of various prices according to size, quality, the material with which they are mounted, &c. Apply either to Messrs. W. Watson & Sons, 313, High Holborn, London, W.C., or to Henry Crouch, Limited, 66, Barbican, London, E.C. There must be some mistake about the microscope for a shilling, warranted to see thirty miles. Micro-

scopes are not made to see long distances. You must mean a telescope. We doubt whether you could get a telescope to see thirty miles at the price you state. We certainly have not seen nor heard of it; but if you send to either of the above firms for a gardeners' lens, you could ask their opinion upon the matter.

Plums and Cherries on an east aspect wall.—*Omega*: Providing the blossom escapes the spring frosts there is no reason why either Cherries or Plums should not succeed well planted against an east aspect wall. If planted against a wall facing the west, they would be much more likely to escape frost. They are early bloomers, and the danger is that the sun striking the frozen blossoms early in the morning they would be destroyed: whereas if placed against a wall facing the west, the blossoms have time to thaw gradually before the sun strikes upon them.

Privet for Game Coverts.—*Omega*: The common Privet (*Ligustrum vulgare*) should suit your purpose best as the plant is much dwarfier and hardier than the broad leaved Privet (*Ligustrum ovalifolium*). The latter would be the more rapid grower, but it would ultimately get much the taller and would probably cost more.

Heating a Greenhouse.—*D. M.*: We should say that a properly constructed apparatus heated with gas or paraffin would be cheaper than an apparatus heated by means of coal or other fuel, for a small house like that you mention. If you were in the midst of a coal country where small coals could be obtained at a very low price it would alter matters greatly. The furnace of the London boiler you mention is probably too small to allow of a proper body of fire to keep up the heat during the night. It might be worth while building a fireplace with bricks and iron bars so as to heat the pipes at present in use. If a shed or other outhouse is at command in which to build a furnace and hide the same, that is what we should prefer. Nevertheless, if you would like details about coils of piping heated with paraffin for greenhouses you might apply to Messrs. Toope & Son, High Street, Stepney, London, E., for their catalogue of sizes and prices of paraffin heating apparatus. Other makers are Messrs. Fenlon & Son, Tudor Street, Whitefriars, London, E. C.; and Messrs. Poore & Co., 139, Cheapside, London, E. C.

Names of Fruits.—*D. E.*: 1, Ribston Pippin; 2, Rymer; 3, Cellini; 4, Warner's King; 5, Royal Somerset; 6, Bedfordshire Foundling; 7, Dumelow's Seeding; 8, not recognised; 9, Pear Louise Bonne of Jersey; 10, Pear Beurré Capiaumont.—*James Robertson*: 1, Vicar of Winkfield; 2, Emperor Alexander; 3, Marie Louise; 4, Mère de Ménage; 5, Beurré Diel; 6, Bergamot Espere.

Names of Plants.—*John Halifax*: 1, *Tanacetum vulgare crispum*; 2, *Lamium maculatum*; 3, *Verbascum olympicum*; 4, *Artemisia vulgaris*; 5, *Oenothera biennis*.—*James Mayne*: The Fern sent appears to be *Dicksonia apiifolia*, and certainly resembles that to a greater extent than *Davallia Moorei*. *Dicksonia apiifolia* has a creeping rhizome and is entirely distinct in habit from *D. antarctica*. It is not safe to name Ferns without fructification.—*W. H.*: 1, *Choisya ternata*; 2, *Anemone japonica elegans*; 3, *Erica vagans*; 4, *Daboecia polifolia*; 5, *Colchicum autumnale flore pleno*; 6, *Liquidambar styraciflua*; 7, *Taxodium distichum*.—*A. G.*: 1, *Davallia filijensis*; 2, *Platylova rotundifolia*; 3, *Asplenium bulbiferum minus*; 4, *Osmunda regalis palustris*.—*J. Herd*: 1, *Aster Novi-Belgii laevigatus*; 2, *Aster diffusus horizontalis*; 3, *Sternbergia lutea*.—*C. L.*: 1, *Fittonia Verschaffeltii*; 2, *Ruellia Portellae*; 3, *Ophiopogon Jaburan variegatus*; 4, *Liriope graminifolia*; 5, *Blechnum occidentale*.

Collection of Gaillardias.—*J. B.*: We do not know of any full and complete collection of Gaillardias, but it might be worth your while to apply to several firms, including Messrs. J. Carter & Co., High Holborn, London; Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, London; Messrs. Kelway & Son, Langport, Somerset; Messrs. J. Laing & Sons, Forest Hill, London, S.E.; Messrs. Barr & Sons, Long Ditton, Surrey; and Messrs. H. Cannell & Sons, Swanley, who have collections of named varieties.

Spotted Leaves.—*Waterloo*: The leaves you sent were those of the Sycamore (*Acer Pseudoplatanus*). They were affected with a fungus named *Rhytisma acerinum*. We have seen whole avenues of the Sycamore as badly spotted as those leaves you sent, but the fungus does not attack Oak, Beech, Elm, and other trees of that class.

Cherry to succeed the May Duke.—*Omega*: The Archduke is the finest of the Duke Cherries, and ripens its fruit about eight or ten days after May Duke. The fruits of Late Duke come in sometime after those of Archduke, and with protection from birds will hang on the trees till late in September.

Communications received.—A. Hope.—J. Mayne.—W. B. G.—Willard N. Clute.—P. D., B.—John Cameron.—J. B.—A. P.—F. C. Heinemann.—G. Tucker.—J. Veitch & Sons.—A. L.—Q. Means.—Geo. T.—L. I.—Nunhead.—A. Munson.—P. C.—Kioto.—'Mum.

M. LAKIN (Late Joseph Lakin), Cowley, Oxford.—List of Carnations and Picotees.

KELWAY & SON, Langport, Somerset, England.—Wholesale Catalogue of Gladioli.

C. PLATZ & SON, Erfurt, Germany.—Novelties of Seeds of their own Raising.

THE LEEDS ORCHID COMPANY, Roundhay, Leeds.—The West Patent Orchid, Fern, and Wall Baskets.

F. C. HEINEMANN, Erfurt, Germany.—Special Trade Offer of Novelties and Specialities.

GEORGE BUNYARD & Co., Royal Nurseries, Maidstone.—Catalogue of Fruit Trees.

THE ANGLO-CONTINENTAL (Late Ohlendorff's) GUANO WORKS, 30, Mark Lane, London, E. C.—The Peruvian Guano Deposits at the present date; also Chinchas Raw Peruvian Guano, and Ohlendorff's Guano Garden Manure.

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue

JAMES CYPHER,

Exotic Nurseries, CHELTENHAM.

THOMSON'S

VINE & PLANT MANURE.

SPLENDID FOR ALL PURPOSES.

Largely used both at Home and Abroad.

SOLD BY ALL SEEDSMEN.

Agent for London:—J. GEORGE, 14, Redgrave Road Putney, S.W.

Agent for Channel Islands:—J. H. PARSONS, Market Place, Guernsey.

SOLE MAKERS:—

WM. THOMSON & SONS, LTD.,
TWEED VINEYARD, CLOYNFORDS, N.B.

Price Lists and Testimonials on application.

ANALYSIS SENT WITH ORDERS OF ½ CWT. AND UPWARDS.

GARDENING BOOKS.

HARDY ORNAMENTAL FLOWERING TREES AND SHRUBS, by A. D. WEBSTER. A valuable guide to planters of beautiful trees and shrubs for the adornment of parks and gardens. Second and cheap edition now ready. Price, 2s.; post free, 2s. 3d.

CHRYSANTHEMUMS AND THEIR CULTURE. By Edwin Molyneux. Ninth Edition. By far the best practical work yet written on this subject. Price, 1s.; post free, 1s. 2d.

VINES & VINE CULTURE.—The best book on Grapes. By Archibald F. Barron, late Superintendent of the Royal Horticultural Society's Garden, Chiswick, and Secretary of the Fruit Committee.—A New and Cheaper Edition, Revised and Enlarged. Demy 8vo, Handsomely Bound in Cloth. Price, 5s.; post free, 5s. 3d.

THE CARNATION: ITS HISTORY, PROPERTIES, AND MANAGEMENT; with a descriptive list of the best varieties in cultivation. By E. S. Dodwell, Third edition, with supplementary chapter on the yellow ground. Price, 1s. 6d.; post free, 1s. 7d.

FERNS & FERN CULTURE. By J. Birkenhead, F.R.H.S.—How to grow Ferns, with selections for stove, warm, cool and cold greenhouses; for baskets, walls, warden cases, dwelling houses, &c. Price, 1s.; by post, 1s. 3d.

THE AMATEUR ORCHID GROWER'S GUIDE BOOK. By H. A. Burberry (Orchid Grower to the Rt. Hon. J. Chamberlain, M.P.). Second Edition, with coloured plates. Containing sound, practical information and advice for Amateurs, giving a List with Cultural Descriptions of those most suitable for Cool-house, Intermediate-house, and Warm-house Culture, together with a Calendar of Operations and Treatment for each Month of the Year. In Cloth. Price 5s.; post free, 5s. 3d.

Postal and money orders should be made payable at the East Strand Post Office to F. A. COBBOLD

"GARDENING WORLD" Office, 1, Clement's Inn, Strand, London, W.C.

FIXTURES FOR 1897.

OCTOBER.

26.—R.H.S. Committees and Lecture.
29, 30.—Battersea, Clapham and Wandsworth Chrysanthemum Show.

NOVEMBER.

- 2.—Devizes Show.
- 2, 3.—Truro Chrysanthemum and Fruit Show.
- 2, 3.—Watford Chrysanthemum Show.
- 2, 3.—Coventry Show.
- 2, 3.—Brighton Chrysanthemum Show.
- 2, 3.—Borough of Croydon Chrysanthemum Show.
- 2, 3.—Southampton Chrysanthemum Show.
- 2, 3.—West of England Chrysanthemum Show at Plymouth.
- 3.—Ealing Show.
- 3, 4.—Woking Chrysanthemum Show.
- 3, 4.—R.H.S. of Ireland Chrysanthemum Show.
- 3, 4.—Ascot, Sunninghill, Sunningdale and District Chrysanthemum Show.
- 3, 4.—Kent County Chrysanthemum Show.
- 3, 4.—Isle of Thanet Chrysanthemum Show.
- 3, 4, 5, 6.—North Peckham Chrysanthemum Show.
- 3.—Teignmouth Chrysanthemum Show.
- 4.—Colchester Show.
- 4, 5.—Highgate Chrysanthemum Show.
- 4, 5.—Devon and Exeter Fruit and Chrysanthemum Show.
- 5, 6.—Swindon Chrysanthemum Show.
- 9, 10, 11.—N.C.S. at Royal Aquarium
- 9, 10, 11.—Birmingham Chrysanthemum and Fruit Show.
- 9, 10.—Kingston and Surbiton Chrysanthemum Show.
- 9, 10.—Leeds Paxton Chrysanthemum Show.
- 9.—R.H.S. Committees and Lecture.
- 10.—Harrison & Sons' Vegetables and Farm Roots Show at Leicester.
- 10.—Bodmin Chrysanthemum Show.
- 10, 11.—Carlisle Chrysanthemum and Fruit Show.
- 10, 11.—Liverpool Chrysanthemum Show.
- 10, 11.—Chesterfield and District Chrysanthemum Show.
- 10.—Brixton Chrysanthemum Show.
- 11.—Reigate Show.
- 11.—Jersey Gardeners' Society's Chrysanthemum Show.
- 11.—Leighton Buzzard Chrysanthemum Show.
- 11.—Hammersmith Show.
- 11.—Spalding Chrysanthemum Show.
- 11, 12.—Putney Show.
- 12, 13.—Eccles, Patricroft, Pendleton and District Chrysanthemum Show.
- 12, 13.—Bradford Chrysanthemum Show.
- 12, 13.—Hanley Chrysanthemum Show.
- 12, 13.—Sheffield Chrysanthemum Show.
- 12, 13.—Nottingham Show.
- 16, 17.—Ipswich Chrysanthemum Show.
- 16, 17.—Manchester Chrysanthemum Show.
- 16, 17.—Belfast Chrysanthemum Show.
- 16, 17.—Chester Paxton Chrysanthemum Show
- 16, 17.—Folkestone Show.
- 17.—Buxton Chrysanthemum Show.
- 17, 18.—Hull Chrysanthemum Show.
- 17, 18, 19.—York Chrysanthemum Show.
- 17, 18.—South Shields and Northern Counties' Chrysanthemum Show.
- 17, 18.—Bristol Chrysanthemum Show.
- 17.—Rugby Chrysanthemum Society.

231097.

COUPON.

OGILVIE'S ENCYCLOPÆDIA OF
USEFUL INFORMATION,
AND WORLD'S ATLAS,
(Published PRICE 25s.).
16 COUPONS, AND 6D. WITH EACH.

Name _____

Address _____

Postal Orders or 3d. stamps may be sent.

COUPONS AND CONTRIBUTIONS MAY BE LEFT at or SENT TO the Office for THE PUBLISHER OF

THE GARDENING WORLD.

COPIES OF THIS BOOK CANNOT BE BOUGHT. They can be obtained only by using these Coupons.



CLAY'S MANURES.

CLAY'S SUCCESSFUL GARDENING.
1s, post free.

CLAY & SON, Stratford, London, E.



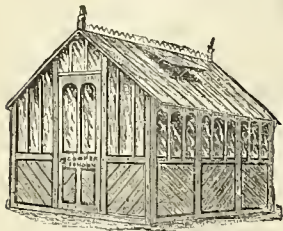
TRADE CATALOGUES RECEIVED.
THE LEEDS ORCHID COMPANY, Roundhay, Leeds.—Catalogue of Orchids.

W. COOPER, Ltd., HORTICULTURAL PROVIDERS,

THE ORIGINAL INVENTORS OF CHEAP GREENHOUSES,

755, OLD KENT RD., LONDON, S.E.

The Largest Steam Horticultural Works in the World. Inspection invited.



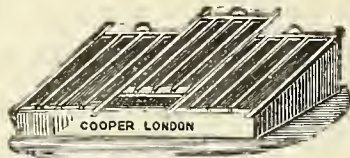
Circular Light CONSERVATORY.

Substantially constructed upon the most approved principles.

See No. 8 in List. Post free.

AMATEUR FORGING HOUSES.

For Cucumbers, Tomatos, Melons, etc. From 50s. Complete.



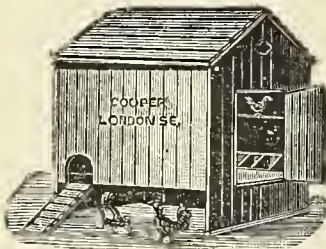
CUCUMBER FRAMES.

ONE-LIGHT.
4ft. by 3ft. ... 17s.
6ft. by 4ft. ... 28s.
TWO-LIGHT.
6ft. by 4ft. ... 30s.
8ft. by 6ft. ... 50s.

POULTRY HOUSES.

Well and substantially constructed. Warranted waterproof. Complete with Door, Ventilator, and Slide.

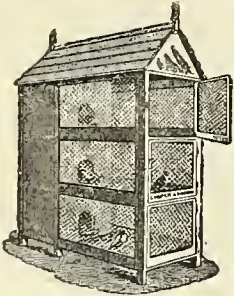
5ft. by 4ft. ... 20s.
6ft. by 4ft. ... 24s.
7ft. by 5ft. ... 27s.
9ft. by 6ft. ... 32s.



Span-Roof Improved POULTRY HOUSE.

5ft. by 4ft. ... 35s.
6ft. by 4ft. ... 40s.
7ft. by 5ft. ... 45s.
9ft. by 6ft. ... 50s.

3-TIER PIGEON OF DOVE-COTE, £2.



DOVE OF PIGEON COTE. (ON POLE). £1 15s.



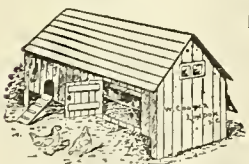
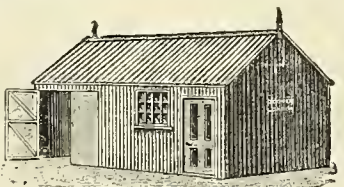
BICYCLE or TRICYCLE HOUSES.

6ft. long, 4 ft. wide, 5ft. high. £2 5s.

See No. 212 in List.

Portable STABLE, COACH-HOUSE, and HARNESS-ROOM COMBINED.

See No. 203 in List. Post free.



NEW SPAN-ROOF IMPROVED POULTRY HOUSE.

4ft. by 4ft. ... 23s.
5ft. by 4ft. ... 25s.
6ft. by 4ft. ... 27s.
7ft. by 5ft. ... 30s.

"COOPER" CYCLES from £4 15s.

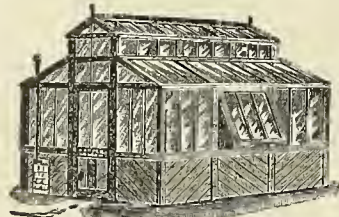
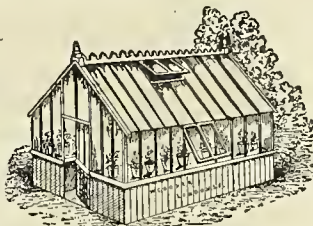


Latest Humber design frame, Large Weldless Steel Tubes, Ball Bearings, Tangent Wheels and Brake and Mud Guards, Cushion Tyres £4 15s.; Standard Pneumatic, £6 15s.; Ladies', with Dress and Gear Guards, from £5 15s.. 12 months' warranty.

List free. Largest Cycle Works in London.

AMATEUR SPAN-ROOF GREENHOUSE.

These greenhouses are made especially for amateurs at a cheap rate, so that any handy man can put them together in a few hours. Made of good, sound, well-seasoned red deal. Painted one coat of good oil colour, lock for door, all necessary ironwork for ventilation, stages on each side for plants. Carefully packed and put on rail at the following respective price:—7ft. by 5ft., £2 16s.; 8ft. by 5ft., £3 10s.; 9ft. by 6ft., £4. For other sizes see page 24 in List.



LANTERN ROOF CONSERVATORY.

A very elegant and highly finished structure.

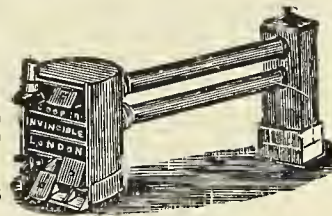
See No. 9 in List.

INVINCIBLE HOT-WATER APPARATUS.

Most Efficient and Cheapest in Existence.

Cost of complete apparatus for greenhouse, with 4-inch flow and return pipes along one side—

7ft. by 5ft. ... £3 0 6
9ft. by 6ft. ... £3 6 0
12ft. by 8ft. ... £3 11 0
15ft. by 10ft. ... £4 13 6
20ft. by 10ft. ... £5 15 6
25ft. by 10ft. ... £6 17 6



GLASS! GLASS!! GLASS!!! 10,000 Boxes to select from.

| | | | |
|------------------|---------------|----------------|---------------|
| 15 oz. 100ft. | 15 oz. 200ft. | 21 oz. 100 ft. | 21 oz. 200ft. |
| 4th's... 7s. 9d. | 15s. | 10s. 6d. | 20s. |
| 3rd's... 8s. 3d. | 15s. 9d. | 11s. | 21s. |

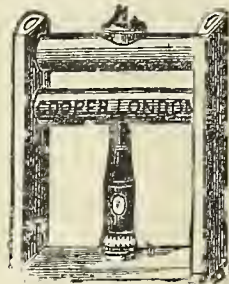
The following is a list of sizes always in stock:—8 in. by 6 in., 9 in. by 7 in., 10 in. by 8 in., 12 in. by 8 in., 12 in. by 9 in., 13 in. by 9 in., 11 in. by 10 in., 12 in. by 10 in., 13 in. by 10 in., 14 in. by 10 in., 13 in. by 11 in., 18 in. by 11 in., 14 in. by 12 in., 16 in. by 12 in., 18 in. by 12 in., 20 in. by 12 in., 17 in. by 13 in., 20 in. by 13 in., 16 in. by 14 in., 18 in. by 14 in., 20 in. by 14 in., 22 in. by 14 in., 20 in. by 15 in., 21 in. by 16 in., 24 in. by 16 in., 20 in. by 18 in., 22 in. by 18 in., 24 in. by 18 in. Glass cut to any size required—15 oz., 1 3/4d.; 21 oz., 2 1/4d. per foot. Large sizes for cutting up—15 oz., per case 300ft., 25s., 21 oz., per case 200ft., 25s. All glass is cut and packed in own warehouse; quality of glass and careful packing guaranteed. Special quotations given for large quantities. Have cash estimate from me before ordering elsewhere. Putty prepared especially for greenhouse work. Best, 7s., seconds, 6s. 6d. per cwt.; package 6d. per cwt. Please note all our glass is packed on rail, not ex-wharf, which means 1s. 6d. per box for collection and charge by Railway Company to customer.

Get our lowest quotations before purchasing elsewhere.



Portable DOG KENNEL.

10s., 16s., 25s.



COOPER'S HYGIENIC HEATER.

Burning Paraffin or Gas without smoke or smell.

18 in. by 25 in. by 10 in. will heat a house 7 ft. by 5 ft. Consumes 3/4-pint of oil in 10 hours.

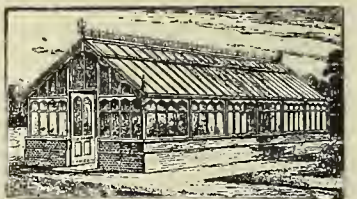
Price 16s. Extra for Gas, 2s.

See No. 287 in List for other sizes

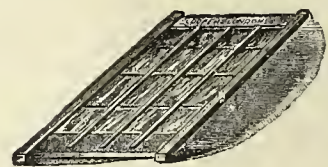
SPAN-ROOF CONSERVATORY.

Substantially and handsomely built.

See No. 19 in List.



GARDEN LIGHTS.



Painted and Glazed—21 oz.

3ft. by 2ft., 5s. each.

4ft. by 3ft., 6s. 6d. "

6ft. by 4ft., 9s. "

Unglazed—

6ft. by 4ft., 3s. 6d. "

Special Quotations for Large Quantities.

RAPID PROPAGATOR.

For raising plants from seeds, slips, or cuttings.

1ft. 8in. by 1ft. 6in. ... 16s.

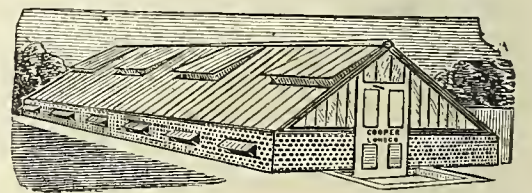
2ft. 6in. by 1ft. 10in. ... 20s.

4ft. by 2ft. ... 40s.

Glass not included.



SPAN-ROOF FORCING HOUSE.



A most useful House for Gentlemen, Nurserymen, &c. for forcing and growing Tomatos, Cucumbers, Melons, &c. Complete and ready for erecting on brickwork.

| Length. | 9ft. wide. | 12ft. wide. |
|------------|------------|-------------|
| 20ft. ... | £8 ... | £10 |
| 40ft. ... | £15 ... | £19 |
| 100ft. ... | £35 ... | £42 |

IRON BUILDINGS of every description.

Churches, Temporary Hospitals, Bungalows.

Packed on rail, or erected in any part of the Kingdom.

See Section IV. in List Plans and Estimates free.



DOVE COTE FOR WALL.

With 5 Holes, £1 2s. 6d.

With 7 Holes, £1 7s. 6d.



ROOFING FELT.

Patent Asphaltic Rolls, 25 yds. long by 32 in. wide, 3s. 3d. per Roll; 6 Rolls or more, 3s. per Roll.

Illustrated Catalogue, 364 pages and about 1,200 Illustrations, bound in cloth, post free on application.

W. COOPER, Ltd., Horticultural Providers, 755, OLD KENT ROAD, LONDON, S.E.

WARE'S

Tulips. Hyacinths.
Crocuses. Lilies. Irises.
Begonias. Anemones.
Gladioli. Spiraeas.

Daffodils to clear, viz:—

| per 100 | | per 100 | |
|------------------|------|-------------------|------|
| Annie Baden .. | 6/- | Obvallaris .. | 12/- |
| Barri Conspicua | 30/- | Odorus | |
| | | (Campernelle) | 2/6 |
| Burbidgei .. | 2/6 | Poeticus Ornatus | 4/6 |
| " Mary .. | 6/- | " Plenus .. | 4/- |
| Cynosure .. | 3/- | Princeps .. | 6/0 |
| Double Daffodils | 4/6 | Pseudo .. | 3/- |
| Emperor .. | 30/- | Sir Watkin .. | 30/- |
| Golden Spur .. | 21/- | S. ella .. | 3/6 |
| Leedsii .. | 3/- | Mixed Narcissus.. | 3/- |

Carnations. Picotees.
New and Other Roses.
Clematis.
Hardy Climbers. Pinks.
Paeonies.
Pansies. Primroses, &c.

Catalogues have been posted to all Customers, and may be had free upon application to:—

THOMAS S. WARE,
 Hale Farm Nurseries,
TOTTENHAM, LONDON.

ORCHIDS.

Clean Healthy Plants at Low Prices.
 Always worth a visit of inspection. Kindly send for Catalogue

JAMES CYPHER,
 Exotic Nurseries, CHELTENHAM.



EMPEROR, a magnificent variety, with deep primrose-coloured perianth, and rich full yellow trumpet, very large flower. *Extra strong Bulbs*, per 100 30s., per doz. 4s. 6d.

OBVALLARIS, the Tenby Daffodil, very early, perianth and trumpet deep yellow, a charmingly graceful daffodil. *Extra Strong Bulbs*, per 100 14s. 6d., per doz. 2s.

SIR WATKIN, the Giant of the Chalice Cupped Daffodils, perianth rich sulphur, cup yellow slightly tinged with orange. *Extra strong bulbs*, per 100 25s., per doz. 3s. 6d.

BARRII CONSPICUUS, a flower of great beauty and refinement, a favourite with all, large broad spreading yellow perianth, broad short cup, conspicuously edged bright orange-scarlet. *Extra strong bulbs*, per 100 21s., per doz. 3s.

ALL BULBS SENT CARRIAGE PAID ON RECEIPT OF REMITTANCE.

Send for BARR'S ILLUSTRATED CATALOGUE of all the most beautiful DAFFODILS, with full particulars of collections for Amateurs and Exhibitors, *Free on Application to:—*

BARR & SONS,
12 & 13, KING ST.,
COVENT GARDEN, LONDON.
 Nurseries:—Long Ditton, Surrey.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.
 Edited by J. FRASER, F.L.S.

SATURDAY, OCTOBER 30th, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, November 1st.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 TUESDAY, November 2nd.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 Sale of nursery stock at the Hale Farm Nurseries, Tottenham, N., by Messrs. Protheroe & Morris (2 days).
 WEDNESDAY, November 3rd.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 THURSDAY, November 4th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 Sale of nursery stock at Millford Nurseries, Godalming, by Messrs. Mellersh (3 days).
 FRIDAY, November 5th.—Sale of Dutch bulbs and imported and established Orchids by Messrs. Protheroe & Morris. [For the numerous Chrysanthemum shows which are to take place next week consult our list of fixtures on p. 130.]

FRUIT AND PLANT HOUSES AT DOVER HOUSE.—Some weeks ago we had the pleasure of inspecting the gardens at Dover House, Roehampton, the beautiful suburban residence of J. Pierpont Morgan, Esq., but pressure of space prevented us from using the whole of our notes at the time. For some years past Mr. J. F. McLeod has been working out many improvements both out doors and under glass. He found the roots of the Peaches too deeply buried in the soil and, lifting them, replanted all of them 9 in nearer the surface in 1889. The trees are now reaping

the advantage. Admirable Peach bore a heavy crop of large and luscious fruits. Princess of Wales carried a heavy crop, although seventy fruits had been gathered before we saw the tree. Many of the earlier trees had been gathered, and all had fruited equally well. Nectarines were represented by Victoria, and some others. The late house or Peach case is of some extent, and unheated. Good crops were carried by Goshawk, several trees of Premier, Princess of Wales, and Royal George Peaches. The house is too late for the Albert Nectarine which fails to reach that perfection of which it is capable in a heated house. Pineapple and Byron Nectarines behave admirably, the latter assuming a splendid colour. The first house is closed pretty early with the result that the fruits are ready to gather sometime between the 25th May and the 1st June. The second house was ready by the 10th June.

Equally interesting were the vineries, an early one of which matured a good crop of Black Hamburgh and Foster's Seedling. Asparagus medeoloides, better known under the names of Myrsiphyllum and Smilax made a beautiful green covering against the back wall, where it was trained upon strings. The large vinery bore a magnificent crop of fruit, the bunches of Gros Colman being large and the berries like black Plums. Other heavily fruited varieties were Lady Downes, Mrs. Pince, Lady Hutt, and Appley Towers. The two latter varieties are practically new, and both of them are worked upon Gros Colman. The second crop of Figs was ripening in pots. Some of the trees are also planted out. The pots are plunged in fibre to prevent rapid fluctuations of drought and heat. A second and a third crop of Melons were being brought along. Tomatos are largely grown in pots, and trained up with a single stem. It will be sufficient indication of their fruitful character to mention the fact that they carried 20 lbs. of fruit to a plant. Tomatos also do well in the open ground, for rows of plants between young Apple trees were maturing heavy crops of fine fruit.

The plant houses are equally cared for at Dover House, and healthy plants of a useful kind are kept scrupulously clean. Crotons of a size suitable for table decoration are grown in great variety. Mr. McLeod has also many seedlings of his own raising, some of which look promising. Gardenias are grown in pots. Calanthes are well managed here, the plants on shelves being very strong. A fine collection of the newest and best Caladiums, to the number of 154 varieties, make a notable feature of the place, they and the Crotons being occasionally brought before the public at exhibition in grand condition. The Caladiums were potted in December, and the same plants were good when we saw them. Dracaena Doucetti and Begonia Gloire de Sceaux were also in excellent trim. The greenhouse contained a fine collection of tuberous Begonias, which were still in a floriferous state although they had been started into growth early. The fine strains of Cannas could hardly be neglected here, where the best of everything is secured for decorative purposes. Fuchsias and Trachelium caeruleum are also very serviceable in this cool house. All mandas and Bougainvilleas keep the roof the stove gay for months at a stretch. Large specimen Crotons find a place in this house, and are well furnished with clean and healthy foliage. Anthuriums, Palms, and Dracaenas furnish variety at all times with their beautiful evergreen foliage. In a pit close by was a fine batch of Bouvardias.

The fernery is used as a show house in the early part of the season, but on the occasion of our visit was brightened with

FOR PLEASURE AND PROFIT

FRUIT SEEDS

Nothing so profitable and easy to grow.
 80 Acres of Saleable Trees.

ROSES

THE BEST PROCURABLE.
 Lists Free.

ROSES

HUNDREDS of THOUSANDS.
 Bushes in variety. Packing and Carriage free for Cash with order.
 8/- per doz., 60/- per 100.
 All other Nursey Stock carried forward.

ROSES IN POTS From 15/- a doz.

Ornamental Trees, 91 Acres,
 A Superb Collection of
 Herbaceous Plants,
 Four Acres of Glass,
 Clematis (80,000) from 15/- doz.
 N.B.—Single Plants are sold at slightly increased prices.

GENERAL CATALOGUE
 (Over 160 pages) of Nursery Stock, artistically produced containing some hundreds of illustrations, and full of valuable information, free on receipt of 3d. for postage. Please mention this Paper.

RICHARD SMITH & CO., WORCESTER.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Malda Vale, London W.

Cannas, Begonias, and other flowering subjects interspersed in batches amongst the Ferns, but chiefly Adiantums. Many varieties of Achimenes in full bloom were arranged along the front of the benches. The latest batch of Gloxinia seedlings were flowering freely and displaying a great variety of colours in one of the several low, span-roofed houses utilised for plant growing. A houseful of ornamental Capsicums, well fruited, and Asparagus constituted another speciality in their way. A set of frames is to be altered and supplemented till they form two rows, each 120 ft. long. They are to be heated with fermenting manure and utilised for growing Cyclamens, Cinerarias, Cannas, etc. A batch of Cyclamens sown in September, 1896, formed fine plants which must now be close upon the flowering stage. In a lean-to house, having a southern aspect, we noted those fine specimen Malmaison Carnations which sometimes make their appearance in public. They consisted of bushy, well-furnished plants about 2 ft. high and were summering here in plenty of sunshine and abundant ventilation, which keep the plants sturdy and short-jointed. They formed the group which took the Jubilee Medal at Richmond as the best miscellaneous exhibit in the show last summer.

Mr. John Duff, foreman in the gardens at Devonhurst, Chiswick, for the last two years, has been appointed head gardener to Colonel Williams, Bryn Glas, Newport, Monmouthshire.

Lord Justice Lindley, only son of the Dr. Lindley of horticultural fame, has been promoted from the Court of Appeal to the post of Master of the Rolls, in succession to Lord Esher.

Mr. Thomas Ormiston, a well-known Scottish horticulturist has just died. He was gardener for some twenty-five years to the Mar family, serving under three of the earls of Mar during that time. Under Mr. Ormiston's care and skill the gardens at Alloa Park became notable for their beauty and originality of design.

The Pelican, which for some years has been a great favourite with visitors to Kew Gardens, at last grew old enough and strong enough to discover that the world was bigger than Kew Gardens, and possibly better. Like many another unfortunate traveller it met its death at the hands of a wretched gamekeeper or gun-keeper, whose sole idea is simply to shoot every flying thing that comes within gunshot, ay, even if it were an angel. The pelican, like Adam, perchance imagined it was not good to be alone, its mate having died some time previously. Now the cormorant feels lonely and disconsolate in the absence of its big companion.

The Edinburgh "Diamond Jubilee" Chrysanthemum Show promises to be a big thing, coming off on the 18th, 19th, and 20th November. The special Jubilee prizes lead the van of all other shows in value, and for the benefit of our readers we have the pleasure to draw attention to them. The great feature of the exhibition will be the class for twenty vases Chrysanthemums, three blooms each of twenty varieties; first prize, £50 in cash, and Victoria Gold Medal, second, £50, and Silver Medal, third, £15, 4th, £10, 5th, £8, and 6th, £7. We are informed that the gold medals to be awarded are no trifles, but are to be made of 22 carat gold and weigh 2½ ozs. The City of Edinburgh prize is also a tempting one for forty-eight blooms, Japanese Chrysanthemums, distinct; first prize, plate value £20 and £5 in cash, 2nd, £12, 3rd, £8, 4th, £5, and 5th, £3. With such prizes to tempt competitors, and the added attractions of the band of the Grenadier Guards, besides the excellent trade exhibits always met with here, we predict a great success for the show and trust the hopes of the committee may be amply realised of having a large surplus to hand over to charities, of which those connected with gardening will doubtless receive a liberal share.

Miss Muir Macreadie has purchased the historical estate of Warwick Hill, in Ayrshire, for £14,000. It had been in the hands of the Ralston family for many years.

The Fite Mutch.—"We hed a meenin o'wynter last ook fan Morven an' Culbleen got on the fite mutch." This quotation merely indicates that the party concerned had a taste of winter when Morven and Culbleen (two Aberdeenshire hills) got a cap of snow.

"Ouida" has written a letter to Mr. Joseph Collinson of the Humanitarian League, urging the crying need for the protection of birds from their callous and rapacious destroyers, and society from the danger of the mal-practices of the school of medical inoculationists.

Webb's Barley Competition.—The valuable prizes for Barley offered by Messrs. Webb & Sons, of Wordsley, Stourbridge, brought a keen competition, and the Judge, Mr. T. Phipps, of the firm of Messrs. Pickering, Phipps & Sons, Limited, of Northampton, was occupied a considerable time in making his awards, which were as follows: Class I, Champion Prize, open to the United Kingdom, £25, Mr. W. Nisbett, Stratford St. Andrews, Saxmundham, Suffolk. Class II, open to Salop, Stafford, Hereford, Worcester, and Warwick. First prize, £15, Mr. E. Bomford, Spring Hill, Fladbury; second prize, £10, Mr. W. Chick, Sutton Maddock, Shifnal; third prize, £5, Mr. G. Corbishley, Bricklehampton Court, Pershore. The conditions of competition stipulated that the Barley should be one of Webbs' varieties, and grown with Webbs' Special Barley Manure. The high quality of the samples exhibited testified to the value of both seed and manure.

National Chrysanthemum Society.—A special fruit competition in commemoration of Her Majesty the Queen attaining to the 60th year of her reign, is to be held at the Royal Aquarium, Westminster, on the 9th, 10th, and 11th November next, under the auspices of the National Chrysanthemum Society, and promises to be very interesting. Five prizes are offered for twenty-four dishes of Apples, nine of which must be varieties in cultivation in this country at the time of the accession of the Queen in 1837. The remaining fifteen must consist of varieties which have been put into commerce during the past thirty years. Five fruits constitute a dish, and a card must be put on the plate showing the name, the year of introduction, and the name of the introducer. The fruits need not necessarily have been grown by the exhibitor, but they must be the produce of the United Kingdom. Particulars may be obtained from the secretary, Mr. Richard Dean, Ranelagh Road, Ealing, London, W.

Patents for Inventions.—Inventors, who desire to have their inventions patented, have to do so at their own risk. The Patent Laws in this country make no provision for an official research as to the originality of a novelty. It is therefore necessary that inventors do this for themselves before they incur any expenses, otherwise they may find after paying their fees that the invention is practically worthless, because some one else has forestalled them and possesses the patent rights. At the present time there are now over 250,000 printed specifications at the Patent Office to wade through; but the task is rendered easier by the preparation and publication of a series of Indexes and Abridgements as a guide to the Specifications themselves. These Abridgements refer to all sorts of trades, professions, and occupations. That relating to gardening or horticultural appliances comes under "Agricultural Appliances for the Treatment of Land and Crops." The oldest Abridgements mentioned go as far back as 1617, but those of more recent date are more likely to be of service. The publications run into hundreds, and may be obtained at the Patent Office, 25, Southampton Buildings, Chancery Lane, London, W.C., for 1s. to 2s. each according to age. Any of them, however, may be seen at the Patent Office free of charge, as well as at free and public libraries in London and the provinces. The purpose of the Abridgements, however, is to enable the would-be patentee to carry out a search at his leisure to determine whether his invention has been patented or not.

Showers of Snow have been falling in the lowlands of Aberdeenshire, though the weather, till recently remained remarkably mild in the southern counties.

Enraged Fruit-grower: "Get outside of those Apples as quickly as you can, you young rascal." Young Rascal: "'Ees, mister, I'm a tryin' to, but they're very 'ard.'"—Stampede of both in single file.

Trafalgar Day.—On Thursday the 21st inst., the anniversary of the death of Nelson, the national hero, Nelson's Monument, in Trafalgar Square, was simply but appropriately decorated. At a height of 120 ft. from the ground the column was girt with a naval crown, weighing about 8 cwt., and 6 ft. in height. From the iron band supporting it four garlands depended, each about 60 yards in length, entwining the column, and reaching from thence to the Landseer lions, and then to the ground. Four huge wreaths of Laurel were sent by branches of the Navy League and Abbotsholme School. The wreaths each bore a suitable motto. Chrysanthemums, Tuberoses, Lilies and other flowers were brought in the form of wreaths and bunches during the day. The decorations were allowed to remain till the 26th inst. The old flagship Victory at Portsmouth was decorated with garlands of Laurel. The figure of Nelson at Chatham was decorated with Laurels and flowers.

Woolton-Mutual Improvement Society.—The usual fortnightly meeting of this society was held at the Mechanics' Institute on the 21st inst., Mr. Henry Middlehurst presiding. Mr. W. H. Yeo, of Birkenhead, gave an excellent paper entitled "A chat about Vines." The subject was handled in an able manner, the defects and failures, and how to overcome them were the strong points of information; bad methods were also brought to the fore, and the results that usually follow. These very important items connected with Vine culture that most growers have had to contend with, and how to deal with them successfully are as useful as the most approved details of high class culture. The paper was somewhat out of the beaten track, but proved the more desirable especially to those who have to undertake the renovation of old or badly treated Vines, whether through defective borders, or improper treatment. Sound practical advice at this period is most valuable. At the conclusion of the lecture a good discussion followed, after which a cordial vote of thanks was tendered to the essayist and the chairman for a most enjoyable and instructive evening.

"The Fern Bulletin."—This is the title of an illustrated 16-page quarterly, which claims to be "the only journal in the world devoted entirely to Ferns." The October number completes the fifth volume. The first article of this number, written by Lucien M. Underwood, is entitled "The Ferns of Scolopendrium Lake." The writer of it enumerates the Ferns in the immediate vicinity of Green Lake (the real name of the small sheet of water), near Jamesville, Onondaga county, New York. He mentions some twenty-seven species, which he finds within a radius of fifty rods from the margin of the lake, and says that others run the number up to thirty-four, all of which are found within a circle, whose diameter does not exceed three miles. This he considers the richest district in the United States for Ferns, and invites others to inform him of any richer district. This nearly equals the whole British flora in the matter of Ferns. By the way, twelve of the species are British, which goes to show the cosmopolitan character of Ferns. The names adopted are not all the same as ours. For instance, Nephrodium spinulosum, N. cristatum and N. Thelypteris are all classed under Dryopteris; while Polypodium Dryopteris is placed under Phegopteris, as is sometimes done here. The editor, Mr. Willard N. Clute, of the Herbarium of Columbia University, New York City, has an interesting article on the Hart's-tongue, which he calls Phyllitis. Several of the species mentioned in the "Bulletin" are hardy and more or less cultivated in Britain. The British Columbia variety of the common Bracken is indeed a giant, for a man on horseback can make two fronds touch over his head. There is an interesting article on Californian Ferns, &c. Mr. Charles T. Druery, Acton, London, W., has an article on apospory and Fern variation in Great Britain. *The Fern Bulletin* is published at Binghamton, New York, U.S.A.

The Wrong Man.—Sandie : "Losh, Geordie, I heard ye fell oot o' an Aipple tree an' broke yer leg." Geordie : "Na, Sandie, it wisna me. It wis my brither." Sandie : "Eb, mon, I'm wae to hear't, an' awfu' disappintit."—*Snaggs.*

Economic Botany.—The introductory lecture in the course of economic botany at the Glasgow and West of Scotland Technical College, was delivered on October 4th, by Mr. G. F. Scott Elliot, M.A., B.Sc., F.R.G.S. The object of the course, it was explained, was to afford a knowledge of the possibilities of our British possessions, and a judgment of the chances of success in the cultivation of the more useful plants, such as those yielding rubber, guttapercha, tea, cocoa, coffee, fibre, oil, gum, tanning materials, and drugs of various kinds. It was intended to thus give an opportunity of training those going to the tropics or any British dependencies in other parts of the world. The importance of the subject was demonstrated by the fact that last year the balance of this country's imports over exports amounted to £141,000,000. The determining factors that decided what plants could be cultivated in any part of the earth were six in number:—1st, security of life, property, and fair play; 2nd, the size and expansibility of the market; 3rd, labour, which was of two distinct kinds, managing and manual; 4th, climate—the amount and distribution of sunshine and rainfall; 5th, soil; and 6th, wind shelter. Climates were classified according to the modern German method by physical characters. Thus, in tropical countries there were wet coast jungle, the home of the Oil Palm, and rubber plants; wet insular climates, producing chiefly the Coconut Palm; wet mountain forest climate, the chosen home of tea and quinine; and the monsoon area, notable for the coffee plant. Then came the sub-tropical region, in which Oranges, Lemons, and Bananas could be cultivated, but not the Olive. In temperate regions Mr. Elliot recognised two divisions, viz.:—The Olive region, such as the Mediterranean districts and Southern California, and our own temperate climate. The presence of the Date Palm is the chief characteristic of the desert.

Ladywell and Lewisham Horticultural Society.—The fourteenth annual dinner in connection with this society took place on the 21st inst. at the "White Hart," High Street, Lewisham, about eighty sitting down. Mr. S. J. Gore presided, Mr. D. Bartlett being in the vice-chair. Others present included Messrs. T. W. Sanders, F.R.H.S. (president), T. White (vice-president), A. Pratt (secretary), E. J. Hughesman, E. G. Bowman, H. Myers (representing the Ichthemic Guano Co.), W. T. Kinnear, H. Sercombe, W. Brown, W. Burgess, W. Cakebread, A. Collins, George Cornes, J. Deal, George Edwards, W. Tarrant, C. T. Green, J. Harding, Hines, E. Kelsey, G. King, E. Lee, H. Lewis, W. Musson, W. Ovenden, D. Parker, S. Payne, Charles Perry, H. Petty, W. Rabbits, H. Reeves, A. Robertson, J. Roberts, W. Savage, G. Seago, G. Stanton, M. Stevens, G. Taylor, G. Tilbury, J. J. Turpin, A. Weller, F. W. Westcott, R. Wilkinson, &c. After the loyal toasts, the chairman submitted the toast of "The Society and its Officers," and referred to the excellence of the exhibition held in his grounds in August. He also commented upon the beneficial results which emanated from such societies, and said it afforded him much pleasure to lend the use of his grounds for their show, and to preside over them that evening. Mr. Sanders, in reply, referred to the increase in the allotments and the excellent order in which they were kept. Mr. White and Mr. Pratt also responded, the latter remarking that the society was in a very prosperous condition, there being a balance in hand of over £30. The toast of "The Patrons and Visitors" was proposed by Mr. C. T. Green, and replied to by the vice-chairman and Mr. E. J. Hughesman. Miss Violet Gore, daughter of the chairman, next presented the prizes to the successful competitors at the annual exhibition, a list of whom appeared in these columns at the time. Mr. E. G. Bowman proposed "The Judges," and spoke of the arduous work they had to discharge and the general satisfaction which their awards had always given. Mr. Fox suitably returned thanks. The remaining toasts were those of the "Chairman and Vice-chairman" and "The Auditors." The musical portion of the programme was well sustained.

Are they late or early?—Primroses were gathered at The Lindens, Yatton, during the last week in September.

Two fine leaves of *Gunnera scabra* have been presented to the Brighton Museum by Mr. Alderton, head master of the Municipal School of Art. They have been placed in the wild flower department.

NOTES FROM DUNOON.

ON p. 102 of THE GARDENING WORLD, C. B. G., Acton, W., has some interesting remarks under the heading "Notes from Dunoon;" but I am afraid that some of his statements will be read with considerable surprise in many parts of Scotland. It would appear from his pen that amateurs were almost an unknown quantity there. In speaking of Dunoon he states that "Professional gardeners hold their own, but amateurs are not in evidence." This I will not dispute, but further on he takes a wider scope and states that "We Saxons have been brought up to believe that canny Scots are great gardeners. This may be true professionally but not otherwise, else we should see the amateur in greater force."

As to canny Scots being great gardeners one could not expect a Saxon to freely admit, "but facts are chieft that winna ding and Jarna be disputed," and the canny Scot still fights his way when others fail. I am afraid that C. B. G. could not have traversed much ground on the shores of the Firth of Clyde, where he mentions having seen several pretty combinations of nature and art, otherwise he could not but have noticed the amateurs in great force and been struck with the skill shown as cultivators by many of them. Indeed, Ayrshire is a stronghold of amateur gardeners, and I doubt very much whether C. B. G., has ever seen productions from any amateurs that could excel their specialities. In Scotland, generally, the amateur is permitted to exhibit in the gardeners' classes, but not *vice versa*, at exhibitions; and, indeed, in most of the florists' flower classes the amateur is the most successful. Who then shall say that the amateur is not in force there, when they at least hold their own with the professional, and in some respects are their masters as cultivators. I am afraid C. B. G. will have to become better acquainted with the status of the amateur generally in Scotland before his statements are taken seriously. I am sure that all "Lovers of Burns" who have read C. B. G.'s interesting article will tender him their thanks for the discovery that "'Highland Mary' was born at Dunoon," as he states "they will be gratified to hear it."—*James Gibson, Devonhurst, Chiswick.*

LEAVES FROM MY NOTEBOOK.

PENTSTEMONS.

THESE ever popular flowers, when given some attention in the matter of good rich soil and plenty of water at the roots when forming their flower spikes, can be depended upon to brighten the beds and borders for many weeks during the end of summer and all through autumn. A great improvement has taken place in recent years both in the size and colours of the flowers. Varieties such as Alfred Rambaud and President Carnot, are not much behind a good *Gloxinia* in size and form; and whether grown in beds or in the mixed border they look equally well.

The following varieties are specially fine either for competitions or for garden decoration:—Alfred Rambaud, purplish crimson with pure white throat, very large; Donald McBean, purple-crimson, with maculated throat; Emile Deschanel, clear carmine throat, pencilled with blood red, very striking; General Thomas, rosy-cerise, with large open throat; Hugh G. Oliver, purplish violet, large and distinct; and Jean Mace, brilliant scarlet, with white throat. This latter is a telling variety for massing.

James Robertson is white, tinted rose at the edges; Jean Lorrain is rosy violet, and large with close set spikes; John Fraser is rosy scarlet, with tall spikes, and very handsome; J. M. Troup, dark purple, produces close set, sturdy spikes; Lamennais is carmine-scarlet; Leonidas is rich rose, being a grand variety; Lord Ravensworth is rosy-purple and scarlet, with white throat, and a splendid spike; Loredan Larchey is rich rose and very large; President Carnot is

crimson, with a large, open, pure white throat, and is a startling variety; Scapin is clear violet, with grand open flowers, on well built spikes. That named Park Royal, is rosy-violet with pure white throat, and very large; Paul Verlain is a fine shade of rosy scarlet, producing grand spike; J. W. Moorman is rosy-purple with maculated throat, and handsome. Many more might be added, equally good, but the above will be found to be up-to-date in all respects, either for decorative purposes or for the competition table.—*Coila.*

CROTONS AT BATTENHALL MOUNT.

PASSING through the stove houses of Battenhall Mount, Worcester, the residence of the Hon. A. P. Allsopp, the other day, I saw the prettiest pair of Crotons in small pots I ever beheld. The variety was the beautiful *C. Warrenii*, the plants were in 32 sized pots, and were about 3 ft. in height as nearly as I can recollect, furnished with leaves clean, and beautifully coloured nearly to the top of the pots, each plant a picture indeed, and a marvel of cultural skill. Good examples of many other well-known varieties were included in the same house—a span-roofed building—representing such varieties as Princess of Wales, Mrs. Dorman, Mrs. Swan, Laingii, elegantissimus, and many others, all testifying by their highly-coloured foliage and clean well furnished appearance to the skill and attention bestowed by Mr. Fox. In striking contrast to this system of growing Crotons and other table plants, where each plant is allowed to develop properly and display its individual character and beauty (and it is only such plants as these that are fit to use where high class decorations are required in dwelling rooms, &c.), was another house of Crotons I noted in the same neighbourhood. Here were plants in pots ranging in size from 6's to 60's, crammed as thickly as they could stand, enough to fill a house twice the size.

Plants grown under such conditions are not nearly so serviceable, nor do they last in condition so long as those grown under more favourable conditions, having plenty of light and air.—*A. P.*

PLANTS RECENTLY CERTIFICATED.

THE undermentioned Chrysanthemums received First-class Certificates at the hands of the Floral Committee of the National Chrysanthemum Society at a meeting held at the Royal Aquarium on October 25th.

LADY HANHAM.—This is a sport from Charles Davis, and may be said to be mid-way between the latter variety and Vivand Morel. The florets are long, rather narrow, and drooping, whilst the bloom is of huge size, and constitutes a grand show variety. The colour is flesh pink with a bronzy-yellow centre. Messrs. H. Cannell & Sons, Swanley.

PRIDE OF THE MARKET.—This was certificated as a market variety, for which purpose it is well fitted. The flowers are of larger size than we expect in blooms of this class, and are possessed of exceptionally stout and strong footstalks. The colour is a rich bronzy-orange, very showy and attractive. It belongs to the Japanese section. Mr. Norman Davis, The Vineries, Framfield, Sussex.

MRS PROBYN.—Here we have a bold incurved Japanese bloom of great beauty and merit. The individual florets are strong, of great substance, deeply keeled, and have thorned and divided apices. The colour is a deep mauve, with a good deal of pink in it. Mr. Norman Davis.

MADAME PHILIPPE RIVOIRE.—The ranks of the white Japanese flowers are already well filled, but this is the latest addition to them. The blooms are of great depth and size, and they would look well in the back row. The white is not at all a dull or dead one, but is bright and glistening. Mr. W. J. Godfrey, Exmouth, Devon.

ELLA CURTIS.—This is one of the largest flowers that have yet appeared. The individual florets are of great length, width, and substance. The outer ones droop considerably, and all of them are twisted to some extent. The colour is a rich golden-yellow. Mr. W. J. Godfrey.

LADY RIDGEWAY.—The incurved Japs already constitute a very strong section, and in Lady Ridge-

way we have yet another addition to them. The florets are broad, of great substance, and have acute and entire apices. The colour is light rosy-pink with a silvery reverse. As the reverse is chiefly shown, the whole bloom exhibits a silvery-rose hue that is at once delicate and attractive.

CHRYSANTHEMUM NOTES.

ROYAL EXOTIC NURSERY, CHELSEA.

WHEN visiting the Chelsea collection of Chrysanthemums last October, we noticed a considerable number of first-rate blooms, but comparing it with last year the show is very much finer now than it was then. The season, for one thing, has been rather more favourable. True it is that September was a rather wet and cold month, but October has made abundant amends, for the three weeks of fine weather that it has brought us have been of inestimable value to the 'Mums. Congratulations to Messrs. James Veitch & Sons, Ltd., and to their enthusiastic and capable grower, Mr. Weeks, are therefore in order.

The malign and devastating influences of a London fog upon plant life generally are well known to some of our readers, to some of them by sad experience, and no plants are more susceptible to injury by reason of these visitations than Chrysanthemums, for the flowers invariably commence to damp, and the greatest watchfulness is needed to limit the spread of the damage.

This will give some idea of the difficulties which have to be surmounted by the Chelsea firm before a display such as that now on view can be obtained. We must get our blooms in October or not at all, said Mr. Weeks, in answer to a query, and that the first part of the statement had been fulfilled, even a casual look round would have assured us.

Special attention seems to have been paid to bush plants in eight, ten, and twelve inch pots, some of the results obtained being remarkably good. About three hundred plants are grown in this way, out of the total of a thousand. Throughout they are well-grown and shapely specimens carrying an abundance of medium-sized flowers. As decorative objects for the conservatory or the dwelling room, or even to supply cut flowers in quantity these bush plants are eminently serviceable.

Passing in by the Fulham Road entrance the visitor finds a row of profusely-flowered bush plants of varying heights extended in a long row on either side of the pathway running through the large conservatory. The stately and somewhat sombre presences of the huge Camellias which the house accommodates only serve to throw into more effective relief the bright colours of the Chrysanthemums.

Of the numerous varieties which have been grown in bush fashion none is a more conspicuous success than M. William Holmes, when disbudded to a moderate extent. A dozen or twenty medium-sized flowers on a plant are a grand sight, inasmuch as the rich shades of crimson and gold are as well developed as in the large blooms. Florence Percy as a white is one of the best, whilst Lady Selborne is too well known to need further praising. The reflexed Dr. Sharp, with its charming crimson-magenta hue is a great success.

Another large house is filled with the remainder of the bush plants, and here we were delighted with the grand specimens of such varieties as John Shrimpton, Vicar of Exmouth, Soeur Melaine, Charles Davis, Vivian Morel, and Avalanche.

The large blooms are all massed in a third house, where a raised temporary pathway has been built to enable visitors to see more easily the full beauty of the plants, and also to enable the latter to be brought near to the glass in order to obtain as much of the waning autumn light as is available. Here, too, the health and vigour of the plants is well demonstrated by vigorous foliage and stout, well-matured wood.

The Japanese varieties are represented in the greatest numbers, as may be expected when we consider their usefulness and popularity. Among the novelties, Liscarde Gentils, the yellow Louis Bochmer, closely resembling the latter variety in build of bloom, but with rather narrower florets, and bright golden yellow hue, is one of the finest of the season. Mrs. S. C. Probin is another fine flower. The florets are long and twisting, the colour being clear pink on the upper surface, and the reverse silvery.

There is a certain resemblance to Louise about the contour of the flower, but the florets do not incurve quite so strongly. John Neville is another variety that can scarcely fail to become popular. The colour is rich crimson-carmine with old gold reverse, and with long twisted and drooping florets; the habit, too, is dwarf and sturdy. The yellow Madame Carnot, G. J. Warren, was showing well when we saw it, but required another week or so to really see what it was like. Emily Silsbury, with its grand white blooms, has been fully open for a fortnight, and yet the flowers are still fresh, Louise, Souvenir d'une Petite Amie, Vivian Morel, Charles Davis, William Seward, Amiral Avellan, La Moucherotte, Sunflower, and Phoebus have all done splendidly, but this is only what we expect from these varieties. Huge blooms of the ivory-white Lady Byron were most conspicuous, and the same may be said of the distinct, rich amaranth-hued flowers of Pride of Madford. Pride of Exmouth, white, shaded with pink, will also have to be reckoned with on the exhibition boards this season.

Incurved blooms were not so much in evidence, not because they are not well represented in the Messrs. Veitch's collection, but because many of them are later than the Japs. Among these we may mention the Queens, of which there should be some capital samples in a few more days. The same might be said of Prince of Wales, still a good variety. Baron Hirsch is earlier, and was in capital form. Harold Wells, the yellow sport from Sir Trevor Lawrence is of good form and large size. Barbara, Madame Darrier, John Lambert, and Mrs. J. Kearns are all well-known varieties that need no further description.

Reflexed varieties have not made nearly so much progress of late years as their sister sections, but we were reminded of their merits by some capital flowers of the Christines, Dorothy Gibson, and King of Crimsons.

The Japanese Anemones are perhaps inclined to be overlooked amongst the more insistent glories of Japs and incurves, but there are some wondrously pretty things amongst them. Mrs. Hugh Gardener is a novelty of considerable merit. The ray florets are deep rose-crimson, the disc is high, and the florets prettily tipped with gold. It should make a good exhibition flower. Descartes is a handsome variety of longer standing. The ray florets are long, and crimson-red, the disc is high and full, and the habit of the plant dwarf.

ST. JOHN'S NURSERIES, PUTNEY.

MR. GEORGE STEVENS' busy establishment at Putney has long afforded a home to the Chrysanthemum, and each season a visit to the nurseries is well repaid by the sight of numbers of well-grown and flowered plants. Mr. Stevens grows largely, and, and we may say chiefly to supply his numerous customers with cut flowers; but his collection has a much wider scope than one purely destined for the cut flower market, since all the best novelties, together with all old varieties that have stood the test of time and cultivation, are included within it.

A fine, roomy, double span-roofed house, with one end facing the road at the side of the dwelling house, has been built by Mr. Stevens during the last summer. This house measures 111 ft. in length by 32 ft. in width, the greatest height being about 14 ft. It is well and strongly glazed with large panes of glass, and altogether forms an ideal house for flowering Chrysanthemums in during the dull and too often foggy months of October and November.

Some 6,000 plants in all are grown, of which about 3,000 are disbudded to yield three or four large flowers.

Phoebus holds a high position in Mr. Stevens' regard as a good market yellow. He describes it as being far and away better than W. H. Lincoln or even Edith Tabor, and illustrates his opinion to the visitor by showing the three varieties grown side by side. Edwin Molyneux has done wonderfully well at Putney this year, and we saw a good batch of plants, each carrying three first-class blooms. M. Chénon de Léché has also won golden opinions. It would be impossible to see this variety and not to like it. Colonel Chase is in excellent form. The flowers are large, rosy-blush in hue, and with long drooping florets. John Shrimpton, with its prettily reflexed crimson-scarlet flowers, is the best of its kind, and the richness of colour is not its least charm. Madame Carnot is one of the finest whites,

and unapproached by anything else in its particular line. Middle. Thérèse Rey is another grand white, but totally distinct from Madame Carnot in build. The two may thus be grown side by side in any collection without fear of the one being mistaken for the other. Wm. Seward is without doubt the finest of the deep crimson flowers. William Tricker is a useful rosy-pink variety, whose chief merit is its earliness. In build of bloom it is not characterised by too much elegance.

We also noted excellent samples of Vivian Morel, Sunflower, Souvenir d'une Petite Amie, Thos. Wilkins, Madame Marius Ricoud, and Louise.

Of incurved varieties there were not so many, but still there were some good samples. Mrs. Geo. Rundle and Mrs. G. Glenny, although not able to compete with later varieties for size, possess a charming contour of build. Baron Hirsch has done very well with Mr. Stevens, and was represented by some large and handsome samples. There were also good blooms of C. H. Curtis and Globe d'Or.

Large quantities of decorative varieties in the form of bush plants are grown at St. John's Nurseries. Lady Selborne does exceptionally well when grown thus. The yellow Lady Selborne is a golden-yellow sport that is exactly like the parent plant in everything but colour, and the later period at which it expands its flowers. It may be regarded as an October variety. A large batch of the bronzy-yellow Rycroft Glory was an ample demonstration of the value of this variety for supplying quantities of cut flower. The bronzy-yellow flowers are in great favour with the public, and find a ready sale. The reflexed creamy-yellow flowers of Elsie are both distinct and handsome, but unless stopping is well looked after the plants are apt to assume a tall and some ungainly appearance. It is, however, very useful for cutting. The old Elaine is hardly ever grown as a show flower now, but an extensive batch of plants of it in floriferous condition reminded us that as a decorative variety it is by no means superseded. Noces d'Or is likewise a great success in the guise of a bush plant, and should be more frequently grown in this way.

TRIALS AT CHISWICK.

THE Floral Committee of the Royal Horticultural Society met at Chiswick on Friday the 22nd inst., and made awards of XXX to each of the undermentioned zonal Pelargoniums and early flowering Chrysanthemums, with the exception of Chrysanthemum Madame F. de Cariel, which was accorded an Award of Merit. The Pelargoniums were grown in pots; the Chrysanthemums were planted in the open border.

ZONAL PELARGONIUMS.

ISEULT.—This dwarf-habited variety has leaves of moderate size, with a dark zone. The individual flowers are of great size, circular, very freely produced, and of an orange-scarlet hue overlying salmon-pink. Messrs. J. R. Pearson & Sons, Chilwell, Notts.

ZENOBIA.—Flowers large, circular, and of a dark, glowing scarlet. The habit of the plant is dwarf, and the leaves are marked with a faint zone. It is a bold and striking variety. Messrs. J. R. Pearson and Sons.

MISS JOLIFFE.—Amongst the pale varieties this is certainly very handsome and attractive, the huge, circular flowers being of a pleasing soft pink, but paler or almost white on the base of the two upper petals. The zone on the leaf is dark at first but gets pale as the leaves get old. Mr. W. Brooks, Weston-super-Mare.

LE COMTE DE LISLE.—The plants of this showy and floriferous variety were much taller than the rest, being evidently older. The flowers are of good form, moderate in size, and scarlet with a pink eye or centre. M. Lemoine, Nancy, France.

LILACINA.—The leaves in this case are wholly green. The huge, circular flowers are of a charming, rich, lilac-pink, with two white blotches at the base of the upper petals. Captain Holford, Westonbirt, Gloucestershire.

LE RHONE.—Leaves quite zoneless. Flowers carmine-purple or pink and purple, with a scarlet edge and two white blotches at the base of the upper petals. It is a handsome and distinct variety. Messrs. H. Cannell & Sons, Swanley, Kent.

LILIAN.—Flowers very large, orbicular, delicate pink, but intensifying somewhat at the margins. There is a long succession of flowers in the truss. Messrs. H. Cannell & Sons.

NIAGARA.—There are numerous white varieties at Chiswick, but this is the purest white variety amongst them, with large flowers. The plant is dwarf, with light green, zoneless leaves. Messrs. H. Cannell & Sons.

EARLY FLOWERING CHRYSANTHEMUMS.

MME. F. DE CARIEL.—In this we have a Japanese variety with flowers of moderate size, of a uniform orange, and old gold on the reverse. The plant grows 2 ft. high, and commenced flowering during the second week of October. It is particularly handsome either for open air, or pot culture, and flowers most profusely. An Award of Merit was accorded it by a unanimous vote. Messrs. Dobbie & Co., Rothesay; and Messrs. Barr & Sons, King Street, Covent Garden.

MDLLE. SABATIER.—The moderate sized flowers of this Japanese variety are of a rich glowing crimson, or maroon-crimson. It grows about 3 ft. high, and is well furnished with dark green foliage. Mr. H. J. Jones, Ryecroft Nursery, Lewisham.

MME. GAJAC.—The plants in this case grow about 2 ft. high and produce a profusion of flowers of a rose-pink, fading almost to white in the centre. Mr. H. J. Jones.

RYECROFT GLORY.—This well-known and popular variety grows about 2½ ft. high when consigned to the open ground. The flowers are golden-yellow, the later ones being more or less heavily tinted with bronze. It flowers profusely, and is very useful for a variety of purposes. Messrs. Dobbie & Co.; Messrs. Barr & Sons, King Street, Covent Garden; and Mr. W. H. Divers, Belvoir Castle.

THE PLANT HOUSES.

The Stove.

IN the warm stove the temperature through the night should range from 63° to 65° Fahr., and this will be maintained until the end of the month, after which it will be suffered to drop gradually until it reaches 60°, which is a good minimum winter temperature for the warmest house. The bright and favourable October has been of great service to plants under glass, and the tissues of the plants all round are harder and in a more favourable condition for wintering than they were at the end of September.

ALOCASIAS AND ANTHURIUMS.—The autumn and winter months is usually a very trying experience for these and Aroids generally. They often are given too much water, and this, combined with the low temperatures, generally means destruction to the thick fleshy roots. Some of the more delicate kinds it will be advisable to shift to a warm close pit where the temperature of the house can be regulated to suit their special requirements. Those that remain should be given a light corner of the house, and should be kept rather on the dry side, enough water only being given to keep the roots from shrivelling.

DIPLADENIAS.—Cuttings of the young shoots inserted singly in small pots in a mixture of fibrous peat and sand about the end of August, and placed in the propagating frame with a brisk heat, have now rooted sufficiently to warrant potting off. They should therefore be shifted at once into 60-size pots, using as before only peat and sand as a compost. Pot the plants moderately firm, and stand them on a shelf near the glass if a place cannot be found for them in the propagating pit. They should be encouraged in every possible way to make growth before winter sets in, and kept growing on all the winter. By the middle of November the large stove will not be hot enough for them and they should be removed to a close pit.

The old plants should be given all the light possible to enable them to thoroughly ripen up their growth, for it is usual to give them a rest annually, and this rest can be most naturally taken in the winter. Keep them moderately dry. This is easily done in the case of pot plants trained to balloons or rafters, but is so easy when the plants are growing in a border along with other subjects. Pruning may be conducted as soon as the wood is matured. A large proportion of the growths of the current year, which have produced this season's flowers, may be

cut out, leaving only enough to cover the balloons or trellises with young growths next year.

ALLAMANDAS.—These, too, should have their water supply curtailed, for it is time that the wood was showing signs of approaching maturation. Pruning may follow, as in the case of the Dipladenias.

THE INTERMEDIATE HOUSE may be given a night temperature of 60° Fahr. with a proportionate rise by day for the next fortnight. Here the fibrous rooted Begonias are best accommodated. This useful class of plants is worthy of every attention, although those who happen to be in the neighbourhood of large towns or cities have cause to lament the destructive influence of fogs upon their tender leaves.

BEGONIA GLOIRE DE LORRAINE.—There is no more useful form of its stamp than this, and it is well worth growing in quantity. Being of neat habit, the plants look wonderfully happy if suspended from the roof above the pathway just out of the reach of the head of an ordinary man. They may also be hung lower down over the stage, where they will effect a finish to the plants below. Stout iron hooks with a stem of about 10 in. in length and a loop at the end standing at right angles to the stem are easily made and form capital suspenders.

SELECTED STRIPED FRENCH MARIGOLDS.

THE frosty nights which recently occurred in the south must have been very partial, or unequal in their severity, for in some districts in the Thames valley Dahlias, Heliotropes, Tropaeolums, and everything of that tender character were blackened and completely cut down, while in other places not far distant and also on the banks of the Thames the Dahlias are flowering as brightly as if it was mid-summer.

In like manner there seems to have been but little frost at Orpington in Kent, judging from a boxful of Selected Striped French Marigolds, gathered from an open field of 15,000 plants last week, and sent us by Messrs. Dobbie & Co. The blooms were as fresh as they might have been in August or September, while the quality was first-class. Striped French Marigolds are of many years standing, but so inconstant were the colours in the early days of the strain that many years elapsed before the colours could be fixed. The strain sent us must represent many years of careful selection otherwise the blooms could not have attained their present excellence. Every floret had broad maroon-crimson margins, with a golden stripe down the centre. The outer florets were notable for the great breadth of their wedge-shaped outline. The blooms were simply superb, for we have never seen better of this type. These Marigolds stand hot weather and drought well, and might be more extensively utilised for garden and park decoration than they are. They are much favoured on the Continent, being very much employed in the parks at Paris, where soil and climate alike are dry.

Accompanying the above was a quantity of single flowers, equally as well striped as the double ones, but having only a single row of ray florets. They were certainly pretty in their way, but gardeners would, we feel sure, like them much better if the florets of the ray were more extensively imbricated so as to form a more compact and firm outline like a Cineraria. Some of them were good, however, even in this respect.

Gleanings from the World of Science.

THE undermentioned subjects were brought up at the meeting of the Scientific Committee of the Royal Horticultural Society on the 12th inst.

Acorn Cups Malformed.—Mr. French of Felstead sent specimens of this not uncommon phenomenon. It appears to be due to an arrest of the flower, probably by some insect attack, when the scales of the cup become enlarged and free.

Melons with New Disease.—Specimens were received from Mr. J. Fraser Smith, of the Gardens, Cullen House, N.B., who writes as follows:—The disease attacked my crop last year, and has again

this, in both a sudden and deadly manner. An entire crop of twenty plants has perished in a few days. The disease first shows a spot on the leaf, then a part of the stem gets effected, and in two or three days the whole plant collapses. It is only at a certain time of the year, for the first crop in both years, which was grown in the same house, finished without any signs of it—i.e., about the early part of August; while the second crop, about half-grown on the opposite side of the path, has all gone, as also a later batch planted on the same side as the first ones. Out of thirteen plants ten went off in one day. Two young Cucumber plants have also died in the same way, after they were 4 ft. high." The following report has been received from Kew:—"The Melon disease is caused by *Scolecotrichum melophthorum*, *Prill.*, a parasitic fungus. The disease is common in France, but I am not aware of its having previously been observed in Britain. Burn all diseased plants, as if they be allowed to rot on the ground a recurrence of the disease would be almost certain next season. Under any circumstances it would be advisable not to use the same ground for Melon-growing for at least two years, as the fungus spores are probably abundant in the soil."

Parrot Tulips Seeding.—Mr. Wilks brought ripe pods and seeds of this variety, which he had crossed with the pollen from other kinds of Tulips growing in his garden. It had been stated by growers that the Parrot Tulip had not been known to bear seed at all, and Mr. Henslow observed that of some bulbs received from Mr. Barr, in every case the pistil was abortive. It is proposed to raise plants from the seed thus obtained.

Abies Bracteata Cones.—Fine specimens were received from Mr. A. Harding, The Gardens, Orton Longueville, Peterboro'. It is believed to be the first occasion of its fruiting in this country. They were borne by one of the finest specimens of this species in England. The tree is a native of South California, growing at one place only, in Santa Lucia, and is in danger of becoming extinct. The cones are remarkable for their long linear bracts.

Cedrela Toona? Fasciated.—A remarkable specimen, consisting of a spirally-coiled, flattened branch, two of the coils being welded together, was exhibited by Dr. Masters. The tree is a native of Santa Barbara of South California.

Abies balsamea Tuber.—A specimen was received from Mr. Noble of a young plant which had developed a globular tuber-like excrescence below the soil. Similar cases had occurred some years ago in the same grounds, but the cause is not traceable at the present state of growth, though it might possibly be due to some injury by insects at a very early stage.

Juniper Berries Gymnospermous.—Dr. Masters exhibited some berries of the common Juniper, received from Dr. Schröter of Zurich, remarkable for the three coherent bracts not having become fleshy enough to close in upon the seeds, so that the latter remained visible, free, and strictly "gymnospermous," as in the previous condition of the ovules.

Trapa natans, Fruit.—He also showed specimens of the Water Chestnut from a particular Italian lake having four knobs upon them, which do not occur on the ordinary form of this fruit.

Spruce Fir cone var.—He also showed cones having smooth-rounded scales, instead of the usual form. Dr. Schröter, who obtained it from Switzerland, referred it to *Abies medioxyma*; but Dr. Masters observed that the species is a dwarf Alpine or Arctic species, and regarded the specimen as a variety only of the Spruce.

Anthurium Spatha monstrous.—Col. Beddome sent a specimen having three spathes and the spadix commencing to branch, exhibiting a semi-proliferous condition.

Plants Exhibited.—M. Lemoine sent a spray of *Tamarix kashgarica*, interesting as being a late-flowering species, from Central Asia; *Panax sessiliflorum*, with large, dense bunches of black berries, probably from Japan; the *Begonia, odorata*, having a delicate but very evanescent odour of lemon, and double and semi-double sports of *B. semperflorens*.

Galls on Roots of Oak.—Mr. Wilks brought remarkable galls, forming a large mass on the roots of Oak or Chestnut. They are also found on the roots of the Deodar. The galls are polygonal and wedge-like, so forming together a globular cluster about the root. They are produced by *Cynips aptera* (see *Gardeners' Chronicle*, 1841, p. 732, and 1874).

HINTS FOR AMATEURS.

The Flower Garden.—Day by day the hardy flower garden is putting on a more and more dreary look, and before long the herbaceous borders will have clothed themselves in the cemetery-like garb which characterises them for a great part of the winter, when the labels which here and there mark the resting place of our friends which have, for a season, departed from us, alone tell of latent life, and future prosperity. Still, there are a few things that do not lightly take their dismissal from the ice king's hand, but brave the elements, unless more than usually unkindly until the leaves of the sturdy Oak have rustled from the branches and are bestrewn the ground beneath us with a carpet, or dancing in mournful rhythm to the dreary cadences of the autumn wind. Amongst these the later forms of the Michaelmas Daisies find an honoured place.

Up to the time of writing, October has been an exceptionally favourable month. We have had one or two frosts, it is true, but these have been rather unequally distributed, for while in some places the tender plants have all been cut down, in others they have not been damaged at all.

Aster diffusus horizontalis.—Of all the numerous forms of the perennial Asters there is none that is more distinct in habit and general appearance than this. According to time of blooming it comes into the latest section, viz., those commencing to bloom in October, and lasting till the severe frosts and bad weather, generally of late autumn, put a full stop to them. The plant is from 2½ ft. to 3 ft. in height, and produces a thick branching bush, in which the side branches leave the main stems at nearly right angles. The flowers are small but very freely produced, and thus the effect they produce in the mass by contrast with the rich green foliage is very striking. The outer or ray florets are rather short and bluish white in colour. The inner or disc florets are numerous, and occupy a relatively large portion of the flower head. They are rosy-pink in hue, and thus the flowers when viewed in the mass appear to be wholly of this colour. *A. diffusus horizontalis* is, taking it all round, a first-rate thing; although the sprays do not present quite such a graceful presence when cut as many other forms, as they are somewhat stiff when taken individually; still, from its very distinctness of habit the plant recommends itself to all those who have collections, whether small or large of Michaelmas Daisies.

A. Novi-Belgii E. G. Lowe.—The *Novi-Belgii* section is the largest, and probably the most comprehensive of any of the sections into which perennial Asters are grouped. Some of the forms are early flowerers, others come into bloom in mid-season, whilst there are still some that fall into the latest section. Of the last named *E. G. Lowe* is one of the finest. The height is 4 ft., and the flowers are large, and exhibit a delicate light blue shade.

A. turbinellus.—It is only in the southern counties that this fine species has a chance commensurate with its merits. It comes into bloom late in the season, and its beauty is often cut short by frost ere it has well developed. This year it seems to have made the most of its opportunities, and the kindly October, and is in capital condition. The flowers are large, and bright violet-blue in colour with a suspicion of rose near the tips of the ray florets. The height is from 3 ft. to 3½ ft., and the habit is spreading and graceful. The upper part of the stems are somewhat sparsely clothed with small and narrow leaves, and thus the large flowers really need to be placed in proximity to plants of heavier habit and thicker growth to display them properly.

As a pot plant for the conservatory it might be turned to capital account. It would help to add a spice of variety to the aspect of the house in the latter part of October and the beginning of November, when the *Chrysanthemums* monopolise the whole of the attention.

A. versicolor.—From this species have been evolved in the course of cultivation several very handsome and useful varieties, all of which commence to bloom towards the end of September in ordinary seasons. *A. versicolor nanus* is a veritable dwarf; being only about 18 in. in height. The flowers on first opening are white, but change gradually as they get older to rose or rose-purple.

They are rather moderate in size, but the freedom with which they are produced more than compensate for this. On a good plant the flowers may be seen in all colours between the two extremes named above, and this is certainly no small part of the charm attaching to the species. *A. v. Themis* is a foot taller than *A. v. nanus*, and the flowers are a little larger, but not conspicuously so. *A. v. Antigone* is taller still, since it reaches a height of fully 3½ ft. The peculiar mutations of colour are common to them all; the general habit is the same, and the size of the flowers alters comparatively little, although we naturally expect to see the largest flowers on the most vigorous plants.

A. Noviae-Angliae ruber.—This is a great favourite amongst the ladies who seldom fail to admire the rich crimson-purple flowers. The plant is of robust habit and a most vigorous grower, reaching a height of well over 5 ft. It is thus a suitable subject for the back row in the herbaceous border. The peculiar disposition of the flowers in terminal clusters to be observed in *A. Noviae-Angliae* is also conspicuous in this variety. When given a fair amount of light, and not surrounded too closely by other subjects, the stems carry their leaves well to their bases. The foliage is a dark green and this, combined with the richness of hue exhibited by the flowers, imparts a warm and cheering effect to the autumn garden.

A. Coombe Fishacre.—This is a seedling raised from *A. diffusus horizontalis* by Mr. Archer Hind, and is a most valuable acquisition to the later flowering section of Michaelmas Daisies. The plants run to some 3 ft. in height, and have a very graceful symmetrical habit. The flowers are of medium size, and exhibit a charming shade of flesh pink.

All the forms mentioned above have, in addition to many others, been very fine with Messrs. Barr & Sons, at the Long Ditton Nurseries,

Flower Beds.—It will be necessary to see about the task of clearing the flower beds of their summer occupants or rather of their remains, since it is not wise to let the autumn advance too far before the beds are cleaned up and filled again for the winter and spring months. All plants that were of any value which it was desired to keep, will have been lifted and consigned to safer quarters before the frost cut them down. The rest may be dug up at once and consigned to the rubbish heap. After this, the beds should be dug over. If they are not to be filled again until summer, the soil should be left fairly rough on the surface, for the frosts of winter to pulverise and sweeten. On the other hand, if they are to be filled with spring-flowering subjects, such as bulbs of various kinds, the soil must be broken up smoothly at once, in readiness for planting. In any case a dry day should be chosen for the digging.

Echeveria secunda glauca.—This pretty and useful little edging plant is gifted with a strong constitution and will stand a good deal of cold if the soil is fairly dry at the same time; hence, they are generally left out until the last moment. In mild winters the plants do very well if planted under the shadow of a wall—or better still, a corner where two walls meet—and covered during frosty weather with dry straw or bracken. We can never tell, however, what the winter is to be; and hence it is advisable to be on the safe side and transfer the plants straight away to a frame. During the summer they have made a considerable number of offsets. These should be pulled away from them with a few roots attached, and planted separately. The old plants may then be discarded, for the offsets will make neat and handy sized plants for next year. Make up a bed of sandy soil in a frame, and dibble these offsets in close together. Do not water them but keep them shielded from rain and snow all the winter. All the protection required besides the light may be furnished by throwing a spare mat over the frame during frosty spells.—*Rex*.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Feeding Goldfish.—*Kioto*: You will find instructions how to feed goldfish on p. 109 of the issue of THE GARDENING WORLD for October 16th.

Asparagus Beds.—*A. L.*: Go over the beds with a sharp knife, and cut off the stems close to the ground. Remove and burn them subsequently. The beds may be dressed with short half-rotted stable manure for the winter, or with a mixture of soot and sandy soil. If you lift the roots and force them they are of no further use, and may be thrown away after the produce has been gathered from them.

Broccoli.—I have a plantation of Broccoli in my garden in which the plants have grown to a great size, but a friend tells me that they are too strong, and that the frost will kill them. Is this true? and if so what can I do to prevent it.—*Means*.

You must try to check the overluxuriant growth in some way, for your friend is quite right in saying that the winter will be likely to prove fatal to plants in such a condition. Some growers advise lifting the plants and laying them down in a trench close together with their heads to the north. If this is too much trouble take a digging fork with long tines and loosen the plants grip of the ground by inserting the fork under them, and raising them up. The growth will be checked, and the tissues will become hardened and better able to put up with frost.

Keeping Onions.—*A. Munson*: Your best plan will be to "rope" the Onions, and hang them up against the wall in the shed you mention. The bulbs are not easily injured by frost, for they will stand a lot of cold if they are in a dry place. Should they become frozen, avoid handling them until they are thawed, or they will go rotten very quickly.

British Botany.—*Geo. T.*: You have been making a mistake, which many have made before you, viz., that of grinding away at the textbook, and neglecting to examine living specimens. Such a course is sure to result in failure. In future, after reading a description of a wild flower from the book, try and compare notes with a living plant. This, by the way, you will not have many opportunities of doing for the next few months.

Named Gaillardias.—*A. O. B.*: You will find the following varieties some of the best:—Magician, orange-scarlet, with orange-yellow margin; Minerva, scarlet, edged with yellow; Somerset, pure yellow, a large fine flower handsomely quilled; and William Kelway, bright scarlet, edged with golden-yellow. If you are going to fill a bed entirely with Gaillardias we should advise you to invest in a mixed collection, and not attempt to keep them separate, but just plant them in mixture. You will find this come rather cheaper.

Chrysanthemums not Flowering.—*Mum*: The reasons why your plants did not flower last year may be several. We think the late potting had a good deal to do with it. Then again the plants were undoubtedly late and weak. You do not say whether they formed buds or not. Very often the buds on plants which have badly ripened wood come hard, and only a few ragged florets appear instead of a good head. From the description you give of your plants you have evidently every right to expect flowers from them this season.

Too Early Chrysanthemums.—*Q.*: If you are afraid that the flowers will be too early you should shift the plants to a cool shed. This will retard them considerably. Flowers that are fully expanded will if cut with stalks of a fair length, and the leaves are all stripped from them last a long while if put in water and kept in a cool room. They must have plenty of light, however.

Orchids for Beginners.—*E. L.*: The articles on the best twelve Orchids for beginners appeared in the issues of THE GARDENING WORLD for April 24th, May 8th, May 22nd, June 19th, June 26th, July 10th, and July 24th of the current year. They were written by a practical man who has had a deal of experience in this charming class of plants, and you will find in them a lot of useful information.

Lapageria for the Orchid House.—*Odonto*: The *Lapagerias* will do well in the cool Orchid house, and the shade given will not be too much for the Orchids if care and judgment is employed. You may order the plants at once.

MUSA CAVENDISHII.

The accompanying illustration was prepared from a photograph sent us by Mr. H. W. Sharman, gardener to Mrs. Ernald Smith, The Oaks, Emsworth, Hants, about the beginning of the present month. The Bananas are grown in a span-roofed house, in a winter temperature of 60° to 65°, but during summer it is not allowed to drop below 70°. They get no bottom heat. The plants are growing in a bed of stiff loam, two feet deep, and get no artificial manure, the only feeding they receive being liquid cow manure occasionally.

The larger bunch is on a plant which came up as a sucker in November 1896. This bunch was ripe about the time the photograph was sent, and carried 152 perfect fruits of very equal size. One fruit weighed 7 ozs.; 12 fruits, 5½ lbs; and 24 fruits 10 lbs. The smaller bunch is on a stem which came up as a sucker in February 1897, and carries 137 perfect fruits. It will thus be seen that neither of the fruiting stems are yet 12 months old. At the base of each of them suckers are now being thrown up, and these will no doubt flower and fruit next year. Those who have seen the plants growing are of

shape ripening off to a brilliant red. The flesh is solid and crystallised—and the flavour—well, Tomato epicures will appreciate that too, and smack their lips with gusto. I have had fifty in pots on greenhouse shelves, and finer fruit I never grew nor saw, some turning the scale over the pound. Many friends who have seen the crop, exclaimed, "Oh! I say. There now; these are something like." With the result—"What yer call it, please? Fine for the exhibitor."—*B. Lockwood, Lindley, October 6th.*

BATTERSEA PARK.

"BATTERSEA Park for Beauty" is an association of ideas that may be often heard amongst those who are fond of comparing with each other the parks and open spaces of our great metropolis. Certain it is, however, that this park has many very fine features, and it enjoys a popularity that is not entirely the result of the fine cycling road which encloses so many of its broad acres, and upon which, every fine day, may be seen all sorts and conditions of men, women and children besporting themselves upon the ubiquitous wheel.

colour is forthcoming, furnished by a host of subjects too numerous to mention.

The large oblong bed immediately facing the Queen's Road Gate is filled with dwarf Roses which have been blooming freely all the summer. They are now rather shabby, but their decadence is covered by numerous plants of *Anemone japonica alba* which have been freely interspersed with the Roses. These are enclosed by a broad band of early flowering Chrysanthemums, and passing from thence to the edging we find bands of pink flowered zonal Pelargoniums, the charming *P. Flower of Spring*, Golden Feather, blue *Lobelia*, and *Ecbeveria secunda glauca*.

As we pass into the park, and skirt the margins of the lake (on which, by the way, during the summer months Battersea people go through various aquatic evolutions of greater or less danger with a view, evidently, of capsizing themselves and as many more as possible), we pass some well executed carpet beds. These naturally, have been afflicted with the jubilee craze that has fastened itself on everything British. The execution in this case is, however, capital, and the crown, V.R., and the dates



MUSA CAVENDISHII.

opinion that Bananas are at home at The Oaks, Emsworth, and many another gardener would doubtlessly agree that Bananas cannot be grown, fruited and matured in much shorter time. We congratulate Mr. Sbarman on his success.

TOMATO, CLIBRAN'S.

ANYONE bent on change or additions naturally scans the seed catalogues, which pay their periodical visits, containing elaborate descriptions by the dozen, and amounting to columns in area. Overhauling and comparison mentally takes place as to which will be best for a set purpose, some sorts being found wanting, whilst others just pass muster. With wisdom born of experience, one or a few old sorts are reinstated, then down goes the mark opposite for supply packets of the new sorts, and in the mass of surrounding professed new varieties, fortunate is he who can drop on the right one.

In the above Tomato we have a decided acquisition. The vines are short-jointed, strong, and vigorous in growth; the flowers set exceedingly well, fine trusses as a matter of course following. The individual fruits are large, smooth, and of handsome

In addition to the broad and well kept road referred to there are many quieter walks and promenades winding about in all directions, and on all sides we find evidence that much taste, and skill are employed in the filling of the various beds and borders which adorn the grounds. The various entrances are especially bright spots, and special efforts have evidently been made to render them attractive to the public. Thus the gate near to the Albert Bridge shows a 6 ft. herbaceous border flanking it on either side, and running round with a bold sweep for some distance each way. There, behind an edging of zonal Pelargonium Golden Harry Hieover, is a collection of herbaceous plants, amongst which perennial Asters and Sunflowers are very conspicuous. In the front ranks bold clumps of *Sedum spectabile* were very effective in the declining glory of the latter end of September. The Queen's Road entrance is the one, however, upon which the greatest pains have been displayed. There in the flanking borders long lines of *Cineraria maritima*, Golden Pyrethrum, yellow *Calceolarias*, and the dark crimson-purple foliage of ornamental Beet show up strongly, whilst in the borders that line the path leading sharply to the right after passing through the gate plenty of floral

1837 and 897, are very well done, *Alternantheras* in various colours being abundantly used.

Subtropical gardening is really the feature of the bedding in Battersea Park, and the number of subjects that are made use of is very great and covers a wide range of style and habit. Here and there, where occasion offers, or taste suggests it, Palms of various sizes are plunged in the grass. One corner, close to the subtropical garden proper, is devoted to a collection of such plants. A high bank, in shape like a narrow horse shoe is thickly covered with this class of plants, that include *Phoenix sylvestris*, *P. reclinata*, *Geonoma Seemani*, *Kentia australis*, *Musas*, *Cycas revoluta*, *Zamia horrida* and *Dracaena umbraculifera*. In the miniature valley enclosed by the bank are studded *Asplenium bulbiferum* in quantity, *Platycerium alcornice*, and *Aspidium falcatum*. Two pieces of *Monstera deliciosa* represent a plant that is very rarely seen outside a stove.

The two prettiest beds in the park, according to our fancy, are to be seen on the eastern side of the sub-tropical garden. They are oval in shape and of medium size. The style of hedding may be said to be half-way between carpet hedding proper, and the freer sub-tropical method. Dot plants are very

numerous, and than the effect produced by the prettily variegated *Chamaepeuce diacantha*, and the graceful *Acacia lophantha*, and *Fuchsias* standing out of a groundwork of *Alternantheras* and other dwarf plants, nothing finer could be imagined. Tuberous *Begonias*, both single and double, add their quota; and an edging of *Golden Feather*, and *Echeveria secunda glauca* completed the display. In a small circular bed between these two oval ones, a handsome little specimen, some 3 ft. high, of the Dragon tree (*Dracaena Draco*) has been flourishing all the summer.

A circular bed filled with Ivy-leaf *Pelargoniums* trained into balloon-shaped specimens, is distinct, but too stiff to be really effective. An attempt has been made to relieve this stiffness by interspersing plants of *Eucalyptus globulus*, and they certainly improve matters somewhat.

Fuchsias, as may be supposed, are freely employed all over the park, and they have done very well, although, of course, September is too advanced to expect to see them in unimpaired beauty. *Cassia corymbosa* has also had its merits recognised, for its bright flowers are peeping from many a bed and border. *Ficus elastica* is another success as an outdoor subject. The *Castor-oil* plants have a very stately presence, and the various shades of bronze-green and purple that their foliage exhibits gives them a distinct individuality amongst other foliage plants.

Abutilon Thompsoni with its golden and green leaves is worthy of the highest praise. A bed of it associated with *Heliotrope*, and edged with the bronzy-leaved *Fuchsia Meteor* pegged down flat upon the ground to form a carpet, has had many admirers.

Of the larger beds, of which there are many in the central area of the sub-tropical garden from which the public is excluded, one filled with *Erythrina crista-galli* is very imposing. The plants were carrying a few large racemes of the bright coral-red flowers at the time of our visit. *Nicotiana atropurpurea grandiflora* well deserves its place, for with its towering height and deep purple flowers it is very conspicuous in the mass. *Cannas* have only been moderately employed. A bold, oval-shaped bed has the centre filled with purple-leaved varieties. This mass of purple is enclosed by a ring of the showy white *Marguerites* and by an outer ring of *Gnaphalium lanatum*. The broad, white leaved *Sakia argentea* appears in several places and is most effective in each one of them.

A most interesting bed is one entirely filled with succulent plants. The arrangement consists of five raised mounds, the central one being the tallest, with their attendant hollows. Some finely coloured pieces of *Echeveria metallica* are very conspicuous here. *Portulaccas* are also freely employed, and we also noticed the pretty *Rochea falcata*.

Acalypha tricolor is utilised as an edging to several beds and borders, and throughout is very bright and has evidently done remarkably well. The *Aviary*, too, has not been forgotten, and the 3-ft. border surrounding it is filled with a great variety of plants in a tasteful way, whilst the structure itself is shaded in the summer and enlivened in the autumn by that popular London subject—the *Virginian Creeper*.

In his arrangements for the adornment of the park and the gratification of the public, Mr. Coppin, the able superintendent, has been exceedingly thorough, and everything reflects great credit upon him.

BOLTONIA LATISQUAMA.

In general appearance the *Boltonias*, of which there are some three or four species, approach closely to the perennial *Asters*, and they may indeed be easily confused with the members of the latter genus. *Boltonias* differ from *Asters*, however, in having the pappus of the ray and disc florets dissimilar, whereas in *Asters* the pappus is the same throughout. *Boltonia latisquama* is one of the very finest of our hardy autumn-flowering plants. In height it is from five to six feet, the habit being bold and spreading. The flowers are large (about an inch in diameter), pure white, and produced in large, loose, terminal panicles. Its noble presence is a great feature of the nurseries of Messrs. Barr & Son, at Long Ditton at the present time, for it peeps out from various nooks on the rockery and other parts of the grounds. It is a great favourite with Mr. J. W. Barr, who thinks highly of it and its usefulness. *B. latisquama* is a native of North America.

BEECHHILL NURSERY, EDINBURGH.

THOUGH the nursery of Mr. John Downie, Beechhill, Murrayfield, Midlothian, is only of moderate extent, every part of it both outside and under glass is filled to overflowing, while everything is kept in neat and trim order. The city office at 144, Princes Street, Edinburgh, is within easy reach and call of the nursery, along the great western road running between Edinburgh and Glasgow. We made a hurried inspection of the place during the second week of September, and found everything in the same excellent condition as when we made the inspection some nine years ago.

THE HOUSES.

The glass houses here are all relatively new and have consequently been built on the best modern principles for plant growing. The stove was the first house we entered. Some sixty or more varieties of *Croton* of a suitable size for table decoration are kept in stock. Other useful decorative stuff consisted of *Pandanus Veitchi*, *Acalypha musaica*, *A. macrophylla*, and other members of the genus; also *Ixoras* in clean and vigorous plants; *Sanchesia nobilis* with its yellow ribbed leaves; *Aralia Veitchi*, *A. V. gracillima*, and *A. leptophylla*, all very graceful and highly ornamental in their several ways. The silvery *Caladium argyrites* is still very popular. An uncommon plant is *Xylophylla latifolia*. *Dracaena Princess Louise*, with white-edged leaves and various others added their effect to the whole collection, of which the above may be taken as representatives of the class of plants that are cared for and kept in first-class order.

The propagating pit contains a collection of various stove subjects of a useful size, independently of those which are being propagated. Here are to be seen batches of *Cocos weddelliana* in various sizes. Ferns in variety find a place here together with the more useful and popular forms of *Maidenhair*. The narrow-leaved and graceful *Dracaenas* will be grown for many years in establishments where decorative work has to be carried out. *Anthurium crystallinum* is hardly ever absent from collections of stove foliage plants. The spiny-stalked *Licuala horrida* is highly ornamental though formidable in appearance. Infinitely graceful is that old favourite, *Reidia glaucescens*, with its drooping and curiously-fringed flowers.

The Palm stove contains its complement of the Palms which are almost essential to every establishment on account of their general utility. We refer to specimens of various sizes of *Kentia belmoreana*, *K. fosteriana*, *K. canterburyana*, and *Phoenix reclinata*. Of the two latter are some grand plants for furnishing work. *Cannas* in some of the finest of modern varieties have found their way here and are being utilised to the best advantage. *Aspidistras* stand a deal of bad usage when taken into dwelling-rooms. A fine stock of young *Crotons* occupies the shelves of this house.

A miscellaneous collection of greenhouse or conservatory subjects occupied an airy house, which looked well furnished notwithstanding the large assortment of plants at the autumn show of the Royal Caledonian Horticultural Society. Some of these noted at random were *Cordylines*, *Hydrangea paniculata grandiflora*, *Lilium auratum*, *Eucharis grandiflora* in pots, and the *Bridal Wreath* (*Francoa ramosa*) all flowering finely.

There were some handsome specimens of *Strobilanthes Dyeri*, 3½ ft. high, with richly coloured foliage. A good assortment of choice Ferns included various species of *Pteris*, *Maidenhair Ferns*, *Asplenium palmatum cristatum*, *Cyrtomium falcatum*, and others of like importance for decorative purposes.

Passing into the fernery we found batches of *Davallias*, *Microlepia hirta cristata*, *Adiantum tetraphyllum acuminatum*, *Pteris serrulata cristata*, and others grown in association with plants requiring a stove or intermediate temperature. *Caladiums* were numerous, and *Begonia La Lorraine* in the pink of perfection was most profusely flowered. The latter now takes leading rank amongst flowering plants, whether for summer or winter work. *Begonia Rex* in variety and many others are also kept in stock. *Acalyphas* also associate well with the above.

Tuberous *Begonias* are a prominent feature of Beechhill, being grown in quantity, both single and double, named and unnamed. Every colour is represented by good varieties, amongst the single sorts of which we noted handsome scarlet, rosy-scarlet, crimson, white, rose, magenta, and orange varieties

with shapely circular flowers. The same range of colours runs through the doubles. Very choice was the yellow *Miss Travers*, the petals of which were arranged round a single centre. Other grand varieties in the collection are *Prince of Wales*, scarlet; *Rose Laing*, rose, and of very pretty form; *Alfred Berber*, salmon-pink; *Paul Verlaine*, pure white; *Salmon King*, deep salmon, and of fine *Camellia* shape; *Madame Le Boucher*, large, bright pink, and very full; and *Gladiateur*, a dwarf bright scarlet variety. The flowers of *Major Hope* are of great size and rich pink. *Le Colosse*, as its name implies, is also of magnificent proportions, and differs from *Major Hope* chiefly in having darker flowers with more salmon in them. *Beauty of Belgrove* reminds one of the colour of *La France Rose*. A fine variety is *Madame Ernest Fourtell*, having creamy-white flowers. For size and purity it is beaten by Mrs. John Downie, the flowers of which are massive, chaste and beautiful. Near by we noted collections of early flowering *Chrysanthemums* and Chinese *Primulas*.

The next house entered was largely occupied with small Palms in variety, batches of *Araucaria excelsa*, 9 in. to 12 in. high, *Asparagus*, *Smilax*, *Lapageria rosea* and *L. r. alba*. Small Palms, Ferns, and a fine batch of *Cypripedium insigne* monopolise another house. The last named is grown for the sake of cut flowers. Between and amongst the houses, or close under the front walls of the same, are numerous frames accommodating a great variety of subjects. One or more were filled with tuberous *Begonias*. A large one gave shelter to a fine lot of *Araucaria excelsa*, *A. e. glauca*, *Cannas*, *Fuchsias* and *Bouvardias*, all of the best types. Show and zonal *Pelargoniums* each monopolised a frame, or rather a set of them. *Cinerarias* also require a length of these frames; Ivy-leaved *Pelargoniums* and *Gladioli* of the *branchleyensis* type, another; and show and alpine *Auriculas* require a similar extent of frame space.

THE OPEN NURSERY.

Where the ground is of any great width it is broken up into squares known as brakes. One or two of these squares were occupied with a fine collection of show, fancy and *Cactus Dahlias*, in full bloom at the time of our visit. *Dahlias* have been a speciality of the firm for many years. A brake is occupied with *Aucubas* in very fine condition, the foliage being clean and healthy, and the plants bushy. Similar spaces of ground are occupied by *Hollies*, in variety, *Azalea mollis*, *Cherry Laurels*, seedling *Hollies*, and the broad-leaved *Privet*. As we proceeded along the pathways we came upon breadths of *Larches* and *Hydrangea paniculata grandiflora*, doing splendidly and quite hardy.

A plantation of *Strawberries* included many of the best and most highly prized varieties, such as *Garibaldi*, *Veitch's Perfection*, *Lord Suffield*, *President*, *Six Joseph Paxton*, *Royal Sovereign*, *Vicomtesse Hericart de Thury*, and others. Some pomologists consider the first and last named as synonymous, but the Scotch growers always maintain that they are distinct.

Brakes, beds and colonies of various flowers meet the eye at intervals. *Lilium tigrinum* and *L. speciosum* had done well in the open ground. French and African *Marigolds*, *East Lothian Stocks*, *Antirrhinums* and *Pentstemons* have long been favourites here, receiving the best attention. *Gladioli* and the *Cape Hyacinth* (*Galtonia candicans*) are grown in quantity, and a fine effect they had when we saw them. *Roses* are extensively grown for cut flowers, the firm having a large business in decorative and furnishing work. Both Tea and hybrid *perpetuals* are grown, amongst which we noted Mrs. J. Laing, *General Jacqueminot*, *La France*, *Duke of Edinburgh*, *Catherine Mermet* and many others in their autumn stage of blooming.

Black, White and Red *Currants*, and *Gooseberries*, the latter in a great number of the best varieties, occupy brakes of ground of useful young stuff fit for planting. *Leeks* and *Beet* are grown for seed, the latter including *Downie's* and *Dell's Beet*.

Conifers are well represented by green, golden and variegated varieties of the most distinct and useful kinds. Amongst others we noted *Cupressus*, *Retinosporas*, *Thuyas*, *Golden Yews*, *Austrian Pines*, and *Juniperus macrocarpa*, in specimens of various size and age. Variegated, coloured, and other ornamental trees and shrubs occupy a considerable amount of space. Golden and Silver variegated *Hollies* in

various sizes are healthy and clean, the foliage glittering in the autumn sunshine. Golden Privet and Golden Elder are largely grown and very conspicuous shrubs, often used for planting in masses. Many species of Spiraea are grown; also many varieties of Robinia Pseudacacia. The Portugal Laurel does well and maintains a fine dark green colour. Weeping trees are represented by many species grafted standard high and making fine heads. Rhododendrons of the best hybrid and hardy sorts are kept in stock.

Before leaving the nursery we had the pleasure of meeting that veteran florist Mr. George Goodall, who is still hale and hearty, though now well over 70 years of age. He came to the neighbouring Pinkhill Nurseries in 1853 and has been in the neighbourhood ever since. He is now foreman to Mr. John Downie in the Beechill Nursery, and has been so for a long time. The nursery under his care gives him great credit, every part of it being well filled and in admirable condition.

NOTES FROM KIRN.

KIRN, like Dunoon, is rapidly passing from a primitive to an up-to-date condition; indeed, this cannot be otherwise, for both places lie in the wake of the splendid service of steamers which abound on the Firth of Clyde. Moreover, both places come under the jurisdiction of one board of commissioners; and, as a consequence, in the near future it will be somewhat difficult to distinguish a line of demarcation between them. Kirn possesses a goodly proportion of pretty villas, which are chiefly occupied by Glasgow and Greenock merchants and manufacturers. It is then an altogether different place from that which once prevailed, and which its Gaelic name of *Carn* implies, namely "heap of stones." Stones, however, still abound—every house is built of them; which fact gives solidity and strength to every structure so unlike and so superior to those jerry-built brick-boxes which disgrace our suburbs.

But substantiality—in itself—will never quite compensate for the artistic blending of brick and stone; for badly built, though many of our domiciles are, there is yet a tone, a colour, and a character about them, which these northern dwellings sadly lack. For permanent residence, then, give me for preference the sunny south, the pretty villa, the gable roof, the red brick, the coloured creepers festooning the walls, and all the other floral adjuncts of a well-ordered home and its appurtenances.

On a sunny day, however, the little town of Kirn looks interesting and impressive; but, like Dunoon, its weather is capricious. When it rains it rains, and no mistake about it; although the converse also ought to be that when it shines it shines, and smiling is the scene.

At "Annfield" House, Mr. Cameron, the gardener, was good enough to show me round. He possesses a good miscellaneous collection of plants, and the customary Scotch herbaceous border; but his strong point is Ferns, of which he grows a large number. In addition to a collection of greenhouse Adiantums, the British one—*A. Capillus-Veneris*—finds a place. Mr. Cameron possesses some varieties of *Scolopendrium vulgare*, *Asplenium adiantum nigrum*, and a grand case of *Trichomanes radicans*, the beautiful Killarney Fern. Outside there is a bold bit of rockery with running water, on which luxuriate *Osmunda regalis*, *Athyrium Felix-foemina*, *Lastrea pseudo-mas cristata*, *Struthiopteris germanica*, *Aspidium aculeatum*, and a splendid form of this with fronds about 4 ft. long, and broad in proportion. These do not exhaust the list by any means, but merely serve to show that a rockery with a stream as an adjunct is the proper place to grow our British Ferns.

"Ericht Bank" was next visited, and here Mr. Spears presides for the present, over the garden, which, with the mansion, is unfortunately in the auctioneer's hands. There are, however, some notable things here in the plant line. *Cordyline australis* on the terrace, although severely mauled by the winter of 1895-6, is taking a new lease of life; *Camellia japonica* does well and flowers freely in its season; *Phormium tenax*, *P. t. Veitchii*, *Gunnera scabra*, *Fatsia papyrifera*, *Latania borbonica*, *Chamaerops Fortunei*, *Dicksonia australis*, and *D. squarrosa*, besides some tender Conifers, are all doing satisfactorily and therefore bespeak the

salubrity of the position as favourable to vegetation. The Pampas grass (*Glycerium argenteum*), however, is only just now beginning to unsheath its silvery panicles of graceful flowers, which rather shows the lateness of the Scottish season—while *Lilium giganteum* is full of fruit, about 8 ft. high, and looking wonderfully well and vigorous. It is evidently quite at home, for Mr. Spears says this season is no exception to the general rule.

The flower beds and borders, too, are worth noting; a particularly simple yet happy combination of the former took my attention, and was in the form of a large oval bed planted with tuberous Begonias, interblended with *Dactylis glomerata elegantissima*, and edged with *Viola Bullicn*. The turf was soft and green—reminding one of the Emerald Isle—not because the garden-hose or water-barrow had been in requisition, but in consequence of the too great attentions of Jupiter Pluvius.

Water is a *sine qua non*—no estate can do without it—so that:—

"A copious rainfall, now and then,
A blessing is to garden men;
But, when too much is in the shoot
A Scotsman e'en will 'gang about'."

C. B. G., Acton, W.

THE PROGRESS OF VEGETABLE CULTIVATION DURING QUEEN VICTORIA'S REIGN.

(Continued from p. 124).

THE BRASSICAS.—CABBAGE.

FIRST and foremost in point of general utility comes the Cabbage. Although our forefathers had not so long a list of names to select from as gardeners now have, there were several good Cabbages in 1837. Chief among these were Early Battersea, Early York, Large York, Emperor, Sugarloaf, &c., names which still retain a place in all seed lists, and are certainly valuable for spring sowing. It is reasonable to suppose that the crops of those days suffered from "bolters," and with none but these and similar sorts to grow the probability is that an even bed of Spring Cabbage would be the exception, as these sorts are peculiarly liable to bolt. Of late years much has been done to avoid this tendency, and we now have such Cabbages as Ellam's Early, Early Offenham, Imperial, and our own Flower of Spring and Early April, which when obtained true to name may be relied upon in any season to form solid hearts without bolting.

The improvement in the Cabbage has been entirely due to selection. The advent of the Nonpareil was a distinct gain to horticulture. Amongst others, Shaw, of Newbury, did much to make this Cabbage popular, and as it is one of the best for spring sowing, it will be long before it ceases to be grown. Enfield Market is popular where a large growing kind is required. Almost every market-gardening district has its own particular selection, as seen in The Rainham, Higham, Evesham, East Ham, and Fulham varieties.

Rapid strides have been made in the improvement of early Cabbages for summer use, and although many of the earliest are of Continental origin we on this side can claim no inconsiderable amount of credit on account of the careful selection given to them. Earliest of All, Empress, and their kindred types are Cabbages which we could not now well do without, but on account of their tendency to bolt they must give place for August sowing to the sorts previously named.

The Hardy Green Colewort was introduced in 1852, and a selection from it, Rosette Colewort, appeared a few years later. These are very important crops for consumption towards the end of the year, and are delicious in flavour.

Red Cabbages have been so far improved that instead of relying on an August sowing for heads to use the following summer and autumn they can now be obtained in the same year by sowing in spring.

Savoy Cabbages, on account of the limited period in which they are required for use, have not had so much attention devoted to them, although it is now possible by the use of recently introduced early and later kinds to extend the supply from August to April if required.

BRUSSELS SPROUTS

Amongst Brassicas stand second only to the Cabbage, Broccoli and Cauliflower in importance. This plant

was well known in 1837, but since that time wonders have been accomplished in its improvement by means of selection, and we now have dwarf, medium, and tall varieties of great excellence. Scrymger's Giant, Dalkeith, and Reading Exhibition were among the earlier improvements, while the Dalmeny and Albert Sprouts first offered about 1858-9, had but a short-lived reputation.

A dwarf type originating on the Continent, and covered with close firm buttons, has of late years given grand results, the best known strain being the Dwarf Gem. As is well known the sporting tendency of the Brassicas is responsible for some very peculiar forms, and it is, I think, not at all unlikely that a Brussels Sprout with red buttons may eventually have a place amongst our favourite vegetables.

BROCCOLI

Were represented in the earlier days by the Capes, Grange's Autumn, Portsmouth, Sulphur, Dwarf Russian, Purple Sprouting, and Knight's Protecting. In 1843 that popular sort Snow's Winter White, was first offered, and although various and inferior strains have been offered under this name it is safe to say that in many cases the seed now sold is altogether superior to the original type. The following year Walcheren, which perhaps should be classed amongst the Cauliflowers, was brought to notice and has done good service. After this came Adam's Early, Wilcove Late White, Dilcock's Bride and White Sprouting. In later years Broccoli with heads of closer and whiter texture have appeared, including Leamington (still one of the best), Perfection and Late Queen. Great improvements have been made in Purple Sprouting Broccoli by selection, and it is now possible to grow three distinct types, the earliest of which is available for use at Christmas, the ordinary type following, and lastly a late selection of more compact growth and better coloured sprouts. The hardiness of these strains is an important feature, and their popularity must continue.

In the late Broccoli it has been difficult to retain lateness without in some degree sacrificing colour and quality, but I am pleased to note that a late Broccoli which continues good in quality longer than any variety with which I am acquainted and with heads which are in every way equal to an Autumn Cauliflower is already in existence and will certainly become deservedly popular. By these late as well as the extra early selections there is now no difficulty in having a succession of good Broccoli and Cauliflower throughout the year.

CAULIFLOWERS

Are scarcely to be surpassed for delicacy of flavour when properly cooked. Three types were grown in 1837, the Early, Late, and Asiatic. These were followed by the Stadtholder and Walcheren, Snowball, Erfurt, and Autumn Giant. As Cauliflower seed can seldom be successfully grown in England, we are, of course, indebted chiefly to our Dutch, German, and Italian specialists for most of the improvements made, and with the finest types of the Dwarf Erfurt section, such as Snowball and First Crop, at one end and the early and late selections of the Italian Giant varieties at the other, we can extend the supply over a very much longer period than was possible sixty years ago. A head of Cauliflower 36 in. to 38 in. in circumference of perfect quality was a thing unheard of in 1837, but it is by no means uncommon to-day.

KALES.

The great diversity in colour and form of this section of the Brassicas at the present day would surprise any gardener who knew only the few sorts existing at the commencement of the Victorian era. The hardiness of this useful vegetable has always been its most important feature, and it is to be hoped that the newer selections will retain this essential characteristic.

During the fifties Mr. Turner introduced the hardy and most useful Cottage's Kale, and it appears to increase in favour. Mention must also be made of the Variegated Kale, a highly ornamental plant as well as useful for cooking purposes. In mid-winter the charming colours of the leaves render them invaluable for decorative purposes.

THE CELERIES OF 1837

Were the Italian, Red, and White Solid, and Turnip-rooted, and although at this date there are many superior sorts, Celeries vary so little in character that there is less scope for great improvement than in many other garden vegetables. Much, however, has been done in improving the solidity and flavour,

and amongst the Reds may be noted Clayworth Prize, A. I., Standard Bearer, Sulham Prize, and Leicester Red, with Solid White and Wright's Grove White as the best of the white section. Probably the most distinct variety of English origin is White Gem, a small early sort of great value.

Attempts have been made to popularise the continental self-blanching sorts, but although they may be useful for soups they are practically of no value where tender fine-flavored Celery is prized, for except in appearance they differ but little from unblanched English Celeries.

CARROT.

In Carrots the progress made has been as great as in other vegetables during the period under review. Although there were several varieties grown in the early years of the Queen's reign, they were either very long such as Altrincham and Surrey, or of the horn section. Improvements on some of these quickly appeared, James's Scarlet Intermediate at once meeting with approval, and for market purposes this will doubtless long continue to be grown. Our French neighbours are adepts at the improvement of the Carrot, and the English trade is indebted to them in this respect to a larger extent perhaps than for any other vegetable. The French Forcing Horn and Nantes have met with warm approval, the finest types of the latter being particularly free from the objectionable yellow core existing in most sorts. It is only necessary to refer to the magnificent specimens of New Intermediate and Early Gem and similar varieties which are so frequently seen on the exhibition table for evidence of the great improvement which has been made in this popular vegetable.

(To be continued.)

SOCIETIES.

NATIONAL CHRYSANTHEMUM.—October 25th.

A meeting of the Floral Committee was held on the above date at the Royal Aquarium. Upwards of two dozen large cut blooms came from Messrs. H. Cannell & Sons, Swanley, Kent, amongst which were observable fine samples of Robert Powell, N.C.S. Jubilee which narrowly missed receiving a certificate, Lady Hanham, and Souvenir des Molines.

Four dozen large blooms were also sent by Mr. W. J. Godfrey, Exmouth, Devon, and in addition to those receiving certificates, (for which see another column), these comprised fine flowers of such varieties as Golden Nuggett, Werther, Antoinette, King of the Yellows, Geo. Gover, and Topaze Orientale.

Mr. Norman Davis, Framfield, Sussex, contributed samples of several decorative varieties. Mr. Robert Owen, Maidenhead, had a stand of cut blooms of new seedlings. Mr. W. Wells, Earlswood Nurseries, Redhill, sent plants in bloom, of Mrs. Geo. Palmer, a huge new Japanese variety, which however, did not receive an award at the hands of the committee. Mr. Wells also sent the new Japanese Madame Desblanc.

ROYAL HORTICULTURAL.—October 26th.

ORCHIDS were in strong force at the meeting on Tuesday last. Chrysanthemums also occupied a large share of attention. Batches of Nerine, Roses cut from the open, Begonia La Lorraine, and Violets may be described as interesting specialities. The number of distinct novelties amongst the Nerines was remarkable.

A large and valuable collection of Orchids was exhibited by Messrs. J. Veitch & Sons, Ltd., Chelsea. Cattleyas and Cypripediums were abundantly represented, the former including *C. labiata* in quantity, *C. dowiana aurea*, *C. maxima*, as well as many hybrid and bigeneric hybrids. Very distinct and pretty is the hybrid *Cattleya wendlandiana*. *Laeliocattleya Pallas superba* is also a magnificent thing. Along the hack were tall plants of *Vanda sanderiana*, *Cattleya howringiana*, *Oncidium praetextum*, *O. incurvum*, *O. varicosum*, *O. tigrinum*, *Dendrobium taurinum amboinense* and *D. Stratiotes*. *Cyperorchis elegans*, an uncommon plant, was well-flowered (Silver Gilt Flora Medal).

Messrs. Hugh Low & Co., Clapton, exhibited a group of *Vanda caerulea*, in plants of various height, well-flowered, and varying considerably in colour. They were set up with *Asparagus*, and had several *Cypripediums* in front of them.

Messrs. F. Sander & Co., St. Alhans, staged a fine group of Orchids, including a large number of *Cattleya labiata* as imported, and amongst which there was a great amount of variety. Interesting and pretty also were *Laelia monophylla*, *Oncidium ornithorhynchum*, *O. kramerianum*, *Miltonia moreliana*, *M. vexillaria*, and *Habenaria carnea*, the colour of which is chaste and beautiful.

Messrs. B. S. Williams & Son, Upper Holloway, staged a collection of *Cattleya labiata*, *C. howringiana*, *Oncidium Phalaenopsis*, *O. crispum*, *Pescatorea klabochorum*, *Vanda tricolor*, *Dendrobium bigibbum*, and various others.

Messrs. W. L. Lewis & Co., Southgate, N., exhibited a most interesting group of *Laelia pumila praestans*, with flowers of great size, broad petals, and varying considerably in colour. The flowers, in fact, seemed too large for the plants.

Mrs. Wingfield (gardener, Mr. W. J. Empson), Amphill House, Beds, set up a showy group of Orchids consisting of *Cattleya labiata*, in variety, *C. bowringiana*, *C. dowiana aurea*, and various *Oncidium*s and *Odontoglossum*s in season (Silver Banksian Medal). Fred. Hardy, Esq., Tyntesfield, Ashton-on-Mersey, Cheshire, showed some grand varieties of *Cattleya dowiana aurea*.

Walter C. Walker, Esq., (gardener, Mr. Geo. Cragg), Percy Lodge, Winchmore Hill, exhibited a richly-flowered collection of *Cattleya labiata*, *Oncidium crispum*, *O. Forbesii*, *O. praetextum*, &c. (Silver Banksian Medal).

R. I. Measures, Esq. (gardener, Mr. H. J. Chapman), Cambridge Lodge, Camberwell, set up a showy and richly-flowered collection of Orchids, noticeable amongst which were *Cattleya labiata*, *Laelia purpurata* Mrs. R. I. Measures, *Oncidium ornithorhynchum album*, *O. marshallianum*, *Dendrobium aureum*, various *Cypripediums* and others, making a most interesting assemblage (Silver Floral Medal).

T. Statter, Esq. (gardener, Mr. R. Johnson), Stand Hall, Manchester, exhibited part of the original *Cattleya hardyana* in the form of a healthy piece with a profuse development of roots, and some good flowers. It has now been eighteen years in the country. He also showed *C. dowiana aurea johnsoniana*. Mrs. Briggs Bury, Bank House, Accrington, showed *Cattleya gigas gigantea* and *C. Adonis* with blooms of enormous size.

J. Bradshaw, Esq. (gardener, Mr. H. Whiffen), The Grange, Southgate, exhibited a group of choice varieties of *Cattleya labiata*, including the chaste and charming C. l. "R. I. Measures," C. l. *glauca*, with a blue lip, C. l. *Etona*, and C. l. *Ruby*, all very choice indeed.

C. L. N. Ingram, Esq. (gardener, Mr. Bond), Elstead House, Godalming, exhibited *Laeliocattleya Homere*, *L. Lady Rothschild*, and *Cattleya bowringiana*. Messrs. W. L. Lewis & Co. staged the magnificent *Laelia pumila magnificum*, and the charming *L. longipes* with orange lip.

R. Brooman White, Esq., Arddarrach, showed some fine *Odontoglossum crispum*. Reginald Young, Esq., Fringilla, Linnet Lane, Liverpool, showed some fine Cattleyas. Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), was accorded a Cultural Commendation for *Laelia Perrinii alba* Burford Variety, with white flowers and pale mauve lip.

A handsome group of stove and greenhouse decorative plants was set up by Messrs. John Laing & Sons, Forest Hill, S.E. There were several well-flowered bush plants of Chrysanthemums included; and *Dracaenas* and *Crotons* were well coloured and healthy. *Erica hyemalis* and *Begonia Gloire de Lorraine* were very floriferous and showy. A grand piece of *Phyllotenum Lindenii* was also very conspicuous (Silver Flora Medal).

Mr. W. Fyfe, gardener to Lord Wantage, Lockinge Park, Wantage, contributed a showy group of cut seedling Sunflowers.

A small collection of cut decorative Chrysanthemums was sent by Messrs. H. Cannell & Sons, Swanley, Kent. Miss Rose, The Star, and Lady Onslow were some of the handsomest varieties shown.

On the right hand side of the entrance Messrs. Cuthush & Son, Highgate, N., had deposited a semi-circular group of plants that included Chrysanthemums, Carnations, and two grand pieces of *Dracaena Doucettii*. There was a triple edging of *Ophiopogon Jahuran variegatus*, *Skimmia japonica*, and *Begonia Gloire de Lorraine* (Silver Banksian Medal).

On the opposite side of the doorway Messrs. Jas. Veitch & Sons, Chelsea, made a grand display of Chrysanthemums in pots. The plants bore some grand flowers and ranged in height from 3 ft. in the front ranks to 7 ft. in the back row, where a fringe of Palms completed the effect. All of the blooms were good, but special mention may be made of varieties like Mutual Friend, M. Chénon de Léché, Sunflower, Louise and Emily Silsbury (Silver Banksian Medal).

A grand exhibit of Chrysanthemums both of plants and cut blooms was made by Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey. Thos. Wilkins, Edith Tabor, and Ma Perfection were represented by superb flowers on the plants, and in the two dozen cut blooms shown, Mrs. J. Lewis, Phoebus, Lady Hanham, and Pride of Madford were of that high quality we expect to see from Mr. Wells (Silver Gilt Banksian Medal).

Cut Chrysanthemums were shown by Mr. G. Wythes, gardener to Earl Percy, Syon House, Brentford. Three blooms each of most of the varieties represented were on view, and comprised capital samples of John Lightfoot, Vivian Morel, Amos Perry, Etoile de Lyon, Globe d'Or, and Baron Hirsch (Silver Banksian Medal).

An extensive exhibit of cut Chrysanthemums was made by Mr. W. J. Godfrey, Exmouth, Devon. Lady Ridgeway, Royal Standard, Mr. W. J. Godfrey, Lady Byron, Werther, Mrs. Hume Long, Edith Tabor, Mrs. J. R. Lewis, Ella Curtis, Mrs. Maling Grant, and Pride of Exmouth were some of the most telling sorts. The Japs were most in evidence (Silver Gilt Flora Medal).

An exceedingly handsome decorative exhibit was that coming from Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton. The groundwork consisted of Ferns, in which some beautifully grown samples of *Adiantum farleyense* were very conspicuous. Raised above the level of these were some of the finest specimens of *Begonia Gloire de Lorraine* that we have ever seen, for they were large, vigorous, and floriferous (Silver Flora Medal).

A collection of Nerines was contributed by H. J. Elwes, Esq., Colesborne, Andoversford, Gloucestershire. The umbels of flower were large and fine, and several shades of carmine, scarlet, orange-scarlet, and pink were on view (Silver Flora Medal).

Miss Emmett, 6, St. Charles' Square, W., exhibited models of Orchids made for the Royal Gardens, Kew. The models were absolutely life-like, and as good as those specimens of this lady's handiwork to be seen in the windows of Messrs. Barr & Sons' shop in King Street, Covent Garden. A Silver Banksian Medal was awarded.

Messrs. James Veitch & Son, Ltd., sent hybrid Rhododendrons and a batch of *Begonia Gloire de Lorraine*, also *Richardia Pentlandii*.

Messrs. Wm. Paul & Sons, Waltham Cross, Herts, received a Silver Gilt Banksian Medal for a group of cut Roses. These, considering the advanced state of the season, were really first-class. Enchantress Marie Van Houtte were represented by fine baskets.

Messrs. H. Cannell & Sons had an exhibit of cut Chrysanthemums arranged in a taking way with pots of Maidenhair Fern. Madame G. Bruant, Lady Byron, Souvenir des Malines, N.C.S. Jubilee, Robert Powell, and Lady Hanham were some of the finest blooms. Bunches of Violet Princess of Wales were also shown (Silver Banksian Medal).

Mr. P. Blair, gardener to the Duke of Sutherland, Trentham, Staffordshire, had a batch of grand plants of the beautiful *Gesnera amabilis*. Mr. R. Owen, Maidenhead, sent a quantity of blooms of new seedling Chrysanthemums.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., set up in a tasteful and effective manner a group of Chrysanthemums, for which a Silver Banksian Medal was voted. A fringe of Maidenhair Fern, interspersed with small plants of *Crataegus Pyracantha Lelandii* added a finish to the group.

A Silver gilt Knightian Medal went to Messrs. John Laing & Sons, for a splendid exhibit of 100 dishes of hardy fruit. Duchesse d'Angoulême, Easter Beurré, Doyenné du Comice, Beurré Clairgeau, and Beurré Diel were some of the best Pears, and such Apples as Beauty of Kent, Emperor Alexander, King of the Pippins, Cox's Pomona, Swedish Reinette, Golden Noble and Hollandbury were first-rate.

A Silver Gilt Knightian Medal also went to Messrs. J. Cheal & Sons, Crawley, Sussex, for upwards of seventy dishes of hardy fruit. Fearn's Pippin,

Thomason, Paroquet, Nanny, Frogmore Prolific and Bismarck were some of the finest Apples; and Doyenné du Comice, Durandean, and Epine Dumas some of the best Pears.

A Silver Gilt Knightian Medal was voted to Mr. W. Taylor, gardener to C. A. Bayer, Esq., Tewkesbury Lodge, Forest Hill, for an excellent collection of Grapes Muscat of Alexandria, Gros Maroc, Trebbiano, Alicante, Gros Colman, and Black Hamburgh which were all in remarkably good condition.

A seedling Grape Marchioness of Downshire was sent by Mr. T. Bradshaw, gardener to the Marquis of Downshire, Hillsborough Castle, Co. Down. Mr. J. Crook, Forde Abbey Gardens, Chard, sent a dish each of Plums—Coe's Late Red and Coe's Golden Drop.

There were eight dishes of Apples submitted for the Veitch flavour prizes. Mr. C. Herrin, gardener to the Hon. G. M. Fortescue, Dropmore, Maidenhead, was placed first with Cox's Orange Pippin. Mr. G. Woodward, gardener to Roger Leigh, Esq., Barham Court, Maidstone, was second with American Mother.

Eight dishes of Pears were also shown, the first prize going to Col. Brymer, M.P., Islington House, Dorchester, with Doyenné de Comice. Second came Mr. G. Woodward with Emile d'Heyst.

Messrs. Dobbie & Co., Rothesay and Orpington, showed clean and shapely samples of Turnips—Dobbie's Model White, and Golden Ball, and Parsnip Dobbie's Selected; also Dobbie's Selected Parsley and Victoria Kale.

Messrs. H. Cannell & Sons received a Silver Gilt Knightian Medal for a grand collection of vegetables that comprised magnificent samples of Onions of various sorts, Cauliflower Autumn Giant, Leeks, Cabbages, and Potatos.

Messrs. Jas. Carter & Co., High Holborn, obtained a Bronze Knightian Medal for a collection of Beet, and some clean and heavy roots of Red Elephant Carrot.

THE VICTORIAN MEDALS OF HONOUR.

The presentation of the Victorian Medals of Honour to the sixty chosen recipients took place in the end of the hall where the lectures are usually held at three p.m. Sir Trevor Lawrence Bart., occupied the chair, a numerous attendance being present.

On rising to address the meeting, Sir Trevor Lawrence called attention to the fact that the council of the Royal Horticultural Society had decided to institute this medal in order to celebrate Her Majesty's long and glorious reign. Her Majesty had been for many years patron of the society, and the Prince Consort had for a number of years presided over its fortunes. The medal after due consideration had been distributed to every form of intellect that had been devoted to the interests of horticulture. There were, he regretted to say, only two ladies on the list. Of botanists there were eight, headed by the greatest botanist in the world, Sir J. D. Hooker. Of collectors and hybridists there were six; of nurserymen, fourteen; of gardeners, twenty-seven, including fifteen amateurs and twelve professionals; of landscape gardeners, one; and of gentlemen connected with the press, two.

The medal itself was the work of a lady, viz., Miss Margaret Giles, who had accomplished a great deal in a small space.

The names of the various recipients were then read out by the Rev. W. Wilks, and the medals were handed to the gentlemen in person by Sir Trevor Lawrence. There were a few absentees, including Professor M. Foster, Mr. Herbst, Mr. W. Paul, Mr. David Thomson, and Mr. Wm. Thompson. The following is the list of the recipients of the Medals:—

- | | |
|----------------------------|-------------------------|
| Miss Jeykyl | Professor M. Foster |
| Miss Willmott | Mr. G. Gordon |
| Mr. J. G. Baker | Mr. John Heal |
| Professor I. Balfour | Rev. G. Henslow |
| Mr. P. Barr | Mr. Herbst |
| Mr. A. F. Barron | The Very Rev. Dean Hole |
| Mr. Ed. John Beale | Sir J. D. Hooker |
| Mr. W. Boxall | Rev. F. D. Horner |
| Mr. Wm. Bull | Mr. J. Hudson |
| Mr. Geo. Bunyard | Mr. Peter Kay |
| Mr. F. W. Burbidge | Mr. John Laing |
| Mr. W. Crump | Mr. Maries |
| Mr. R. Dean | Mr. McIndoe |
| Mr. Geo. Dickson | Mr. H. E. Milner |
| Rev. H. H. D'Ombrain | Mr. Ed. Molyneux |
| Mr. Chas. Drury | Mr. Geo. Monro |
| Mr. Malcolm Dunn | Mr. F. Moore |
| Rev. Canon Ellacombe | Dr. D. Morris |
| Mr. H. J. Elwes | Mr. Geo. Nicholson |
| Mr. J. Fraser, (Leabridge) | Mr. J. O'Brien |

- Mr. Geo. Paul
- Mr. Wm. Paul
- Mr. T. Francis Rivers
- Hon. Walter Rothschild
- Mr. F. Sander
- Baron Schroder
- Mr. John Seden
- Mr. N. N. Sherwood
- Mr. Jas. Smith
- Mr. Martin R. Smith

- Mr. Wm. Speed
- Mr. A. Sutton
- Mr. Owen Thomas
- Mr. David Thomson
- Mr. W. Thompson
- Mr. H. Turner
- Mr. G. F. Wilson
- Rev. C. Woolley Dod
- Mr. John Wright
- Mr. G. Wythes

OBITUARY.

MR. E. J. BAILLIE.

As announced in our last issue, we now place on record a few facts relating to the late lamented Mr. E. J. Baillie, F.L.S., who died at his residence, Woodblee, Upton, Chester, at the age of forty-six, on the morning of the 18th inst. He had been ailing for some time past but treated the matter rather lightly, and returned to business the day after he had consulted his doctor, but soon returned and had to take to bed. This was on Wednesday and he died on the following Monday.

Mr. Baillie was educated at Tarvin. A little over thirty years ago he commenced as a junior in the correspondence department of Messrs. F. & A. Dickson & Sons, Eastgate Street, Chester, where his business capacity secured him rapid promotion. He ultimately had the full charge and supervision of the establishment. He next rose to be cashier and confidential adviser of the firm and later on became the managing partner of the business. When the two firms of the name of Dickson became amalgamated, Mr. Baillie became deputy chairman and one of the managing directors of Messrs. Dicksons, Limited. His management extended more and more into the extensive nursery department after the death of Mr. Alfred Dickson.

Independently of his business in which he was intimately wrapped up, he was closely connected with various other organisations which prospered on account of the whole-hearted way with which he took them in hand. For some time he had been honorary secretary and treasurer to the management of the Grosvenor Museum, and laboured hard for the good of that institution. He enjoyed a considerable amount of reputation for his knowledge of plants, as was well known to the members of the Natural Science Society of Chester, to whom he acted as "guide, philosopher and friend," while making an inspection of the living specimens grown in the nursery, or during their rambles in the surrounding districts. He was a Fellow of the Linnean Society of London, as well as of the Royal Horticultural Society. Locally, also, he will be remembered for the little book he wrote on the flora of the district. The Kingsley Memorial Medal was awarded him for his services to natural science. The Chester Paxton Society owes him a debt of gratitude for the aid he rendered the formation of the same.

Mr. Baillie was also a prolific writer on all sorts of subjects he had at heart; but was best known about London for the papers he read on fruit culture at the conferences and meetings of the Royal Horticultural Society. As might be expected his contributions to the subject of fruit culture appeared in various publications. Consistently with his opinions on the value of fruit as food, he was an enthusiastic vegetarian and a vice-president of the Vegetarian Society, taking an active part in the conferences of that body both by his presence, his active assistance and in the reading of papers relative to views held by this society. The latter was celebrating its Jubilee at Manchester on the day of Mr. Baillie's death, and singularly enough, a paper by the latter was read at the conference before the Vegetarian Society was made aware of his death. The paper was entitled "A Guild of Good Life," and in it the deceased author referred to the issues at stake in opposition to the ethics of vegetarianism. While in Ireland recently he was struck with the abundance of Blackberries that lined the hedgerows, and the abundance of Mushrooms that were allowed to waste while the rural population was often in a state of poverty, and threatened with famine on account of the failure of the Potato crop. He contended that with proper organisation all this food might be turned to account as a source of income.

A personal friend and an enthusiastic disciple of John Ruskin, Mr. Baillie offered much assistance both by word and example in spreading a love of the fine arts. Yet in the midst of his extensive business

engagements and the many sidedness of his accomplishments and his labours for the good of many causes, he was noted for his courteousness and affability, not only to his friends, but to strangers on matters even of the most trivial importance. By his attentiveness to and sympathy with all with whom he came into contact, he endeared himself to a wide circle of friends. Chester has lost much by his death. Though thus cut off in the prime of life, he leaves a widow and a family of ten to mourn his untimely departure.

CHRYSANTHEMUM SHOW.

BY TELEGRAM.

STEYNING.—October 27th and 28th.

THERE are good all round exhibits. The entries exceed by sixty-five more than ever they have done before. Class one, best group Chrysanthemums, 1st, Mr. C. F. Knowles; 2nd, Mr. G. Phillips; 3rd, Mr. G. Treagus. For the best three Chrysanthemum plants, 1st, Mr. C. F. Knowles; 2nd, Mr. A. Worthington; 3rd, Mr. G. Phillips. For the best twenty-four Japanese varieties distinct, 1st, Mr. G. Hart; 2nd, Mr. J. White; 3rd, Mr. A. Slaughter. For twelve incurved blooms, distinct, 1st, Mr. G. Hart; 2nd, Mr. C. Knowles; 3rd, Mr. R. Botting. For six bunches of Pompons, 1st, Mr. J. Mannings; 2nd, Mr. R. Botting; 3rd, Mr. E. Cripps; 4th, Mr. P. Breach. In the class for a group of Chrysanthemum plants Mr. H. Joyes was first; Mr. H. Goatcher, second. For eighteen blooms, 1st, Mr. H. Joyes. For the best bouquet of Chrysanthemums Mrs. Searle was first; Mr. C. J. Hole, second; and Mrs. G. Phillips, third.

A fine display of wreaths, Chrysanthemums, Heaths, Solanums, and other plants not for competition was shown by Mr. Walter Hills, florist, Steyning, who also decorated the platform. Other exhibits not for competition included those of Mr. C. Kilmister, The Nurseries, Steyning, and the Ichthemic Guano Company.

QUESTIONS AND ANSWERS

Dendrobiums showing flower buds.—*Constant Subscriber*: The usual flowering season of *Dendrobium nobile* is from January to March, but this can be prolonged by cultural treatment as to temperature and the moisture given them. The method you have pursued as to temperature and the water you have actually applied to them seems to be correct enough, but it strikes us that the cool *Odontoglossum* house is not the best that could be selected for ripening off *Dendrobiums*. Although you applied very little water to the roots there would always be a considerable amount of moisture in the atmosphere, and the roots of *Dendrobiums* would absorb it as easily as if it were applied to them artificially. This, together with the mild autumn we have been enjoying, no doubt accounts for your plants starting into growth prematurely. Another year you would do better to hang the plants up in a vinery or Peach house after the fruit is gathered and the ventilators thrown open, so as to secure a free circulation of air. This would hardly be the case in an *Odontoglossum* house. So long as the autumn remains open you should keep the *Dendrobiums* relatively cool, so as to retard them, but not actually check growth where the plants are really started. By this means you may be able to tide them over the worst part of autumn and winter before the flowers actually expand. Those which are in active growth had best be taken into a house where the night temperature does not fall below 55° at night, with a rise to 60° by day. This should be done on the advent of really stormy or very cold weather. Those which have not started into growth should be kept a little cooler and drier to retard them. They cannot really be very dry at the root, otherwise they would hardly have started yet. It may be remembered, however, that there are individual variations, some being naturally early. On the whole, however, it is our opinion that the atmosphere of an *Odontoglossum* house is too moist to allow *Dendrobiums* to go to rest. What applies to *D. nobile* also applies to *D. wardianum* and its varieties, except that the latter species requires a slightly higher temperature to do it justice.

Coelogyne Cristata.—*Constant Subscriber*: Now that your *Coelogyne*s have finished their growth, you must ripen them off, if this has not already been done, by giving abundant ventilation on all favourable occasions. Some successful growers place them on the shelf of a greenhouse or similarly cool structure close to the ventilators. The result is that the leaves get thoroughly hardened and leathery, while the pseudobulbs become equally firm in texture. After this ripening has been completed you may keep the plants in a temperature of 40° to 45° during winter, and give them only just sufficient water to prevent the pseudobulbs from shrivelling. When the plants begin to show signs of pushing up

their flower spikes it will then be time enough to place them in a slightly warmer house, giving them an increasing supply of moisture as the temperature rises in spring and growth becomes active.

Asters.—*G. Stapleton*: The varieties of Aster Novi-Belgii are now so numerous that it is almost, if not quite impossible, to name more than a few of the more distinct unless one had a correctly named collection to consult. The greater proportion of them have arisen in British gardens so that they cannot be matched from American specimens. Many people give them their own names so that many indistinguishable varieties have different names. No. 3 which you sent seems identical with what used to be named Aster Novi-Belgii aestivalis; but it is scarcely worth cultivating when many finer things are to be had. No. 7 has not large enough flowers for formosissimus. It is very common in the suburban gardens of London and we have for many years known it as Aster Novi-Belgii spectabilis. No. 8 we consider as near the typical Aster Novi-Belgii as possible, judging from the small specimen sent.

Outside Thermometer.—*Omega*: This is usually placed at 3ft. to 4ft. from the ground, for gardeners are not very particular to a foot or two. About 4ft. would be a suitable height, providing you are careful to state the elevation of the same in any records you may make, and whether the thermometer is sheltered in a case or fully exposed.

Imported Odontoglossum crispum.—*Odont.*: The spike you mention in the report of Craigclowan as carrying twenty blooms, was no doubt a single, strong, unbranched spike bearing large flowers. Your plant in a 32-sized pot, bearing three spikes, having an aggregate of 112 blooms must have been grand, and quite unusual for the ordinary run of imported plants; but we should suspect that the spikes are branched as well as being strong. Now, when branching occurs the flowers are usually much smaller than in the case of unbranched spikes under good cultivation. You do not say whether your flowers were small, but whether this was the case or not your plant was undoubtedly a magnificent and showy one.

Best Coloured Variety of Berberis.—*John Halifax*: The best for general purposes is *B. Aquifolium*, often named *Mahonia Aquifolium*. The leaves, or many of them, change to a fine red when the weather becomes cold in autumn, and retain this hue till the temperature rises in spring. It does well under trees, but we would not guarantee that the leaves will colour well under such conditions. To colour well, the plants must be fully exposed to sun and air, and be in dry rather than wet soil. For instance, the two common forms of *Ampelopsis* colour well in England, but remain green almost to the last in Scotland, and then turn yellow. Your district of England has a rather moist climate, therefore the more need to plant with full exposure. *Berberis thunbergiana* assumes a fine orange-red for ten days or a fortnight before the leaves fall. *Berberis vulgaris purpurea* has purple leaves all the summer and autumn till they fall; but we think you have *B. Aquifolium* in your mind.

Hardy Shrubs with highly coloured Leaves.—*John Halifax*: In speaking of coloured foliage you do not say whether you mean autumn tints or leaves that are coloured all the season; nor do you state what colours. The following are taken at random, but if they do not meet your wants let us know more precisely what you mean. In summer you may have the Golden Privet, the purple Hazel, the copper, purple and black Beech, *Prunus Pissardii* (purple), the young shoots of the purple-leaved Peach, variegated Hollies, Iviess, *Cornus* of sorts, variegated Negundo, and many others. In autumn a fine red or crimson hue is assumed by *Rhus glabra* and *R. g. laciniata*, *Liquidambar styraciflua*, *Ampelopsis Veitchii*, *Virginian Creeper*, *Quercus coccinea*, *Q. tinctoria*, *Berberis thunbergiana*, &c. The young shoots of second growths of Elm, Oak, Hornbeam, *Acer colchicum rubrum*, and many others are choice for cutting. The small leaved wild Ivy in exposed positions becomes very handsome in winter.

Names of Fruits.—*P.D., B.*: 1 and 5, Warner's King; 2 and 4, New Hawthornden; 3, Northern Greening; 6, Norfolk Beefing; 7, Eclinville.

Names of Plants.—*Harding*: 1, *Aster diffusus horizontalis*; 2, *Aster ericoides*; 3, *Aster Novi-Belgii*, var.; 4, *Aster multiflorus*; 5, *Aster cordifolius*.—*F. B.*: 1, *Aphelandra cristata*; 2, *Agathosma ciliata*; 3, *Cypripedium longifolium*; 4, *Cedronella triphylla* (*Balm of Gilead*); 5, *Adiantum cuneatum Pacottii*; 6, *Selaginella emiliana*; 7, *Crataegus Pyracantha*.—*G. Stapleton*: 1, *Aster ericoides*; 2, *Aster diffusus horizontalis*; 3, *Aster Novi-Belgii*, var.; 4, *Aster Novi-Belgii Harpur Crewe*; 5, *Aster Novae-Angliae pulchellus*; 6, *Aster Novae-Angliae ruher*; 7, *Aster Novi-Belgii spectabilis*; 8, *Aster Novi-Belgii*; 9, *Erigeron glabellus*, apparently, but you should have sent some of the long radical leaves. See separate note on Asters.—*Alex. Logan*: 1, *Coelogyne (Pleione) hookeriana*; 2, *Coelogyne (Pleione) lagenaria*; 3, *Coelogyne (Pleione) praecox wallichiana*; 4, *Acropera Loddigesii*. We are not surprised you were puzzled for different importations are very variable in colour.—*C. McKenzie*: *Erica australis*.

Communications received.—H. J. Jones.—H. Cannell & Sons.—Dobbie & Co.—L. Upcott Gill.—A. Gorton.—S. N. Sampson.—I. P. Roberts.—Geo. Tucker.—J. H.—Geo. Williams.—J. R. Johns.—T. S.—A. P. South.—Benj. Forbes.—Z.—L. K.—Lionel Y.

TRADE CATALOGUES RECEIVED.

W. ATLEE BURPEE & Co, Philadelphia, U.S.A.—Sweet Peas. Special offer to the Trade. THOS. COOK & SON, Ludgate Circus, London E.C.—Popular Tours at Popular Rates. (First Edition).

COVENT GARDEN MARKET.

October 27th, 1897.

FRUIT.—AVERAGE WHOLESALE PRICES.

| s. d. s. d. | | s. d. s. d. | |
|--------------------------|-----------|-----------------------|---------|
| Apples, per bnsbel | 2 6 7 0 | Grapes, per lb | 0 9 1 6 |
| Black Currants 1/2 sieve | | Pine-apples | |
| Red " 1/2 sieve | | —St. Michael's each | 2 6 8 0 |
| Cherries half sieve | | Plums per 1/2 sieve | |
| Nova Scotia Apples | | Strawberries, per lb. | |
| per barrel | | Tasmanian Apples | |
| Filberts | | per case | |
| Cobbs | 22 6 24 0 | | |
| per 100lbs. | | | |

VEGETABLES.—AVERAGE WHOLESALE PRICES

| s. d. s. d. | | s. d. s. d. | |
|-----------------------|--------------------|----------------------|--------------------|
| Artichokes Globe doz. | 2 0 3 0 | Herbs | per bnch 0 2 |
| Asparagus, per bundle | | Horse Radish, bundle | 2 0 4 0 |
| Beans, French, per | | Lettnces | per dozen 1 3 |
| per half sieve | 4 0 5 0 | Mushrooms, p. basket | 1 0 |
| Beet | per dozen 2 0 | Onions | per bunch 0 4 0 6 |
| Brussel Sprouts, | | Parsley | per bnch 0 3 |
| per half sieve | | Radishes | per dozen 1 6 1 3 |
| Cabbages | per doz. 1 0 1 3 | Seakale | per basket |
| Carrots | per doz 0 3 | Small salad, pnnnet | 0 4 |
| Cauliflowers | doz. 2 0 3 0 | Spinach | per bushel 3 0 4 0 |
| Celery | per bundle 1 0 1 6 | Tomatos | per lb. 0 6 1 0 |
| Cucumbers | per doz. 2 0 3 0 | Turnips | per bnch 0 3 |
| Endive, French, doz. | 1 0 2 0 | | |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| s. d. s. d. | | s. d. s. d. | |
|-------------------------|------------------|-----------------------|----------|
| Arum Lilies, 12 blms. | 5 0 6 0 | Marguerites, 12 bnn. | 2 0 4 0 |
| Asparagus Fern, bun. | 1 6 3 0 | Marigold Fern, 12bs. | 4 0 8 0 |
| Asters, various, doz. | | Orchids, doz. blooms | 1 6 12 0 |
| bunches | 3 0 6 0 | Pelargoniums, 12 bun. | 4 0 6 0 |
| Bonvardias, per bnn. | 4 0 9 0 | Pyrethrum doz. bun. | 1 6 3 0 |
| Carnations doz. blms. | 0 6 3 0 | Roses (Indoor), doz. | 6 1 0 |
| Carnations, doz. bun. | 4 0 9 0 | " Tea, white, doz. | 0 9 2 0 |
| Chrysanthemums | | " Niels | 1 6 4 0 |
| dozen blooms | 1 0 3 0 | " Safrano | 1 0 2 0 |
| Enocharis | per doz 3 0 6 0 | (English), | |
| Gardenias | per doz. 2 0 4 0 | Red Roses, doz. | 1 0 2 0 |
| Geranium, scarlet, | | Pink Roses, doz. | 2 0 4 0 |
| doz. bunches | 4 0 6 0 | Roses, doz. bun. | 3 0 9 0 |
| Lilium longiflorum | | Smilax, per bunch | 1 6 3 0 |
| per doz. 4 0 6 0 | | Tuberose, doz. | |
| Lily of the Valley doz. | | hlooms | 0 3 0 4 |
| sprays | 1 0 2 0 | Violets (Parma), per | |
| Lilac (French) per | | bunch | 2 6 3 6 |
| bunch | 5 0 6 0 | " doz. bun. | 1 6 2 0 |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

| s. d. s. d. | | s. d. s. d. | |
|-------------------------|-----------|------------------------|---------------|
| Arbor Vitae | | Ferns, small, per 100 | 4 0 6 0 |
| per doz. | 12 0 35 0 | Ficus elastica, each | 1 0 5 0 |
| Aspidistra, doz. | 18 0 35 0 | Foliage Plants, var., | |
| specimen | 5 0 10 0 | each | 1 0 5 0 |
| Aster, d z. pots | 2 0 4 0 | Lilium Harrissii, | |
| Chrysanthemum, per | | per pot | 2 0 4 0 |
| doz. pots | 6 0 30 0 | Lycopodiums, doz. | 3 0 4 0 |
| Coleus, doz. pots | 2 0 4 0 | Marguerite Daisy doz | 4 0 9 0 |
| Dracaena, various, | | Myrtles, doz. | 6 0 9 0 |
| per doz. | 12 0 30 0 | Palms in variety, each | 1 0 15 0 |
| Dracaena viridis, doz. | 9 0 18 0 | Palms, Specimen | 21 0 63 0 |
| Eucalyptus, var. doz. | 6 0 18 0 | Pelargoniums | |
| Evergreens, invar. doz | 6 0 24 0 | Scarlets | per doz 1 4 0 |
| Ferns, invar., per doz. | 4 0 12 0 | | |

INDEX TO ADVERTISEMENTS.

| | |
|---------------------------------|--------------------------------|
| Auction Sales. | Hardy Plants. |
| F. A. & A. W. Mellersh...130 | Hood Gardens .. 129 |
| Protheroe & Morris...130 | Heating Apparatus. |
| Bulbs. | W. Cooper, Limited ...144 |
| Barr & Sons ..131 | Messenger & Co...144 |
| Z. Gaye ..129 | Thames Bank Iron Co ...129 |
| W. B. Hartland ..129 | Horticultural Builders. |
| R. Sydenham...129 | J. Boyd & Sons...129 |
| Sutton & Sons ..129 | W. Cooper, Ltd.129 |
| T. Turner ..129 | J. Gray...129 |
| T. S. Ware...131 | W. Richardson & Co ..144 |
| C. G. Van Tuhergen ..129 | J. Weeks & Co ..129 |
| Catalogues. | Insecticides. |
| Barr & Son ..131 | Gishurst Compound ..129 |
| R. H. Bath ..129 | G. H. Richards...130 |
| Bunyard & Co...129 | Manures. |
| H. Deverill ..129 | Anglo-Continental ..129 |
| R. Smith & Co...131 | Clay & Son...129 |
| Sutton & Sons ..129 | W. Colchester ..129 |
| J. Veitch & Sons ..130 | Lawes' ..143 |
| T. S. Ware...131 | W. Thomson & Sons ..143 |
| Chrysanthemums. | Miscellaneous. |
| Dobbie & Co.129 | Epps's Cocoa...143 |
| Florists' Flowers. | Gishurstine ..129 |
| R. H. Bath ..129 | Potter's Felt ..129 |
| J. Douglas ..129 | Smyth's Baskets ..129 |
| Hood Gardens ..129 | Orchids. |
| Kelway & Son ..129 | J. Cypher ..131 |
| Mrs. Lakin...129 | Leeds Orchid Co.129 |
| S. Pye ..129 | W. L. Lewis & Co.129 |
| G. Stevens...129 | P. McArthur ..131 |
| G. Thornhy ..129 | F. Sander & Co ..129 |
| T. S. Ware ..131 | Publications. |
| C. A. Youog ..129 | Darlington ..143 |
| Flower Pots. | F. C. Edwards ..129 |
| Sankey & Sons, Ltd.144 | GARDENING WORLD ..143 |
| Fruit Trees. | Roses. |
| G. Bunyard & Co.129 | G. Cooling & Sons ..130 |
| Cheal & Sons...130 | R. Smith & Co...131 |
| R. Smith & Co.131 | James Walters ..129 |
| J. Veitch & Sons ..130 | Seeds |
| Garden Sundries, &c. | R. Smith & Co...131 |
| J. Arnold ..144 | Strawberries. |
| Essery's Coal ..144 | Laxton Bros.129 |
| Hirst, Brooke & Hirst. .. 129 | A. Metcalfe...129 |
| A. Outram ..143 | Vines. |
| Porter's Crocks ..143 | J. Veitch & Sons ..130 |
| G. H. Richards ..130 | |

A Special Offer to Readers of THE GARDENING WORLD. 25/- BOOK for 8/-

NO HOME SHOULD BE WITHOUT ONE

Ogilvie's Encyclopædia

OF USEFUL INFORMATION AND WORLD'S ATLAS.

No Single Book ever before contained such a Wealth of Knowledge.

By Special Arrangement with the Publishers of the "Encyclopædia of Useful Information and Atlas of the World," we are enabled to offer to the Public a Magnificent 25s. Volume for 16 of the coupons, which will appear weekly, together with 6d. each, accepted in Weekly Instalments, or the Coupons may be held until the whole period has elapsed and brought or sent to the Office with 8s., and 6d. towards carriage.

A COMPLETE ILLUSTRATED LIBRARY IN ITSELF.

A universal assistant and treasure-house of information on every conceivable subject, from the household to the manufactory. In short, gives information about everything, is absolutely indispensable to everyone in all walks of life; the contents being so separated, indexed, and arranged that they can be turned to at once. It is

THE BEST { BOOK OF INFORMATION } EVER ISSUED. Size of Encyclopædia: 9 by 11 1/2 inches. 656 Pages

It contains

MANY MAGNIFICENTLY ENGRAVED COLOURED MAPS,

and a description of every country under the sun, besides much other matter relative to the Home, the Farm, the Factory, a Dictionary of Statistics—many Useful Tables, Poetical Selections, Synonyms, Famous Bridges and Ships, How to Calculate, How to Cook, How to Get Rich, How to Cure all Diseases, How to Succeed in Business, Table of Weights and Measures, and

HUNDREDS OF OTHER TOPICS OF GREAT VALUE TO EVERY PERSON

who desires to be up to the times. To see the Book is to want it. To Members of Mutual Improvement Societies it will prove of inestimable value.

The articles are written by men whose lives have been devoted to the subjects treated, are short and concise, but contain full information up to date. It is to be consulted on every subject that arises in everyday life, by old and young alike. It contains a complete Illustrated Atlas of the World.

IN THESE DAYS OF COMPETITION

it is imperative that a Gardener should be a well-informed individual. Here is an Encyclopædia containing an immense amount of knowledge that will be of the greatest service to him.

YOUNG GARDENERS,

do you wish to be successful? Then remember that to possess knowledge is the surest way to achieve success.

It is elegantly bound in Morocco Cloth, with beautifully designed Gilt Side-stamp and Red Edges, making at once the most handsome and durable as well as THE MOST USEFUL BOOK EVER MADE or sold for 25s.

301097. **COUPON.**

OGILVIE'S ENCYCLOPÆDIA OF USEFUL INFORMATION, AND WORLD'S ATLAS, (Published Price 25s.). 16 COUPONS, AND 6d. WITH EACH.

Name _____

Address _____

Postal Orders or 1/2d. stamps may be sent. COUPONS AND CONTRIBUTIONS MAY BE LEFT at or SENT to the Office for

THE PUBLISHER OF

THE GARDENING WORLD.

COPIES OF THIS BOOK CANNOT BE BOUGHT. They can be obtained only by using these Coupons.

BARR'S GOLD MEDAL DAFFODILS

The Most Lovely of all Spring Flowers.

EMPEROR, a magnificent variety, with deep primrose-coloured perianth, and rich full yellow trumpet, very large flower. *Extra strong Bulbs*, per 100 30s., per doz. 4s. 6d.

OBVALLARIS, the Tenby Daffodil, very early, perianth and trumpet deep yellow, a charmingly graceful daffodil. *Extra Strong Bulbs*, per 100 14s. 6d., per doz. 2s.

SIR WATKIN, the Giant of the Chalice Cupped Daffodils, perianth rich sulphur, cup yellow slightly tinged with orange. *Extra strong bulbs*, per 100 25s., per doz. 3s. 6d.

BARRII CONSPICUUS, a flower of great beauty and refinement, a favourite with all, large broad spreading yellow perianth, broad short cup, conspicuously edged bright orange-scarlet. *Extra strong bulbs*, per 100 21s., per doz. 3s.

ALL BULBS SENT CARRIAGE PAID ON RECEIPT OF REMITTANCE.

Send for BARR'S ILLUSTRATED CATALOGUE of all the most beautiful DAFFODILS, with full particulars of collections for Amateurs and Exhibitors, *Free on Application to:*

BARR & SONS,
12 & 13, KING ST.,
COVENT GARDEN, LONDON.
Nurseries:—Long Ditton, Surrey.

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

FOR PLEASURE AND PROFIT

FRUIT

Nothing so profitable and easy to grow.
80 Acres of Saleable Trees.

SEEDS

THE BEST PROCURABLE.
Lists Free.

ROSES

HUNDREDS of THOUSANDS.
Bushes in variety. Packing and Carriage free for Cash with order.
8/- per doz., 60/- per 100.
All other Nursery Stock carriage forward.

ROSES IN POTS From 15/- a doz.

Ornamental Trees, 91 Acres,
A Superb Collection of
Herbaceous Plants,
Four Acres of Glass,
Clematis (80,000) from 15/- doz.
N.B.—Single Plants are sold at slightly increased prices.

GENERAL CATALOGUE

(Over 160 pages) of Nursery Stock, artistically produced containing some hundreds of illustrations, and full of valuable information, free on receipt of 3d. for postage.
Please mention this Paper.

RICHARD SMITH & CO., WORCESTER.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, NOVEMBER 6th, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, November 8th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
TUESDAY, November 9th.—Royal Horticultural Society: Meeting of Committees at 12 o'clock.
National Chrysanthemum Society's Show at the Royal Aquarium (3 days).
Chrysanthemum Shows; two days—Farnham, Kingston, Leeds; three days—Birmingham.
Sale of Dutch bulbs by Messrs. Protheroe & Morris.
WEDNESDAY, November 10th.—Messrs. Harrison & Sons' Vegetable and Farm Root Show at Leicester.
Chrysanthemum Shows; one day—Bodmin, Brixton; two days—Bournemouth, Carlisle, Cheltenham, Chesterfield, Eastbourne, Great Yarmouth, Liverpool; Paris (5 days).
Sale of Dutch bulbs, and special sale of Japanese Lilies by Messrs. Protheroe & Morris.
THURSDAY, November 11th.—Chrysanthemum Shows; one day—Jersey Gardeners' Society, Leighton Buzzard, Hammersmith, Reigate, Spalding; two days—Putney.
Sale of Dutch bulbs by Messrs. Protheroe & Morris.
FRIDAY, November 12th.—Chrysanthemum Shows; two days—Bradford, Eccles, Patricroft, Pendleton and District, Hanley, Sheffield, Crewe; three days—Montauban, Nantes, Algiers.
Sale of Dutch bulbs and imported and established Orchids by Messrs. Protheroe & Morris.
SATURDAY, November 13th.—Chrysanthemum Shows; one day—Weston-super-Mare; three days—Havre; four days—Carlsruhe.

FALKLAND PARK, SOUTH NORWOOD HILL.
—Some time ago, being in the neighbourhood, we had the pleasure of making a hurried inspection of the gardens of Thos. McMeekin, Esq., Falkland Park, South Norwood Hill. The trees were in the sere and yellow leaf, yet the beautiful grounds on the crest of the hill were neat and gay with a variety of subjects. Early flowering Chrysanthemums were bright and highly effective amongst the beds and plantations of shrubs, making one wonder why they are not more largely employed when summer is on the wane and the tender bedding subjects are giving out. They have, however, gained immensely in popularity during the past season. Michaelmas Daisies were also most effective and conspicuous. Their value for autumn work is being recognised. St. Dabeoc's Heath, white and purple Heather, as well as the purple and white forms of the Cornish Heath have been the glory of the rockery for many weeks past. Antirrhinums are planted in irregular masses, and the yellow varieties have been more effective than the ubiquitous yellow Calceolaria. Montbretias have been fine, and Helenium pumilum was flowering for the second time. A bed of Heaths contained the above named kinds, with the addition of Erica carnea, Calluna vulgaris, C. v. aurea, C. v. flore pleno and C. v. alba, all of which give much satisfaction. Various perennial Sunflowers added their quota to the display. The same may be said of the Japan Anemone and its white variety planted in large masses. The fruiting powers of Pernettya mucronata is something remarkable. In the ponds the Hawthorn-scented Aponogeton and many Water Lilies were still flowering, including N. alba, N. odorata, N. chromatella, N. marmorata, N. marliacea alba, N. m. rosea and N. alba rosea. Several beds of tuberous Begonias were still gay, notwithstanding the hailstorm a few days previously. Rain and thunder storms often pass up the valley without affecting this

elevated site. A bed of Lobelia Victoriae and tricolor Pelargoniums was still fine. Two beds of Salvia patens, Liliun speciosum Kraetzeri, Petunias, Veronica Traversii, &c., in mixture, were very effective. Tall specimens of Aralia Sieboldi stand out all winter, giving every satisfaction here.

At this point we passed into the hot-houses, which contain something gay all the year round. A fine batch of Begonia Gloire de Lorraine for winter work was just coming into bloom in the propagating pit. The purple, green and gray striped leaves of Tradescantia Reginae are very telling. Orchids are the pets of Mr. A. Wright, the gardener, who showed us seedlings of Cypripedium oenanthum superbum crossed with C. spicerianum; also C. bar-chamber, C. Arnoldiae, Cymbidium eburneo-lowianum and C. lowiano-eburneum. Leea amabilis is always a handsome subject. Uncommon is Stenandra Lindenii with olive and yellow-ribbed foliage. Mr. Wright grows Cyanophyllum magnificum well. Some plants had leaves 1½ ft. to 2 ft in length. One Cattleya house contained a fine batch of Odontoglossum grande in bloom; and the glorious Cymbidium traceyanum was fast approaching that condition. The cool Odontoglossums were in robust health.

The stove always contains a fine assortment of well-grown foliage plants suitable for this structure. Cyanophyllum carried leaves of enormous size; and those of Alocasia thibautiana were 2½ ft. long. A. watsoniana was equally good in its way. The bright red edges of the variegated Pineapple were very handsome indeed. Heliconia illustris rubricaulis has found its way here. The noble leaves of Anthurium warocqueanum measured 3 ft. 3 ins. in length; while those of A. crystallinum and A. intermedium were proportionately large. The striped foliage of Maranta sanderiana attains handsome dimensions here. The spiny petioles of Chamaerops palambaricus have a forbidding aspect. Specimens of Elaeodendron orientale, 3½ ft. high, were very ornamental indeed. Cattleya dowiana aurea suspended from the roof in quantity is now in bloom.

We never cease admiring the long cool corridor connecting the range of seven new houses together. Something is flowering in it at every period of the year. The climbers on the back wall and on the rafters are the leading feature of the corridor all the year round. The large blue flowers of Lasiandra macrantha have been grand. The white wreathed, drooping sprays of Solanum jasminoides take the eye of every visitor. There were tall Heliotropes filling the house with fragrance, tall Pelargoniums, Fuchsias, Datura sanguinea, with huge red trumpets, Begonia metallica 6½ ft. high, Bougainvillea sanderiana, Begonia ascotensis, B. fuchsioides and others of that type, 10 ft. high, White Plumago, Cassia corymbosa, and many other showy and interesting subjects. The corridor opens into a conservatory filled with a great variety of flowers delighting in a cool, airy structure. The flowers of Abutilon Schwartzii are white, with a green centre and handsome. Many fine varieties of tuberous Begonias, single and double, have been raised by Mr. Wright.

Passing into one of the Orchid houses we noted seedlings of Cypripedium lath-chamber, a very suggestive and very ambiguous combination of names. Amongst flowering subjects we noted Vanda caerulea, V. amesiana, Cypripedium chamberlainianum, C. crossianum, large trusses of Dendrobium formosum giganteum, D. Dearei, and D. Phalaenopsis. Angraecum schottianum is a uncommon species, and Oncidium varicosum Rogersii is always

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Malda Vale, London W.

pretty and interesting. Some fine pieces of *Nepenthes* adorn the roof of this house. The glory of another house close by was upheld by *Cattleya dowiana aurea*, *C. Harrisoniae*, *C. gigas*, *C. gaskelliana*, *Laeliocattleya elegans schilleriana*, and the fragrant autumn-flowering, showy *Oncidium tigrinum*. Effective also are *Oncidium excavatum grandiflorum*, and *Laelia Perinii superba*, with an intense purple lip.

Mr. Wright is not only maintaining the high character of the place, but improving upon it, and making additions to the subjects grown out of doors and under glass. The drought of summer is severe upon this hill top, but the green sward is now well established and trimly kept.

Royal Gardeners' Orphan Fund.—At a meeting of the committee of the Royal Gardeners' Orphan Fund held on the 29th ult., the receipt was announced of a bequest of £457 5s. 11d. from J. W. Thomson, late nurseryman at Haywards Heath; also the following donations for which the special thanks of the committee were accorded:—Rev. A. Lowe, Rangemore, Burton-on-Trent—Proceeds of a collection at a harvest festival, £6 1s. 6d.; Sandringham Cottage Garden Society, £5 5s.; Wimbledon Horticultural Society, sale of flowers, £5; Uckfield Chrysanthemum Society, sale of flowers, £3 3s.; J. Selway, Betteshanger, £3; per T. Roberts, local secretary, Ramsgate, £2 1s.; Forest Hill Horticultural Society, £1 10s.; Hesse and District Horticultural Society, £1 4s. 3d.; Bradford Paxton Society, £1 2s. 6d.; C. Herrin, Maidenhead, £1; G. Carpenter, Byfleet, 10s.; J. Dunkin, Warwick, 10s.; and M. Kneller, Basingstoke, 8s. It was decided to hold the annual meetin at Anderton's Hotel, Fleet Street, early in February, when the election of children to receive the benefits of the fund, will take place. The necessary nomination forms may be had on application to the secretary.

Chrysanthemums in a Drapery Establishment.—As an indication of the wonderful position to which the development of the Chrysanthemum is bringing us to, we notice this week that one of the largest Midland drapery and furnishing houses is announcing prizes of £20 in value, distributed in four classes for eighteen, twelve, and six cut blooms respectively. These will, we understand, be staged in the grand suite of windows in Bull Street, Birmingham, and will undoubtedly form a vast attraction for the multitudes of folks continuously passing there. The dates of the exhibition are November 30th to December 3rd, and the entries close November 25th. There are no entrance fees, and it is not necessary that the varieties of bloom shown should be distinct. We do not observe in the schedule any restriction as to amateur or professionals, and finally it is worthy of further observation that the railway companies will run special excursion trains at reduced fares in that particular week.

Dundee Chrysanthemum Carnival.—This popular northern fixture takes place on the 25th, 26th and 27th inst., and a telegram just to hand announces that Sir William Harcourt has very graciously consented to perform the opening ceremony. The popular patron of the Society, Sir John Leng, M.P., and the entire council are to be congratulated upon the honour which Sir William will undoubtedly confer on the Dundee Chrysanthemum Society, an honour which nevertheless is fully merited by the progressive character of its management and membership. A very full programme has been arranged for the delectation of the flower-loving public of this city of jute and hessian and the surrounding town-ships of Newport, Tayport, Broughy Ferry and so forth; and we are also advised of a probable excursion of delegates from the sister society in Edinburgh on this auspicious occasion. The council have secured the services of one of the leading London bands, consisting of lady musicians and cyclists, and the whole event promises to go off with the very greatest eclat. Walker S. Melville, Esq., is the worthy president of the society, and Mr. William P. Laird, of the famous Nethergate firm, is the indefatigable secretary. Some extensive miscellaneous exhibits are promised.

Death of Mrs. Cornelia Rachel Amys.—Many gardening friends will sympathise with Mr. Amys, who has just lost his wife, who was laid to rest in the quiet little churchyard at Hamble amid every token of esteem and regret on Thursday, October 21st. Mrs. Amys' eyesight entirely failed her fifteen years ago. She was much respected by everyone who knew her. Mr. J. Amys has been gardener and bailiff at Hamble Cliff for many years.—A. O.

Presentation at Glasgow Botanic Gardens.—Mr. James Rourke was presented, on the night of the 29th, with a handsome timepiece, on the occasion of his marriage, by the curator and staff of the Botanic Gardens. The presentation was made in the old classroom, where all the staff were assembled to witness the ceremony. Mr. Dewar, in making the presentation, referred in eulogistic terms to the high appreciation in which they all held Mr. Rourke during the short period which he was with them, and he had no doubt, inferring from the past, that he would long continue to deserve their highest respect, and grow more and more in their esteem. He wished Mr. Rourke and his young wife long life to enjoy the useful gift, as well as the instructive lessons it teaches, and hoped that in the course of time it would be yet another added to the long array of "Grandfather's Clocks." Mr. Rourke replied in appropriate terms, and Mr. Sherry asked a vote of thanks for Mr. Dewar for his kindness in making the presentation.—Gamma.

Princess Mary Adelaide, Duchess of Teck, more familiarly known as Princess Mary, died suddenly at her residence, White Lodge, Richmond, Park, Surrey, at 3 o'clock on the morning of Wednesday the 27th ult., at the age of 64. Last May she underwent a surgical operation for an internal complaint, from which she recovered. On the Monday previous to her death she felt symptoms of her old malady returning, and on Wednesday night at 12 o'clock her physicians after much consultation resolved upon a second operation in the hope of saving her life, but she suffered also from a weak heart and died two hours after the operation. She died in the presence of her husband, her son Prince Alexander and her only daughter the Duchess of York, more familiarly known as Princess May. The Duchess of Teck was well known as the leading organiser of all charitable schemes for helping the needy in her neighbourhood, including Richmond and Kew; and by her geniality and good nature endeared herself to a wide circle of friends, who cannot but regret her sudden demise. Princess Mary was a keen lover of flowers, of which she had a wide knowledge, and was often present at exhibitions many of which she opened. By permission of the Queen, she was buried at Windsor on Wednesday last amid much regret.

Ealing Gardener's Society.—On Tuesday, the 19th ult., the members of this society held a very successful meeting in the Municipal Buildings, Ealing, Mr. C. B. Green, the chairman, presiding. The occasion was a paper by Mr. Geo. Wythes, of Syon House Gardens, Brentford, and the subject was "Profitable Strawberries." The large, electric-lighted room was full to overflowing, many of the members being unable to find seats; none, however, being lukewarm in the reception which was accorded Mr. Wythes, who dealt with his subject in a fresh and vigorous way, even going so far as to quote criticism against himself. Mr. Wythes then strongly advocated the annual system of culture, and claimed—in opposition to some Press critics—that not only was the quality of the fruit thereby enhanced, but that the system in itself was more economical and therefore more profitable. Mr. Wythes also gave, in some detail, the methods whereby he obtained these results, and otherwise afforded much useful and valuable information, which the subsequent spirited discussion showed was acceptable generally and on all-fours with the best practice in the best gardens. Mr. Wythes received an enthusiastic vote of thanks, which he generously acknowledged. In addition to the paper by Mr. Wythes, there was an excellent exhibition of Apples, two dishes (one dessert and one kitchen), the competition being very keen—sixteen entries. The premier award was taken by Mr. W. J. Simpson, The Gardens, The Beeches, East Acton, with splendid samples of Ribston Pippin and Gloria Mundi. Six prizes were awarded.

Mr. H. J. Jones has now fully recovered from his recent illness, and is attending to his duties with as much enthusiasm as ever. He is full of his favourite Chrysanthemums at present.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held in the Drill Hall, James Street, Westminster, on Tuesday, November 9th, at one to four p.m. At three o'clock a lecture on "Roots" will be given by Professor F. W. Oliver, D.Sc.

Aberdeen Chrysanthemum Society.—The directors of the newly formed Chrysanthemum Society, met on the 1st inst. in the secretary's office when reports of a very encouraging nature were presented. There has never been so good an appearance for blooms of our autumn queen in this district; and if some of our reputed best growers do not show the white feather and shirk coming forward for fear of being beaten by what they might term "lesser lights," there should be a very good display by the 26th and 27th November. In addition to a long list of special prizes circulated some time ago, other two Silver Medals by Messrs. G. Stephen and Conway, and a valuable Orchid by Messrs. Sander & Co., were allotted for competition. The directors are likely to secure the services of a gentleman of great eminence to perform the opening ceremony, when the elite of Aberdeen should turn out in their hundreds. It would surely be a pity if the efforts put forth to raise such a show in Aberdeen were not to get that amount of public support the movement deserves. A flower show in winter is something to be appreciated, and the Chrysanthemum by the aid of a little artificial treatment in skilful hands is a sight worth seeing. It might be mentioned that the directors have been very fortunate in securing the services of Mr. Norman Davis as judge.—A. G.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Cypripedium norrisianum. *Nov. hybr.*—The seed parent of this hybrid was *C. purpuratum*, and the pollen bearer *C. leeanum*, itself a hybrid. The colours of the flowers are so rich as to give one the impression that *C. oenanthe superbum* must have been concerned in the cross. The bloom is intermediate in size between the parents, and the dorsal sepal is rolled back in the same characteristic way as *C. purpuratum*. It is of a rich crimson purple on the lower half, the colour running into lines along the veins towards the apex, which is white. The spreading petals are heavily ciliated on both margins, and of a rich shining claret colour, with black veins, paler near the base and spotted with purple there. The lip is of a dark brownish-purple in front, and paler elsewhere. The hybrid was raised by F. A. Rehder, The Avenue, Gipsy Hill, S.E., about five or six years ago, and is now flowering for the first time. It is named in compliment to the gardener, Mr. Norris.

Cypripedium radiosum Lord Pirbright. *Nov. hybr. var.*—The parents of *C. radiosum* were *C. spicerianum* and *C. lawrenceanum*. Several varieties have made their appearance in a batch of seedlings which we noted in the collection of Mr. P. McArthur, 4, Maida Vale, London, W., last week. The dorsal sepal is greenish-yellow on the lower half, and white on the upper. The spreading petals are golden-yellow, with small black spots in lines along the course of the veins. The lip is brownish-purple, but paler than the type, which has green petals, the contrast being well-marked. The staminode is soft purple. It is, therefore, a very pretty variety.

CHRYSANTHEMUM NOTES.

THE SWANLEY NURSERIES.

MESSRS. H. CANNELL & SONS have for long been associated with the cultivation and improvement of the Chrysanthemum, and from their busy establishment at Swanley many fine varieties of the noble flower have issued from time to time. The list of varieties now grown to supply the needs of the world-distributed clients of the firm is so comprehensive as to assume formidable proportions, for there are no fewer than 1,400 of them, representing

all sections from the pretty but unpretentious single to the stately incurved, and the popular Japanese.

In the show house, which is a spacious building, span-roofed in form, and measuring 165 ft. in length by 25 ft. in width, a magnificent display awaits the visitor, for there are upwards of 3,000 plants in full bloom arranged with that simplicity of design that is the highest art. The first thing that struck us was the exceeding dwarfness of the plants as a whole. Some tall varieties we saw of course, but only a few. As an instance of this we may quote Edith Tabor, which was not a whit more than 4 ft. in height, and carrying good blooms too.

Just inside the door a batch of that grand form Kentish White met our gaze, the plants dwarf and sturdy, and the flowers large and handsome.

As the Messrs. Cannell make a point of year by year buying in the best novelties from all growers of note the collection is well up-to-date, and we observed several new varieties of great promise, of which some were of continental origin, whilst others have been evolved in various parts of greater Britain, as well as in the territories belonging to Britannia's sturdy brother Jonathan.

Among the Japs we noticed Souvenir de Molines in fine condition. This is a handsome flower raised by M. Calvat, of Grenoble, France, and closely approaching M. Chénon de Léché in colour, but has narrower florets with a more decided droop. Werther, crimson-magenta, with a silvery-rose reverse, and with prettily upturned tips to the florets is also handsome. Mrs. Ernest Cannell, sent out this year, is built much like Reine d'Angleterre, but is not so coarse, and the colour is rather richer. Secrétaire Fierens should also make a name for itself. The colour is bronze-yellow tipped with bronze-crimson. Mrs. W. J. Tibbs, which may be described as a white Lilian Bird, is one of the finest of the Australian seedlings. Chatsworth, which hails from the same part of the globe, should not be lost sight of. The colour is pink striped with carmine. Mrs. F. A. Bevan is a grand rosy-pink variety with florets gracefully reflexing throughout their greater length, but upturned at the tips. Mrs. C. F. Payne is another Swanley seedling of much promise. The blooms resemble those of Mrs. J. Lewis in build, but exhibit a bright shade of buff yellow, the lower florets being prettily flaked with crimson.

Of varieties of older standing there were some remarkably fine examples of successful culture. Swanley Yellow (syn Sunflower) Phoebus, Dorothy Seward, Le Moucherotte, Australian Gold (of which there was a fine batch), Milano, Mrs. Blick, Mrs. A. G. Hubbock, Mrs. J. Lewis, Eda Prass, Mrs. Hume Long, Pride of Madford, and Miss Annie Gaunt were all first class.

Incurved Japanese, as may be supposed, were very strong. N. C. S. Jubilee was represented by a number of grand blooms scattered about the house. Mrs. R. D. Douglas is of American origin and bears the stamp of promise. The colour is buff with chesnut brown suffusion, and a buff reverse. A single bloom of Mrs. H. Weeks on a plant obtained from an April struck cutting, and accommodated in a 7-in. pot was a marvel of beauty and certainly the best specimen we have yet seen this season. Duke of Wellington is a charming form, exhibiting a shade of rosy salmon shading to buff in the centre. Louise, Topaze Orientale, and Robert Powell were all in first-rate order. Buff Globe is a sport from Good Gracious, and is a first-rate buff variety with the same habit as the type.

The incurves were likewise in capital condition although really good novelties in this line are few and far between. Certainly the best of them is Lady Isabel, with its huge blush-white blooms, that will certainly have to be reckoned with on the show board this year. Ma Perfection was strongly in evidence, but the blooms although large take too much dressing before they can take their places with other incurved varieties. Standard sorts were in good condition throughout, and special mention may be made of Robert Petfield, Mrs. R. C. Kingston, Miss Dorothy Foster, Lord Wolseley, Mrs. Heale, Baron Hirsch, Miss Haggas, and C. H. Curtis.

Hairy varieties are not invested in so strongly at Swanley, but nevertheless the samples of them that were on view were substantial. Hairy Wonder does as well here as could be desired. Louis Boehmer is also well grown. The chief novelty is a yellow

Louis Boehmer, known as Leocadie Gentil. The florets are somewhat narrower than in Louis Boehmer, but otherwise the build is the same.

The chief representative of the Anemone section was that grand Japanese form Mrs. Hugh Gardener, of which some excellent flowers were on view.

Single varieties have been favourites with the Messrs. Cannell for many years, and the collection is as complete as unwearied care and selection of the best forms can make it. Quite recently a batch of grand seedlings from Miss Mary Anderson has been raised: and included in it are several forms that are bound to make their way. Blanche Chapman is one of the best of these. It is very free, and bears large flowers with long pearly-pink ray florets. Madge is another very fine form, but the ray florets in this case are terra-cotta in hue. Freda bears a multitude of smaller white flowers. Mrs. E. Staines has two or three rows of ray florets, and although this fact prevents it from being regarded by the Messrs. Cannell as the best type of single flower, it is withal very useful and pretty. The colour is white. King of Siam exhibits a shade of deep crimson with a high full disc, that, given a bright day, looks exceedingly rich and showy. Miss Rose is well known as a most valuable variety for conservatory decoration. Its dwarf bushy habit and great floriferousness combine to render it most suitable for growing, either as specimens or for cutting from. The Star, a seedling from it, raised at Swanley, possesses both these invaluable qualities in an equal degree, but the flowers are larger, and of a richer rose shade. Grown side by side with the type, the improvement was most apparent.

Jane is another semi-double than which it would be hard to imagine anything more pretty and graceful. The long, white, drooping, and rather narrow ray florets, and the large size of the flowers are sufficient to insure its popularity.

"Come and see," the motto of the Swanley firm, will bring much pleasure to those acting upon it, for the Messrs. Cannell have many good blooms other than those mentioned in these notes.

RYECROFT NURSERY.

Mr. H. J. Jones, Ryecroft Nursery, Hither Green, Lewisham, has as large a display of Chrysanthemums or larger than on any previous occasion. The large plants number 7,000, while these are supplemented by 2,000 dwarf ones, with large flowers, in 6 in. pots. Two large span-roofed houses of equal size are crowded with plants in different stages of advancement. One house is now at its best, while the later one will continue the display for weeks to come. Some smaller houses are filled with the latest hatches intended to bloom in December. Mr. Jones raises many seedlings every year, those sown in January last being already in full bloom or nearly so. The plants are dwarf and already many of them have been marked, while others have been honoured with a name.

Japanese varieties are again in the ascendant as might be expected, and by far the most conspicuous in all the houses. In the later of the two large houses the plants are stood upon the floor, arranged in a continuous undulating bank from end to end of the house on either side of the central winding pathway. The rose and white drooping petalled Mme. G. Bruant recently certificated is here. Frau Agatha Kesson is a Japanese seedling of this year, with dense heads of great depth and bright rose. Pride of Ryecroft is a clear yellow sport from the valuable commercial variety Niveus, and will be as valuable as the type. The golden-yellow Modesto, and the charming soft lavender N.C.S. Jubilee will be greatly sought after this year. The bright yellow Soleil d'October is one of the finest October varieties extant, for though at the October show, the blooms are still good. In Mrs. G. W. Palmer we have a fine sport from Mrs. C. Harman Payne, of a claret-red with bronzy reverse, and as dwarf as the type. The Yellow Mme. Carnot, otherwise G. J. Warren, has done well everywhere this year, and is bound to prove a first-class exhibition variety. The long drooping and spreading florets ensure an immense head. W. Wright is notable for the great width of its rosy-purple florets. Western King, an incurved Jap., is reckoned as the standard of perfection in America. The pure white incurved florets have a satiny gloss on the back; and every bud comes good, so that it is, indeed, an acquisition.

Croda is of the same type as E. Molyneux, having

been indeed raised between that and G. C. Schwabe. The broad florets are crimson with an old-gold reverse. Robert Powell, an incurved Jap, is bronzy with an old-gold reverse, and has already taken two certificates. Lady Hanham is a sport from Vivian Morel, being intermediate between that and Charles Davis. No two agree about the colour, which we reckon salmon-pink with a shaded yellow centre, and of the same magnificent proportions as the type. The silvery grey or pink heads of Australia are like cannon balls, and here in fine form. Rayonant is an improvement upon Lilian Bird, with slender, thread-like, whorled, white florets. J. Fraser is a Japanese variety raised by Mr. Jones last year, but there being no stock, it could not be put into commerce. The florets are broad and bright, bronzy-gold, the outer ones of great length and drooping. The incurved Japanese Lady Byron seems to do well with most people, the pure white blooms being grand. A clear yellow Japanese sort is S. A. le Prince Hussen Kamil, still fine, though at the October show. A large, bright, dark yellow is Mrs. Fisher, the flower being well built up.

The broad, bright yellow florets and the compact build of the bloom of Phoebus make it a favourite with exhibitors. Autumn Bride is a Japanese variety of American origin, and develops large, creamy-white florets of great width. The above constitute only a few of the hundreds of varieties in the late house, and which will maintain a display for weeks to come. Many of the seedlings are not sufficiently advanced to be named; but we noted a grand yellow.

In the other large house the bulk of the varieties are very nearly at their best. There is a central stage in this house and side benches, so that the visitor looks on the side of the great banks of bloom instead of down upon them. A very unusual colour is presented by Herbert Cutbush, a Japanese variety, striped with red on a yellow ground; it is of large size. Mrs. Charles Cater is an incurved Jap. of a golden yellow, and built on similar lines to Robert Owen. The pure white, incurved and glossy florets of Beauté Grenobloise remind us of Western King, the American standard of perfection, and belongs to the same section. The florets of Crown of Gold are twisted and curled in a very interesting way. Mrs. Cotesworth Bond is a huge Japanese variety, pink in colour and very full in the centre. The blooms of Lord Justice Lopes are of a pleasing silvery pink. The creamy-yellow blooms of Mrs. C. Orchard are choice and telling on account of their handsome proportions and broad florets. Mrs. L. Humphrey is a primrose-yellow of great size and neat, refined form, with narrow, closely arranged florets and very full in the centre. It was raised from seeds last year by Mr. Jones, and is named in compliment to the wife of the Chrysanthemum grower. Master H. Tucker is a broad-petalled crimson variety of great merit. The pure white flowers of Mrs. Richard Jones are also very choice. We have already seen Mr. G. Hubbock elsewhere, and can testify to its popularity with these who have tried it. The build of the bloom is that of the true Japanese type; and the narrow, closely arranged florets are of a glowing Indian red. It is almost certain to be well-represented on the exhibition table at the forthcoming shows. Still another dark flower presses itself upon our notice in the shape of the dark crimson Mrs. J. J. Kerslake. The value of Simplicity has already been recognised by more than one certificate being awarded it. Miss Shear is one of this year's seedlings raised by Mr. Jones. It is similar in form to Phoebus, but the florets are narrower and of a much darker yellow.

The incurved or Chinese race of Chrysanthemums is not being neglected here. A true incurved form is Emile Nonin, with crimson florets and a reddish-bronze reverse. The plant is dwarf, the bloom of medium size and neat, and is an acquisition to its class. Honorine Chapius is one of the most distinct things out, in the incurved florets being violet with white edges. The incurved rosy-bronze Mons. Desblanc is building up well. Even more handsome are the large, and well-built pure white flowers of Lady Gormaston, which will do much to restore the status of the incurved race. The pure white Ma Perfection is also included amongst this type.

Very chaste and choice is Mrs. Caterer, an Anemone with pure white disc and ray. Charles Tutt is also a new Anemone, with quilled rays and a

high centre, wholly pure white. An equal number of meritorious kinds could be added.

EARLSWOOD NURSERIES, REDHILL.

London, enswathed in the grimy folds of an autumnal fog, enshrouded in a darkness which, like that of the Egyptians, might be felt—a city as of the dead! The fair hills of fair Surrey bathed in sunshine, and tipped with a thousand gold and russet tints of rural autumn, smiling beneath the mellow touch of a benignant autumn! This is a contrast sufficiently striking, and yet it is one that must occur many times during the roll of the seasons. At any rate, Mr. Wells, of Earlswood fame, has much to congratulate himself upon in having his lines cast in such pleasant places. Certainly the present year has been exceptionally kind to the people of Redhill and district, for we found that Scarlet Runner Beans were still being gathered from the open, and Dahlias and Chrysanthemums, also in the open, blooming uninterruptedly. In a piece of ground, under the protecting lee of a hill, which Mr. Wells has planted with early flowering Chrysanthemums, we found that grand white form, Queen of the Earlies, still producing magnificent flowers, an example which other varieties have not been slow to follow.

It was the pot plants safely esconced in the houses, however, that rivetted our attention. The large span-roofed house contained an enormous wealth of big blooms, and here and there especially fine samples called for particular notice. Speaking of the flowers as a whole, we may say without exaggeration that Mr. Wells has never been in better form than he is this year. The plants all round are good, healthy, and strong, the impress of superior cultivation being everywhere manifest.

Of novelties there are several that are either good already, or promise well for the immediate future. "Yes," said Mr. Wells, in answer to a question, "M. Calvat, of Grenoble, has sent out many good things in his time, but this year he has beaten the record." Papa Veillard is one of the best of them. It bears a close resemblance to President Borel both in build and colour, but exhibits a rather lighter shade. N.C.S. Jubilee is indeed a noble flower. It may be grown to large size, as was well demonstrated by the numerous grand blooms of it scattered about the house. The florets are broad massive, deeply keeled, and incurve strongly. The colour is a beautiful mauve. There is nothing in general cultivation that is at all like it in colour, and taking it altogether it is one of the best incurved Japs ever introduced. In Madame Ferlat we have a flower that is not unlike Lady Byron, being of great depth, and of the same colour. The bloom is rather closer in build, however. Directeur Liebert is a huge Japanese variety with very long florets. The colour is a bright rose-purple. Mlle. Luci Faure bears a certain resemblance to Mutual Friend in the contour of the florets, and like the latter variety is white, but the much greater depth of the bloom renders it totally distinct from aught else.

In Mrs. J. Butters, raised by a Camberwell grower, we have a very curious and pretty flower that can scarcely fail to become popular. The florets are split up in such a way as to suggest a stag's horn, and each division being narrowly linear renders the likeness more striking. The flower is of medium size and white. Mr. Wells is of opinion that it will prove a good decorative variety, and there is no doubt that it would be a break away from anything we have. Madame Edmond Roger must not be forgotten among the list of novelties. The peculiar shade of green-white which it exhibits may cause some to describe it as a monstrosity, but there is no denying the noble appearance of the flower, which is of large size, and has incurving florets of medium length. Mr. Wells has some capital blooms of it taken on second crown buds, and we were most favourably impressed with it.

Julian Hilberd, a cream coloured Madame Carnot, was promising well when we saw the plants, but we were too soon to be able to say anything definite about the variety as yet. Georgina Pitcher comes very close indeed to Edith Tabor, but the latter variety is of such notoriously tall habit that the dwarfer stature of Georgina Pitcher is well worthy attention. In addition to this the latter variety is a really good doer. G. J. Warren, although it may not be exactly a novelty, is yet sufficiently new to warrant a note. We were prepared for and expected

something good by reason of its having originated from that grand white, Madame Carnot. Its cultivation has been attended with varying success however, for while some of the flowers exhibit clearly enough the Madame Carnot build of bloom, others run off into the ragged style seen in such varieties as Mrs. Hume Long, which while it may have a few admirers does not find one in us. Mr. Wells has some first rate blooms of G. J. Warren. Madame G. Bruant, was also represented by some capital samples on second crown buds. We fully described this variety on the occasion of its receiving certificates from the Royal Horticultural Society, and the Royal Horticultural Society, on October 16th. On second crowns this variety takes a lot of beating. Madame Philippe Rivoire, which received a First-class Certificate from the N.C.S. on October 25th, is undoubtedly a great acquisition to the ranks of white Japanese varieties, and we were much taken with it as seen at Earlswood.

Coming to standard varieties we are pleased to be able to record our admiration for the samples which Mr. Wells had on view. Madame Carnot was rather tall, but bore first-class blooms. Phoebus, Edith Tabor, Le Moucherotte, M. Chénon de Léché, Thos. Wilkins, Mrs. J. Lewis, Mutual Friend, and Australian Gold were all in capital condition. Duchess of Fife, Thos. Bevan, and Mrs. Airdrie were standing side by side, and even a close comparison of the blooms could not discover any real difference between them. If these names are not synonyms of each other they ought to be.

Incurved blooms were showing signs of great promise. Such varieties as Baron Hirsch, D. B. Crane, Perle Dauphinoise, John Lambert, and Miss D. Foster were all good. Lady Isabel was somewhat of a surprise to us. This variety has been sent out by Mr. Wells as a Jap, and it undoubtedly is so, upon the first bud, but upon the second crown it develops a grand bloom with regularly incurving florets that want but little dressing to constitute a tip-top incurved variety. If the second crown buds are constant thus we shall have a bloom that for size will entirely supersede Queen of England. Topaze Orientale, on the other hand will scarcely make a true incurve, no matter how it is treated. Both colour and size are good, however.

The practice of growing exhibition plants in 6 in. and 7 in. pots may be said to have been introduced by Mr. Wells, and at the present day this method is followed by him most successfully. The cuttings are struck in March, stopped once, and put into their flowering pots by the beginning of July. It is really wonderful to see these comparatively small plants carrying blooms that for size and colour compare favourably with those borne by the plants in 10 in. and 12 in. pots. Of all the varieties which may be successfully grown thus, none is a more conspicuous success than the beautiful white Souvenir d'une Petite Amie. Madame Gustav Henry also comes well. Phoebus, Mrs. J. Louis, Parachute, Jno. Shrimpton, Australian Gold, Modesto, M. Chénon de Léché, and Louise are other well-known varieties which respond readily to this kind of treatment. In the show house at Earlswood, these dwarf plants are staged four or five deep next the wall of the house, the taller ones finding a place in the centre.

In conclusion we may well bestow a word of praise upon the general arrangement of the plants which admitted of each plant and each bloom having room to display its charms to visitors, of which there was none more interested than—G.

NOTES FROM DUNOON.

I AM agreeably surprised to find that my "Notes from Dunoon" have stirred up some enthusiasm in my respected friend, Mr. James Gibson, for, although he enters the lists against me as a first-class critic, I do not mind, because I am quite sure he will not be unnecessarily severe. But Mr. Gibson is too serious; he has placed too liberal a construction upon the disputed phrase; he is evidently labouring under a misapprehension.

When I stated that "amateurs are not in evidence," I was not making a general but a specific assertion, an assertion which I believe to be in strict accordance with the facts. I could not say otherwise—I could not speak of that of which I had no cognisance. If, therefore, Mr. Gibson will read my

remarks in connection with the heading of the "Notes," and in the spirit in which they are penned, I feel sure that the cause of difference will immediately disappear.

Mr. Gibson, I must say again, has given too wide an import to a statement made by the way; he has, in truth, taken it out of the local category, and placed it in the national, a position it was never intended to hold.

Facts, I know, are stubborn things; but before we can argue we must first agree upon the "facts." Mr. Gibson then goes on to repine that "one could not expect a Saxon to freely admit that canny Scots are great gardeners." Perhaps not, *en masse*. But I am one of those who take a cosmopolitan rather than a national view, and therefore am willing to give credit wherever credit is due. Moreover, Scotsmen are among my best friends—all hail to Scotia's sons! As to the amateurs of Ayr I can say nothing, except that Middlesex men can hardly be *lighter*; but, joking apart, I do know a professional Ayrshire man whose abilities as a cultivator and whose skill as a gardener I have never seen surpassed. Mr. Gibson, however, winds up somewhat ironically concerning an alleged "discovery"; but if he will take the trouble to look again at p. 102 he will find that I wrote that—"according to local tradition Mary Campbell or 'Highland Mary' was born here," *i.e.*, Dunoon—hence the monument. For further information I must refer my friend to the editor of the *Dunoon Observer* or the *Ayrshire Standard*.

It is recorded in Shakespeare's "Julius Cæsar" that Brutus and Cassius were great friends. I feel somewhat in the position of the latter when he exclaimed (substituting one name only for another) that:—

"A friend should bear his friend's infirmities,
But Gibson makes mine greater than they are."
—C. B. G., Acton, W.

PLANTS RECENTLY CERTIFICATED.

THE awards mentioned hereunder were made by the Royal Horticultural Society on the 26th ult.

Orchid Committee.

LAELIA PUMILA MAGNIFICA, Nov. var.—The sepals and petals are very broad and deep purple. The tube of the lip is white externally, and yellow internally, while the lamina is rich crimson-purple and of great size. This grand variety will raise the reputation of *L. pumila* considerably, for it is in no way inferior to *L. p. praestans*. Award of Merit. Messrs. W. L. Lewis & Co., Southgate, N.

CATTLEYA OLIVIA, Nov. hybr.—The seed parent of this beautiful hybrid was *C. Trianaei*, and the pollen bearer *C. intermedia*. The sepals and petals are of a delicate blush. The tube of the lip is even more delicate, while the lip is of a soft mauve. The throat and disc of the lip are of a soft lemon. It is a chaste and charming *Cattleya*. Award of Merit. Messrs. J. Veitch & Sons, Ltd., Chelsea.

CATTLEYA MELPOMENE, Nov. hybr.—This was raised from *C. Forbesii* crossed with the pollen of *C. Mendelii*. The sepals and petals are soft purple, the latter being slightly folded along the midrib. The lip is short, curved and very pale blush; its lamina is crisped, undulated, and blush with a golden disc. The size of the flowers is intermediate between the parents. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

ODONTOGLOSSUM CRISPUM SUNLIGHT, Nov. var.—The flowers of this handsome variety are of great size, with broad, overlapping segments, the ground colour of which is pure white. There are some rich, reddish-purple blotches on the sepals, and more numerous small spots on the petals. Award of Merit. R. Brooman White, Esq., Arddaroch, Garelochhead.

LAELIA PURPURATA MRS. R. I. MEASURES, Nov. var.—The sepals are white. The petals are oblong-elliptic, veined with purple, almost white at the base and intensified towards the apex. The lamina and side lobes of the lip are crimson-purple. It is a striking variety, remarkable for the shortness of its petals. Award of Merit. R. I. Measures, Esq. (gardener, Mr. H. J. Chapman), Cambridge Lodge, Camberwell.

LAELIA LONGIFES.—In this we have a gem in minia-

ture. All parts of the plant are small, but the flowers are charming, and the plant is worthy of being grown as a pet. The sepals and petals are deep purple, fading almost white at the base. The lip is warm orange forming a fine contrast to the rest. Botanical Certificate. Messrs. W. L. Lewis & Co.

LAELIA PUMILA ALBENS. *Nov. var.*—The flowers of this choice variety are white, with crimson-purple blotches on the lip. Award of Merit. Fred Hardy, Esq. (gardener, Mr. T. Stafford), Tyntesfield, Ashton-on-Mersey.

CATTLEYA HARDYANA MAGNIFICA. *Nov. var.*—In this new variety we have darker and richer flowers than the type, and very handsome. Award of Merit. Fred Hardy, Esq.

CATTLEYA BOWRINGIANA WILD'S VAR. *Nov. var.*—This grand form bore a large raceme of flowers of a darker purple and larger size than the type. Award of Merit and cultural commendation. C. K. Wild, Esq. (gardener, Mr. R. Pallant), Bramcote, Weybridge.

CYPRIPEDIUM HAYNALDO-CHAMBERLAINI. *Nov. hybr.*—This is the first hybrid in which *C. chamberlainianum* has been used as a parent. The dorsal sepal is green at the base, white upward and lined purple. The petals are spotted purple on a green ground. The lip is rosy-purple. Award of Merit. E. Ashworth, Esq. (gardener, Mr. Holbrook) Harefield Hall, Wilmslow, Cheshire.

Floral Committee.

MARATTIA BURKEI.—In the way of Ferns nothing more distinct has been put on the committee table for a long time than *M. Burkei*. It is totally unlike any *Marattias* we have hitherto seen. The fronds, in the present state of the plant at least, are nearly orbicular, and tripinnate, with deltoid, dark glossy-green segments, only $\frac{1}{8}$ in. to $\frac{1}{4}$ in. in length. The stipes is covered with pale points that are not, however, spiny. It is the prettiest of the *Marattias* in cultivation. First-class Certificate. Messrs. J. Veitch & Sons, Ltd.

GESNERA AMABILIS.—This garden form produces pyramidal panicles of gracefully drooping, tubular, white flowers, marked with a golden blotch in the throat. The leaves are bronzy. Award of Merit. The Duke of Sutherland (gardener, Mr. Peter Blair), Trentham Hall, Stoke-on-Trent.

NERINE LADY BROMLEY.—The flowers of this most remarkable variety have wavy, scarlet segments, with a blue midrib. The stamens and style are also blue. The latter colour is unique in the genus. Award of Merit. H. J. Elwes, Esq. (gardener, Mr. Lane), Colesborne Park, Andoversford, Gloucestershire.

NERINE COUNTESS' BATHURST.—Flowers blush, with deep rose midribs to the segments, and pink stamens. Award of Merit. H. J. Elwes, Esq.

NERINE LADY LLEWELLYN.—Segments broad, undulated, and of a rich carmine, giving the flowers an imposing appearance. Award of Merit. H. J. Elwes, Esq.

NERINE LADY MARY SHELLY.—The spreading, wavy segments in this case are pink with darker midribs. Award of Merit. H. J. Elwes, Esq.

NERINE LADY DORINGTON.—This has flat segments, merely recurving at the tips, and pink, with deep rose or red midribs. Award of Merit. H. J. Elwes, Esq.

NERINE LADY LAWRENCE.—This and *Lady Bromley* are the most distinct of the whole batch of seven *Nerines*. *Lady Lawrence* has wavy, narrow, orange-salmon segments, making the flowers decidedly distinct and charming. Award of Merit. H. J. Elwes, Esq.

NERINE LADY LUCY HICKS-BEACH.—The wavy segments in this case are of a glowing carmine-crimson, and highly attractive. No more distinct and striking batch of seedling *Nerines* has before been placed on the table. Award of Merit. H. J. Elwes, Esq.

CHRYSANTHEMUM N. C. S. JUBILEE.—This incurved Japanese variety has broad, closely incurved florets reminding one of *Louise* except in colour, which is a charming silvery blush or pink. Award of Merit. Messrs. H. Cannell & Sons, Swanley, Kent.

CHRYSANTHEMUM SIMPLICITY.—Blooms about 9 in. across, with drooping, tubular, pure white florets, the central ones being incurved. It is a handsome Japanese variety. Award of Merit. Mr. W. J. Godfrey, Exmouth, Devon.

CHRYSANTHEMUM MODESTO.—This incurved Jap-

anese sort is one of the best golden yellow types in cultivation. The heads are massive, and about 7 in. across, with interlacing florets. Award of Merit. Mr. W. J. Godfrey.

CHRYSANTHEMUM LADY BYRON.—The blooms of this incurved Japanese sort are pure white, of beautiful form when well grown, and measure 6 in. to 7 in. across. Award of Merit. Mr. W. J. Godfrey.

LADY RIDGEWAY, ELLA CURTIS, AND MME. PHILIPPE RIVOIRE.—For description of these three Japanese varieties see p. 133. Award of Merit to each. Mr. W. J. Godfrey.

CHRYSANTHEMUM SUNSTONE.—A Japanese variety of a clear bright yellow and very handsome. Award of Merit. Mr. W. J. Godfrey.

CHRYSANTHEMUM G. J. WARREN OR THE YELLOW MADAME CARNOT.—The flowers of this variety are clear yellow, but otherwise similar to *Madame Carnot*, and will be equally valuable for exhibition. Award of Merit. Mr. W. Wells, Earlswood Nurseries, Redhill.

CHRYSANTHEMUM LADY HANHAM.—This is a sport from *Viviant Morel* of a beautiful salmon-pink, with a yellow centre. Award of Merit. Messrs. H. Cannell & Sons, Swanley, Kent.

CHRYSANTHEMUM ROBERT POWELL.—Blooms of a beautiful bronze, with old-gold reverse, belonging to the incurved Japanese type, and very striking. Award of Merit. Messrs. H. Cannell & Sons.

Fruit and Vegetable Committee.

MELON EXCELSOIR.—A scarlet-flesbed Melon of useful size, with a yellow, netted rind, and of good flavour. Award of Merit. Earl Percy (gardener, Mr. G. Wythes), Syon House, Brentford.

GRAPE MARCHIONESS OF DOWNSHIRE.—Bunches similar in shape to those of *Gros Colman*; and berries very large, oval, juicy, and rich in flavour. Award of Merit. Marquis of Downshire (gardener, Mr. T. Bradshaw), Hillsborough Castle, Co. Down.

TURNIP GOLDEN BALL.—The tubers of this variety are globular, very shapely, with a small tap-root, light yellow in the lower portion, golden upwards and of excellent quality. Award of Merit. Messrs. Dobbie & Co., Rothesay, N.B., and Orpington.

TURNIP MODEL WHITE.—Similar in form to *Golden Ball*, but white, and of beautiful form. Award of Merit. Messrs. Dobbie & Co.

VEGETABLE CALENDAR.

HERBS.—These are in regular daily demand in all establishments, and a supply in the freshest possible condition must be maintained. This cannot be done where the plants are allowed to remain on the same ground for several years in succession. The present is a good time for splitting up and replanting most kinds of herbs. The ground intended for their reception must be well worked, and a position slightly shaded will be an advantage during summer. Beds should be formed of convenient width, and with good alleys to facilitate picking. Thyme, Sage, and such like plants when divided should be planted a little deeper in the new beds to enable the plants to form new roots. Mint is much better lifted while the top growth is green and fresh, as it enables one to see where the principal rhizomes are situated, and these can be lifted in a mass and transferred to new ground with but little check at this season, and the roots establish themselves before winter. A portion of this crop may also be placed in boxes and be in readiness and get well established before it is required for placing in warmth for an early supply. It is essential in replanting Mint to place it in ground free from Couch Grass and Bell-hine.

ROOTS FOR FORCING.—Preparations must be made for supplies of Asparagus, Seakale, and Rhubarb. The plants intended to supply the first crop should be lifted at once and be kept in cool and damp quarters. The frames and structures must be got ready for their reception. No warmth is more genial for forcing these vegetables than that supplied by leaves and dung; the former should predominate, to render it mild and more continuous. A deeper bed should be made for the Asparagus, as this will require exposure to light when growth commences. The stocks of Potatoes intended for forcing should also be looked over and a selection made from the best tubers. These must be placed under conditions favourable to give them a very gentle stimulus to plump-up their eyes. Some of the forwardest may be put into

10 in. pots, or boxes 3 ft. long and 9 in. deep, and started gently at once. These are easily movable to fresh and warmer quarters after growth has commenced.

SMALL SALADING.—Where regular supplies of Mustard and Cress, and Radishes are expected, weekly sowings of the former should be made in gentle warmth. Sow very thickly in shallow boxes of prepared light soil, pressing the seed into the soil, and cover each box with boards or stiff brown paper to ensure an even germination of the seed. To ensure success with Radishes after this season, a slight hotbed should be made, and a sowing made every fortnight or three weeks. Endive must be lifted and placed under cover to blanch at regular intervals according to the demand for it. Chicory should also now be ready for lifting at any time and prove useful when an extra supply is needed. A few clumps of Chives cut over and potted and then placed in heat will soon give some young growths and a flavour agreeable to some palates.—J. R.

The Orchid Grower's Calendar.

CATTLEYA HOUSE.—The plants of *Cymbidium lowianum*, after the slight rest they have been subjected to since making up their growths, are now pushing forth strong flower spikes; to each spike a neat stake should be put so that the spikes may be trained up in a manner that when each flower is open it will be seen to the best advantage. Left to their own resources, they sometimes become spoilt by coming in contact with a near neighbour, and half the beauty is lost.

With the spikes about 6 in. long the plants should receive a good soaking of weak liquid manure. We use Guano, but failing that, soot water in a weak state as applied to "Mums" will help them, besides adding a lustre to the foliage. Do not be afraid it will kill them, because it will not, or I should not advocate its use. In all cases use judgment and you are all right.

LAELIA ANCEPS.—The spikes of hanging plants will require attention so that they do not get damaged by touching the glass. If possible they should be made to face one way, so that when in bloom there will be no difficulty in arrangement. Do not give this plant too much moisture at the roots at this season. Always bear in mind that these Mexican *Laelias* are subjected to plenty of sunlight and drying winds in their native habitat; hence the short clubby hulbs and exceptionally hard leaves we find on imported pieces. Our plants are allowed to go a long time without more than what they take up from the moisture put about the house. To this fact we attribute the exceptionally highly coloured flowers we always get.

LAELIA PRAESTANS.—Of all the dwarf growing *Laelias* this certainly takes a foremost place amongst Orchid lovers. Its culture is similar to that of *Cattleya marginata*. It is, however, a much more desirable Orchid. We have therefore to thank Messrs. W. L. Lewis & Co., for bringing it over in quantity. Small pans are the most suitable to grow them in, although they do equally well in small baskets. It is when the repotting season comes round that the pans are seen to be the best, as the plants may be more readily turned out, or if necessary the pans may be broken to avoid spoiling the roots. Not so with baskets, as the roots will encircle the teak rods. Elevate the plants and use a small quantity of good peat and the best Sphagnum Moss for them to root into. During the summer months the cool house would be warm enough for them, but early in autumn, when the growths are making up, the *Cattleya* house is much the best place for them.

VANDA CAERULEA.—There is no *Vanda* to beat this when well done, but how many of us can keep it in good condition for long? Too much heat I am afraid has to answer for a good many failures. I am told by no less an authority than Sir John Kirk that frost is not unknown in the Khasya Mountains where this beautiful blue Orchid thrives. But to imitate this under cultivation would be, I think, a mistake. We all know that plants under glass become more delicate, no matter how carefully you follow the dictates of nature, so that a happy medium seems to be the most sensible course to pursue in their culture. The *Cattleya* house seems then to be the most suitable.—C.

HINTS FOR AMATEURS.

CHRYSANTHEMUM NOTES.

Phoebus.—There is really no colour that is brighter and more useful for decorative purposes than yellow. Bright days or dull days come all alike to it, and when the darkness of night covers all, and the lamps are lit, yellow again comes out the best, whether beneath the tell-tale electric light, or the more plebian gas, or even the self-assertive wax candle. This is doubtless the reason why we have so many yellow Chrysanthemums, of all sizes, grades, and styles of bloom. Particularising, however, it will be found that no one of the many yellow varieties has more to recommend it than Phoebus. This, like many another first-class variety, originated on the Continent, having been sent out by M. L. Lacroix in 1895, so that it is quite a recent introduction. It has received a First-class Certificate from the National Chrysanthemum Society, and has been generally received with favour, so much so, indeed, that it bids fair to oust some of the older varieties. Of these, perhaps, the most notable instance is W. H. Lincoln, which has been grown largely for market purposes, but which, compared with Phoebus, is quite out of the running. The colour of the bloom is a rich chrome-yellow. The florets are of medium width and considerable length, and there are plenty of them, so that there are all the makings of a large flower when the plant is grown with that intent. The florets droop gracefully for the greater part of their length, but curve prettily upwards towards the tips. The plant itself is between 4 ft. and 5 ft. in height, and of sturdy constitution. Phoebus is one of the varieties that an amateur may safely invest in, and expect to get a return for his trouble.

Edith Tabor.—Up to the present time Edith Tabor has been one of the successes of the season, and has made its appearance in most of the winning stands of cut flowers and groups of plants. Its great height (6 ft upwards) renders it a first-class subject for the back row in a group. The flower may be grown to a large size, and exhibits a shade of bright canary-yellow. The florets are broad and of great substance, and as they hang down almost vertically the bloom appears to be of enormous depth. The incurving tips of the florets are an additional charm. The constitution is good, and the only drawback to the variety, as far as amateurs are concerned, is the great height. Certainly, Edith Tabor is one of the best things ever sent out by Mr. R. C. Notcutt, to whom we are indebted for it. A First-class Certificate from the National Chrysanthemum Society has been awarded it.

Lady Hanham.—The popularity of Vivand Morel and its handsome sport Chas. Davis has been fully demonstrated upon many a show board throughout the kingdom. The build of bloom in both cases remains the same, the difference being simply in the colour. Truth to tell, both varieties are variable, and Vivand Morel especially changes colour, according to the bud it is taken on. Thus on the first crown it comes white, and on the second crown a bright rosy-pink. Then again, the influence of the particular locality has to be taken into account, and the result is that during the season one may see all shades between the two extremes mentioned. In Lady Hanham we have a fixed variety, originating as a sport from Vivand Morel, that is practically intermediate between Chas. Davis and Vivand Morel, exhibiting some of the colour characteristics of each. The build of bloom is identical with these two varieties. The colour is flesh-pink with a bronzy-yellow centre. The bases of the florets also exhibit the same shade of bronze-yellow, and, in fact, white, yellow, and rose seem to have had a struggle for the predominance, the result having been a compromise, in which a charming mixture of all three is to be seen. The habit and constitution of the plant are both good, and the variety is altogether easy of management.

Queen of the Earlies.—It may seem to some readers that the beginning of November is rather late in the season to call attention to the merits of an early variety, but Queen of the Earlies has made for itself such a great reputation this year both as an early and mid-season variety, that no apology is needed for bringing it in now. Within the last week we have seen grand blooms of it cut from plants growing in the open without protection of any sort.

True it is, that in some localities sharp frosts have been experienced, at least, sharp enough to cut down Dahlias and other tender stuff of that class, and also to cripple any Chrysanthemums that had their buds at all forward, but other places seem to have escaped this visitation, and out-door Chrysanthemums have, as a consequence, had a fine time of it. In Queen of the Earlies we get what will probably be found to be the best white variety for market work in September and the early part of October. We say early part of October advisedly, for although the plant has proved itself capable of producing excellent flowers in the open air up to the end of October, when the weather has given it a chance, we must not expect October to be as kind to us every year. Now if a variety is to suit for market work, the flowers must be of fair size be produced in plenty, and be of good colour. Again, the habit of the plant must be good, ditto the constitution. Now all these qualities are just what is needed in a plant that is to do well with an amateur who is just starting to grow Chrysanthemums. Coming to particulars we may make special mention of the stiff strong stems upon which the flowers are borne—a most valuable recommendation in a market variety, or indeed in any variety that is grown to produce flowers for cutting. The height of the plant is from 3 ft. to 3½ ft., and it readily assumes the spreading bush form that is required if plenty of flowers are to be developed. Those who wish to give it a trial for pot work will find it wise to disbud to a moderate extent, leaving only one bud on each shoot. In this way, if stopping during the earlier stages has been properly seen to, a good specimen, carrying about a score of medium-sized flowers, and with leaves right down to the rim of the pot, may be obtained.

Pride of the Market.—Whilst dealing with decorative or market varieties, we may well make mention of this one. It was shown in excellent condition at the meeting of the Floral Committee of the National Chrysanthemum Society at the Royal Aquarium on the 25th ult., by Mr. Norman Davis, The Vineries, Framfield, Sussex. The committee was so impressed with its beauty, and evidently free character that a First-class Certificate was awarded it as a market variety. The blooms are of extra large size for this section, and exhibit a rich shade of bronzy chestnut-orange. The florets are broad, of great substance, and stand well out from each other. The foliage is remarkable for its vigour and substantiality. Those lovers of the 'Mum who are on the look-out for good things in the decorative line, should not lose sight of a variety such as this.

N.C.S. Jubilee.—The Jubilee rage dies hard, and a remembrance of one of its applications will be perpetuated in this variety. The contour and build of the flower is not unlike that of Louise, and the size is about the same. The colour, however, is totally different, being a delicate mauve. Gradually, the gaps that separate distinct colours are being bridged over by the introduction of varieties representing intermediate shades, and in N.C.S. Jubilee we have one of the most noteworthy examples of this. The variety is worthy of a place in any collection if for its colour alone.

Mrs. S. C. Probin.—This variety and the last named were brought before the N.C.S. Committee on October 25th, when Mrs. S. C. Probin received the First-class Certificate as the better of the two. The florets are certainly more massive and incurve more strongly, and we should surmise that it has more of the makings of a large bloom in it than has N.C.S. Jubilee. The colour is a deep mauve with a lot of pink in it, so that the difference between it and N.C.S. Jubilee is marked enough upon comparison. There is, indeed, plenty of room for both varieties, as they are sufficiently distinct, the one from the other. —*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Pruning Grape Vine.—Could you inform me as to the best time to prune an indoor Grape Vine?—*H. B.*

You may prune your Vine as soon as the wood is fairly ripened. This condition will be shown by the fall of all the leaves and the colour of the wood,

which should be of a light brown. Any time after the fall of the leaf and before the swelling of the buds in the spring will, therefore, do, but it is customary, for the sake of neatness, to have the pruning finished before the expiration of December. The exact time when the wood is ripe depends entirely upon the period of the year, whether late or early, at which the Vines were started into growth.

Unheated House.—*Lionel V.:* For the border in the unheated house we should recommend some good bushes of Camellias as the things most likely to give satisfaction. The plants will thrive in either loam or peat, or in a mixture of the two. You will probably find a compost of equal parts of peat and turfy loam answer the best. The best time for planting is in spring, before growth commences. You may if you choose employ Camellias in pots to help fill the house until the planted-out subjects have got to a good size. These pot plants may be shifted out-of-doors in the summer, and their places taken by other things. The appearance of the border will thus be varied and improved.

Chrysanthemum Edwin Molyneux.—For the last three or four years I have grown this Chrysanthemum, but while other varieties subjected to the same treatment have done well, Edwin Molyneux has been nearly a failure. The plants never seem to become really strong, and I have only been prevented year after year from discarding it by seeing good blooms of it at shows. Can you suggest any course that may improve my chances of success?—*'Mum.*

We assume that your plants have each year been obtained from cuttings taken from the plants that have been highly fed. The variety of Chrysanthemum under notice has been so extensively grown that its constitution has considerably degenerated, and propagation during a series of years from bigly fed plants has had a great deal to do with this. In future we should suggest that you take your cuttings from plants that have been planted out and have been let alone. Such cuttings would be more likely to make strong plants. For next year's supply it might be worth while to buy your cuttings or plants from a grower in another part of the country. The change would probably be beneficial.

Watering Coelogynes.—*Benj. Forbes:* Your plants certainly do not need very much water now, but you must not keep them entirely without, or the pseudobulbs will shrivel. It is a mistake, too, to have them standing over the hot-water pipes. Shift them to a cooler part of the house, or, better still, to a cooler house, if you have one. A temperature of 50° Fahr. is rather higher than they like, for about 45° is quite warm enough during the winter and while they are resting.

Fuchsias.—*L. K.:* Lift the plants from the garden, leaving a fair amount of soil about the roots; place them closely together in a box, and shake a little more soil over them. In this condition they may be placed in a cellar, where they will keep very well until the spring.

Six Chrysanthemums.—*A. P. South:* Of course you will show your best blooms in the stand of six Japanese, but we should not think it advisable to include more than one white, or yellow, or, indeed, of any other colour. In any case, try and arrange the flowers so that the colours that do not go well together—or that kill each other, to use a common term—are not placed in close proximity to each other.

Lilacs.—I have a number of Lilacs in my garden which have got too hushy for me. I should like to split them up to obtain a few more plants for making good a corner of a shrubbery. Will it be of any use to try this?—*Geo. Williams.*

You may lift the suckers thrown out from the base of the stems of the old plants and from the roots. There is generally plenty of these. A good strong spade will be required, in order that a fair amount of roots may be preserved to the suckers. The latter may be planted straight away in a corner by themselves, where they may stay until they are of the size you require.

Chinese Primulas Damping.—*F. R. Johns:* You have evidently been too free with the watering-pot, and this has been the cause of your plants damping. Keep your plants rather drier, and do not give any more manure until they lose their sickly appearance.

LILIUM GIGANTEUM.

The Giant Lily is a native of the Himalayas, from Kumaon and Gurwhal to Kashia and Sikkim, at elevations varying from 5,000 ft. to 10,000 ft. In its native habitats it flowers during the rainy season. Judging from the elevation at which it grows one would naturally take it for granted that it would be hardy in this country, and it is so as far as the southern counties are concerned.

The accompanying illustration was taken from plants in flower on the 22nd July last, at Fernielee, Murtle, Aberdeen, the residence of M. M'Laren, Esq. Some growers consider themselves lucky or successful if they manage to flower bulbs which they may have imported or bought, but the Lilies under notice were raised from seeds, nursed through their babyhood, and brought to perfection during the past summer. The botanist Wallich describes the species as growing from 6 ft. to 10 ft. high and bearing ten to twelve flowers. The tallest plant shown in the photograph was 9 ft. 9 in. high, and carried twenty-three flowers. The next best plant was a few inches shorter, and produced twenty-one flowers, and each bloom developed a seed pod nearing maturity in September last.

The seedlings have been reared in the frame seen in the photograph, so that we cannot say whether the species is quite hardy at Aberdeen; but it must be very nearly so, seeing that a batch of seedlings has continued to acquire vigour year after year until the flowering stage is reached. About the end of the summer of 1896, Mr. M'Laren had hopes of seeing his nurslings in bloom after some years of waiting, judging from the enormous size the radical leaves had attained. His expectations were realised when growth was resumed last spring and the enormous crown bud began to lengthen. We congratulate Mr. M'Laren on his success, and hope he will now experiment with some of his bulbs, in order to ascertain the hardiness of *L. giganteum* in his northern latitude.

AUTUMN TINTS.

WHAT a lovely picture Dame Nature presents to us about this season of the year; truly such a picture no pen, pencil, or brush can imitate. I often think what a great pleasure it would give to many thousands of people in those large busy towns who are compelled to pass their time there, could they but spend a few weeks in the country and behold the many trees taking on their autumn garb before dispensing entirely with it during the winter months.

I will mention a few that give us a splendid bit of colouring just now and will take the Liquidambar (*L. styraciflua*) with its glowing crimson scarlet leaves which stand out prominently among the many deciduous trees that are given us. We have one planted on a island in the centre of a large lake which on a bright sunny day shows to great advantage with an undergrowth of *Gynerium argenteum*, whose plumes look well under the crimson foliage of this noble tree. *Nyssa sylvatica*, a native of North America, is a tree seldom met with now. It is none the less beautiful, with its medium-sized, shining, smooth green leaves in summer; but at present it is a sheet of crimson and gold, the last named colour predominating, and admired by all who see it. The Tulip tree, too, gives us a rich yellow, contrasting well with the bright red leaves of the Guelder Rose (*Viburnum Opulus*) not far distant.

Now, let us turn to the wall, an eastern aspect, where we find *Ampelopsis Veitchii*, and its newer variety, *A. V. purpurea*, which has put on a very deep crimson and stands out conspicuously with its neighbour, that pea green, hardy flowering creeper, with us, *Stauntonia latifolia*. And does not the Andromeda and some of the American Azaleas, especially the old yellow flowering *A. pontica*, give us a brilliant bit of colouring, almost indescribable? Even in the kitchen garden some of the Pear trees remind us that winter is near at hand by the almost red leaves of some and golden-yellow of others, which all help to brighten the often dull and gloomy days of October and November, while the absence of frost has assisted the trees to hold on their foliage much longer than is usually the case and given us such lovely autumn scenery.—*J. Mayne, Bicton.*

THE OLD NURSERIES, CHESHUNT.

The continued mild weather in the south has been very favourable to the prolongation of autumn flowers, including Roses belonging to various sections, and with the object of seeing the famed collection of Messrs. Paul & Son, The Old Nurseries, Cheshunt, Herts, we paid a visit to the establishment some weeks ago. We had evidence at the Royal Horticultural Society's Meeting on the 26th ult. that Roses were still abundant, and quite sustained the anticipations we had of them on seeing them at home. An abundance of fresh Roses all through September and October argues much to re-establish the character of our much despised climate.

GLASSHOUSES.

Roses are the speciality for which Messrs. Paul & Son are most widely reputed; but trees and shrubs generally, herbaceous and alpine plants and various other things are more or less extensively cultivated. The first house we entered was 100 years old, though several times repaired and now to be rebuilt. Here we noted *Vitis Coignetiae*, with highly ornamental

them. A few specialities in the way of Orchids are grown, including a fine batch of *Coelogyne cristata* and its varieties now on a shelf close to the open ventilators. During the growing period they are often dipped in the tank, and kept abundantly watered to swell up the pseudo-bulbs, after which an abundance of air is given to ripen them. The largest batch of *Masdevallia tovarensis* we have seen together was here, there being something over 100 plants, bearing 15 to 22 flowers each in 48-sized pots. The singular *Strelitzia Reginae*, with orange and deep blue flowers, was in bloom.

Several houses are filled with Roses in pots, including a houseful of many sorts, being crossed for the purpose of getting new varieties. They are now ripening their fruits. A houseful of Tea Roses ready to be sent out were bushy, vigorous, and flowering. Rose Alister Stella Gray is a Noisette that expands of a beautiful deep apricot and fades to white when full blown. It is kept all the winter months under glass and rested outside in summer. Rose J. B. M. Camm is an immensely double sort with 'Bourbon blood,



LILIUM GIGANTEUM.

red leaves. Mr. Paul thinks it possible that *Physalis edulis* might be grown to some extent under glass as a dessert fruit by way of a change. The next house entered was also a reminder of bygone days, for the roof is still filled with small panes of round-cornered glass. Oranges are planted out against the back wall by way of experiment, and they fruit splendidly. Some of the originally planted Camellias still remain in the border and are now bristly with flower buds. Another very interesting relict consists of two large old specimens of *Camellia japonica alba plena*, which were bought at the sale of Messrs Loddiges, Hackney, when that famous nursery was broken up. In the same house are some *Cypripediums* that can be grown in a very cool house. The walls and the sides of the benches are covered with *Ficus repens* in a very pleasing way. In another well ventilated house, slightly heated in summer, the roof was covered with a floriferous specimen of the gorgeous *Solanum Wendlandii*.

An unwonted sight was a collection of some 2,000 bulbs of *Amaryllis*, all stood in the open air to ripen off. They had been out for a month when we saw

and rose pink flowers that continue till late in autumn. It is less subject to mildew than the hybrid perpetuals.

Standard Tea Roses in pots fill another large house. They are practically baked with drought and heat in summer, and brought indoors the first week in September to flower during October and November. There are hybrid Teas amongst them. Another house in two divisions is occupied with bush Roses in pots, excellent stuff, 2 ft. to 3 ft. high, and flowering. They are simply the stock for sale. A crimson Tea named Princess Sagan flowers very freely. Sunset is one of the latest Teas with orange and apricot flowers.

Another Rose house, also in two divisions, is filled with plants in 24-sized pots for early spring work. F. Dubruel produces its crimson flowers as freely as *Niphotos*, but is much dwarfier. Souvenir du President Carnot is a hybrid Tea bearing an abundance of soft blush-pink flowers. It is very popular in America and was sent from here. The plants are ripened off during October by throwing the houses wide open during the day, closing them

at night and giving a little heat. When the wood is ripened the last two growths made during the season are cut entirely away to get the young shoots from old and firm wood. Six weeks' rest is sufficient, after which the plants will be started again in January to bloom in March.

We next came upon a house of Niphetos, the growth of which was just commencing. All possible air is given while the plants are making growth and flowering. Madame Lambard, the well-known Tea, was fragrant and beautiful in another span-roofed house.

Cannas constitute another speciality, several houses being filled with them. Many of them were flowering freely. Mr. James Bailey is deeply suffused and spotted with crimson-lake on a yellow ground. William Tolfts is a magnificent variety of a handsome rich salmon-orange, with a narrow yellow edge. It is named in compliment to the grower of the Cannas. Souvenir de Antony Crozy is a glowing, fiery, crimson-scarlet with a yellow edge. George Paul (Crozy) is a handsome salmon-orange variety. Sir Trevor Lawrence is blotched and variegated with red on a yellow ground. The house had been in full bloom for two months previous to our visit, and many of the spikes had been cut. Truly the Cannas are a grand race. New varieties and some old ones fill a lean-to structure. Many of the new ones had just been imported. They make the best crowns for division in pots, and are so grown. The Orchid flowering race of Cannas was represented by Italia, with flowers of enormous size. In a third house we noted George Paul and Souvenir du President Carnot, two of the best Cannas having dark foliage and good flowers.

Good pot Vines monopolise a house. Not far off we came upon *Cypripedium Charlesworthii*, *C. spicerianum* and other species in small pots for cut flower purposes. *Nerine Fothergilli* and several other sorts were commencing to flower.

ORNAMENTAL TREES AND SHRUBS.

Next to the Roses in importance comes the extensive collection of trees and shrubs. In front of a hedge was a collection of *Rhododendrons* in pots. Many of them have been raised from *R. Fortunei*, including Mrs. Thiselton Dyer, with huge soft pink flowers. There were some forms of the *White R. nobleanum*. Hybrids are being raised from *R. Smirmoroi*. *R. Duchess of York* comes from *R. Fortunei* and bears huge salmon-pink, fragrant flowers. *Carpenteria californica* on a high and dry bank against a south wall succeeds well.

Near some propagating pits are collections of *Clematis*, hybrids of *C. Flammula*, *C. Viticella*, and many others of an interesting character. *Cotoneaster horizontalis* is scarlet with berries. Here also is a collection of all the best *Ivies*, of which *Hedera amurensis* has very large leaves belonging to the same type as *H. dentata*.

Away to the north of the glasshouses the nursery widens out, becoming much more extensive; and here the trees and shrubs, including *Roses*, are grown in quantity and great variety. Besides squares and plantations in various parts of the ground, there is a border $\frac{1}{2}$ mile long planted with a single specimen of each tree and shrub in the collection. To get acquainted with every species and variety here is in itself a liberal education. On this occasion we can only mention a few of the choice and rare things picked up here and there, *Cedrus atlantica aurea* and *C. a. glauca* are excellent subjects that make vigorous growth here. The colour of the foliage is indicated by the name, but they need only to be seen to be appreciated. The weeping Cedar of Atlas (*C. a. pendula*) is worked on a stem 6 ft. high. *C. Libani nana*, though twenty years old, is only 3 ft. high. There is a grand specimen of the Japan Lilac (*Syringa japonica*) in the form of a standard. The variegated Portugal Laurel has bright red stems and silvery edges to the leaves, the contrast being strikingly handsome. Young plants of *Abies nordmanniana pendula* are small but very pretty. The weeping Douglas Fir (*Pseudotsuga Douglasii pendula*) is also a very handsome thing. *Abies nordmanniana nana*, though many years old, forms little evergreen tufts hugging the ground, and would be very serviceable for the rockery. Dwarfing, as the Japanese manipulate it, is unnecessary in this case. *Abies Pinsapo* is well known, but *A. P. glauca* is uncommon and has silvery, glaucous foliage.

The Lucombe and Fulham Oaks—sub-evergreen

varieties of *Quercus Cerris*, worthily find a place in the collection. The Austrian Oak (*Q. austriacus*) has evergreen leathery leaves. *Cupressus lawsoniana erecta lutea* originated here, and though the trees are yet small, we think there is an important future before it. The Cheshunt Aucuba turned up in a batch of 2,000 seedlings, being the best amongst them. It has more regularly blotched foliage than the common one, and is very handsome on that account. The other named varieties are also grown here, including the very distinct *Aucuba japonica longifolia*, with long narrow leaves. The Dovaston Yew is an old and well-known variety; but more interesting is *Taxus baccata viridis pendula*, which has drooping branches, and lighter, more pleasing green foliage. *Negundo aceroides robusta* has less of the silvery variegation than the ordinary variegated form, but it gains immensely in vigour and hardiness, being better adapted for the climate of the north of England and Scotland, and valuable in that respect.

ROSES,

As we have already stated, are the most important and prominent speciality of the Old Nurseries, being grown by the thousand in all the best and most interesting varieties. The Dawson Rose is a hybrid between *Rosa multiflora* and *General Jacqueminot*, and is making fine growth, but has not yet flowered. Seedlings have been raised from *Crimson Rambler*, and the only one yet bloomed proved to be single. As the flowers are produced in autumn there are hopes that an autumn flowering race will yet result from this popular type.

There is an experimental garden for dwarf and pillar *Roses*; but on the occasion of our visit, the great centre of attraction was the open field where fresh *Roses* could be gathered by thousands, and were being gathered more or less daily. Though we have seen *Roses* at Christmas, never before have we witnessed such a display in the open during October. Many classes, single and double, were represented; but the beauty, delicacy, variety of colour, and profusion of bloom on the Hybrid Teas were an eye-opener. The hybrid perpetuals are not in it with this new race. The hybrid Teas have already taken hold of the public in this country as they have in America, and we have every reason to believe that their cultivation will be greatly extended in a few years.

Hybrid Teas are the *Roses par excellence* for the cut flower basket. A number of very handsome varieties were honoured with Awards of Merit from the Royal Horticultural Society during the past summer, and well they deserved it. Descriptions of these will be found in the pages of THE GARDENING WORLD for July and August last, with an illustration of Souvenir du President Carnot (Vol. XIII., p. 729). That and Camoens, one of the earliest raised, were full of buds and blossom in all stages. *Gustave Regis* is a yellow of the same type. The bright carmine-red *Mme. la Marquise Litta* is charming. Many others of equal value could be mentioned, not forgetting the chaste white *Kaiserin Augusta Victoria* so well shown at the Crystal Palace last summer. The rosy-carmine *Mme. Abel Chatenay* is a continuous bloomer.

A trio of *Noisettes*, namely *Mme. P. Cochet*, *Wm. Allan Richardson* and *Alister Stella Gray*, were in full bloom. The salmon and yellow *China Rose Mme. E. Resal* is very choice indeed.

Garden *Roses* are a special feature of these nurseries, and we noted only a few of the many to be seen. *Rosa rugosa atropurpurea* is velvety crimson and the darkest of this type. *Rosa sacta* is the oldest recorded *Rose* in the world, being identical with dried specimens in mummy cases. It has fragrant, single, pink flowers akin to *R. gallica*. This interest-Rose is described by M. Crepin in his monograph of the genus. The hybrid *Wichuriana* *Roses* have already found a home here. There is a variegated one amongst them. Deliciously fragrant are the double blooms of *Rose des Parfumiers*. A hybrid raised from *Rosa rugosa* crossed with *R. humilis* is a perpetual bloomer with deep rose flowers. *Crimson Rambler* crossed with a Tea has given rise to seedlings which promise to be perpetual bloomers. Here also we noted the yellow rambler, *Aglaiia*, the single *R. nitida* and *R. lucida*, with a purple-leaved variety of the latter named *R. l. Vivid*. A cross between *Crimson Pillar* and a Tea variety has given a seedling with lemon flowers. Very interesting and pretty are the named varieties of the Scotch *Rose* with double flowers. In a plantation of *Roses* planted out at the end of April last we noted many

that had made enormous growth, including *Mrs. Paul*, a Bourbon *Rose*, with blush flowers. It has made stems 8 ft. to 10 ft. high. The soil here is a stiff brick earth, and we noted some being trenched, while fresh material had been carted on the ground to mix with it. Finer soil for *Roses* could hardly be desired.

ORCHIDS AT MAIDA VALE.

THOUGH the *Chrysanthemum* season is now in full swing, yet *Orchids* claim a place in our pages, particularly those which are now in season. Therefore, while busy amongst the *Chrysanthemums* we made a call upon Mr. P. McArthur, The London Nurseries, 4, Maida Vale, London, W. *Chrysanthemums* are grown here, but only for the sake of cut flowers in which Mr. P. McArthur carries on an increasing business. They are grown in bush form, both late and early batches keeping up a supply.

The flowering pieces of *Cattleya labiata* are bright and varied, and amongst them we noted a handsome variety with light sepals and petals, and a very highly coloured lip, edged with white. Other fine things are *Dendrobium formosum giganteum*, and *D. Phalaenopsis schroderianum* in small pans and showing a great variety of rich colours. Here we find pieces of *Coelogyne cristata alba* in baskets. *C. schilleriana*, grown on a piece of board, is a rare plant.

Numerous *Cypripediums* are flowering at present, including *C. polystigmaticum*, *C. harrisianum superbum*, *C. insigne Chantinii*, with large blotches; *C. i. Maulei*, and a variety with remarkably long segments, all of them being more drawn out than usual. There are several distinct forms of *C. radiosum*, including one with yellow petals (see under "Orchid Notes and Gleanings," *C. Charlesworthii* shows even more variation, one having a large purple dorsal sepal; another a large blush dorsal sepal darkening at the base, but entirely without the usual tessellated or checkered markings, and very distinct. A third very pretty variety has a dark upper sepal deepening to crimson at the base. *C. crossianum (insigne x venustum)* has a yellow dorsal sepal, spotted with brown in lines. There are two pieces of a variety of *C. insigne* each bearing twin flowers, in one case at least, bearing a double lip, and a leaf at the top of the scape. The variety is remarkable for its nearly black flower stalk, about twice as thick as usual. A variety of *C. Boxalli* has very black blotches on the dorsal sepal and wonderfully broad petals. Very fine also is *C. Ashburtoniae*, with huge finely blotched and marked flowers on scapes 18 in. high. Here also we noted a fine batch of the pretty *C. Exul*.

Many rare or uncommon things find a place here, amongst them being the pretty *Coelogyne fimbriata* with pale yellow flowers and a dark fringed lip. The soft blush-violet flowers of *Odontoglossum Krammeri* are also very choice. Equally rare is *O. Inseayi splendens* with soft chestnut sepals and petals and a yellow lip margined with crimson spots. The blue *Orchid (Dendrobium Victoriae Reginae)* is also in bloom, together with *Laelia pumila praestans* in variety. A healthy vigorous batch of *Chysis aurea* gives promise of flowering well presently. The same may be said of that remarkable *Orchid Uropedium Lindeni*, of which there was an importation of 2,000. Many of them died on the way home, the rest being now well established.

Oncidium varicosum Rogersii is a seasonable and useful species. Amongst a colony of various species of *Miltonia* we noted *M. cuneata major* throwing up its flower spikes. *Cattleya Mossiae*, in quantity, and *C. percivaliana superba* are in sheath. The pretty *Dendrobium fytchianum* is present in a quantity of healthy vigorous pieces grown in baskets. The stems and leaves of the rare *Vanda teres gigantea* are twice as thick as those of the type along side of it. *Cypripedium lathamianum*, *C. nitens* and other valuable hybrids are throwing up their flower scapes. A choice and uncommon thing in its way is *Cypripedium Charlesworthii* having a pure white dorsal sepal.

Amongst *Cattleyas* and *Laelias* now in sheath are some valuable forms, including a huge piece of *Laelia tenebrosa*, in a large pot, and bearing many sheaths. It is a fine dark variety. *L. anceps* and its varieties will be grand presently. *L. elegans* and *L. e. alba* have flowered and the correctness of the names substantiated. Very choice are *Cattleya Schroderae*

alba, *C. labiata* Peetersi, with splashed sepals and petals; and ten grand plants of *C. Mossiae* Wageri, especially one splendid piece in a basket. Other good things are *Oncidium Papilio majus*, *Lycaste Skinneri*, *Calanthe Veitchi* and *C. vestita*, the two latter now throwing up their flower spikes. A large batch of *Cattleya Trianaei* is now in sheath.

In a tall span-roofed house is a grand batch of 300 plants of the white *Anguloa eburnea* in robust vigour. Very rarely, if ever, have we seen so many of them all in one house. The foliage and pseudo-bulbs are enough to send an Orchid lover crazy. They fill the central and one of the side stages of the house. On the other side is a fine lot of *Laelia purpurata*. The lip of *Cymbidium lowianum* Rajah is remarkable in being nearly white. *Laelia praestans*, and *Cattleya citrina* on cork suspended from the roof are also noteworthy.

Another house is filled with *Odontoglossum crispum*, *O. Pescatorei*, *O. triumphans*, *O. Rossii majus* and *Cymbidium eburneum* in rude health. Elsewhere is a houseful of *Cattleya Mossiae*, *Coelogyne cristata*, *C. c. lemoniana* and others in good order.

PALMS, FERNS, &c.

The early flowering form of *Poinsettia pulcherrima* is grown in great quantity for decorative purposes. *P. p. alba* is useful by way of contrast. Amongst *Chrysanthemums* are bushy specimens of the crimson *John Shrimpton*. *Kentia belmoreana* in 48-sized pots, is grown cool, making dwarf, neat and sturdy specimens fit for anything. Other houses contain smaller plants in 60-size, and thumb pots, in the same useful condition. They are fit for decorative purposes under any condition to which Palms are put, and calculated to withstand low temperatures and dry atmospheres. Mr. P. McArthur can supply about a quarter of a million of them. *Geonoma gracilis* and *Cobaea scandens variegata* are also useful subjects. One cool house is filled with late *Chrysanthemums*, *Eucalyptus globulus*, *Pelargoniums*, &c.

The Fern house contains an assortment of decorative species and varieties of useful market size in 48-sized pots. We need only mention such as *Pteris Wimsettil*, *P. cretica major*, *P. c. cristata*, *Cyrtomium falcatum*, *Asplenium fabianum* and that charming dwarf Fern *A. Colensoi*, so graceful and so hardy. A large batch is ready to put into 48-sized pots. Very sturdy and well-grown stuff of *Adiantum Victoriae* may be seen in market size, grown cool and calculated to withstand a dry atmosphere as well as a *Pteris*. Highly coloured plants of *Aralia Sieboldi variegata* are in remarkably fine condition. Those who want a hardy subject for cool houses or dwelling rooms might well give it a trial. *Festuca glauca* in pots also finds admirers for decorative purposes. A batch of *Dendrobium crassinode barberianum* is being rested in this house in pots suspended from the roof. The stems are stout and the plants of good size.

The Palm house contains an assortment of Palms for decorative purposes in various sizes from large specimens in tubs to seedlings in thumb pots. A grand plant of *Kentia belmoreana*, with a tall stem and large head, grown in a tub is about as high as the roof of the house will permit, although the tub is sunk in the floor of the house. A fine batch of 700 to 800 small specimens of *Cycas revoluta*, recently imported, is being established. The plants are of small size, suitable for decorative purposes in relatively small pots, and are throwing up heads of four to six leaves of a fine dark green hue. A large batch of seedlings in another house, will turn out to be *Corypha australis*, we believe, when the plants are large enough to determine. The seeds were sent home without name, but the seedlings will soon be in proper form.

BOLTONIA DECURRENS.

Of the three *Boltonias* in general cultivation *B. decurrens* is by no means the least handsome. It closely resembles *B. latisquama* in style and habit of growth, but is scarcely so tall. The flowers, too, have long, reflexing, flesh coloured, instead of white ray florets, but they are both pretty and effective. The whole plant, indeed, has a warm and cheerful appearance in the autumn flower garden, and preserves its beauty until well on into the autumn. We had the pleasure of seeing it in capital condition during a visit to the Long Ditton Nurseries, where hardy plants of all kinds thrive under the fostering care of Mr. J. W. Barr.

BEGONIAS AND DAHLIAS AT FOREST HILL.

SEPTEMBER is the month for seeing seedling tuberous *Begonias* in the open air; but cuttings rooted in the previous autumn, and young tubers come into bloom much earlier, making, in fact, a summer display. Some little time ago we paid a visit of inspection to the nurseries of Messrs. J. Laing & Sons, Forest Hill, when *Begonias*, *Dahlias*, and perennial *Asters* were the chief items of interest.

TUBEROUS BEGONIAS.

Most of the older plants grown in the open air this year were transferred to the Rutland Nursery where they made a grand display till late in the season. By old plants we mean seedlings of last year and cuttings taken from named sorts and rooted during 1896.

A few of these named sorts were planted in the Stanstead Park Nursery, and during the mild, moist weather of the latter part of summer made fine growth. The same may be said of the seedlings of this year, which covered the ground closely during September and flowered grandly. They were arranged as usual in long beds, in the leading colours, such as white, pink, rose, scarlet, crimson, yellow, and bronze. Masses of a colour are more effective than mixtures.

Some small beds were planted with named kinds of erect habit, and specially adapted for bedding purposes. Laing's Golden Ball forms dwarf and bushy plants, about 6 in. high, bearing a profusion of small yellow flowers that are globular and perfectly double. The variety is also very popular with some growers as a pot plant. Duke of York is a charming salmon-pink variety with large flowers of fine form, which flowers as profusely as any. Lafayette is an early variety with small, scarlet flowers that are highly effective for this kind of work. Henshaw Russell is a large scarlet variety of telling aspect. Stanstead Gem is a scarlet of grand form. All of the above named kinds are double, and were exceptionally fine this year.

Several houses were filled with pot plants, many of which were being utilised for seed raising by cross-fertilisation. Three houses were filled with double varieties, many of them being the most recent selections from this year's seedlings. We noted some grand varieties amongst them in various shades of colour, and have no doubt they will even be finer next year.

In one of the houses and in some heated frames were batches of *Streptocarpus* of a large flowering strain. A large proportion of them were of some or other shade of blue, such as porcelain, violet, white with violet lines, sky blue in various tints, and purple. The white varieties were very numerous, and the violet lines and bands made a beautiful contrast with the white. The gayest house was that in which the plants were arranged amongst Maidenhair Ferns. They were accompanied by a late batch of *Gloxinias*.

DAHLIAS.

A large plantation of these had withstood a tremendous downpour of rain and hail, while the leaves of the *Cannas* close by were torn into shreds. Single, Pompon, show, decorative, and Cactus varieties were all well represented, the plants being masses of bloom. Beauty of Watford, a golden-yellow single variety with a crimson zone was very handsome indeed.

Cactus varieties included most of the best varieties. Mrs. Peart is a beautiful white variety, but it is excelled in purity by Mrs. Francis Fell. Very fine also are Princess Ena, golden buff; Mrs. Allhusson, rich pink with a creamy centre; Illuminator, scarlet; Mahalacheris, white; the Queen, very large, and white, with broad florets; Mrs. W. B. Wright, crimson with violet tips; and George Dayrell Reed, scarlet, tipped violet. Starfish is considered the best scarlet, the long, narrow florets being very fine. Cycle is another magnificent form having carmine-scarlet florets, tipped violet. Bridesmaid may be likened to the Rose Marie Van Houtte in colour. The narrow crimson florets of Dr. Jameson are also fine. The rich purple of Purple King is excellent of its kind; and African is amongst the darkest of the maroon-crimson kinds.

We may best describe Mrs. H. Pomeroy as yellow, overlaid with salmon-pink. The buff yellow of Kingsley Foster is also pretty. Markiss may be likened to African in being of a dark maroon-crimson. A very charming *Dahlia* is that named Mrs. E. Cannell, which is of a bright salmon-red, overlying yellow. Cinderella is rather difficult to describe, being of a rich purple, overlaid with some dark

colour in the centre. Of dark coloured varieties Harry Stredwick is very fine of its kind, being crimson with a maroon-crimson centre. Fantasy is a remarkably fantastic variety in having incurred orange-scarlet florets, making heads of great beauty. Apollo is a rich scarlet and very late variety. Altogether there were six rows of new varieties, many of which carried a great profusion of flowers well above the foliage. They, as well as the Pompon sorts, are very useful for cut flowers.

The perennial *Asters* have been showy for weeks past, some of the most conspicuous being *Aster Novi-Belgii*, *Aster Novae-Angliae*, and their varieties, and the charming *A. diffusus horizontalis*.

THE PROGRESS OF VEGETABLE CULTIVATION DURING QUEEN VICTORIA'S REIGN.

(Continued from p. 140).

THE CUCUMBER

Was represented by numerous sorts at the time of the accession of the Queen. Chief among them were Early Frame and White and Black Spine, besides the so-called Long Prickly and Short Prickly Ridge Cucumbers. Snow, Cuthill, Mills, and Constantine were among the earliest improvers of this popular esculent, and by 1842 many varieties were available.

Kelway's Victory and Phenomenon, Syon House and Victory of Bath appeared during the fifties, and a few years later Berkshire Champion and Manchester Prize. It was then that Thomas Lockie took the Cucumber in hand, and Blue Gown (and its sport Tender and True) Royal Windsor, and the deservedly popular Lockie's Perfection were the leading varieties raised by him. Meanwhile other sorts, including Telegraph and Cardiff Castle, obtained a leading place, and it will be a long time before Telegraph is superseded for general cultivation.

I have not enquired from the Messrs. Rochford how many years the Rochford Cucumber has been in their family, but it is probably more sought after by growers for market than other variety. In recent years the palm for raising improved varieties must certainly be given to Mr. Mortimer, whose wonderful exhibits at the Drill Hall and elsewhere have been greatly admired. Sutton's Ar, Peerless, Progress, and Matchless are results of his painstaking work.

Notwithstanding the almost endless varieties now procurable, it is generally admitted that none of them supply the ideal type required for cultivation on a large scale. For productiveness no sort equals the best strain of Telegraph, but the somewhat pale colour, especially when the plants are bearing a heavy crop, lessens its value for market purposes, and if the Council of the R.H.S. should see their way to undertake a series of trials at Chiswick I would gladly offer a prize of £5 5s. for the seedling Cucumber, raised since 1896, which shall combine the productiveness and excellent form of Telegraph, with the dark colour of Rochford's Cucumber.

THE LEEK

In 1837 was represented in this country by the Common and Flag types, although it is on record that in the previous year four Scotch Leeks were produced in Edinburgh with a circumference of 9 in. or more. A Scotch gardener, now living, informs me that although he came to England in 1854 it was several years before he saw Leeks grown here. The Musselburgh was one of the first improved forms, followed by Ayton Castle and Henry's Prize. The greatest triumph, however, is found in The Lyon, and the better selections of this good variety, such as Prizetaker, appear to present as perfect a form of Leek as it is possible to obtain or desire.

In this connection may be mentioned the excellent work done by the Messrs. Dobbie, who have introduced one or two very fine selections of Leek, as well as of several other vegetables.

LETTUCE.

The number of varieties, both Cos and Cabbage, has wonderfully increased during the past twenty years, and they embrace many types and shades of colour.

In 1837 several of the leading varieties of the present day were in use, including amongst the Cabbage varieties Brown Dutch, Brown and White Silesian, Drumhead, Grand Admiral, Hammersmith, and one or two others, and in the Cos, White Seeded and Black Seeded Bath, Florence, Green, White, and Spotted.

By 1842 Paris White and Green were announced, and the various selections of this type are amongst the best Cos Lettuces at the present time. More recently a very large kind of great excellence, named by my house Mammoth Cos, has appeared, and is very popular. White Heart, intermediate in colour between Paris White and Green, deserves a place as a popular introduction of recent years. With regard to Cabbage Lettuce, the number of varieties now available is extraordinary. All the Year Round was amongst the first improvements, and so good is it that it has been honoured with several distinctive names. Wheeler's Tom Thumb, Veitch's Perfect Gem, Standwell Green, and others are excellent kinds largely in use, while more recently Commodore Nutt, Favourite, and Daniel's Continuity are improved types of great merit, the two latter standing longer than other sorts without running to seed.

Recently my house has introduced the Intermediate—a variety resulting from a cross between the Cabbage and Cos Lettuce, which is highly prized by many.

THE MELON

Has advanced during the past sixty years by leaps and bounds. Every year witnesses the advent of new varieties, and the Fruit Committee of the R.H.S. can testify to the constant succession of aspirants for honours.

In 1837 gardeners depended upon the Cantaloup, Scarlet Fleshed, Green Fleshed, Lord Sondes, and Queen Anne's Pocket. In 1842 Windsor Prize Green and one or two scarlet-fleshed kinds were distributed. Ten years later Beechwood, Bromham Hall, Victory of Bath, and other standard varieties were grown, followed at short intervals by Scarlet Gem, Blenheim Orange, Hybrid Cashmere, Imperial Green, and Hero of Lockinge, the latter still retaining the first place as the best Melon for frames. So easy is the culture that it has acquired the reputation of being essentially the amateur's Melon.

In connection with improvements in Melons much good work has been done by Mr. Owen Thomas, of the Royal Gardens; Mr. Wythes, of Syon House; and Mr. Chas. Ross, besides many others. In 1894 we had the pleasure of introducing a handsome white-fleshed variety raised by Mr. Thomas named Royal Favourite, and other noteworthy Melons have also emanated from the Frogmore Gardens.

ONIONS

were represented sixty years ago by Blood Red, Deptford, Silver-skinned Globe, James Keeping, Lisbon, White and Brown Spanish, Portugal, and some of the Tripoli varieties. While most of the types have undergone more or less improvement, special attention has been given to the Spanish class. The Reading was a valuable selection, and it was followed by Improved Banbury, named after a town which has long been popular for its Onions. The late Mr. Deverill of that place introduced many fine types, such as Rousham Park, The Wroxton, Anglo-Spanish, and others. Banbury Cross, a comparatively recent introduction of fine quality, also hailed from the same town.

The justly celebrated Ailsa Craig (with Cranston's Excelsior, a very similar Onion) has caused quite a revolution in this vegetable. One celebrated grower last season exhibited twelve specimens weighing no less than 37½ lbs., an enormous weight for this country, which would have startled the growers of the olden days who had to be content with small specimens weighing only a few ounces each.

Until quite recently it had not been possible to obtain seed of the fine Spanish Onions of the grocers' shops, and although specimens grown in this country are not often so large as imported bulbs, some very fine Onions can be grown by sowing the seed in heat in January and transplanting in April.

THE PARSNIP

Has certainly been much improved since the Guernsey and Hollow Crown were the only available sorts, although no very great increase in the number of varieties can be reported.

As late as 1852 the only one quoted in a leading seed list was Hollow Crown. The Student, obtained by the late Professor Buckman, by continual selection from the wild Parsnip, and distributed by my House first in 1860, is still regarded as a popular variety; and has been singularly successful at Shows. Quality in a Parsnip is almost entirely a matter of selection and in that way the fine types now in cultivation have been obtained. Carter's Maltese marked a distinct advance and is still widely grown. Quite recently

at the Reading Show, where the general opinion was that so extensive and fine a collection of vegetables was never before staged in competition, some of the collections contained remarkable specimens of a new variety called Tender and True. This is certainly distinct from other kinds, and possesses quality which has not hitherto been reached in this vegetable.

SPINACH.

No great advance was made in this vegetable until a few years ago when the Victoria and other similar strains were introduced. It is true that many varieties bearing Continental names have been grown, some standing rather longer than others before running to seed, but the difference was only slight. With the advent of the Victoria, however, the duration of the crop was greatly prolonged, and still more recently this variety has been surpassed, and we now have both in the round and prickly seeded sections, strains of Spinach which remain good weeks after others have gone to seed.

Time will not permit of my referring to Parsley, Rhubarb, Vegetable Marrow, and some other vegetables, and I must pass on to

THE TOMATO

which has increased in popularity to a greater extent and more rapidly than any other vegetable referred to in this paper.

A proof that it was not much cultivated in the early years of Her Majesty's reign is shown by the fact that in a wholesale list published in 1852 the only Tomato mentioned is the common Red. It is within the last quarter of a century that such an enormous impetus has been given to the growth of Tomatos in consequence of the more cultivated taste of the masses of the people, and it is now found in almost every garden from the cottager's upwards. The Queen's gardener, Mr. Thomas, has identified himself with its improvement, and Frogmore Prolific is one of the best sorts grown at the present day.

The introduction of the Perfection type was the prelude to that of many others, and now the number is legion. New selections are plentiful enough as our own trials of over 200 lots this year go to show. The question which is the best Tomato admits of a multiplicity of varying answers.

To mention in detail anything like the whole of the varieties which deserve notice would take up too much time, but for the earliest out-door use Conqueror, Earliest of All and Early Ruby are popular kinds. Fine shapely fruits and plenty of them are produced by Ifield Gem, Eclipse, Best of All, Duke of York and Ham Green Favourite, and in yellow varieties Golden Nugget as a small fruited kind, and Golden Queen may be relied on to ripen early and produce good crops.

Strange developments, in which the fruit partakes of the character of the Peach, are observed in certain kinds, and the crossing of the Peach Tomato with Perfection has resulted in some charming types, amongst the best of which is one introduced by my House last year under the name of Peachblow. Certainly no gardener in 1837 ever dreamt of the fruits now commonly grown.

With white, yellow, pink, ruby, and scarlet kinds, not to mention the varying sizes and shapes, there is a wide choice for the most fastidious, both as regards external appearance and flavour.

GARDEN TURNIP.

A brief reference must be made to the garden Turnip. In the early days as many yellow as white varieties were offered, although the demand for the former has certainly not increased in proportion to the white fleshed kinds.

Amongst the many improvements may be noticed Veitch's Red Globe, Snowball, Dobbie's Model, and Golden Ball, while the Red and White Milans are varieties which arrive at maturity quicker than any other Turnip. These should not be confused with their prototypes the Red and White Strapleaved which have almost had their day.

Several important sorts have been imported from the Continent in addition to the Milans, but much selection and improvement has been necessary to make them worthy of a place in English gardens.

POTATOS.

It will obviously be impossible for me, at the close of this lengthy paper, to attempt to describe at all adequately the improvements effected in the Potato during Her Majesty's Reign, and as I have already in my paper on "Potatos" published in Vol. XIX. No. 3 of the Journal of the Royal Horticultural

Society dealt somewhat fully with this subject, I must content myself now with the fewest possible remarks. As long ago as 1836 Messrs. Peter Lawson & Sons published a descriptive list of 146 varieties, and amongst some forty-five of the principal of these I only find one which is still cultivated, viz., the Early Ashleaf. There are, besides these, some familiar names such as Early Shaw and Dons, but the remainder must have passed out of cultivation at least twenty-five years ago.

In 1852 the old Walnut-leaf Kidney, Early Oxford, Fortyfold, and York Regent, were grown—all sorts of real merit in their day—but now seldom met with. That excellent Potato Paterson's Victoria was widely cultivated up till 1880, but it would be difficult now to find an acre of this variety true to name. The fact that almost all these have disappeared from sight does not of itself necessarily prove that they were worthless or even inferior to others grown at the present time—for it is generally admitted that the majority of Potatos will not maintain their full vigour of growth and constitution beyond a certain time, the limit varying with each sort. This is not to be wondered at when we remember that each year's growth is but the prolongation of the life of the plant which apparently had completed its work when the haulm died the preceding autumn.

At the same time I have no doubt whatever that even if we could reproduce such favourite varieties as the Regent, Paterson's Victoria, etc., in all their former excellence, and plant them by the side of the best Potatos of to-day we should find very great progress had been made, not merely in productiveness and power of withstanding disease, but also in flavour—a point in which the older sorts are often supposed to have excelled. Besides this we have in Ringleader, A1., Early Puritan, etc., first-early sorts which are ready for use long before the so-called early Potatos of twenty-five years ago, and also several second-earlies such as Beauty of Hebron, Supreme, and Windsor Castle, which certainly were not equalled by any of the older varieties in their own section. Whether these will still retain their good qualities unimpaired twenty-five or fifty years hence no one can say, though in all probability, as they themselves are instances of the survival of the fittest, in so far that they were chosen from thousands of less promising seedlings—several of them will doubtless greatly exceed the limit of age reached by older sorts.

In the late and maincrop section nothing has yet approached the Magnum Bonum in popularity, and it is certainly at least as good now as when introduced by my house twenty-one years ago. There are many other very similar varieties, but on the closest scrutiny I have failed to detect any point in which they differ from the Magnum Bonum, and I have generally found when any difference has been suggested that the sorts in question were not grown alongside under the same conditions, or else that the seed had been obtained from different sources, a change of seed often producing a marked contrast in two rows of the same variety.

I must not leave the subject of Potatos without mentioning such names as the late James Paterson, Mr. Robert Fenn, the late James Clark, and Mr. Archibald Findlay, all of whom have devoted many years, if not a lifetime, to the improvement of the noble tuber—and to whom the whole Horticultural fraternity and the community at large are so greatly indebted.

We have now passed in review all the leading kinds of vegetables, and I think, imperfect as this paper has been, we must all feel that the progress in vegetable cultivation during Her Majesty's reign has been little less than marvellous.

What the progress in the next fifty or sixty years may be no one can foretell; but on behalf of the seed trade I can only express the hope that it may be accompanied by a corresponding decline in the demand for older and inferior sorts, for the labour and anxiety of keeping the rapidly increasing number of varieties true to name is such as none but those acquainted with the details of seed growing can for a moment conceive.—Arthur W. Sutton.

Large Marrows.—Mr. Ferris, Broadway, Market Levington, Wilts., reports two large Vegetable Marrows in his garden, weighing 70 lbs. and 50 lbs. respectively on one plant. This plant has borne a number of medium-sized fruits as well as the two monsters referred to, so it has not been idle.

CHRYSANTHEMUM MUTUAL FRIEND.

BEFORE the "fever" rages, and before THE GARDENING WORLD is besieged with descriptions of the shows, I should like to note a very fine variety—particularly fine, in fact, as grown by Mr. Jas. Gibson, of Devonhurst Gardens, Chiswick. Mr. Gibson is a well-known and successful cultivator of the Chrysanthemum, and this year he has, undoubtedly, excelled himself. Among, however, the many fine varieties which are already—October 24th—far advanced, I could not help admiring Mutual Friend, a very fine pure white, with a good strong dwarf habit; a plant with a character, and, I believe, alike suitable for exhibition or for decoration—a plant for the amateur as well as the professional. Mr. Gibson possesses several specimens of the plant in question, each carrying three blooms, which are pure white, and of great size and substance, the quality being indicated by the fact that the average dimensions are about 10 in. in diameter, with a depth and solidity of about 6 in. One bloom that was measured exceeded these figures, and, I think, certainly tended to prove that Mr. Gibson's skill as a cultivator is as apparent in this direction as in any others. Mutual Friend, therefore, is well named; it well repays the cultivator for his care; it responds to his attentions in a generous spirit; it acts according to the treatment it receives; and thus, in a way, it may be said to be "mutual," and a "friend," indeed.—*C. B. G., Acton, W.*

CHRYSANTHEMUM SHOWS.**BATTERSEA.**—*Oct. 29th.*

THIS Show opened on Friday 29th ult., and attracted a great deal of local attention during that and the succeeding days. We were pleased to note better groups even than last year, and it is a matter of much surprise that in so dense and low lying a neighbourhood there should be a supply of the autumn flower equalling what we have seen at many a place with better surroundings and conditions. The premier award was taken by Mr. W. H. Riddle, 75, Montholme Road, Wandsworth Common, with an exceedingly fine group occupying 30 sq. ft. with a circular front, containing clean well-grown plants.

Amongst the amateur growers, Messrs. A. W. Bolton, 11, Eversleigh Road; W. H. White, 121, Latchmere Road; and J. Daniel, 50, Washurst Road, took prizes for groups, and certainly deserved them. We noticed some very pretty Pompons, and this class must have caused some little difficulty to the judges, who awarded the honours to Mr. C. Awberry, 13, Avenue Road, Clapham; Mr. A. A. Stewart, 86, Clifton Street, Battersea; and Mr. J. J. Green, 127, Latchmere Road.

For 6 blooms, incurved, Mr. J. French, Ambleside, Wandsworth Common; and Mr. J. Portbury, Ripon House, Putney, were first and second respectively, whilst the latter exhibitor took firsts for dishes of Apples and Pears, followed by Messrs. J. J. Green and A. A. Stewart as second and third. Mr. Portbury again succeeded with his group of miscellaneous plants, but had to yield first place to Mr. Carter, Woodlands, Streatham Hill. Some very pretty baskets were arranged by Mr. Youl, 148, Eversleigh Road, and Mr. W. G. Bond, 17, Frances Street, Battersea, whilst they again scored for bouquets, but were beaten by Mr. C. Hemshead, 26, Wilson Street. Mr. Youl secured first for a vase of Chrysanthemums, and was followed by Mr. J. O. Langrish 167, Elsley Road.

For six blooms of Japanese, Mr. A. A. Stewart, Mr. A. R. Geale, 11, Geddes Road, Wandsworth, and Mr. J. Youl were successful. Mr. W. Forth, 40, Westover Road, Wandsworth, Mr. G. J. Nines, 57, Montholme Road, Wandsworth Common, and Mr. W. T. Underwood, 13, Dighton Road, Wandsworth, also staged six Japanese blooms that received awards under the conditions laid down. Mr. J. French, Mr. J. Portbury, and Mr. A. J. Povey, Field House, Larkhall Lane, each staged eighteen blooms, Japanese, in twelve varieties, and scored in this order. Mr. French further led with twelve blooms, Japanese, in eight varieties, and was seconded by Mr. J. Brown, 55, Norman Road, Wimbledon, whilst Mr. Portbury was third. The Ryecroft Silver Gilt Medal for six blooms of white Japanese, was awarded

to Mr. J. J. Green, and second and third places to Mr. J. O. Langrish, and Mr. C. Hemshead. Messrs. W. G. Bond, J. J. Green, and C. Awberry, ran each other very close for two blooms Japanese, two blooms incurved, and two bunches of Pompons (three blooms to each bunch) with foliage.

The best incurved blooms were shown by Mr. W. G. Bond and Mr. J. J. Green. Mr. G. Rock, 5, Porson Street, followed Mr. A. A. Stewart in the classes for six Japanese. Messrs. Hemstead, Bond, & Forth took the awards for six blooms of the variety Japanese.

A very fine board of twenty-four cut blooms was sent "not for competition" by R. Garton, Esq., Worplesden Place, Guildford. Mr. W. Pearson, Jr., 34, Ashbury Road, sent two plants Vivand Morel, which appeared to have been grown entirely in the open, and had not received sufficient of the cultivators' attention to warrant the judges in giving it a Certificate. Mr. Robert Neal, Trinity Nurseries, Wandsworth Common, greatly assisted the show by loans of well-grown groups of Palms, &c. Mr. Norman Davis and Mr. H. J. Jones sent some fine specimen blooms, and the Ichthemic Guano Company also testified to their existence.

Another year we hope to see more nurserymen exhibiting, as we can assure them a hearty welcome by Mr. Coppin and Mr. Langrish, the president and secretary, besides the appreciation of a good and enthusiastic attendance.

BY TELEGRAM.

DORCHESTER.—*November 3rd.*

THE annual show of the Dorchester Chrysanthemum and Horticultural Society opened in the Corn Exchange, Dorchester, on Wednesday, November 3rd. A considerable amount of merit was shown by the various competitors, who, though small in number, made up in quality what was lacking in quantity. A tradesman's exhibition was held in the Town Hall, resulting in an interesting addition to the show.

We give some of the principal awards.—A. B. Sheriden, Esq., got a first prize for forty-eight Japanese blooms, Miss Burt was second, and Miss Church third. Miss Burt took first for twelve Japanese; J. Groves, Esq., was second, and the Rev. W. M. Anderson came in third. For the best six Japanese blooms shown in a vase with foliage, the first award was taken by Miss Burt; second came A. B. Sheriden, Esq., and in the third position came Captain Sutton. A. B. Sheriden, Esq. had the best Japanese bloom in the show. For twelve incurves, J. Groves, Esq. was first; A. B. Sheriden, Esq. second; and Miss Church came in third. For a group of Chrysanthemums, Captain Sutton was first; second came Mr. W. J. Bibben; third, Miss Ashley. For a group of miscellaneous plants, A. B. Sheriden, Esq. scored first; second came Major Parry; and third Miss Ashley. Captain Hounslow and Miss Ashley took first and second for the best three Japanese specimen plants, and also for the best single specimen.

The class for the best six pots of Violets brought up a good number of entries, and the competition was very keen. Primulas and Solanums had classes to themselves; and some very handsome dishes of Apples and Pears were staged in the fruit classes, the entries in which were more numerous than usual. A handsome group of Chrysanthemums and Foliage plants was exhibited by W. E. Brymer, Esq., M.P., not for competition, who filled up one end of the Corn Exchange.

DUBLIN.—*November 3rd and 4th.*

THE Royal Horticultural Society of Ireland held their winter exhibition of Chrysanthemums and fruit at Ball's Bridge, Dublin, on Wednesday and Thursday, November 3rd and 4th. It was a grand all-round show in every department. In the class for a group of Chrysanthemums, not to exceed thirty pots, staged for effect, first came Mrs. M'Cann, Simmon's Court Castle, Dublin (gardener, T. Goff) for the leading award; Mrs. Pearce, Willow Park, Dublin (gardener, J. McKenzie) came second. For a group occupying 50 superficial feet, arranged for effect, first came Mr. M'Cann; second, Mrs. Mac-taggart, Oasell House, Rathgar (gardener, Mr. Sullivan); third, Mrs. Pearce. In Class III, for four pots of incurved Chrysanthemums, each different, the first prize was taken by Mrs. M'Cann. In the Class IV, four plants, any varieties, not to exceed 8 ins. in diameter, Mr. M'Cann was first; H. B.

White, Esq., Bullingule, Donnybrook (gardener, J. Finegan), came second.

In Class VIII for thirty-six cut blooms, eighteen Japanese, eighteen incurved, first, Lord Ashbrook, The Castle, Durrow (gardener J. L. Mc Kellor); Countess Pembroke, Mount Merrion, Dublin (gardener, H. Crawford), came in second; and R. De La Poer, Kilcronagh (gardener, M. Fernie), took third. Class IX, stand of twenty-four blooms Japanese, 14 distinct varieties, first, Col. C. B. F. Crichton Mullaboden, Ballymore Eustace (gardener, J. Mitchiner); second, Lord Ashbrook, The Castle, Durrow (gardener, L. Mc Kellor); third, Countess of Pembroke, Mount Merrion, Dublin (gardener, H. Crawford). Class X, stand of forty-eight blooms, forty-eight varieties, first, Countess Pembroke; second, Col. C. F. Crichton; third, Lady E. H. Bury, Charleville (gardener, Mr. R. McKenna). For twenty-four blooms not less than eighteen varieties, the first prize, a handsome silver cruet, presented by the Ichthemic Guano Co, Ipswich, was taken by Lord Ashbrook; second, Countess Pembroke; third, R. De La Poer, Kilcronagh, (gardener, J. Fernie).

In Class XVI. for six white Japanese blooms all one variety: first, Clifford Lloyd, Esq., Victoria Castle, Killiney (gardener, J. Farrell); second, Mrs. Moore, Ashton, Phoenix Park (gardener, Mr. Kearn); third, Countess Pembroke. In Class XVII. for six Japanese any colour except white or yellow, Countess Pembroke was first; C. Lloyd second; and Lord Plunkett, Old Connaught House, Bray (gardener, W. Webster), was third.

In the class for four bunches of Grapes in two varieties, first came Lady E. H. Bury, and second Lord Ashtown.

For two bunches of white Grapes Lady E. H. Bury was first, and Lord Ashtown (gardener, Mr. A. Porter) Woodlawn, Dublin second. Two bunches of black Grapes were best shown by the Rt. Hon. J. M. Meade, St. Michaels, Merrion, Dublin, (gardener, Mr. J. Colgan), second came Lord Ashtown, and third, Lady E. H. Bury.

In the class for a dish of six cooking Pears Mr. R. Cassels, Harrold's Cross, Dublin, led; second came Mrs. McCann, Simmon's Court, Dublin (gardener, Mr. Goff); third, Mr. J. B. Quin, Shannon Lawn, Limerick (gardener, Mr. J. Ryan). Six dessert Pears were best shown by Mr. J. Gubbins, Bruree House, Bruree (gardener, Mr. H. Morrison). The second prize fell to Lord Carew, Castle Boro, Enniscorthy (gardener, Mr. J. Kennan); and the third to Mrs. Myre, Ashton, Phoenix Park (gardener, Mr. Kearns). For six cooking Apples Mr. E. Dolier, Knockton Bray, Dublin (gardener, Mr. J. Harvey) was first; Lady E. H. Bury, second; and third, Mr. J. Gubbins. In Class, XXXV. six dessert Apples were best shown by General Sir R. Palmer, Kenure Park, Rush, Dublin (gardener, Mr. N. Stringer). Mrs. Moore was second, and Lady E. H. Bury third in this class.

The finest group of foliage and flowering plants was contributed by Messrs. C. Ramsey & Sons, Ballshridge Nursery, Dublin; Mr. R. Jameson, the Nurseries, Sandymount, Dublin was second.

Amongst the trade exhibits not for competition, Messrs. Edmondson Bros., Dublin, had a splendid lot of Apples and Pears. Mr. W. Tait, Nurseryman Dublin, sent a grand collection of Apples of the leading varieties. A collection of plants was exhibited by the Ichthemic Guano Co.

SOCIETIES.**NATIONAL CHRYSANTHEMUM SOCIETY.***November 1st.*

THERE was a fairly busy meeting of the Floral Committee of the above society at the Royal Aquarium on this date. A considerable number of Certificates was given (for which see next week), and there were several varieties that the committee desired to see again.

Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey, staged a quantity of fine cut blooms including such varieties as Mrs. G. W. Palmer, Directeur Liébert, and N.C.S. Jubilee.

Mr. H. J. Jones, Ryecroft Nursery, Lewisham,

S.E., showed amongst other things capital samples of the handsome new white Anemone Mrs. P. R. Dunn.

Mr. W. J. Godfrey, Exmouth, Devon, contributed two dozen fine blooms. President Nonin, Mrs. Chas. Birch, George Foster, and Mrs. F. A. Bevan, were some of the most striking forms here. Mr. N. Molyneux, Rookesbury Park, Fareham, and Mr. H. Weeks, The Gardens, Thrumpton Hall, Derby, were likewise extensive exhibitors.

Mr. Robert Owen, Maidenhead, had two dozen cut blooms, half of which were of incurved varieties.

QUESTIONS AND ANSWERS

Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Transplanting Hollies.—G. H.: It depends very much on the size of the plants, especially in relation to the quantity of uninjured roots in proportion to the head of foliage. Large trees generally have their roots more or less cut up. It would be the safer plan, therefore, to transplant specimens of small size at the present time, waiting till you get showery weather about the end of March before lifting larger ones. The roots become active just before growth begins to push, and if they, as well as the foliage, are kept moist till the roots get fresh hold, the operation proves successful.

Fern Fronds discoloured.—C. B. G.: We discovered some small colonies of fungi on the more decayed portions of the Polypodiums, but they were seated on the surface of the fronds and belonged to some species of Botrytis. From what we could see these fungi were not the immediate cause of decay but an after result. The fronds are transparent under the microscope, and when that is the case there can hardly be anything in the interior that cannot be detected beyond bacterial organisms, always present in decaying matter. The chlorophyll grains are mostly destroyed in the brown portions, while the walls of the cells are darker brown than their contents. We have seen similar discolouration in the case of Filmy Ferns that were kept in a cold and continually saturated atmosphere, but which gave satisfaction when placed under drier atmospheric conditions. The fronds sent were thin and membranous, suggesting that a more airy atmosphere would give them greater rigidity and enable them to resist the attacks of fungi if present. Polypodies delight in air and light.

Dressing a Border with Manure.—Omega: Some varieties of Narcissus do not like manure, and in such a case it would be injurious to cover the ground above them with manure. The Tenby Daffodil comes into this category. The majority of cultivated varieties, however, derive advantage from an application of well-rotted farmyard manure, if not put on too deeply. The substance of this would be washed down by rain during the winter, thereby furnishing the roots with something to feed upon while they are developing and leaves being thrown up.

Leaf Mould or Stable Manure for Carnations.—Omega: We could not advise you to use either during the winter months, as they would encourage too much moisture about the plants at a time when it is more injurious than beneficial. Carnations, if planted in autumn, should first have the soil trodden, before being inserted. A firm soil is always drier than a soft, loose one. When growth is being resumed in spring, or say about the beginning of May you may give a thin coating of well rotted stable manure to preserve the moisture. Good growers prefer to plant in rich soil, where the manure has been dug in some time previous to planting. Mulching is unnecessary in well enriched soil.

Management of Cricket Ground.—X. Y. Z.: We take it for granted that the ground will be dug or trenched equally all over in the first place, so that it may consequently subside equally and regularly. If sufficiently dry to permit of the operation, the soil may be rolled before sowing, to break down the clods, &c. Then rake it finely, keeping it level. Sow the seed and give it another rolling, after which the grass should be allowed to grow as it may, till rank enough to require mowing. This should be done with the scythe at the first operation, because it may have grown unequally, and not be very firmly rooted in the ground. Subsequent mowings, in our opinion, had better be done carefully with the mowing machine. Should June and July be very dry we should advise you to give the grass a good watering after the mowing has been completed and the grass cleared away. After the superfluous moisture has sunk into the ground, run the roller over it again. If your operations have been successful you should be able to play upon the ground towards the end of the

season or even in August. This may be done if the soil is firm and the grass forms a close sward.

Names of Fruits.—J. H.: 1, Court of Wick; 2, Lane's Prince Albert; 3, Colonel Vaughan; 4, Dumelow's Seedling; 5, Tower of Glamis; 6, Beurré de Capiaumont; 7, Beurré Sterkmans; 8, Easter Beurré; 9, possibly Beurré Clairgeau, but not quite in character.

Names of Plants.—J. H.: 10, Kerria japonica; 11, Polygonum Sieboldi.—D. Lamb: The Japanese Toad Lily (Tricyrtis hirta).—C. B. G.: Mnium undulatum.—W. M.: 1, Aster Novi-Belgii laevigatus; 2, Aster diffusus horizontalis; 3, Rhus Cotinus; 4, Acer platanoides; 5, Alyssum maritimum variegatum.—A. H.: 1, Asplenium bulbiferum minus; 2, Selaginella Braunii; 3, Cotoneaster Nummularia; 4, Cotoneaster Simonsii; 5, Pernettya mucronata; 6, Arbutus Unedo.—W. K.: 1, Oncidium varicosum; 2, Maxillaria picta; 3, Cattleya dowiana aurea.—T. L.: 1, Polypodium aureum; 2, Lomaria gibba; 3, Pteris cretica albo-lineata.—E. B.: 1, Lycesteria formosa; 2, Spiraea Bumalda; 3, Abelia triflora; 4, Tradescantia virginiana; 5, Escallonia rubra; 6, Kerria japonica; 7, Calycanthus floridus; 8, Azara microphylla; 9, Diervilla grandiflora var.—Odont.: Odontoglossum grande, well grown.

Communications Received.—F. C. Heinemann.—A. Hope.—B. Lockwood.—Biggs & Son.—Pomona.—J. H.—John McIntyre.—One in Doubt.—S. H.—Cassell & Company, Ltd.—J. W. Moorman.—W. B.—G. Taylor—Wm. Hayes—H. H.—C., Swansea.—L. E., Maidstone—Andover—A. E. R.

TRADE CATALOGUES RECEIVED.

LITTLE & BALLANTYNE, CARLISLE.—Forest and Ornamental Trees, Shrubs, &c.

FREDERICK ROEMER, Quedlinburg, Germany.—Novelties in Flower Seeds for 1898.

JAMES COCKER & Sons, Aberdeen.—Descriptive Catalogue of Roses, Hardy Herbaceous Plants, Shrubs, Fruit, Trees, Climbing Plants, &c.

ARNOLD PUETZ, Pampas Grove, Greenland P.O., Florida.—Cannas; also Pampas Grass; and Sacaline (Polygonum sachalinense).

THE DEVON CHRYSANTHEMUM NURSERY, Perley Cross, Teignmouth, South Devon.—List of Choice Chrysanthemums.

R. MORGAN, 65, Westow Street, Norwood, S.E.—The British Astronomical Weather Almanac and Chart.

DICKSONS, The Nurseries, Chester.—Forest Trees, Ornamental Trees, Evergreens, &c.

COVENT GARDEN MARKET.

November 3rd, 1897.

FRUIT.—AVERAGE WHOLESALE PRICES.

| s. d. s. d. | s. d. s. d. |
|------------------------|-------------|
| Apples.....per bushel | 3 0 7 0 |
| Black Currants ½ sieve | |
| Red " ¼ sieve | |
| Cherries half sieve | |
| Nova Scotia Apples | |
| per barrel | |
| Filberts..... | |
| Cohhs | 22 6 24 0 |
| per 100lbs. | |
| Grapes, per lb | 0 9 2 0 |
| Pine-apples | |
| —St. Michael's each | 2 6 8 0 |
| Plums per ½ sieve..... | |
| Strawberries, per lb. | |
| Tasmanian Apples | |
| per case | |

VEGETABLES.—AVERAGE WHOLESALE PRICES

| s. d. s. d. | s. d. s. d. |
|------------------------|-------------|
| Artichokes Gloche doz. | 2 0 3 0 |
| Asparagus, per bundle | |
| Beans, French, per | |
| per lb. | 0 6 0 8 |
| Beet..... per dozen | 2 0 |
| Brussel Sprouts, | |
| per half sieve | 1 6 2 0 |
| Cabbages ... per doz. | 1 0 1 3 |
| Carrots ... per bunch | 0 3 |
| Caniflowers.....doz. | 1 6 3 0 |
| Celery.....per bundle | 1 0 1 6 |
| Cucumbers per doz. | 2 6 3 6 |
| Eddie, French, doz. | 1 0 2 0 |
| Herbsper bunch | 0 2 |
| Horse Radish, bundle | 2 0 3 0 |
| Lettuces ...per dozen | 1 3 |
| Mushrooms, p. basket | 1 0 1 6 |
| Onions.....per bunch | 0 4 0 6 |
| Parsley ... per bunch | 0 3 |
| Radishes... per dozen | 1 c 1 3 |
| Seakale...per basket | 1 6 2 0 |
| Small salad, p. bunch | 0 4 |
| Spinach per bushel | 2 0 3 0 |
| Tomatos..... per lb. | 0 6 1 0 |
| Turnips per bu. | 0 3 |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| s. d. s. d. | s. d. s. d. |
|-------------------------|-------------|
| Arum Lilies, 12 blms. | 5 0 6 0 |
| Asparagus Fern, bun. | 1 6 3 0 |
| Bonvardias, per bun. | 0 6 0 8 |
| Caruatiflowers.....doz. | 0 6 3 0 |
| Carnations, doz. bun. | 4 0 9 0 |
| Chrysanthemums | |
| dozen blooms | 1 0 3 0 |
| dozen hoods | 1 0 3 0 |
| Eucharis ...per doz | 3 0 6 0 |
| Gardenias ...per doz. | 2 0 4 0 |
| Geranium, scarlet, | |
| doz. bunches | 4 0 6 0 |
| Lilium longiflorum | |
| per doz. | 4 0 6 0 |
| Lily of the Valley doz. | |
| sprays | 1 0 2 0 |
| Lilac (French) per | |
| bunch | 4 0 5 0 |
| Marguerites, 12 bun. | 2 0 4 0 |
| Martehair Fern, 12bs. | 4 0 8 0 |
| Orochids, doz. blooms | 1 6 12 0 |
| Pelargoniums, 12 bun. | 4 0 6 0 |
| Pyrethrum doz. bun. | 1 6 3 0 |
| Roses (Indoor), doz. | 6 1 0 |
| " Tea, white, doz. | 0 9 2 0 |
| " Niels | 1 6 4 0 |
| " Safrano | 1 0 2 0 |
| " (English), | |
| Red Roses, doz. | 1 0 2 0 |
| Pink Roses, doz. | 2 0 4 0 |
| Roses, doz. bun. | 3 0 9 0 |
| Smilax, per bunch ... | 1 6 3 0 |
| Tuberose, doz. | |
| blooms ... | 0 3 0 4 |
| Violets (Parma), per | |
| bunch | 2 6 3 6 |
| " " doz. bun. | 1 6 2 0 |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

| s. d. s. d. | s. d. s. d. |
|------------------------|-------------|
| Arbor Vitae | |
| per doz. | 12 0 35 0 |
| Aspidistra, doz..... | 18 0 36 0 |
| " speolmen | 5 0 10 0 |
| Chrysanthemum, per | |
| doz. pots... | 6 0 36 0 |
| Dracaena, various, | |
| per doz. | 12 0 30 0 |
| Dracaena viridis, doz. | 9 0 18 0 |
| Eunymus, var. doz. | 6 0 18 0 |
| Evergreens, lvar. doz | 6 0 24 0 |
| Ferns, lvar., per doz. | 4 0 12 0 |
| Ferns, small, per 100 | 4 0 6 0 |
| Ficus elastica, each | 1 0 5 0 |
| Foliage Plants, var., | |
| each | 1 0 5 0 |
| Lilium Harrissii, | |
| per pot | 2 0 4 0 |
| Lycopodiums, doz. | 3 0 4 0 |
| Marguerite Daisy doz | 4 0 9 0 |
| Myrtles, doz. | 6 0 9 0 |
| Palms in variety, each | 1 0 15 0 |
| Palms, Specimen ... | 21 0 63 0 |
| Pelargoniums | |
| Scarletsper doz | 1 4 0 |

A Special Offer to Readers of THE GARDENING WORLD. 25/- BOOK for 8/-

NO HOME SHOULD BE WITHOUT ONE

Ogilvie's Encyclopædia

OF USEFUL INFORMATION AND WORLD'S ATLAS.

No Single Book ever before contained such a Wealth of Knowledge.

By Special Arrangement with the Publishers of the "Encyclopædia of Useful Information and Atlas of the World," we are enabled to offer to the Public a Magnificent 25s. Volume for 16 of the coupons, which will appear weekly, together with 6d. each, accepted in Weekly Instalments, or the Coupons may be held until the whole period has elapsed and brought or sent to the Office with 8s., and 6d. towards carriage.

A COMPLETE ILLUSTRATED LIBRARY IN ITSELF.

A universal assistant and treasure-house of information on every conceivable subject, from the household to the manufactory. In short, gives information about everything, is absolutely indispensable to everyone in all walks of life; the contents being so separated, indexed, and arranged that they can be turned to at once. It is

THE BEST { BOOK OF } EVER { INFORMATION } ISSUED. Size of Encyclopædia: 9 by 11½ inches. 656 Pages

It contains

MANY MAGNIFICENTLY ENGRAVED COLOURED MAPS,

and a description of every country under the sun, besides much other matter relative to the Home, the Farm, the Factory, a Dictionary of Statistics—many Useful Tables, Poetical Selections, Synonyms, Famous Bridges and Ships, How to Calculate, How to Cook, How to Get Rich, How to Cure all Diseases, How to Succeed in Business, Table of Weights and Measures, and

HUNDREDS OF OTHER TOPICS OF GREAT VALUE TO EVERY PERSON

who desires to be up to the times. To see the Book is to want it. To Members of Mutual Improvement Societies it will prove of inestimable value.

The articles are written by men whose lives have been devoted to the subjects treated, are short and concise, but contain full information up to date. It is to be consulted on every subject that arises in everyday life, by old and young alike. It contains a complete Illustrated Atlas of the World.

IN THESE DAYS OF COMPETITION

it is imperative that a Gardener should be a well-informed individual. Here is an Encyclopædia containing an immense amount of knowledge that will be of the greatest service to him.

YOUNG GARDENERS,

do you wish to be successful? Then remember that to possess knowledge is the surest way to achieve success.

It is elegantly bound in Morocco Cloth, with beautifully designed Gilt Side-stamp and Red Edges, making at once the most handsome and durable as well as THE MOST USEFUL BOOK EVER MADE or sold for 25s.

61197. **COUPON.**

OGILVIE'S ENCYCLOPÆDIA OF USEFUL INFORMATION, AND WORLD'S ATLAS, (Published Price 25s.). 16 COUPONS, AND 6d. WITH EACH.

Name _____

Address _____

Postal Orders or ½d. stamps may be sent. COUPONS AND CONTRIBUTIONS MAY BE LEFT at or SENT TO the Office for

THE PUBLISHER OF

THE GARDENING WORLD.

COPIES OF THIS BOOK CANNOT BE BOUGHT. They can be obtained only by using these Coupons.

BARR'S GOLD MEDAL
DAFFODILS
 The Most Lovely
 of all Spring Flowers.

EMPEROR, a magnificent variety, with deep primrose-coloured perianth, and rich full yellow trumpet, very large flower. *Extra strong Bulbs*, per 100 30s., per doz. 4s. 6d.

OBVALLARIS, the Tenby Daffodil, very early, perianth and trumpet deep yellow, a charmingly graceful daffodil. *Extra Strong Bulbs*, per 100 14s. 6d., per doz. 2s.

SIR WATKIN, the Giant of the Challice Cupped Daffodils, perianth rich sulphur, cup yellow slightly tinged with orange. *Extra strong bulbs*, per 100 25s., per doz. 3s. 6d.

BARRII CONSPICUUS, a flower of great beauty and refinement, a favourite with all, large broad spreading yellow perianth, broad short cup, conspicuously edged bright orange-scarlet. *Extra strong bulbs*, per 100 21s., per doz. 3s.

ALL BULBS SENT CARRIAGE PAID ON RECEIPT OF REMITTANCE.

Send for BARR'S ILLUSTRATED CATALOGUE of all the most beautiful DAFFODILS, with full particulars of collections for Amateurs and Exhibitors, *Free on Application to:-*

BARR & SONS,
 12 & 13, KING ST.,
 COVENT GARDEN, LONDON.
 Nurseries:-Long Ditton, Surrey.

ORCHIDS.
 Clean Healthy Plants at Low Prices.
Always worth a visit of inspection. Kindly send for Catalogue
JAMES CYPHER,
 Exotic Nurseries, CHELTENHAM.

FOR PLEASURE AND PROFIT
FRUIT
 Nothing so profitable and easy to grow.
 80 Acres of Saleable Trees.
SEEDS
 THE BEST PROCURABLE.
Lists Free.
ROSES
 HUNDREDS of THOUSANDS.
 Bushes in variety. Packing and Carriage free for Cash with order.
 8/- per doz., 60/- per 100.
All other Nursery Stock carriage forward.
ROSES IN POTS From 15/- a doz.
 Ornamental Trees, 91 Acres,
 A Superb Collection of
 Herbaceous Plants,
 Four Acres of Glass,
 Clematis 80,000 from 15/- doz.
N.B.—Single Plants are sold at slightly increased prices.
GENERAL CATALOGUE
 (Over 160 pages) of Nursery Stock, artistically produced containing some hundreds of illustrations, and full of valuable information, free on receipt of 3d. for postage. Please mention this Paper.
RICHARD SMITH & CO., WORCESTER.

LAING'S
 LARGE
 COLLECTIONS

OF
Fruit Trees,
Roses, Vines,
Seakale, &c.,

ARE EXCEPTIONALLY FINE THIS SEASON.

Shrubs and Conifers

IN GREAT VARIETY.

Inspection Invited. Catalogues Gratis.

RAILWAY STATIONS,

Catford, S.E.R.; Catford Bridge, L.C. & D.R.,
 TELEPHONE, Sydenham, 60.

JOHN LAING & SONS,

Seed, Plant, and Bulb Merchants,
 Rose, Fruit Tree, and Vine Growers, Floral
 Decorators, &c.
 FOREST HILL, LONDON, S.E.
 And CATFORD, KENT.

GARNATION "YULE TIDE"

Is the best scarlet winter flowering Carnation in cultivation. It has already gained Eight First-class Certificates as well as the R.H.S. Silver Flora Medal and has been highly eulogized by the Press. A stirring novelty of great merit. Strong plants 5s. each, carriage paid.

BEGONIA GLOIRE DE LORRAINE

Is the finest winter flowering plant extant, of dwarf, compact, free habit, flowers continuously all winter and spring, a lovely rosy-carmine colour, good flowering plants, 2s. 6d., 3s. 6d. and 5s. each, carriage paid.

JOHN FORBES, Nurseryman,
 HAWICK, SCOTLAND.

THE ORCHID FLOWER HOLDER

(PATENTED).
 A useful invention for Orchid Growers and Floral Decorators
 Price, per dozen, 3s. 9d., post paid.
 TO BE HAD OF

ALFRED OUTRAM,
 7, MOORE PARK ROAD FULHAM, LONDON, S.W.

GARDEN & OLD-FASHIONED ROSES.

GEO. COOLING & SONS

Have always been noted for their Collection of Old-Fashioned and Garden Roses.
 Strong plants can now be supplied of all the beautiful varieties exhibited, and so much admired, at the Rose Shows this season. *New descriptive Catalogue, post free.*
 THE NURSERIES, BATH.

FRUIT TREES

For Market and Private Growers.

ORNAMENTAL TREES, SHRUBS, &c.

DESCRIPTIVE CATALOGUES POST FREE.

J. CHEAL & SONS
 CRAWLEY, SUSSEX.



"Gardening is the purest of human pleasures, and the greatest retreachment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, NOVEMBER 13th, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, November 15th.—Chrysanthemum Shows; Namur, Munich.
 Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 TUESDAY, November 16th.—Chrysanthemum Shows; one day—Hartlepool, Kidderminster, Stirling; two days—Ipswich, Manchester, Belfast, Chester, Folkestone.
 Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 WEDNESDAY, November 17th.—Chrysanthemum Shows; one day—Buxton, Rugby, Wishech, Geneva; two days—Hull, South Shields and Northern Counties, Bristol; three days—York; five days—Dijon, Cambrai.
 Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 THURSDAY, November 18th.—Chrysanthemum Shows; two days—Londonderry, Bury St. Edmunds; three days—Edinburgh.
 Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 FRIDAY, November 19th.—Chrysanthemum Shows; two days—Stockport, Bolton, Edmunds.
 Sale of Dutch bulbs and imported and established Orchids by Messrs. Protheroe & Morris.

FEATURES OF THE N.C.S. GREAT SHOW.—

As we make our annual inspection of this great London exhibition the flowers in the cut bloom classes seem to get larger and larger, by the introduction of new kinds coupled with high class cultivation, rather than the better development of old sorts, hundreds of which get shunted into the back ground and forgotten annually. Even the incurved blooms of the small and old-fashioned type can hardly find a place on the show boards in the more important classes. Japanese varieties on the larger winning stands are represented by varieties which have mostly been put into commerce during the last two or three years. The premier and most popular variety of the whole show was undoubtedly Madame Carnot, which, though not the newest of the recent kinds, cannot by any means be considered old. Enormous blooms of it appeared in all the best stands in the competitive and other classes, but the twelve blooms on the ground floor seemed to take everybody by storm. It was, in fact, in every gardener's and cultivator's mouth. Naturally the older and white form was most abundantly represented, but we noted a bloom of the yellow sport (G. J. Warren) that was the best in the show. The variety requires careful handling to get it in good form, but growers everywhere better understand its requirements than formerly.

For some years past a new type of incurved varieties has been giving an impetus to what is known as the old and true Chinese type. The blooms of the latter were not only old-fashioned, so to speak, but the consensus of public opinion, as far as exhibitions were concerned, was that the blooms were too small. They certainly looked rather insignificant when pitted against the stands of well grown and modern Japanese varieties. With the introduction of J. Agate and C. H. Curtis a few years ago, they made their presence felt to such an extent upon the boards that raisers in various quarters set about multiplying varieties of the same magnitude, but in different shades of colour. The largest incurved bloom we noted was Lady Isabel in the stands of Mr. Mease, who carried off the premier awards for the thirty-six in-

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Malda Vale, London W.

curved, and forty-eight Japanese varieties, taking both of the Holmes Memorial Challenge Cups. The new incurved types were also predominant in the national competition of Chrysanthemum and horticultural societies. They included such as Duchess of Fife, Ma Perfection, Major Bonaffon, and others mentioned in the report of the show. Many of the old growers look upon them as beyond the pale of recognition, and their inclusion in the incurved list as rank heresy; but they have a noble appearance all the same.

The miscellaneous exhibits were undoubtedly a strong feature of the show; for they occupied the whole of the ground floor space. The two groups of Chrysanthemums set up by Mr. Norman Davis and Mr. H. J. Jones, at the west end of the building, were gorgeous, massive, and a great relief upon other arrangements, and took the public fancy immensely. There were also many admirers of the Pelargoniums from Swanley, the Potatos from Reading, the Apples from Forest Hill, and the Conifers from Dundee decorating the Ichthemic Guano Company's octagon group.

The vegetables in St. Stephen's room now constitute the most important show of the kind in London, and have been growing in importance for some years past. The displayed collections were both interesting and instructive. It now takes good vegetables and great skill in arrangement to take a first prize. The samples of Leeks, Potatos, Onions, Cauliflowers, Beet, Parsnips, Brussels Sprouts, Tomatos, &c., are something to be remembered. Potatos were both abundant and of good quality, thanks to new and disease-resisting kinds. Apples in most cases presented a most alluring and imposing appearance.

Ben Nevis was entirely bare of snow at the beginning of this month, a most unusual occurrence.

Victorian Era Exhibition.—A Diploma and Gold Medal have been awarded to Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., by the management of the Victorian Era Exhibition, Earl's Court, for the planting of shrubs and other subjects in the gardens there, while the exhibition was open.

Sutton's Peerless Marrowfat Pea, although classed as a main crop Pea, was shown in excellent condition at Sevenoaks, November 2nd, fine large pods containing grand dark, bright green peas 8 to 11 in a pod, remarkable in size and of excellent flavour. This Pea is most robust in habit, in height about 3 ft., producing an enormous crop, and never attacked by mildew, a very great thing in its favour. It is one of the splendid novelties emanating from the Reading firm.—*Urbanus*.

Lance-Corporal Patrick Milne, the brave piper who continued playing "Cock of the North" on his pipes after being bowled over by a shot in each leg, in the famous charge at Dargai, on the Indian frontier, is a native of Ardoyne near Insch, Aberdeenshire, where his father was a small farmer. The latter is now gardener at Waterside, Newburgh, in the same county. Young Milne first smelt powder at the battle of Malakand, and in the next encounter of the same campaign he again had a narrow escape, while a bullet through the pipe-bag silenced his music.

French Chrysanthemum Society.—On the occasion of the Chrysanthemum show held by this society at Orleans on the 6th, 7th, and 8th inst., a congress was organised to commence at 2 p.m. The questions submitted to the congress were the "Fertilisation of Chrysanthemums," "The best Compost and Manures," "Diseases and Parasites," &c. A banquet was held at 7 p.m. On the second day there was a mid-day breakfast, and in the afternoon the town and monuments were visited. On the third day (Monday) the principal horticultural establishments of Orleans were visited by the society and those connected with it.

Mike: "What was it Pat said when he fell through the roof of the hothouse?" Denny: "Oi have a pane in me soide, begorra!"

Late Peas, Scarlet Runners and Strawberries.—About the beginning of November, usable Scarlet Runners were gathered in the suburbs of London. Marrowfat Peas were gathered on the 2nd inst., by Mr. H. C. Corney, High Street, Littlehampton, Sussex. Mr. H. Harvey, of the same town plucked ripe Strawberries on the 1st inst.

Mr. John Forbes at Carlisle.—On the occasion of the Chrysanthemum Show at Carlisle on the 10th and 11th inst., Mr. J. Forbes, Buccleuch Nurseries, Hawick, staged a very fine lot of the immensely popular winter flowering Begonia, Glorie de Lorraine, associated with Roman Hyacinths and Ferns, along with his new scarlet perpetual Carnation, Yule Tide, which has become such a favourite on account of its free blooming qualities, size and colour of flowers, etc.

Messrs. J. Weeks & Co.—In order to better cope with the constantly increasing amount of work entrusted to the firm for execution, the business of the old established and well-known horticultural builders and hot-water engineers, Messrs. J. Weeks & Co. has been formed into a company, most of the capital being privately subscribed, and has been duly registered under the Companies' Acts. The firm, now merged in J. Weeks & Co., Limited, which will be continued under the same management is under the most distinguished patronage, having executed works for Her Majesty The Queen, most of the nobility and gentry, H. M. Government, the Admiralty and War Departments, the Royal Horticultural and Botanic Societies, as also many museums and other public buildings, churches, etc.

Presentation.—On Friday night (the 5th inst.), a few friends met in the house of Mr. McInnes, Shewalton, Irvine, and presented him with a beautiful marble timepiece on the occasion of his leaving Shewalton. Mr. Dewar, Dankeith, occupied the chair, and after a few suitable remarks called upon Mr. Hamilton to make the presentation. Mr. Hamilton, in doing so, expressed the great regret with which they parted with Mr. McInnes. He had been among them for five years, and made himself a kind neighbour and true friend. He wished him much success in his new situation. Mr. McInnes said he was much surprised to receive such a handsome present, and would never cease to remember the many friends he had made in Ayrshire, and trusted he would occasionally be able to be among them. On behalf of his wife and self, he sincerely thanked all who had contributed. Mrs. McInnes entertained the company in hospitable fashion, and a pleasant evening was spent. Mr. McInnes has been appointed gardener to D. Whitelaw, Esq., Eskhill, Inveresk, and is succeeded at Shewalton by Mr. Miller, presently foreman at Caprington Castle.—*R. L.*

Amateur versus Professional.—Apropos of Mr. Gibson's comments on this matter (p. 133), I am very glad to be able to record that, occasionally, the ability of the amateur to out-rival his professional confrere, is not confined to bonnie Scotland; and that the latest instance proves that the Sassenach, also can sometimes excel in his own particular line. Mr. Mathew—a gentleman I know by reputation—not only won first place at the Exmouth show against all comers, but repeated the performance at the Devon and Exeter show a few days later. In fact the *Devon Evening Express* of Nov. 4th states that:—"Following up his success at the Exmouth Show last week, Mr. G. W. Mathew was to-day, at the exhibition of the Devon and Exeter Horticultural Society, awarded a first prize for his splendid specimen of Alicante grapes. The three bunches exhibited were grown in a small cool greenhouse at the rear of Mr. Mathew's residence in Mamhead View, and were produced without professional aid. The bunches are remarkable for their size and symmetry, and certainly do their producer very great credit." Moreover, this is no isolated instance, for the Exmouth local paper has it that when Mr. Mathew "lived at Sandhill Cottage he repeatedly beat experts whose life's business was grape-growing," and that, "the marvel is that no artificial heat of any description has been employed."—*C. B. G., Acton, W.*

Enthusiastic Amateur Gardener.—Goggles was so fond of grass that, because it would not grow in his back yard, he wore green spectacles.

Chrysanthemums at Waterlow Park.—In the long range of greenhouses there are 2,000 Chrysanthemums in 750 varieties, old and new. The display promises to be the best ever seen at Waterlow Park, when the blooms shall have reached their best condition. The collection reflects great credit on Mr. Webbe, the grower.

Mutual Improvement Society, Woolton.—On Thursday of last week the usual meeting of this society was held at the Mechanics' Institute, Mr. W. Oliver in the chair. The lecturer, Mr. A. Randall, of Aigburth, selected for his subject, "Plants Suitable for Decoration." A large number of kinds was submitted, including stove, greenhouse, and hardy kinds, with the varied requirements to suit them for the trying time that they were in the house and usually in positions far from the light. A special selection suitable for table decoration of the most light and graceful varieties was given. A discussion followed in which Messrs. Todd, Waterman, Corlett, Carling, Rae, and Disley took part. Sections of stems of Aspidium and Bracken, the root of a marsh plant, the starch grains in wheat, and specimens of lungs heavily charged with foreign matter were shown by the aid of the microscope under the direction of Messrs. Corlett and Potts. Votes of thanks to the essayist and chairman concluded the business.

Exmouth Chrysanthemum Show took place in the market at Exmouth. Up to the present year it has been a one day's show only, but this season the period has been extended to two days. A highly creditable display of Chrysanthemums, fruit and vegetables was got together. Amongst the cut Chrysanthemums some excellent blooms were to be seen, the leading award for thirty-six Japanese going to Mr. H. Hammond Spencer. Mr. Hammond Spencer also showed the best twelve incurves. General Roche received the first prize for four Chrysanthemums in pots; and Mrs. H. Steward a similar award for plants arranged for effect. In the classes for fruit, first prizes went to Mr. Matthew, for Muscat Grapes; to Mrs. Creswell, for six varieties of cooking Apples; and to Mr. R. Ley, for six varieties of dessert Apples. The premier collection of vegetables was contributed by Mr. A. Shapland. In the special prizes Mrs. Harvey was honoured for table decoration, and Miss Schreiber for a basket of Chrysanthemums. Mr. W. J. Godfrey, of the Exmouth Nurseries, sent a splendid non-competitive exhibit of Chrysanthemums, both on the plants and off them, and other subjects for which the Exmouth Nurseries are famous.

Devon and Exeter Gardeners' Association.—At a meeting of this association, held at the Guildhall, Exeter, on the 27th ult., a paper was read by Mr. R. Hodder, gardener, to Mrs. Trevor Barclay, Ponsonby, Torquay, on the subject of "How a Knowledge of Botany is a Help to Gardening." The chair was occupied by Mr. T. Stoneman, lately teacher of botany at the Exeter Museum. Mr. Hodder said that botany had much to teach gardening, because it afforded an insight into the physiological principles upon which horticultural operations were based. By thoughtful care a gardener could often so improve the surroundings compared with those of the natural home of plants, that he could coax Nature, as it were, to greater developments and a higher perfection. In the production of double flowers, man did not add new possibilities to Nature, but took advantage of those already existing. Man could not break through the laws of Nature, which were fixed, but could only work in accordance with them. Botany taught them the structure of plants, the functions performed by them, and the systematic arrangement of the same in sub-kingdoms, classes, orders, &c. In conclusion he told his hearers not to imagine that the whole field of improvements had been traversed, but that there was a vast field for improvement ahead of them. Mr. A. Hope showed the members a branch of the true Cedar of Lebanon. The Rev. Lloyd Sanders exhibited a cone obtained from the Biblical Forest of Lebanon. He sowed the seed and has reared a tree from it.

CHRYSANTHEMUM HAIRY WONDER.

THE advent of Mrs. Alpheus Hardy in 1890 practically inaugurated a new race of the autumn queer. The difficulty of growing that variety was not sufficient to damp the enthusiasm of growers who were

tion for their reception. None of the hairy varieties have given more satisfaction than Hairy Wonder, of the same form as a true Japanese type, but thickly covered all over with bristly outgrowths from the back of the tubular florets. In colour the blooms

1894, and has been honoured with several certificates from different societies. We first met with it in the establishment of Mr. H. J. Jones, Ryecroft Nursery, Hither Green, Lewisham, who supplies the accompanying illustration of this remarkable variety.



CHRYSANTHEMUM HAIRY WONDER.

taken with the strange appearance of the new comer. Raisers set about getting new varieties of different forms and colours, but all possessing the hirsute or plumy character of the original. So well have they succeeded that a large number have already been put into commerce, with the result that the National Chrysanthemum Society has created a "hairy" sec-

vary from a light to a deep fawn according to the stage of advancement, the earlier stages being the darker. About this time the bristly florets have the most singular appearance of wriggling caterpillars. Later on as the florets lengthen, they droop down and give the whole bloom a more graceful and easy appearance. The variety was put into commerce in

Sixty trees were planted on the summit of Redhill Common on the 19th ult. in commemoration of the Queen's Diamond Jubilee. Many people were present, including Lord Oxenbridge, Henry Cubitt, Esq., M.P., Mrs. Cubitt, the Mayoress of Reigate, and Lady Myles Fenton. Some of the trees were planted by ladies.

PEOPLE WE HAVE MET.

MR. J. W. MOORMAN.

THE subject of our memoir was not born of gardening parents, but took to the calling from pure love of horticulture.

At the early age of ten years he was employed at the floors of a tin mine, washing and cleaning tin ore, which occupation he followed for nearly four years, the next two found him acting in the capacity of a navy boy attending on the men carrying their tools and fetching them rock powder for blasting purposes. Thus at the age of sixteen when lads now think of leaving school, Mr. Moorman had done six years of hard rough toil. On leaving this he procured employment in a small garden belonging to Miss Baring Gould, at Teignmouth, Devon, who was a niece of Mr. Joseph Sabine, a former secretary of the R.H.S., and aunt to the great novelist—the Rev. Sabine Baring Gould.

Miss B. Gould was a good botanist and an ardent lover of horticulture, Mr. Moorman gaining from her a rudimentary knowledge of both gardening and botany after a service of four years with her; and fired by a love and a desire for further improvement he engaged himself as an improver in the extensive gardens of Lord Poltmore, Poltmore Park, Exeter. After a stay here for nearly two years he was transferred to Poynton Towers, Cheshire, where he spent the following two years in the gardens of Richard Christy, Esq.

He next made a sojourn of several months in Messrs. James Veitch & Sons' Chelsea Nurseries, being principally employed among Ferns, of which he at that time had a good knowledge. From the Chelsea Nurseries he was next sent to Sulhy Hall, Rugby, Warwickshire (Lady E. Villiers), as foreman; and after a short stay here he was sought after by his former employer to take the charge of his mother's place at Coombe Bank, Kingston-on-Thames, which situation he held for upwards of seventeen years, and through the kindness of his employers, the late Mrs. and Miss Christy exceptional opportunities for gaining further experience in first-class gardening was afforded him. During Mr. Moorman's sojourn here he was for many years actively engaged in the advancement of horticultural societies, and a frequent contributor to horticultural journals. He holds two Gold Banksian Medals from the R.H.S. awarded to him in March, 1879, and 1881 for groups of Hyacinths, Tulips, and Crocuses.

The growth of Roses in pots was for many years a favourite theme of his, and he has taken many first prizes at the Crystal and Alexandra Palaces, also at the Royal Aquarium, &c., when more encouragement was offered by the various horticultural societies for these attractive and much admired subjects than now.

At the local shows many a first prize card was attached to his collections of cut Roses for which he had a long and successful career, as well as gaining awards in almost every other branch of the profession.

But as a grower and exhibitor of Chrysanthemums has he been longest known; he has grown them almost every year since 1866. In 1879 he was awarded the All England Challenge Prize at Southampton for twenty-four cut blooms. He followed up this success the same year at Ealing, Plymouth, Manchester, and came in second for the first Kingston Challenge Vase, the fight for which, and successive Challenge Vases offered by that society has given more stimulus to the rapid development of this autumn favourite than ought else. For the establishment of the Kingston Chrysanthemum Society Mr. Moorman penned and circulated the notices for the first meeting, and remained on the executive of the society for several years until he left the neighbourhood.

After leaving Coombe Wood, he turned his attention to landscape work, and was entrusted to lay out Camberwell Park (Myatts' Fields), and while at work here he came under the London County Council, who, after it was laid out, had the control of the park, Mr. Moorman being appointed its first superintendent.

About two years afterwards on the council acquiring Brockwell Park, he was promoted to the charge of this. His stay here was only for a few months as a vacancy had occurred in the meantime at Dulwich Park, which he was invited to conduct; and his transfer to this fine open space proved that

he was clearly at home amongst the many Alpines and numerous other interesting plants that are so extensively cultivated in this beautiful suburban lung of London.

After a stay of two years and three months he was promoted to his present charge at Victoria Park, which, as its superintendent, he has directed for the past four years, and the record of his work both



MR. J. W. MOORMAN.

there and at Dulwich, we have been pleased to describe in these pages on several different occasions. In the springtime the rockeries and alpines at Dulwich Park afforded us much pleasure in inspecting them. The flowering trees and shrubs were varied and most interesting; while later on the summer bedding offered us much to linger over. After his transference to Victoria Park, the special features of the various styles of bedding were not only maintained but even improved. The spacious area of what should have been grass at the east end of the park, was trodden bare and black by the thousands of Londoners visiting the same for recreation. All this has been transformed by Mr. Moorman, and the grass is everywhere green again.

Mr. Moorman has for some years been an active member on the executive of the N.C.S., being on both the floral and schedule committees; he has also acted in the capacity of judge on several occasions besides the present year, and has been much in request in the past to such important societies as Hull, Bournemouth, South Shields, and Northampton. Mr. Moorman has certainly proved himself an all-round gardener, and it is as a gardener amongst gardeners that he likes best to be known.

PLANTS RECENTLY CERTIFICATED.

FIRST-CLASS Certificates were awarded to the under-mentioned Chrysanthemums at a meeting of the Floral Committee of the National Chrysanthemum Society, at the Royal Aquarium, on November 2nd.

G. J. WARREN.—This is very generally known as the yellow Madame Carnot, from which it originated as a sport. The blooms shown on this occasion were a considerable improvement on those which appeared last season. The colour is bright yellow, and the florets of very great length. The whole bloom is thus of great size, but rather loose in build. Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey.

MRS. PALMER is a new Japanese variety, a sport from Mrs. C. H. Payne. The blooms are very large and exhibit a charming shade of rosy-buff, touched here and there with a warmer cerise. The centre of the bloom has a decided orange flush, and the florets have a silvery reverse. Mr. W. Wells.

LADY ISABEL.—When first sent out this was classed as an incurved Jap., but on later buds it develops into a grand incurved flower. The blooms are of extraordinary size, the florets being massive, and

incurving quite regularly to form a full, high centre. The colour varies from blush-white to blush-pink. Mr. W. Wells.

LENAWEE.—Here we have a most distinct and rather peculiar type of Japanese bloom. As the name suggests, it is of American origin; but should prove of value here also. The florets are long, tubular, and incurved slightly at the tips. The whole bloom is rather loose in build, and runs to lateral expansion rather than to depth. The colour is blush-pink. Lenawee was distributed in this country by Mr. Norman Davis, of Framfield, Sussex, and was shown on this occasion by Mr. J. Ollerhead, Wimbledon.

MRS. F. A. BEVAN.—This variety exhibits one of the prettiest types of Japanese blooms. The florets are of medium length and width, but good substance, and incurve charmingly at the tips. On the upper surface they are bright rose, with a lighter rose reverse. The bloom is of medium size, and should make a capital front row flower. Mr. W. J. Godfrey, Exmouth, Devon.

G. FOSTER is a fine yellow incurved Japanese variety, with very broad fluted florets of great substance. They are rather irregularly arranged with regard to each other, and turn both to right and left as well as towards the centre. The result is a bloom of distinct build. It is, moreover, of fair size, and will doubtless be heard of again. Mr. W. J. Godfrey.

MR. CHAS. BIRCH was shown as a hairy variety, but the committee was of opinion that the hairs or thorns were not sufficiently numerous or pronounced to entitle it to be placed in this section. It received a certificate, therefore, as a Jap. The florets are narrow, thorned to some extent at the tips, and intertwine considerably. The bloom is of fair size, and should make a good front row flower. The colour is a glistening white. Mr. W. J. Godfrey.

MARY MOLYNEUX.—This was the finest of the novelties displayed, at least in its section. It is an incurved Japanese with enormous blooms. The florets are long and of medium width, rose-pink on the upper surface, and pale silvery-pink reverse. The centre is full and high. Mr. N. Molyneux, Rookesbury Park, Fareham.

MRS. N. MOLYNEUX.—This is another grand incurved Jap with long fluted florets, having divided apices. The colour is creamy-white. The size of the bloom is remarkable. Mr. N. Molyneux.

A commendation was proposed to N.C.S. Jubilee as shown by Mr. W. Wells. For full description of this charming variety see the list of Chrysanthemums certificated by the Royal Horticultural Society (p. 151).

VICTORIA PARK.

THE Chrysanthemum show at this London park has been open to the public since the 14th October, and will continue so for some weeks to come. The very earliest varieties are past their best, though the general collection is by no means early. Mr. J. W. Moorman, the superintendent, has a stock of late varieties in reserve to take the place of those that go out of bloom, so that the show will be kept up to the standard for weeks to come. The roomy span-roofed house was originally built to accommodate Chrysanthemums, and is admirably adapted for the purpose. The plants are arranged in a sloping bank, rising in the centre and again at the ends of the house, on either side of the pathway.

We noted grand blooms of Lady Byron, Louise, Phoebus, Mme. Paul Lacroix, Pride of Madford, Wm. Seward, M. Pankoucke, and Mutual Friend, concerning which it would be difficult to speak too highly. The golden yellow A. H. Fewkes, is dwarf in stature and handsome. Other favourites that find their admirers everywhere are Mrs. E. S. Trafford, a bronzy sport from Wm. Tricker, also well done; the crimson M. G. Byron; and the silvery-blush Mme. C. Capitante, having the florets jagged at the tips; the carmine Pride of Madford; and the golden-yellow Amiral Avellan, the pride of many growers. Mme. Paul Lacroix is a bold primrose-yellow Japanese sort, with broad florets. Mrs. Felix Perrin is pink and pretty. Commandant Blusset comes best on the terminal bud.

Side by side with the most recent introductions are many of the old favourites which were popular years ago, including such as Val d'Andorre, and Mr. C. E. Shea or the yellow Mdle. Lacroix. Besides being an object lesson by comparing them with the newer kinds, we believe the public are as much

delighted with them as with some of the biggest. The massive pinkish-gray Australia is capitally done here. Of smaller size but handsome is Bride of Maidenhead. The bronzy hue of Col. W. B. Smith is rich and striking. Sautel 93 is a large pink flower with broad petals. Modesto and Pallanza are grand yellows, the former being the darker of the two. There is no question but Charles Davis and Mme. E. Rey have still many admirers.

Emily Silsbury is a good exhibition sort and may be had early. Edith Tabor and Oceana are yellow Japanese sorts that find favour with many. The same may be said of Australian Gold, which varies in intensity according to the bud on which it is taken. Ethel Addison belongs to the incurved Japanese class, and its broad florets are shaded with violet on

Mr. Moorman has been a specialist in the cultivation of Chrysanthemums since 1866, and needless to say he knows how to make the most of the means at his disposal in producing a first-class display for the benefit of the public. He is well supported by his grower, Mr. Large.

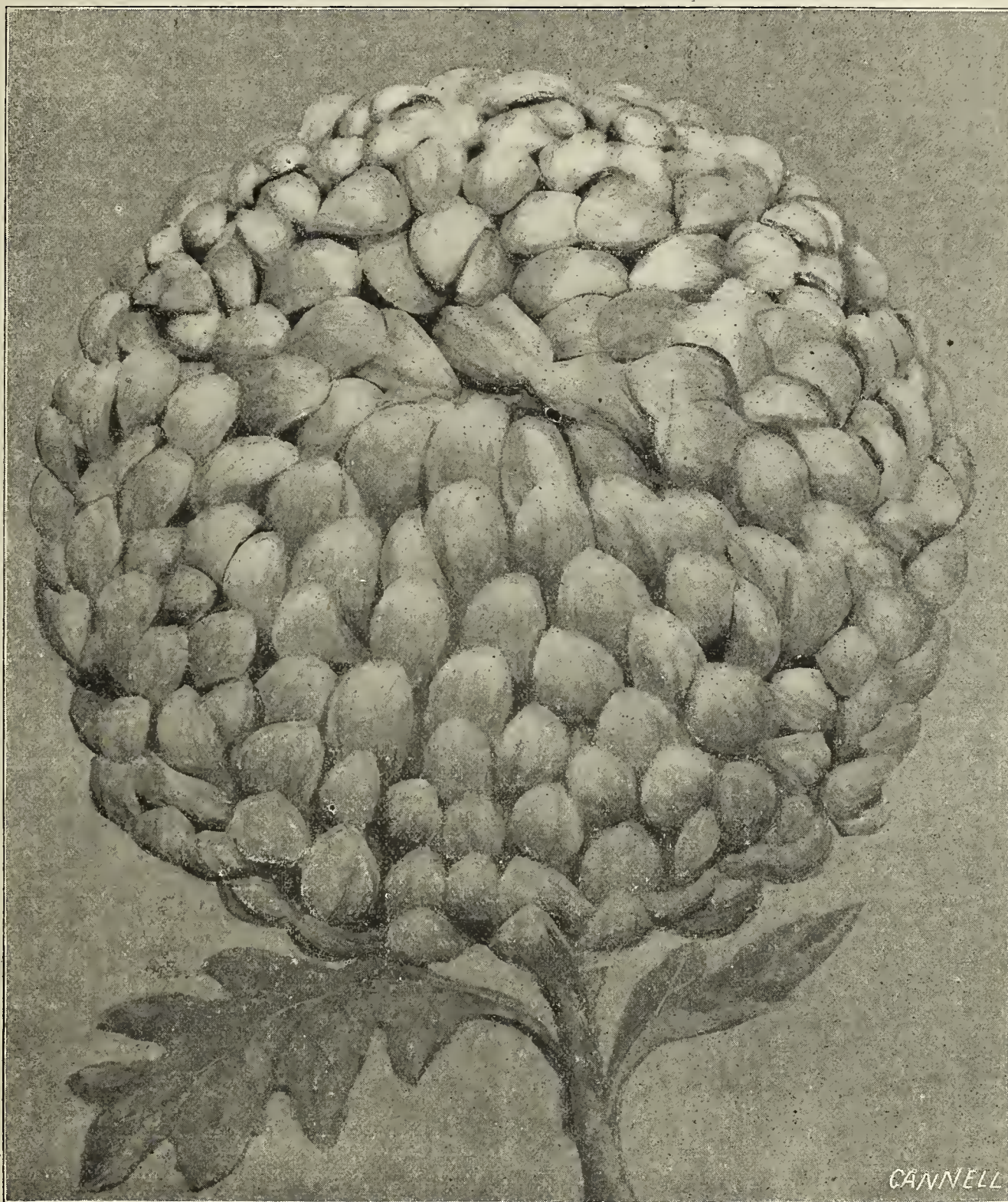
CHRYSANTHEMUM AUSTIN CANNELL.

INCURVED Chrysanthemums respond but slowly to the endeavours of those who busy themselves with the production of new varieties. This is largely due to the fact that the reverse only of the florets can be shown in this form, and that this face is always duller or paler than the upper, and less productive

FINSBURY PARK.

THE public was admitted to the display of Chrysanthemums on the 9th October, being if anything a few days earlier than usual. Some 3,800 of them are on view, the bulk of the big flowers being arranged in the old Chrysanthemum house amongst the shrubs. The conservatory contains the bush grown specimens.

We have never seen a finer display in the old house than there is at present. During the recent dense fogs Mr. John Melville, the superintendent, had the ventilators at both top and bottom sufficiently open to admit of a free circulation of air, which was kept buoyant by means of the hot water pipes. By this means the fog was kept out and a



CHRYSANTHEMUM AUSTIN CANNELL.

a light ground. Yvonne Desblanc is an incurved Jap. somewhat similar to Miss Annie Hartshorn in form and colour.

A good many incurved varieties are distributed through the house including such grand new or recent types as Mrs. R. C. Kingston, Duchess of Fife, and C. H. Curtis. Of moderate size, but very sprightly is D. B. Crane, of a clear old-gold colour. Rena Dula, of a deep rose purple, belongs to the same race. Pompons find a place along the front of the large-flowering varieties, and prove an acceptable adjunct to the whole. Nelson is a large purple Anemone, well worthy of a place here. The purple rays and bronze disc of Mrs. H. Gardiner make another very distinct Anemone. Mrs. Caterer belongs to the same class and is a very beautiful pure white variety.

of variation. Nevertheless, they are not neglected in the rush for the finest and biggest flowers. Austin Cannell possesses the same form, and the bold, massive character of the florets of the well-known M. R. Bahuant, one of the earliest of incurved varieties and more suitable for October than November work. The inner face of the florets of Austin Cannell are purple-maroon, the outer being paler, but to some extent influenced by the darker hue. The best blooms are obtained from the crown buds. A glance at the accompanying illustration, lent us by the Messrs. Cannell, will sufficiently substantiate the claims of this bold and handsome variety to recognition. It is a new variety put into commerce last spring, and possesses the broad, blunt character of the florets of the true Chinese type.

clear atmosphere maintained in the house. One bush grown plant of Margot is stood against each pillar supporting the roof, thus breaking the monotony and rendering the display more effective. In like manner L' Isle des Plaisirs and M. Charles Hubert are employed along the back and just surmounting the great bank of big blooms.

While passing along the only path of the house amongst the visitors we noted grand blooms of Hairy Wonder, Mr. H. Runchman, Miss Elsie Teichman, Charles Davis, Phoebus, Robert Owen, Thos. Wilkins, Mrs. C. Harman Payne and others. The last named is a dwarf and sturdy variety not exceeding 3½ ft., Viviani Morel has been grown continuously here for the last 10 years, and bears huge blooms. Other varieties well grown here are Mrs.

G. Gover, a crimson-red Jap.; C. E. Sheffock, with tubular florets and crimson lamina; Eda Prass silvery pink; Col. W. B. Smith, grandly coloured; Interocean, a large pink flower; and Mrs. E. G. Whittle a pretty silvery Japanese variety. Colonel

Neve, all of which have responded to the cultivator's care with large and handsome blooms.

Beauty of Teignmouth is an incurved Jap, with carmine-crimson florets and a rose reverse. Mme. Carnot has developed into large and handsome form.

King of the Hirsutes, a yellow variety, well represents the plummy section. Golden Gate, a bronzy-gold variety is rather late compared with the rest. The yellow, incurved Jap. Mrs. G. H. Smart is very full. We are pleased to see so many of the old favourites



CHRYSANTHEMUM DUCHESS OF YORK

Conway is a new white Jap. of considerable promise. Western King is a choice thing; and Silver King is a huge rosy-lilac flower. Louise and Shasta, well known kinds are very pretty in their respective ways. The same may be said of Avalanche, Mrs. Falconer Jameson, President Borrel, and W. H.

Amongst recent introductions we noted grand blooms of Sunflower, Duke of York, Viscountess Hambleton, Kentish White, Florence Davis, the pretty greenish-white Jap, William Tricker, International, and that glorious, maroon-crimson variety G. W. Childs, which has often proved refractory.

retained at Finsbury Park, as they are very choice indeed, though small compared with the modern giants. To illustrate what we mean we shall only refer to such as Chang, Triomphe du Nord, Val d'Andorre, Wm. Holmes, Barbara, Prince of Wales, Wm. Bunn, Jean Delaux, &c., all of which are very

fine of their kind. Other incurved sorts are Lord Wolseley, C. H. Curtis, Baron Hirsch, and Mrs. R. G. Kingston, all well done. Amongst the Anemones, equally well bloomed, are Descartes, Madame de Sevin, M. Charles Lebocqz, and Judge Benedict. The above are only a few of the fine things.

The conservatory is filled with banks of tall *Ficus elastica*, Palms, *Dracaenas*, and other subjects in front of which bushy specimens of *Chrysanthemums* show off to great advantage. To give an idea of the varieties grown in this way we may mention James Salter, Lady Selborne, Shasta, Admiral Seymour,

CHRYSANTHEMUM DUCHESS OF YORK.

THOUGH put into commerce in 1895, this Japanese variety still maintains its popularity and its status as a first-class exhibition variety. It was raised by Mr. J. Carruthers, gardener to Mrs. Fleming, Hillwood, Corstorphine, Edinburgh, and has since been honoured with a First-class Certificate from the National Chrysanthemum Society. The blooms attain a great size, but cannot under any circumstances be considered coarse. On the contrary they

accompanying illustration was placed at our disposal by Mr. H. J. Jones, Ryecroft Nursery, Hither Green, Lewisham.

CHRYSANTHEMUM MRS. JAMES LEWIS.

LAST year, about this time we gave a description of the grand Japanese variety of the above name. The blooms we recorded on that occasion measured 6½ in. to 7 in. in diameter and 6 in. in depth, but some blooms have much exceeded that now. In



A. Bilcliffe, Photographer.]

CHRYSANTHEMUM MRS. JAMES LEWIS.

[63, Brighton Road, Redhill.

Autumn Tints, and R. Brocklebank. Great crowds of visitors, especially on Saturday and Sunday, show their appreciation of the fine display placed before them. Mr. Melville is to be congratulated upon the fine condition of his *Chrysanthemums*. He is well supported by Mr. Henry William Marriage, the grower who has been here for more than twenty years and is still faithfully fulfilling his duties, as is Mr. Wm. Dowse, the propagator.

The Emperor Nero was entertained at a banquet at which £32,000 was spent on Roses.

are of very graceful outline, when in perfection, owing to the great length and drooping character of the twisting and interlacing florets. For this reason it is well adapted for groups of *Chrysanthemums*, in which the natural form of the head is displayed to best advantage. As a show bloom on the stands, however, it holds its own as a light or canary-yellow variety. The plant is of dwarf habit, and comes into bloom early so that it would appear at the October as well as November shows. For displays in private establishments as well as public parks, it is equally well adapted for prolonging the flowering period during the early part of the season. The

several private establishments it has more than sustained any hopes it may have aroused last year in the minds of would-be cultivators. Mr. W. Wells, Earlswood Nurseries, Earlswood, Redhill, Surrey, has also succeeded in producing very much finer blooms than those he exhibited last year and for which an Award of Merit was accorded by the Royal Horticultural Society. The florets are pure white, of great length, broad, flat, and twisted in various directions, giving the bloom a bold and effective appearance. As an exhibition variety it has proved itself of first class importance either in the cut state or as a plant for the centre or back of a group.

according to the shape or design of the same. The accompanying illustration was prepared from a photograph sent us by Mr. Wells, and is somewhat reduced in size. The photograph representing the flower natural size showed it to be $9\frac{1}{2}$ in. in diameter.

CHRYSANTHEMUM SWANLEY GIANT.

THE neatly formed and compact, globular blooms of this variety, place it in the incurved Japanese section, amongst which it is reckoned one of the largest as the name would imply. The florets are very broad, closely incurved, twisted and interlaced with one another in a most interesting and attractive way. In colour they are lilac-pink, and the whole has a massive and imposing appearance when well grown. The finest blooms are obtained from the crown buds, so that intending cultivators should make note of this in order to obtain the best results after the first year's care and attention. It was raised by Messrs. H. Cannell & Sons, Swanley, Kent, and was put into commerce by them as a new variety for 1897, along with ten others, also of their own raising. This is good proof of the energy of the Swanley firm in upholding the popularity of this valuable autumn flower. The accompanying illustration was put at our disposal by them.

CHRYSANTHEMUM SHOWS.

NATIONAL CHRYSANTHEMUM.—November 9th, 10th, and 11th.

THE great autumn competition and fête of the National Chrysanthemum Society, was held at the Royal Aquarium, Westminster, as usual. The non-competitive exhibits were arranged on the ground floor, while the groups and cut bloom, including the Challenge Trophy and Memorial Classes were staged in the galleries. The trained plants and the vegetable exhibits were accommodated in St. Stephen's Hall. The show was admitted to be finer than ever, and the attendance was enormous.

CUT BLOOMS.

In the national competition of Chrysanthemum and horticultural societies, the Challenge Trophy and £10, as the first honours for forty-eight blooms, were secured by the Bromley and District Chrysanthemum Society, Kent. The stands contained grand Japanese blooms of Mrs. H. Weeks, Madame Carnot, Australia, Phoebus, Duke of York, Simplicity, Matthew Hodgson, Graphic, Mutual Friend, Mrs. Charles Blick, Edith Tabor, Etoile de Lyon, G. C. Schwabe, Vivian Morel, Elsie Teichman, and others. Incurved varieties were well-shown, including magnificent blooms of Mrs. R. C. Kingston, C. H. Curtis, Duchess of Fife, Empress of India, Mr. J. Keans, Wm. Tunnington, John Lambert, Princess of Wales, Golden Empress, Ma Perfection, Major Bonaffon, and others. The second award was taken by the Sittingbourne and Milton Gardeners' and Amateurs' Association, which had fine blooms of Madame Carnot, Mrs. C. Harman Payne, Edith Tabor, &c. The incurved blooms were good, though smaller than those of the first prize lot. The Highbridge Horticultural Society came in third, being rather weak in the incurved blooms.

The National Chrysanthemum Society's Holmes Memorial Challenge Cups, brought out some very fine stands of bloom. The coveted first award for thirty-six incurved blooms was taken by Mr. W. Mease gardener to Alfred Tate, Esq., Downside, Leatherhead, who staged huge and handsome blooms of Lady Isabel, Ma Perfection, C. H. Curtis, Globe d'Or, Jeanne d'Arc, Lord Rosebery, Major Bonaffon, Lord Alcester, Dorothy Foster, J. Agate, Violet Foster, Duchess of Fife, M. P. Martinac and others. Mr. Higgs, gardener to J. B. Hankey, Esq., Fetcham Park, Leatherhead, took the second place with grand blooms of Duchess of Fife, J. Agate, C. H. Curtis, C. B. Whitnall, M. P. Martinac, &c. Mr. H. Butcher, gardener to C. J. Buss, Esq., Lodge House, Smeeth-Ashford, Kent, was a good third; while Mr. T. Robinson, gardener to W. Lawrence, Esq., J.P., Elsfeld House, Hellingbourne, Kent, was fourth.

Mr. W. Mease was again first for forty-eight Japanese blooms, being clearly a long way ahead of his competitors. Every bloom was strong, but

specially grand were Vivian Morel, Mrs. Charles Blick, M. Chénon de Léché, A. Gold, Mrs. J. Lewis, A. H. Wood, Miss. Elsie Teichman, Mme. Gustave Henry, N.C.S. Jubilee, Lady Hanham, Robert Owen, Simplicity, Australia, Lady Ridgway, J. G. Warren or the yellow sport from Mme. Carnot, which was the wonder of all who saw it. Mr. Henry Perkins, gardener to F. W. D. Smith, Esq., Greenlands, Henley-on-Thames, was second; P. Waterer, Fawkham, Kent, was a good third; Mr. J. F. McLeod, The Gardens, Dover House, Roehampton, took the fourth prize.

In the class open to the trade only, for twenty-four Japanese and twelve incurved, the premier award was taken by Mr. William Wells, Earlswood, Redhill, Surrey, who had grand blooms of G. J. Warren, Australian Gold, Mrs. J. Lewis, Lady Hanham, Mme. Ferlat, and many others too numerous to mention. Mr. Norman Davis, Framfield, Sussex, took the second place with a very good exhibit indeed.

The Turner Memorial Challenge Cup for thirty-six blooms of white, yellow, and crimson Japanese Chrysanthemums was secured by Mr. Norman Davis with a grand lot of Mme. Carnot, Mrs. H. Weeks, Edith Tabor, A. H. Wood, Western King, John Neville, &c. Mr. W. J. Godfrey, Exmouth, Devon, was a very good second.

The Jubilee class for twenty-four dishes of Apples brought out some grand fruits. The leading award was taken by Mr. T. McKenzie, gardener to F. S. W. Cornwallis, Esq., Linton Park, Maidstone, whose Apples were of huge size and richly coloured, Mr. H. Berwick, Sidmouth, was a good second; and Mr. A. J. Thomas, Bargains Hill, Rodmersham, Sittingbourne, came in third.

Mr. W. Robinson, gardener to the Rt. Hon. Lord Ludlow, Heywood, Westbury, Wilts, was first for six incurved Japanese blooms. Mr. J. McKenzie took the lead for six Japanese blooms, showing Phoebus.

Mr. W. Messenger, gardener to C. H. Berners, Esq., Wolverstone, Ipswich, took the leading award for twenty-four Japanese blooms, all of which were particularly strong, in fine form and fresh. Mr. F. King, gardener to Mrs. McIntosh, Havering Park, Romford, was second.

Mr. F. G. Foster, Brockhampton, Havant, took the lead for twenty-four incurved blooms, which were very even and neat. Mr. H. Butcher was second. Mr. W. Barker, gardener to Pandeli Ralli, Esq., Alderbrook, Cranleigh, took the lead for twelve incurved varieties. Mr. W. Tebay, gardener to Mrs. Ryecroft, Everlands, Sevenoaks, had the best six incurved of one sort, showing C. H. Curtis. Mr. W. Messenger again led the way for twelve Japanese blooms, which were grand. Mr. H. Shoesmith, Claremont Nursery, Woking, was almost equally good.

MR. SIMPSON'S PRIZE.—The special prize presented by Mr. J. T. Simpson for the premier Japanese bloom in the whole of the show was awarded to the yellow Madame Carnot, shown by Mr. Mease, in his first prize 48. This bloom was of great depth and superb size.

Twelve large-flowered reflexed blooms in not less than nine varieties were best shown by Mr. W. Robinson, gardener to the Rt. Hon. Lord Ludlow, Heywood, Westbury, Wilts. Mr. G. W. Forbes, gardener to Madame Nicols, Regent House, Surbiton, was second.

There were six competitors in the class for twenty-four large-flowered Anemone blooms, Japanese included. Mr. John Justice, gardener to the Rt. Hon. Sir R. Temple, Bart., The Nash, Kempsey, won the first prize with a splendid lot, amongst which good samples of such varieties as Caledonia, Mme. Lawton, John Bunyan, Lady Margaret, Delaware, and Nelson were observable. The second prize fell to the lot of Mr. W. Skeggs, gardener to A. Moseley, Esq., West Lodge, Barnet, and the third to Mr. A. Ives, gardener to E. C. Jukes, Esq., Hadley Lodge, Barnet.

Mr. John Justice was likewise first in the class for twelve large Anemone blooms, Japanese excluded. Lady Margaret, Fleur de Marie, Mrs. J. Benedict, and Acquisition were some of the finest flowers here. Mr. A. Ives was second, and Mr. W. Ring, gardener to James Warren, Esq., Caysle House, Waltham Cross, third.

The competition for twelve Japanese Anemones also resulted in the first award going to Mr. John

Justice, who had Sir W. Raleigh, Mrs. Hugh Gardener, John Bunyan, and Owen's Perfection in capital order. Mr. W. Skeggs occupied the second, and Mr. W. Ring the third position.

Mr. T. Caryer, gardener to A. G. Meissner, Esq., Aldenholme, Weybridge, had the winning stand of twelve pompons, Mr. W. Aldridge, gardener to G. Lacy, Esq., Springfield House, Palmers Green, being second.

The last-named exhibitor was first for twelve single varieties, showing the varieties of Rose Pink, Kate Williams, Miss May Braithwaite, and Purity in excellent style. Mr. G. W. Forbes won the second prize, and Mr. Felgate, gardener to Her Grace the Duchess of Wellington, Burkhill, Walton-on-Thames, the third.

AMATEURS' CLASSES.

Mr. Jas. Stredwick, Silver Hill, St. Leonards, led the way for twenty-four Japanese blooms, distinct. M. Chénon de Léché, Chas. Davis, Vivian Morel, Viscountess Hambleton, Etoile de Lyon, Phoebus, and Eva Knowles were some of the finest forms. Mr. L. Gooch, gardener to T. Wickham Jones, Esq., Lowcester Lodge, South Norwood, was second.

Mr. C. G. Wilkins, Wellington, Swanley Junction, staged the winning stand of eighteen incurves. C. H. Curtis, Robert Petfield, Bonnie Dundee, Globe d'Or, J. Lambert, Jeanne d'Arc, and A. Sefton were the strongest samples; Mr. C. Goddard, gardener to W. H. Francis, Esq., Broomfields, Sutton, Surrey, was second; and Mr. A. Hooney, gardener to G. H. Cox, Esq., The Grange, East Barnet, Herts, third. The prizes in these two classes were presented by F. A. Bevan, Esq.

There were nine entries for twelve Japs. Mr. Jas. Stredwick was first, showing Phoebus, Eva Knowles, Hairy Wonder, and A. H. Wood in highly commendable fashion. Mr. J. Acock, gardener to Mrs. Bacon, Stoneleigh, Sutton, Surrey, was second; and Mr. T. S. Slann, gardener to H. H. Sillen, Esq., The Pines, Woking, third; Mr. W. Perrin, gardener to C. W. Richardson, Esq., Sawbridgeworth, Herts, staged the winning six Japanese; and Mr. S. Ely, gardener to H. H. Gardener, Esq., Nettlebed, Henley-on-Thames, the best three bunches of three blooms each of Anemone flowered varieties.

The premier stand of twelve incurves came from Mr. C. G. Wilkins, who was followed by Mr. C. Goddard and Mr. A. Hooney in the second and third places respectively. Mr. C. G. Wilkins was also first in the smaller class for six incurves. Mr. J. Acock was second, and Mr. C. Goddard third here.

Six blooms of the incurve Mrs. R. C. Kingston won for Mr. C. G. Wilkins another first prize. Mr. J. Knapp, gardener to F. W. Amsden, Esq., 22, Chichester Road, Croydon, was second with C. H. Curtis, and Mr. A. Hooney third with the same variety.

In Division B. of that part of the schedule devoted to amateurs Mr. Henry Love, 1, Melville Terrace, Sandown, Isle of Wight, secured the leading award for twelve Japanese blooms, Mr. H. A. Needs, Heath View, Horsell, Surrey, coming in second.

Mr. Henry Love was also successful in carrying off the first prize in the larger class for the eighteen Japs. He had a very even and well coloured lot of flowers. Mr. J. Love, Fenneleigh, Cowes, Isle of Wight, was second.

Of the five exhibitors who competed for the six Japanese, Mr. H. A. Needs headed the list followed by Mr. W. E. Reeve, Lyndhurst, Maybury Road, Woking, as second.

The best twelve incurved blooms in this section came from Mr. A. R. Knight, 63, Hardinge Road, Ashford, Kent.

In the maiden growers classes Mr. R. Chamberlain was first for six Japanese; Mr. W. J. Neal, Chesalon, Claremont Avenue, Woking, for three Japanese; Mr. T. W. Preston, 8, Commercial Road, Peckham, S.E., for six bunches of pompons distinct.

PLANTS.

There were three entries forthcoming for the group of Chrysanthemums arranged with foliage, etc., in a circle of 12 ft. diameter. Mr. J. Spink, Summit Road, Nursery, Walthamstow, won the first award with an imposing and well arranged group, height and diameter being well proportioned. The flowers included were all large, well coloured, and handsome. Mr. W. Howe, gardener to Henry Tate, Esq., Park Hill, Streatham, was second with a flatter group, that also contained some good flowers. Mr.

Edward Love, gardener to H. E. Fry, Esq., Bickley Hall, Trent, was third.

TRAINED SPECIMEN PLANTS.—These were accommodated on the floor in the centre of St. Stephen's Hall, where they formed a grand array.

For six large flowering varieties, including Japanese, Mr. D. Donald, gardener to J. G. Barclay, Esq., Knott's Green, Leyton, was again the winning exhibitor. He had magnificent samples of varieties John Lightfoot, John Shrimpton, Col. W. Smith, Gloriosum, William Tricker and Florence Percy.

Mr. D. Donald was also first for six standard specimens, showing grand samples of Wm. Tricker, Eva Knowles, Cleopatra, Chinaman, Col. W. B. Smith, and Miss Alice Luckman.

Mr. F. Gilks, gardener to A. Morris, Esq., Court

securing the first award for six trained specimens of pompons. The samples showed by him of Soeur Melaine, Black Douglas, William Westlake, Yellow Martha, William Kennedy and Antonius were indeed marvels of good culture and skilled training.

FLORAL DECORATIONS.

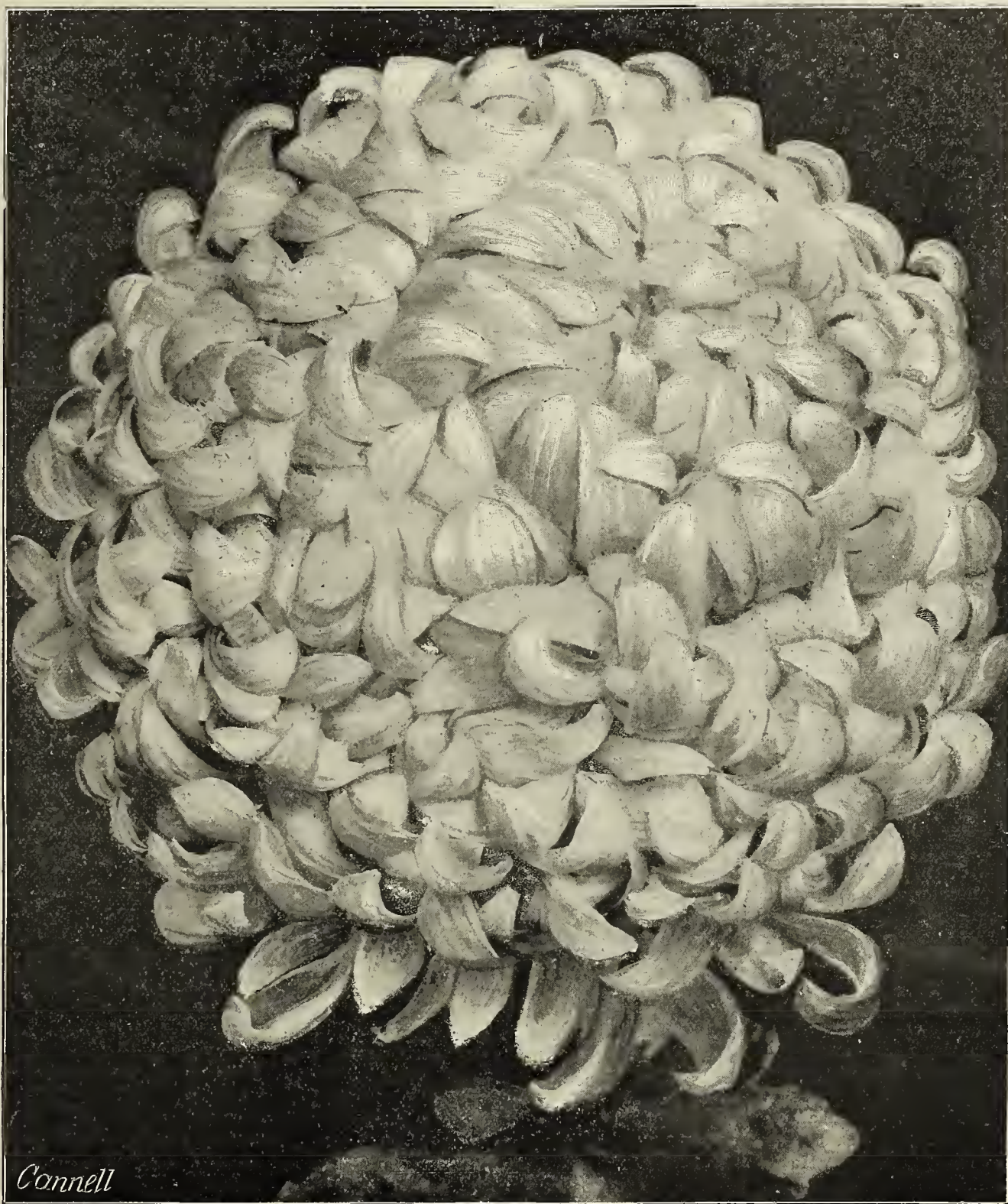
The premier award for the best table of bouquets, sprays, etc., illustrating the decorative value of the Chrysanthemum, was carried off by Miss Nellie Erlebach, "Chards," Stoke Newington. The chief feature here was a very imposing centrepiece, which rose to a height of fully 7 ft. from the level of the table, and was composed of large blooms. The arrangement in the baskets and wreaths was commendable. Messrs. Harwood Bros., 176, High Road, Balham, were second with a more elaborate but

Mr. F. W. Seale, third. The competition in this class was unusually keen and well-sustained.

In the classes open to gardeners and amateurs only, Mr. Mark Webster was again first for two hand bouquets of Chrysanthemums, with Mr. H. Clark, gardener to P. Mortimer, Esq., Ashe Park, Overton, Hants, as second; and Mr. J. Mansey, gardener to S. H. Smith, Esq., 35, Southgate Road, N., as third.

Mr. George Tolton, 25, Albion Gardens, Hammer-smith, contributed the best vase of six blooms.

There were nine entries for the hand-basket of Chrysanthemums open only to ladies: Miss Easterbrook, Fawkham, Kent, was first; Mrs. W. Taylor, The Gardens, Tewkesbury Lodge, Forest Hill, was a very close second; and Mrs. W. Green, Jun., third.



CHRYSANTHEMUM SWANLEY GIANT.

Green, Leigham Court Road, Streatham Hill, won the first prize for four specimens of any varieties. Emily Silsbury was the most noteworthy variety here. Mr. W. Davey was a good second.

Mr. W. Davey, gardener to C. C. Paine, Esq., Hillfield, Haverstock Hill, N.W., sent the winning lot of four standard trained plants, showing Col. W. B. Smith, Standeard Surprise, Cleopatra, and Wm. Tricker in good condition. Mr. D. Donald contributed the best single specimen, pyramidal trained, in Col. W. B. Smith. The flowers on this plant were exceptionally large and fine. Mr. Donald also had the best sample of a plant grafted with not less than three varieties, which were in this case John Lightfoot, Chas. Davis, and Vivian Morel.

Mr. D. Donald added to his list of successes by

rather heavy exhibit. Mr. Eric F. Such, The Royal Berks Nursery, Maidenhead, was third with a light and pleasing arrangement.

There were three entries for two vases of Chrysanthemums, the first prize going to Mr. Mark Webster, gardener to E. J. Preston, Esq., Kelsey Park, Beckenham. Second came Mrs. W. Green, jun., Harold Wood, Essex; and third, Mr. W. C. Pagram, gardener to J. Courtenay, Esq., The Whim, Weybridge.

There were no fewer than twelve entries for three epergnes of Chrysanthemums suitable for table decoration. Finally, Mr. D. B. Crane, 4, Woodview Terrace, Archway Road, Highgate, N., was awarded first for a superb arrangement. Miss C. B. Cole, The Vineyard, Feltham, Middlesex, was second, and

Mr. J. Brookes, gardener to W. J. Newman, Esq., Totteridge Park, Herts, led for a vase of six Japanese blooms, showing Madame Carnot. Mr. James Watt, gardener to Henry Bell, Esq., Fitzjohns Avenue, Hampstead, came second with Col. W. B. Smith. Mr. D. B. Crane filled the third position.

A special prize for six sprays of single varieties to be arranged in a vase with any foliage or grass was offered by Mr. W. Wells. This was won by Mr. R. Chamberlain, gardener to F. M. Lonergan, Esq., Cressingham Park, Reading.

Mr. H. J. Jones, of Ryecroft Nursery, offered special prizes for six vases of Japanese varieties, three blooms in each, the flowers to show at least 12 in. of stalk above the vases. Mr. F. H. Lodge, gardener

to Mrs. Meret, Hockerill, Bishop's Stortford, was first, showing good blooms of Edith Tabor, Chas. Davis, M. Chénon de Léché, Mrs. Chas. Blick, Vivian Morel, and Phoebus. Mr. W. Cotterell, gardener to Sir W. N. M. Geary, Bart., Oxon Hoath, Tonbridge, was second; and third, Mr. Jas. Gibson, gardener to E. H. Watts, Esq., Devonthurst, Chiswick.

FRUIT AND VEGETABLES.

In the open classes for fruit, Mr. W. Tidy, gardener to W. K. d'Arcy, Esq., Stanmore Hall, N.W., was placed first for three bunches of white Grapes, showing Muscat of Alexandria. He was followed in the second and third places respectively by Mr. J. Bury, Petersham Vineries, Byfleet, Surrey, and Mr. W. Harman, gardener to the Earl of Denbigh, Newsham Paddock, Lutterworth.

Mr. W. Howe staged the winning three bunches of black Grapes, showing Alicante. Mr. W. Tidy was second with the same variety, and Mr. W. Taylor, gardener to C. Bayer, Esq., Tewkesbury Lodge, Forest Hill, was third with Gros Maroc. Mr. W. Iggulden, Frome, Somerset, sent the best three bunches of Gros Colman Grape, Mr. J. Bury taking the second place.

There were eight entries for six dishes of dessert Apples, Mr. G. Goldsmith, gardener to Sir E. G. Loder, Bart., Leonardslee, Horsham, taking the first prize with well-coloured fruit. Mr. W. T. Stowers, gardener to G. F. Dean, Esq., 70, Harold Road, Sittingbourne, was second.

There were six entries for six dishes of culinary Apples, the first award going to A. J. Thomas, Bargains Hill, Rodmersham, Sittingbourne, with a heavy lot. Mr. W. T. Stowers was second.

Seven entries of six dishes of dessert Pears were forthcoming. Mr. A. J. Thomas received the first prize, the second going to Mr. W. T. Stowers.

In the classes for vegetables the premier award for twelve dishes of Potatos fell to the lot of Mr. E. S. Wilks, gardener to the Hon. E. Hubbard, M.P., who had clean and heavy samples. Mr. Silas Cole, gardener to the Rt. Hon. Earl Spencer, K.G., Althorp Park, Northampton, was second; and Mr. E. Chopping, Milton, near Sittingbourne, was third.

MESSRS. SUTTON & SONS' PRIZES.—The first prize for fifteen dishes of Potatos, distinct was carried off by Mr. G. T. Wiles, gardener to the Hon. E. Hubbard, M.P., The Rookery, Down, Kent; and the second to Mr. A. Basile, gardener to the Rev. O. L. Powels, Woburn Park, Weybridge.

The two best dishes of Potatos, Sutton's Windsor Castle, and Sutton's Supreme came from Mr. Silas Cole, and the next best from Mr. James Gibson.

MESSRS. WEBB & SONS' PRIZES.—The Wordsley firm offered prizes for a collection of nine kinds of vegetables. Seven collections were staged, Mr. E. Beckett, gardener to Right Hon. Lord Aldenham, Aldenham House, Elstree, heading the list. Mr. R. Lye, gardener to Mrs. Kingsmill, Sydmonton Court, Newbury, was second; Mr. J. Bowerman, gardener to Charles Hoary, Esq., Hackwood Park, Basingstoke, was third. Mr. J. Gibson was fourth.

MR. HENRY DEVERILL'S PRIZES.—In this section Mr. Deverill presented prizes for Onions. The best twelve came from Mr. J. Bowerman, who showed Alisa Craig; Mr. E. Beckett was second with the same variety.

Mr. H. E. Elmer, South Street, Cuckfield, had the premier single bulb in Ailsa Craig; Mr. R. Lye was second; and Mrs. W. Keep, Farringdon House Gardens, Farringdon, Berks, was third with the same variety.

MISCELLANEOUS EXHIBITS.

Potato disease has been exceedingly prevalent this year, especially among the older varieties; therefore, the great show of disease-resisting Potatos made by Messrs. Sutton & Sons, of Reading, attracted particular attention. The principal feature of the collection is the eleven large heaps of the following popular varieties:—Sutton's Windsor Castle, Sutton's Reliance, Sutton's Satisfaction, Sutton's Supreme, The Sutton Flourball, Sutton's Ninety-fold, Sutton's Epicure, Sutton's Seedling, Sutton's Non-such, Sutton's Matchless, and two new seedlings not yet put into commerce. There are thirty-nine distinct sorts exhibited, all of Messrs. Sutton's own introduction. The pyramidal heaps of large, shapely, and clean tubers had an imposing as well as interesting appearance. Amongst them was a new variety after the style of Sutton's Magnum Bonum, but much thicker, oblong, white, and altogether a noble

looking tuber. It is not yet in commerce, but the name has been fixed as Sutton's Ideal. All of the varieties were in first-class condition, notwithstanding the unfavourable character of the season. The Messrs. Sutton also had Fir Apple, Almond and Congo, representing fancy varieties (Gold Medal).

Mr. H. J. Jones, Ryecroft Nursery, Hither Green, Lewisham, had a large table of cut blooms of Chrysanthemums, set up with Crotons, Ferns, Dracaenas, Palms, and other foliage plants. In the centre was a mound of Chrysanthemums surmounted by a Cocos, and towards either end were two large ornamental vases filled with Chrysanthemums in variety, and cut with long stems (Silver Gilt Medal).

Messrs. J. Laing & Sons, Forest Hill, S.E., exhibited a fine collection of fruit, of which the Apples Swedish Reinette, Mère de Menage, Holland-bury, Blenheim Orange, Fearn's Pippin, Hoary Morning, and many others were equally good. Little groups of Bouvardias, Begonia Gloire de Lorraine, and Carnations, all of which were very bright, formed centres. Richardia Pentlandi and R. P. maculata, were also fine (Gold Medal).

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, had a table of Chrysanthemums set up with Maidenhair Ferns, Grasses, plants of the Fiery Thorn, and other decorative subjects. The Ferns served as a beautiful green setting for the blooms (Silver Medal).

Mr. H. Deverill, Banbury, Oxon, had a very interesting exhibit of Onions, including Ailsa Craig, The Lord Keeper, Improved Wroxtton, &c.; also Leeks, Celery, Carrots, Parsnips, Beet, and other vegetables in fine condition (Silver Gilt Medal).

Messrs. S. Spooner & Sons, Hounslow, Middlesex, had a collection of Apples and Pears in fine condition, and in many cases the former were highly coloured (Silver Gilt Medal).

Messrs. B. S. Williams & Son, Upper Holloway, exhibited a large collection of Palms, Crotons, Dracaenas, and Orchids. A group of Begonia Gloire de Lorraine at either end consisted of well-grown and flowered plants. Amongst the Orchids we noticed showy pieces of Vanda tricolor superba, Oncidium varicosum, O. v. Rogersi, Odontoglossum praetextum, and many Cypripediums (Small Gold Medal).

The Ichthemic Guano Company, Ipswich, had as usual a massive octagonal exhibit at the east end of the Royal Aquarium. Each of the four figures on the corners as well as that on the top held an incandescent electric lamp throwing a bright light over the rich and varied colours of the foliage of the Coniferae with which the body of the stand was covered. Amongst the Conifers we noted such fine things as Cupressus lawsoniana Allumii, C. l. erecta viridis, Thuja vervaeneana, Picea nobilis, The Douglas Fir, Thuja ellwangeriana, T. occidentalis lutea, Retinospora plumosa, R. p. aurea, and various others. Many of these were fine trees 5 ft. to 7 ft. in height. There was also a handsome specimen of the Weymouth Pine (Pinus Strobus). The whole collection included about 500 trees and shrubs of various sizes. They were sent up from Scotland by Messrs. W. P. Laird & Sinclair, nurserymen, Nethergate, Dundee, and Monifieth. The Ichthemic Guano Company also had samples of their well-known fertiliser (Silver Gilt Medal).

Mr. E. G. Reid, Reid's Nursery, Beckenham Hill, had a table of Chrysanthemums cut with long stems and set with autumn tinted foliage. He also had a collection of tree Carnations including Rose Rivoire, President Carnot, &c. (Silver Medal).

Messrs. W. & J. Brown, Stamford, had a collection of Apples and Pears, with a small group of sweet-scented Violets at one end (Silver Medal).

Mr. J. Haws, Lea Bridge Road, Clapton, had a table of his improved watering-can in various sizes.

Messrs. H. Cannell & Sons, Swanley, Kent, had a most imposing display of cut flowers of Pelargoniums set up in large bunches of the most diversified colours with which the visitors were charmed. On the opposite side of the table was a bank of Chrysanthemum blooms of exhibition size and in all the leading varieties. At one end they had Spidery Chrysanthemums in variety and pompons, showing at once some of the veriest pigmies alongside of some of the giants. There were Cannas at either end, and Sweet Violets along the sides (Small Gold Medal).

Messrs. Crane & Clarke, March, Cambs., had a group of Carnations and Smilax (Silver Medal).

Mr. W. Wells, Earlswood Nurseries, Redhill,

Surrey, exhibited a large group of Chrysanthemums of undulated outline, including plants of N.C.S. Jubilee, Mutual Friend, Mrs. Ch. Blick, Mrs. H. Weeks, Edith Tabor, and a bronze sport from the latter named Mrs. J. W. Barks. He also had singles and pompons in great variety (Small Gold Medal).

Mr. B. Ladhams, Shirley Nurseries, Southampton, had an exhibit of decorative Chrysanthemums and hardy herbaceous cut flowers in great variety (Silver Medal).

Mr. Robert Owen, Floral Nurseries, Castle Hill, Maidenhead, had a table of Chrysanthemums set up in bunches with autumn-tinted foliage. In front of these were stands of cut blooms of Chrysanthemums in exhibition form and in great variety (Silver Medal).

Mr. J. George, 14, Redgrave Road, Putney, S.W., exhibited a table of horticultural sundries and Grapes. Mr. J. Williams, 4a, Oxford Road, Ealing, set up some table decorations (Silver Medal).

Mr. Norman Davis, The Vineries, Framfield, Sussex, had a gorgeous display of Chrysanthemums in ornamental vases, set up with autumn tinted foliage, baskets of plants, Crotons, Palms, &c., all producing the most gorgeous effect. Along the front he had many enormous blooms of Mme. Carnot, also Hairy Wonder, Western King, Australian Gold (Large Gold Medal).

Mr. H. J. Jones, Ryecroft Nursery, Lewisham, exhibited a massive group of Chrysanthemums, with a sloping face, but variously undulated and rising into a great mound in the centre. A graceful Cocos occupied each of the centres, while Crotons and Adiantum farleyense also served to vary the outline of the surface. The varieties of Chrysanthemums were very numerous. The front was made up with Adiantum and other foliage plants (Small Gold Medal).

Mr. H. Berwick, Sidmouth, Devon, had a table of nicely coloured Apples, some Pears and a basket of Medlars (Small Gold Medal).

Messrs. D. Dowell & Son, Ravenscourt Avenue, Hammersmith, had a stand of peat, loam, manures, pots, pans, and other garden sundries.

Mr. John Pinches, 3, Crown Buildings, Crown Street, Camberwell, S.E., set up a very neat stand of cast Acme Labels, library, key, and plain circular labels, and others in a great variety of forms, including Yeats's zinc labels, and the Ideal Label and Holder.

The Agricultural and Horticultural Association, Ltd., had a table of manures.

Messrs. Wood & Son, Wood Green, N., exhibited a large number of their specialities, including Cuba bast, raffia, Archangel mats, wood wool, bamboo stakes of all sizes from 3 ft. to 21 ft. and in various colours, mushroom spawn, &c.

Mr. W. J. Godfrey, Exmouth, Devon, had a table of Chrysanthemum blooms, arranged with Ferns and other foliage. Very grand blooms were Sunstone, Mrs. Chas. Birch, Mrs. H. Weeks, Visct. R. de Chezelles, Pride of Exmouth, Mrs. Maling Grant, Mrs. F. A. Bevan, &c. (Small Gold Medal).

Mr. Joseph Arnold, 32, St. Paul's Road, London, N.W., had a large exhibit of silver sand, peat and loam. The peat comprised two kinds, Rhododendron and Orchid peat, the latter being of excellent quality. He had a dozen different kinds of sand, from the purest white to the darkest orange-brown, from the finest to the biggest in grain. Mr. Arnold is the largest owner of the famous Bedfordshire silver sand in the country.

Messrs. W. Cutbush & Son set up a charmingly effective group in the gallery. The central feature was Chrysanthemums in pots arranged in such a way that they formed a high mound in the centre. In front of these was a double row of Begonia Gloire de Lorraine, a row of Adiantum farleyense being sandwiched between the Begonias. At either corner in the front was a pyramid of small Oranges in pots, and Ericas crowned with Cocos weddelliana. Some capital Apples found a place in the front ranks.

Mr. H. Shoesmith, Claremont Nursery, Woking, Surrey, exhibited upwards of four dozen fine cut Chrysanthemums grown with nitrate of soda. Mr. F. W. E. Shrivell, F.L.S., Hadlow Farm, Kent, showed some excellent vegetables, also grown with the same specific.

SOUTHAMPTON.—November 2nd.

The Royal Southampton Horticultural Society held their Chrysanthemum and fruit show at the Skating

Rink on the above date when beautiful weather prevailed and drew out a large concourse of visitors. The exhibits were admirably arranged under the direction of the secretary, Mr. Fudge and his staff. The flowers were brilliant, gorgeous, and richly varied. The number of entries was about equal to those of previous occasions, but the quality was better and competition keener. Improvements were visible amongst the exhibits shown by amateurs. A fine collection of Chrysanthemums was shown by J. C. E. d'Esterre, Esq., Elmfield, Millbrook Road. Mr. J. Agate, Havant, showed a beautiful new incurved bloom named Mrs. N. Molyneux. Her Majesty the Queen (gardener, Mr. Owen Thomas), was an exhibitor. Mr. Wills, of Winchester Road, Shirley, and Mr. B. Ladhams, Shirley, had non-competitive exhibits. Sir Samuel Montagu, Bart., M.P., exhibited Palms and Chrysanthemums. Councillor W. F. G. Spranger, Springhill, sent a fine group of Chrysanthemums and Ferns. Messrs. Toogood & Sons staged a taking exhibit, accompanied by another of the renowned speciality, Pure Ichthemic Guano. Alderman W. H. Rogers, J.P., Red Lodge, lent a quantity of shrubs for decorative purposes.

BRIGHTON.—November 2nd and 3rd.

THE annual show of the Brighton and Sussex Horticultural Society was held on the above dates in the Dome and Corn Exchange, Brighton. The entries exceeded 600 in number, being sixty-five in advance of last year, and taking it altogether the fixture was a conspicuous success. The Silver-Gilt Medal presented by Mr. H. J. Jones, of Lewisham, and a prize of £5 for the best circular group, 12 ft. in diameter, of Chrysanthemums was carried off triumphantly by Mr. G. Miles, Dyke Road, Brighton. To this exhibitor also went the first award for a smaller group of similar material; and the piece of plate, given by Mr. Alfred Bunting for an artistically set up collection of cut Chrysanthemums.

A piece of plate value £3 3s., presented by Messrs. Folkard & Sons, for a circular group, 9ft. in diameter, was won by Mr. W. E. Anderson, gardener to Mr. B. Parish, Preston Park Avenue, Brighton.

In the classes for cut Chrysanthemums, Mr. J. R. Heasman, gardener to Mrs. Osley, Turner's Hill, staged a grand exhibit of thirty-six cut blooms of Japanese varieties, winning thereby the first prize, viz., the president's Silver Challenge Bowl, the society's Silver Medal, and £5 in money. Mr. Heasman was also second for twelve and six incurved, six reflexed, and six yellow Japanese; and first for six Japanese of any other colour than yellow.

Mr. E. Meachen, gardener to Mrs. Armstrong, of Withdeane, was another heavy winner, for there fell to his share two first prizes, two seconds, and four thirds. Mr. J. Hill, gardener to Mr. W. Clarkson Wallis, Withdeane, won no fewer than five firsts, three seconds, and two thirds. Mr. T. Fairs, gardener to Mr. R. Cowes, Hassocks, was credited with two firsts, three seconds, and a third.

Other successful exhibitors included Mr. Bonson Lister, gardener to E. A. Wallis, Esq., Brighton; Mr. G. House, gardener to Sir F. Mowatt, C.B., Patcham; Mr. T. Dancy, Horsham; Mr. W. Wallis, Hartfield; Mr. G. Duncan, Horsham; Mr. C. Short, Worthing; Mr. J. Harris, Arundel; Mr. R. Botting, Henfield; Mr. James Pearl, Patcham; Mr. William Taylor, Forest Hill; Mr. J. Bunnèy, Hassocks; and Mr. G. Goldsmith, Horsham.

Fruit and vegetables were well in evidence, and many of the exhibitors mentioned above there gained further laurels.

WEST KENT.—Nov. 2nd and 3rd.

The twentieth anniversary of this popular local show was held in the Public Hall, Bexley Heath, on the above dates. There was a good attendance in the afternoon and evening, when a good string band was in attendance.

Amongst the special prizes we noticed the Commemoration Prize, a handsome marble clock, value £6, which was taken by Mr. J. Simon, gardener to N. W. Man, Esq., Bexley, with twenty-four blooms of Japanese in eighteen varieties. The second prize went to Mr. H. Hart, gardener to W. T. Holland, Esq., Bexley.

The schedule, which was a large one for a local show, contained in all sixty-one classes, all of which were competed for. For a table of twenty-four cut

Chrysanthemums arranged for effect with foliage plants, the first prize was taken by Mr. E. Russell, gardener to T. Pim, Esq., Crayford. For a group with foliage plants and Ferns, D-shape, Mr. Wakeham, gardener to Mrs. Bean, Darsom, took the lead. Mr. A. Tomalin, gardener to S. White, Esq., Oakwood, was second. The president's prize for twenty-four blooms, Japanese and incurved, eighteen varieties, was secured by Mr. E. Russell, who was first. He was followed by Mr. J. Wakeham; and in the third place by Mr. J. Simon. Twelve incurved blooms were weak, Mr. J. Simon being second; and Mr. A. Tomalin, third. The six blooms, incurved, were a very strong class, and gave the judges some work to decide, all being very good, Mr. Wakeham and Mr. Simon dividing the honours.

For groups of Chrysanthemums covering a space of 8 ft. by 5 ft., edged with foliage and Ferns, the lead was taken by Mr. H. J. Nolis, gardener to C. Holme, Esq., Upton. For pot plants, Mr. Baldwin, East Wickham, was first. Mr. J. Wakeham was first in an open prize competition for a magnificent hand bouquet, which consisted of a fine collection of Orchids, Mr. Tomalin being second. Mr. Parris, of Bexley Heath, staged some handsome specimens of brides' bouquets, and funeral wreaths, for which he is so famous. He also showed Ferns and foliage plants not for competition.

Amongst the fruit competitors, Mr. Wakeham had it nearly all his own way, taking first for black Grapes, table and kitchen Apples, and Pears. For vegetables, Mr. E. Russell was champion. There was a good show of cottagers' produce of vegetables, of which Potatoes were well grown. We noticed the Ichthemic Guano Co. had attractive stands of their speciality, and we learned that many of the exhibits were grown with this popular fertiliser.

We wish the West Kent Society continued success. The judges were Mr. James Hudson, gardener to Messrs. de Rothschild, Gunnersbury House, Acton; and Mr. C. Beckett, gardener to Sir W. G. Pearce, Chilton Lodge, Hungerford.

TEIGNMOUTH.—November 3rd.

UNDER the auspices of the Teignmouth Gardeners' Mutual Improvement Society this show was held on Wednesday, November 3rd.

The judges were Mr. Powell, of Powderham; Mr. W. Swan, of Bystock, Exmouth; and Mr. Lock, of Crediton. The table decorations were judged by Mrs. Gulson, Gorway; Mrs. J. R. Morrison, Yannon; and Miss Powell Williams, Alwyns.

Among the exhibitors not for competition was noticed a stand by the Ichthemic Guano Company, tastefully arranged by Messrs. W. Hannaford & Son, who also had a collection of plants. R. Gulson, Esq., had a splendid group of Chrysanthemums, and was awarded the National Chrysanthemum Society's Certificate, one also being awarded to H. H. Hammond Spencer, Esq. (gardener, Mr. G. Foster).

The Devon Chrysanthemum Nursery also had an exhibit. The committee and judges were provided with a luncheon at the invitation of Mr. Hammond Spencer, who, as president, has proved such a generous helper of the Society. Great credit is due to Mr. T. Hannaford, the hon. secretary, for the admirable manner in which the arrangements were carried out.

LEYTON.—November 4th and 5th.

THE Leyton, Leytonstone, and District Chrysanthemum Society held its first show in the magnificent new Town Hall on the above dates, and must be congratulated both upon the arrangement of the hall and the attendance. Councillor E. Bare, Esq., in a few words of congratulation to the committee and the hon. sec., Mr. W. C. Vince, introduced Lady Birt, who declared the show open.

A special feature in the hall arrangement was four magnificent groups of Chrysanthemums in pots interspersed with Ferns and foliage plants. They were amongst the finest groups we have seen in any local show this season, and would have taken a lot of beating. Mr. J. Spink, of Walthamstow, secured the chief honours in this class.

The following are some of the principal prizes:—Group of Chrysanthemums in pots, 8 ft. by 6 ft., first, Mr. J. Spink; second, Mr. E. Bartlett, Walthamstow. For a group, in pots, of foliage plants, 8 ft. by 6 ft., for effect: first, Mr. J. Spink; second, Mr. W. Cade, Wanstead. For three dwarf

specimens of Chrysanthemums, Mr. Whitehome, gardener to S. Nichols, Esq., was first. For four bush-grown Chrysanthemums, not less than nine blooms, Mr. J. Spink took the first and Mr. Whitehome followed. For three bush-grown Chrysanthemums, not less than nine blooms, quality to be the principal feature, the special prize, a pair of silver salts, given by the Ichthemic Guano Co., Ipswich, per Mr. W. Colchester, Ipswich, was taken by Mr. J. Spink.

For twenty-four cut blooms, Japanese varieties, Mr. Kenyon, Woodford, came first; and Mr. J. W. Simmonds, Wanstead, was second. The first prize included the N.C.S. Silver Medal. Mr. Vince was first in cut blooms in vases, and secured the prize for the best bloom in the show. In the amateurs' classes, Mr. J. Caseday, Walthamstow, took first in groups. For cut blooms, Japanese varieties, Mr. G. Smith, Walthamstow, was first, and Mr. J. Smith second. For incurved varieties, Mr. G. T. Simper, Wanstead, was first, and Mr. J. Smith second. The class open to ladies only was well filled. The platform in the hall was very beautifully decorated with Chrysanthemums, foliage plants, and Ferns by Mr. D. Donald, gardener to J. G. Barclay, Esq. In the vestibule at the top of the stairs entrance to the hall the Ichthemic Guano Company were showing their popular fertiliser with Chrysanthemums, &c. Mr. F. Burns, Stratford, had a large stand filled with his specialities in seeds and garden requisites. The entrance to the show was also well decorated. The judges at this successful show were Mr. R. Dean, N.C.S., Ealing, and Mr. C. Langdon, The Lilies, Leytonstone.

BY TELEGRAM.

BIRMINGHAM.—November 9th, 10th, and 11th.

BIRMINGHAM has eclipsed itself. Never in the annals of the Chrysanthemum Society has such a large and magnificent display been brought together and it reflects most creditably upon the energetic committee. The courteous president, W. B. Leatham, Esq., and the Secretary Mr. J. Hughes, High Street, Harborne, carried out the heavy duties of secretary in a manner deserving the highest praise; while noteworthy indeed was the work of the vice-presidents, Mr. John Pope and Mr. W. H. Dyer, upon whom fell the work of allocating space, &c. Viewed from the gallery the wealth of colour, the symmetry of the groups and arrangement of tables presents a picture of extreme beauty never to be forgotten.

Considering that some £5,000 is offered for prizes the competition is naturally very keen, particularly in the groups and large decorative table groups, 20 ft. by 8 ft. The first prize in the latter class, with the Birmingham Challenge Cup, value 25 guineas, was carried off by the famous floral firm, Messrs. Perkins & Sons, Coventry, with a lovely and most exquisite exhibit. The second prize fell to Mr. J. Crook, Florist, Birmingham, who had also a very artistic display, lighted by some mirrors, etc. The third was awarded to Messrs. Jones & Sons, of Shrewsbury, with another beautiful display. Fourth came Messrs. Pope & Sons, King's Norton, whose only fault was a somewhat dark and a trifle heavy group.

In Class XI., a Chrysanthemum group, the leading honours were carried off by J. Whitfield, Esq., Moseley (Mr. W. Thomson, gardener), with a beautiful group finished off by some very fine specimen Caladiums, and Crotons. Second came R. Cadbury, Esq., Moseley (Mr. G. Menzies, gardener), with another splendid group; third, C. Showell, Esq., Edghaston (gardener, Mr. W. H. Westbury); fourth, Lady Martineau, Edgbaston (Mr. O. Brouse, gardener); fifth, G. Kenwich, Esq., Edgbaston (gardener, Mr. J. O. Macdonald). In Class XII., for smaller group of Chrysanthemums, T. Clayton, Esq., of Castle Bromwich (gardener, Mr. Lewis Fewkes), gained first with a really beautiful group which reflected most creditably upon the builder; second came Mrs. Scarf, King's Heath (gardener, Mr. W. Torevell), and following closely, Mrs. Armfield, Edgbaston (gardener, Mr. W. Batchellor), came third. In Class IV., for six large flowering, Japs. excluded, Lady Martineau (gardener, Mr. O. Brasier) took the lead; Mr. J. Maldrem, was second; and J. A. Kendrick, Esq., Edghaston, (gardener, Mr. Alfred Cryer), came in third. For three Japs., flowering, the premier honour was gained by G. Cadbury, Esq., Northfield (gardener, Mr. J. Maldrem); second came J. A. Kendrick, Esq. (gardener, Mr. Alfred Cryer). In Class V., for six

Japs., flowering, first, Lady Martineau, Edgbaston, (gardener, Mr. Brasier), who also gained first for nine Japs., flowering, in another class. The second and third places were gained by G. Cadbury, Esq., and J. A. Kendrick, Esq., respectively.

Several noteworthy miscellaneous exhibits were on view. Messrs. Thompson, of High Street and Sparkhill Nurseries, Birmingham, had a very large exhibit of seed Potatoes, and another exhibit of fine Primulas. Messrs. Hewitt & Co., Solihull, Birmingham, had a unique display of Chrysanthemums, chiefly Japanese. The Ichthemic Guano Co. had their now famous octogan group lightened up by floral arches of Chrysanthemums, Arum Lillies, creepers, and evergreens.

For the prizes offered by Mr. Robert Sydenham, of Birmingham, for vegetables grown with seed supplied by him, nearly 300 entries were made. Messrs. Simpson & Son, Seed Merchants, Birmingham, had a display of flowers grown in Jaddo. Messrs. Wm. Cutbush & Son, Highgate, London, had a beautiful display of the Begonia Gloire de Lorraine.

QUESTIONS AND ANSWERS

Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Muscat of Alexandria and Foster's Seedling Grapes.—One in Doubt: Muscat of Alexandria should do better in the company of Mrs. Pince, Gros Colman and Alicante, than Foster's Seedling. The latter is early, while all the rest are late. Muscat of Alexandria succeeds very well upon Foster's Seedling, so that you need have no hesitation in inarching it upon the same. The Vines being only three-years-old there should be no difficulty in getting a good union.

Apple Lane's Prince Albert.—Pomona: The origin of this variety is not exactly known. Messrs. H. Lane & Son, of Berkhamstead, noticed it in their neighbourhood, and seeing that standard trees of it fruited regularly every year, they set about propagating and putting it into commerce. The firm in question exhibited fruits of it at a meeting of the British Pomological Society, on the 26th October, 1857. This then is the date when it was first placed before the public.

American Cress and Protection.—Omega: American Cress being a name given to Barbarea praecox, often found wild as an escape in Britain, it is perfectly hardy and should not be covered-up in winter. It is a native of continental Europe, and has only been introduced to America. You may in fact give it treatment similar to that accorded to Lamb's Lettuce (Valerianella olitoria) also grown for winter use.

Harpalum rigidum.—Omega: The correct name of this is Helianthus rigidus. It is perfectly hardy; so that if you lift and divide it at once, the roots will get partly established in the soil before winter is far advanced. The plants would also grow away more freely on the return of fine weather in the spring, and be better able to withstand the drought of summer, than if the transplanting of them had been deferred till March.

Names of Fruits.—T. J.: 1, Ne Plus Meuris; 2, Styrian; 3, Beurree Diel; 4, Knight's Monarch; 5, White Doyenne; 6, Apple, Dumelow's Seedling.

Names of Plants.—E. R. Berkeley: 1, Maxillaria picta; 2, Eria acervata; 3, Oncidium flexuosum; 4, Oncidium longipes; 5, Montbretia not recognised. The only way to get the name of hybrid Montbretias would be to ask some one who had a good collection of growing plants earlier in the season.—W. M.: 1, Peristrophe speciosa; 2, Erica vagans; 3, Coronilla Emerus.—J. H.: 1, Aster elegans; 2, Aster multiflorus; 3, Sternbergia lutea; 4, Chrysanthemum uliginosum.—T. S.: 1, Scabiosa caucasica; 2, Hypericum calycinum; 3, Crataegus Pyracantha; 4, Passiflora caerulea.—A. Sim: 1, Cupressus nutkaensis; 2, Retinospora plumosa aurea; 3, Thuja orientalis aurea; 4, Taxus adpressa; 5, Libocedrus decurrens.—Omega: Aster diffusus horizontalis.—Barr & Sons: Chenopodium album.—J. W.: Desmarestia aculeata.

Communications Received.—J. Mayne.—T. Bones.—J. H.—Rosen Zeitung.—A. P.—R. G. W.—J. W.—R. A. R.—Price's Patent Candle Company.—Omega.—Rom.—W. Tolley.—J. P. O.—Y.—G. Menzies.—F. L. M.—Medico.—Enteric.

TRADE CATALOGUES RECEIVED.

J. C. SCHMIDT, Erfurt, Germany.—Novelties for 1898.

DAVID W. THOMSON, 24, Frederick Street, Edinburgh.—Catalogue of Forest Trees, Fruit Trees, Roses, &c.

DICKSONS & Co., Waterloo Place, Edinburgh.—Descriptive Catalogue of Forest Trees, Ornamental Trees, Flowering and Evergreen Shrubs, &c.

JOHN DOWNIE, 144, Princes Street, Edinburgh.—Trees, Shrubs, Coniferae, and Fruit Trees; also catalogue of Roses.

H. CANNELL & SONS, Swanley, Kent.—Illustrated and Complete Descriptive List of Chrysanthemums.

INDEX TO ADVERTISEMENTS.

Table listing various categories such as Auction Sales, Bulbs, Catalogues, Chrysanthemums, Florists' Flowers, Fruit Pots, Fruit Trees, Garden Sundries, Hardy Plants, Heating Apparatus, Horticultural Builders, Insecticides, Manures, Miscellaneous, Orchids, Publications, and Seeds.

COVENT GARDEN MARKET.

Table of market prices for various goods including Fruit (Average Wholesale Prices), Vegetables (Average Wholesale Prices), Cut Flowers (Average Wholesale Prices), and Plants in Pots (Average Wholesale Prices).

A Special Offer to Readers of THE GARDENING WORLD. 25/- BOOK for 8/-

NO HOME SHOULD BE WITHOUT ONE

Ogilvie's Encyclopaedia OF USEFUL INFORMATION AND WORLD'S ATLAS.

No Single Book ever before contained such a Wealth of Knowledge.

By Special Arrangement with the Publishers of the "Encyclopaedia of Useful Information and Atlas of the World," we are enabled to offer to the Public a Magnificent 25s. Volume for 16 of the coupons, which will appear weekly, together with 6d. each, accepted in Weekly Instalments, or the Coupons may be held until the whole period has elapsed and brought or sent to the Office with 8s., and 6d. towards carriage.

A COMPLETE ILLUSTRATED LIBRARY IN ITSELF.

A universal assistant and treasure-house of information on every conceivable subject, from the household to the manufactory. In short, gives information about everything, is absolutely indispensable to everyone in all walks of life; the contents being so separated, indexed, and arranged that they can be turned to at once. It is

THE BEST BOOK OF INFORMATION EVER ISSUED. Size of Encyclopaedia: 9 by 11 1/2 inches. 656 Pages

It contains MANY MAGNIFICENTLY ENGRAVED COLOURED MAPS,

and a description of every country under the sun, besides much other matter relative to the Home, the Farm, the Factory, a Dictionary of Statistics—many Useful Tables, Poetical Selections, Synonyms, Famous Bridges and Ships, How to Calculate, How to Cook, How to Get Rich, How to Cure all Diseases, How to Succeed in Business, Table of Weights and Measures, and

HUNDREDS OF OTHER TOPICS OF GREAT VALUE TO EVERY PERSON

who desires to be up to the times. To see the Book is to want it. To Members of Mutual Improvement Societies it will prove of inestimable value.

The articles are written by men whose lives have been devoted to the subjects treated, are short and concise, but contain full information up to date. It is to be consulted on every subject that arises in everyday life, by old and young alike. It contains a complete Illustrated Atlas of the World.

IN THESE DAYS OF COMPETITION it is imperative that a Gardener should be a well-informed individual. Here is an Encyclopaedia containing an immense amount of knowledge that will be of the greatest service to him.

YOUNG GARDENERS, do you wish to be successful? Then remember that to possess knowledge is the surest way to achieve success.

It is elegantly bound in Morocco Cloth, with beautifully designed Gilt Side-stamp and Red Edges, making at once the most handsome and durable as well as THE MOST USEFUL BOOK EVER MADE or sold for 25s.

131197. COUPON. OGILVIE'S ENCYCLOPEDIA OF USEFUL INFORMATION, AND WORLD'S ATLAS, (Published Price 25s.) 16 COUPONS, AND 6D. WITH EACH. Name Address

Postal Orders or 1/4d. stamps may be sent. COUPONS AND CONTRIBUTIONS MAY BE LEFT at or SENT TO the Office for THE PUBLISHER OF THE GARDENING WORLD. COPIES OF THIS BOOK CANNOT BE BOUGHT. They can be obtained only by using these Coupons.

GRAND SUCCESS.

WHO won the first prize for novelties at the N.C.S. Great Show?
 WHO distributed G. J. Warren, the champion Jap. bloom at the Great Show?
 WHO distributed Lady Isabel, the champion incurved bloom at the Great Show?
 WHO distributed Lady Hanham?
 WHO distributed Julia Scaramanga?

WHY, WELLS!
 WHY, WELLS!
 WHY, WELLS!
 WHY, WELLS!
 WHY, WELLS!

The above four grand novelties (out of five) which I distributed, will speak for themselves.

A very few equally as good are in store for 1898. See special list, January 1st, viz. :—

Mrs. J. W. Barks, a rosy bronze (buff reverse) sport from Edith Tabor, 10/6; Nena Dadds, another of Mr. Silsbury's beauties, the colour and make of Phoebus, with florets as long as, but broader than Edith Tabor, habit superb, 7/6; Mrs. White Popham, white, lined and frosted carmine. Mr. Silsbury tells me this is the largest and best Japanese Incurved ever raised, both in habit and flower, 7/6; Gertrude Salter, Japanese Incurved, rosy-lilac, one of the largest and best Japanese Incurved ever raised. This is from seed sent over by Mr. Thos. Pockett, of Australia. Height 4 ft., 7/6.

P.S. —Lady Isabel and Julia Scaramanga were raised by Mr. Silsbury.

Catalogues free. My Book on "Mums" 1s. 2d. Post Free, from

W. WELLS, EARLSWOOD, SURREY.

CHRYSANTHEMUMS.

THE FINEST SHOW IN THE WORLD.

This, to some, may appear to be a vain boast; it is none the less a fact.

England produces the finest Chrysanthemums in the world, and the best grown collection of the finest varieties arranged in the most handsome house in England is at Exmouth.

W. J. GODFREY has this season, both at the National Chrysanthemum and Royal Horticultural Societies' Exhibitions, received higher honours, for cut blooms alone, than any other grower, and has also been awarded more certificates for novelties.

A really reliable Catalogue giving descriptions of the best varieties, together with cultural hints respecting same, will be published in December. Post free to all applicants.

W. J. GODFREY, EXMOUTH, DEVON.

DAVID W. THOMSON'S

Flower Seeds Specialities.

Vegetable Seeds Specialities.

THOMSON'S DWARF WHITE ANTIRRHINUMS.
 THOMSON'S DALKEITH CALCEOLARIA.
 THOMSON'S SUPERB BEGONIAS.
 THOMSON'S UNRIVALLED CELOSIAS.
 THOMSON'S CINERARIAS.
 THOMSON'S CYCLAMEN.
 THOMSON'S PANSY.
 THOMSON'S PETUNIA.
 THOMSON'S PRIMULAS.
 THOMSON'S EAST LOTHIAN STOKES.

THOMSON'S PRIZE BRUSSELS SPROUTS.
 THOMSON'S PROLIFIC LONG POD BEANS.
 THOMSON'S SUPERB RED BEET.
 THOMSON'S SELF-PROTECTING BROCCOLI.
 THOMSON'S IMPROVED HORN CARROT.
 THOMSON'S MARKET CARROT.
 THOMSON'S INCOMPARABLE WHITE CELERY.
 THOMSON'S MAMMOTH GREEN COS LETTUCE.
 THOMSON'S SUPERB CURLED PARSLEY.
 THOMSON'S EXCELSIOR TOMATO.
 THOMSON'S DUKE OF YORK MELON.

See Catalogue of Selected Seeds for 1898, Post Free on application in December.

Nurseries—WINDLESTRAWLEE.

Seed Warehouse—

24, Frederick Street, EDINBURGH.

SPECIALITIES—

BEGONIAS.

JOHN DOWNIE CRAB APPLE

(Pyramid and Standard).

ORNAMENTAL TREES, SHRUBS & CONIFERS.

STOVE AND GREENHOUSE PLANTS.

ROSES. FRUIT TREES, ETC.

Catalogues on application,

JOHN DOWNIE, Nurseryman, EDINBURGH.

GARDEN & OLD-FASHIONED ROSES.

GEO. COOLING & SONS

Have always been noted for their Collection of Old-Fashioned and Garden Roses.

Strong plants can now be supplied of all the beautiful varieties exhibited, and so much admired, at the Rose Shows this season. *New & descriptive Catalogue, post free.*

THE NURSERIES, BATH.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Malda Vale, London W.

CARNATION "YULE TIDE"

Is the best scarlet winter flowering Carnation in cultivation. It has already gained *Nine First-class Certificates* as well as the *R.H.S. Silver Flora Medal*, and has been highly eulogized by the Press. A sterling novelty of great merit. Strong plants 5s. each, carriage paid.

BEGONIA GLOIRE DE LORRAINE

Is the finest winter flowering plant extant, of dwarf, compact, free habit, flowers continuously all winter and spring, a lovely rosy carmine colour, good flowering plants, 2s. 6d., 3s. 6d. and 5s. each, carriage paid.

JOHN FORBES, Nurseryman, HAWICK, SCOTLAND.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, NOVEMBER 20th, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, November 22nd.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 Meeting of the Floral Committee of the National Chrysanthemum Society at the Royal Aquarium at 3 p.m.
 TUESDAY, November 23rd.—Royal Horticultural Society: meeting of committees at 12 o'clock.
 Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 WEDNESDAY, November 24th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
 Annual dinner and distribution of prizes of the National Chrysanthemum Society. To be held at Anderton's Hotel, Fleet Street, at 6.30 p.m.
 THURSDAY, November 25th.—Leamington Chrysanthemum Show.
 Dundee Chrysanthemum Carnival (3 days).
 Sales of Dutch bulbs by Messrs. Protheroe & Morris.
 FRIDAY, November 26th.—Aberdeen Chrysanthemum Show (2 days).
 Sale of Dutch bulbs and imported and established Orchids by Messrs. Protheroe & Morris.

FERTILISERS AND CELERY.—Cultivators, who have had anything whatever to do with Celery, recognise the fact that a good crop is only to be obtained by the best of cultural treatment, coupled with fertilisers of one or more kinds during the growing season. The nature and quantity of the manures absolutely necessary to insure a good return depends entirely upon the character of the soil to be planted, and that of the season during the period of growth. For instance, a very dry season might necessitate much watering; though on the contrary, this contingency might be guarded against by planting Celery only in deeply and well cultivated soil.

The numerous experiments being conducted at the Cornell University Agricultural Experiment Station, Ithaca, New York, are doing good service to the cause, both of agriculture and horticulture. Every year some fresh branch of gardening is undertaken; while older experiments are continued. Celery has been added to the list chiefly with a view to aid growers in counteracting two forms of Celery blight, and to ascertain how best to fertilise the land. Some remarks about the construction of storage houses are also given together with illustrations in *Bulletin 132*. The experiments with Celery were commenced on the 26th of June, 1896, on some flat meadow land that had never previously been planted with Celery, nor had ever received fertilisers. Each row of Celery was 28 rods in length and 4 ft. apart,

being $\frac{1}{4}$ of an acre of land. The variety Golden Self-blanching was planted 4 in. to 6 in. apart in the row, and other varieties 6 in. to 8 in. The season proved very dry, making the crop lighter than it otherwise would have been. The manures applied were placed in shallow furrows on either side of the rows, about 2 in. or 3 in. from the plants after the latter were established. This was carefully done by hand and the manures covered up. There were fifteen experimental plots, of which we shall mention only a few of the more striking results obtained.

Seven rows of Golden Self-blanching Celery were planted on June 20th, and supplied with 14 lbs. of high-grade sulphate of potash per row. Six plants of average size weighed 4 lbs. 1 oz., being considered a poor return. The manure was applied on the 17th July. Seven rows were treated with high-grade muriate of potash in similar quantity and on the same date as the above. Six plants weighed 5 lbs. 14 ozs., the better quality of the crop being quite evident. One row of Golden Self-blanching received no fertiliser whatever and the crop was worthless. Three rows of the same variety were treated with 200 lbs. of wood ashes on the 17th July. An analysis of the ashes showed 6.32 per cent. potash and 1.87 per cent. of phosphoric acid. This experiment proved the most satisfactory of the whole plantation. Six plants weighed 7 lbs. 7 ozs.

Five rows of Kalamazoo Broad ribbed Celery planted June 24th, were treated with 100 lbs. of dissolved South Carolina rock on July 18th. The stalks were slender and the crop poor. Five rows of the same variety were treated with 100 lbs. of bone black (burned bones) on the same date as the last mentioned, and the crop was heavier and better. Six rows of White Plume planted on the 25th June were treated with 100 lbs. of sulphate of potash on the 18th July. The crop was fair, but one row was almost ruined by being burned with the manure which was scattered over the top of the plants. This then is an example of what to avoid. A row of Golden Self-blanching treated with 10 lbs. of nitrate of soda on the 8th July, gave a very poor return. Several other plots were planted at dates varying from the 8th to the 22nd July, but none of them gave very satisfactory results owing to the season being so far advanced. Wood ashes gave the best results of all; and a combination of nitrate of soda, South Carolina rock, and sulphate of potash promises to do well if applied earlier. An analysis of the soil showed it to be rich in nitrogen, phosphoric acid and potash, but the latter was almost completely unavailable; hence the beneficial results of the application of wood ashes.

— The Mildness of the Autumn is demonstrated by the fact that Primroses, Wallflowers, and Polyanthuses are in full bloom at Clearbrook in the "West Country."

Visitors to the Birmingham Show.—On the occasion of the great Chrysanthemum exhibition held in the Bingley Hall, Birmingham, on the 9th, 10th and 11th inst., under the auspices of the Birmingham and Midland Counties' Chrysanthemum, Fruit and Floricultural Society, 32,558 people passed the turnstile. Over £600 in cash was taken at the doors.

An Enterprising Hampshire Farmer has sought to tide over agricultural distress by the cultivation of Nuts. It is stated that an acre of his land yields 1 ton of Nuts for which £30 can be obtained, the retailer disposing of them again for £60. The great drawback to Nut culture on a large scale is the uncertainty of the crop, but of course a really good year would pay for a number of bad ones.

Mr. David R. Bone, for the past twenty months head gardener at Moor Park, Kilbirnie, has been engaged as head gardener at Lanfine Gardens, Newmills, Ayrshire. Mr. John McLelland, gardener, South Park, Ayr, succeeds Mr. Bone at Moor Park.

The National Chrysanthemum Society.—A very tastily arranged bill has reached us announcing that the Annual Dinner of this Society will take place at Anderton's Hotel, Fleet Street, London, on Wednesday next, November 24th, at 6.30 p.m. The challenge and other trophies will be presented to the respective winners, and as the evening will altogether be well spent we hope that as many as possible of our readers will make early application for tickets (at 3s. 6d. each) to Mr. Richard Dean, the able secretary.

Lawes' Chemical Manure Company, Limited, 116, Fenchurch Street, London, E.C., had an exhibit of their Horticultural or Garden Manure at the Royal Aquarium on the 9th, 10th and 11th inst., on the occasion of the National Chrysanthemum Society's great autumn exhibition. They reckon it an ideal fertiliser containing all the elements of plant food in the most available form. The manure may be applied in the dry state as a top-dressing for Vine borders, Tomatos, Cucumbers, fruit trees, Strawberries, vegetables, &c. In the case of pot plants it may be mixed with the compost, or applied as a dressing, or in every case it may be applied in liquid form. All of these methods may also be employed in the case of Chrysanthemums. A guaranteed analysis is given with the manure. The company also had on view samples of their disinfecting fluid.

Keep the feet dry.—Gardeners are often liable to get wet feet at all seasons of the year, and during summer may be careless or indifferent in the matter, but during autumn, winter, and spring they cannot treat the matter so lightly with impunity. It is neither necessary nor desirable to enumerate the ills to which a gardener or anybody else is rendered liable by wet feet during cold weather; but whether they are spreading water in hothouses, wading amongst wet grass, or collecting vegetables in the kitchen garden, moisture will soak through leather even if normally water tight. The antidote to this may be found in Gishurstine which should be rubbed all over the boots as well as the soles. We need not give directions as to its use, for that is supplied with Gishurstine itself, by Price's Patent Candle Company, Limited, Belmont Works, Battersea, S.W. Gishurstine has long been used by gardeners, farmers, sportsmen, ladies and others. We have used it for years and find it most effectual for the purpose already named. It also keeps the leather of boots soft and pliable.

Messrs. Proctor and Ryland, of Birmingham and Chester.—The present is the forty-fourth year that the above firm has offered prizes for the best crops of roots grown by the aid of their specially prepared manures. The judge this season is Mr. A. S. Berry, of Great Barr. In the class for five acres of Swedes, open to growers residing in the counties of Hereford, Salop, Stafford, Warwick, Worcester, Gloucester, Berks, Hants, Surrey, Oxford, Bucks, Herts, Bedford, Northampton, and Huntingdon, Mr. Thos. Williams, Slindon House, Eccleshall, Staffordshire, wins the first prize which is fifteen guineas. The average weight of his crop per statute acre is 41 tons, 17 cwts., 16 lbs. Mr. Thos. Clarke, Knighton Grange, Newport, Salop, is second, his crop averaging 39 tons, 7 cwts., 16 lbs. per acre. Third comes Mr. S. B. Foxley, Chalcutt, Eccleshall, Staffordshire, with a crop per acre of 35 tons, 2 cwts., 3 qrs., 12 lbs. For a similar acreage of Swedes grown in the counties of Cumberland, Westmoreland, York, Lancaster, Lincoln, Notts, Leicestershire, Rutland, Derby, Chester, Flint, Denbigh, Merioneth, Radnor, Montgomery, or Anglesey, Mr. Samuel S. Raingill, The Grange, Ringway, Altrincham, leads with an average crop per acre of 49 tons, 5 cwts., 2 qrs., 24 lbs. In a competition also for five acres of Swedes open to growers in England and Wales, Mr. F. H. Sharrod, Cherrington Manor, Newport, Salop, wins with a crop of 42 tons, 4 cwts., 1 qr., 4 lbs. per acre. Mr. John S. Billington, Batterley Hall, Crewe, has the finest two acres of Mangel Wurtzel, which yields at the rate of 66 tons, 14 cwts., 1 qr., 4 lbs. per statute acre.

London Flower Girls, it is estimated, dispose of 5,000 buttonholes and sprays daily, representing a value of £100.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held in the Drill Hall, James Street, Westminster, 1 to 4 p.m. At 3 o'clock a lecture on "Horticultural Exhibitions, Schedules, &c." will be given by Mr. J. Wright, V.M.H.

Laelia pumila praestans at the Sale Rooms.—The importation of this fine form of the species made by Messrs. W. L. Lewis & Co., Southgate, N., has proved to be rich in the choicest of colour varieties, thus raising the status of the species immensely. The varieties have been selling at the rooms of Messrs. Protheroe & Morris, Cheapside, at prices ranging from £5 to £56. The latter price was for a variety with white sepals and petals, and two rose blotches on the lip, the central portion being white. On the 12th inst. another fine thing turned up with blush sepals and petals. The lip was large and purple, with a median white band. It fetched £23.

Grapes for Maidstone.—In view of the fearful calamity which has overtaken our county town, I am endeavouring to arrange for a supply of Grapes for the sufferers. Nearly 2,000 cases of typhoid have been recorded, and the distress is terrible. The struggle towards convalescence after attacks of this fever is always a long and weary one. Solid food cannot be given, no matter how keen the pangs of hunger may be. The Mayor tells me that Grapes are needed, and anyone having some to spare, if only a bunch or two, would be performing a good act by sending them. Boxes sent to the Mayor, marked "Maidstone Grape Fund" will be diverted to the proper quarter; and both railways, S.E.R. and L.C.D.R., deliver such gifts free. I would gladly send printed labels to anyone on receipt of a post-card. I may add that kind promises of assistance have already been made by several well-known horticulturists, notably Mr. Chapman, gardener to Capt. Holford, Westonbirt; Mr. W. H. Divers, Mr. J. Hudson, Mr. Martin, gardener to Lord Leigh; Mr. W. Taylor, gardener to C. Bayer, Esq., Forest Hill; and "A Friend." Others will be gratefully received.—W. P. Wright, Willesborough, Ashford, Kent.

Insects and Flowers.—At the meeting of the Linnean Society on the 4th inst., Sir John Lubbock, Bart., M.P., read a paper, "On the Attraction of Flowers for Insects," which dealt chiefly with the points raised in three recently published memoirs by Professor Plateau, who had attempted to show that the scents and not the colours of flowers serve to attract insects. Sir John Lubbock explained that his view, like that of Sprengel and Darwin, was that to insects flowers were indebted for both their scent and colour. Not only had the present shapes and outlines, colours, the scent, and the honey of flowers been gradually developed through the unconscious selection exercised by insects; but this applied even to minor points, such as the arrangement of lines, and the different shades of colour. Professor Plateau had recorded a series of experiments on the Dahlia, in which he showed that bees come to these flowers even when the ray-florets have been removed. Discussing this point, Sir J. Lubbock said it was somewhat singular that he should have selected as proving that insects are entirely attracted by scent a flower which had, so far as he knew, no scent at all. He gave several reasons for disputing the conclusions drawn by Professor Plateau from his experiments, and recorded others made by himself which refuted them. He had selected species of flowers in which the scent is in one part and the coloured leaves in another, as, for instance, the Eryngium amethystinum. This flower is surrounded by brilliant blue bracts; and he found that if the two parts were separated, the bees came more often to the bracts than they did to the flowers themselves. He maintained, therefore, that the observations of Professor Plateau did not in any way weaken the conclusions which had been drawn by Sprengel, Darwin, and others, and that it was still clear that the colours of flowers serve to guide insects to the honey, and in this way secure cross-fertilisation. A discussion followed in which Mr. A. W. Bennett, Mr. Grabham, and Dr. H. O. Forbes took part.

The Alexandra Palace on Muswell Hill is now the centre of a thickly populated district, so that when it reopens it should have a better chance of success than when flower shows were last held in it. To the south of it Hornsey has a population of 80,000; while Wood Green and Tottenham have more than 100,000.

Torquay Chrysanthemum Show was held on the 24th ult., and proved a record with regard to the way in which it was attended. No less than £75 was taken as entrance money. Each exhibition held by the society has been an advance on the previous one, and the two zealous officers, Dr. Ramsay, and Mr. F. C. Smale may congratulate themselves upon the success which has attended their efforts.

Jackson-Harmsworth Polar Expedition.—At a meeting of the Linnean Society of London on November 4th, Mr. F. G. Jackson, leader of the Jackson-Harmsworth Polar Expedition, exhibited a series of lantern-slides, illustrating some zoological observations of the expedition, the most noteworthy being views of the hibernaculum of the polar bear and of the breeding haunts in Franz Josef Land of the Ivory Gull (*Pagophila eburnea*), the eggs of which were also shown. A discussion followed in which Messrs. Harting, H. Saunders, H. O. Forbes, H. Elwes, A. Trevor-Battye, the Rev. F. A. Walker, and Dr. Murie took part. Mr. H. Fisher, botanist to the expedition, brought for exhibition a collection of plants made by him in Franz Josef Land, the consideration of which was deferred for want of time.

English and French Aesthetics.—M. Ch. Albert has been writing on this subject to our contemporary, *Nord-Horticole*, and frequently quotes Mr. C. Harman Payne, to corroborate his opinions. The latter is also a contributor to the November number of our contemporary. Mr. C. Harman Payne is convinced that the recognised methods of procedure by the existing school have assured the success of the Chrysanthemum, and it justifies his opinion in declaring to the people of this country the particulars of taste that we should not recognise. Touching this latter point M. Albert says that the truth is that in England, America, France, and the entire world, the method of exhibiting Chrysanthemums with tubes is contrary to the laws of nature, to those of Aesthetics, and of good common sense. It is quite artificial, conventional, of a nature to lead many people into error who have the interest to be instructed upon the absolute value of the flowers that they know. In other respects he has nothing against the methods of the National Chrysanthemum Society.

The Rose in History, Poetry, and Commerce was the title of a paper read by Mr. G. Love, of the Barton Nurseries at a recent meeting of the Torquay District Gardeners' Association. The chair was filled by the President, Dr. Hamilton Ramsay, and there was a capital attendance. Mr. Love said that the first record of the Rose as a cultivated plant dated back 2,000 years. It originated in central or western Asia. The Greeks held it in great esteem, employing it in their religious ceremonies, dedicated it to the gods, and invested it with supernatural qualities. Theophrastus was amongst the earliest writers upon the Rose. Herodotus spoke of the gardens of Midas, "wherein the Roses grow of themselves, and there have as many as sixty petals apiece." Sappho, Anacreon, and other Greek poets sang of it, but it was not until the Romans took it up that it assumed its proper place in the economy of cultivated plants. Columella was the first to mention about the Rose being budded on briars, for he said:—"They (the Roses) should be budded on bushes with laterals left a foot long." Pliny advised the plants being kept a foot apart, well hoed, and planted deeper than Vines, but not so deep as corn. Like Theophrastus, Pliny believed in the good results of pruning by fire. The latter author spoke of obtaining early Roses by filling a trench round the plants with hot water when the buds were about to break. With the fall of Rome the Rose became neglected, but with the Renaissance of learning in the 16th century came again into prominence. The National Rose Society had fixed the date of its introduction to Britain in 1596. The first Rose nursery upon anything like a large scale was established in the vicinity of Paris in 1815 by M. Vihert. Mr. Love quoted snatches of poetry upon the Rose from Sappho, Anacreon, Chaucer, Spencer, Shakespeare, Moore, and Burns.

A Tree Issues from one of the windows at the top of the round tower of the church of St. Benedict, Norwich. A similar phenomenon may be seen at Bicknoller, in Somerset.

The British Astronomical Weather Almanac and Chart.—This consists of an almanac of some thirty-two pages by B. G. Jenkins, F.R.A.S. It is based on the author's paper on "Forecasting the Weather" in the Bulletins of the Royal Academy of Sciences of Belgium and on Tellustria; a method for determining astronomically the variations in the temperature and pressure of the atmosphere. It gives the customary information to be found in almanacs, including notes for the fisherman, fowler, hunter, farmer, traveller, gardeners, &c. The probable weather for January is a safe prediction, as we are likely to have frost, fog and snow. In February we are to have snow frequently and dense fogs; severe cyclonic storms in March; and thunderstorms in the remaining months except September and December. We think it better not to antedate all these evils. The reminders to farmers, gardeners and others will be the more serviceable items of the almanac which is sold by R. Morgan, 65, Westow Street, Norwood, S.E.

Messrs. Webb & Sons' Root Competition.—The Wordsley firm offer no small encouragement to enterprising agriculturists as well as horticulturists. The root competition inaugurated by them covers nearly the whole of Great Britain. The first prize of 15 guineas, open to the cultivators in the counties of Salop, Stafford, Montgomery, Warwick, and Leicester, for five acres of Swedes, this year goes to Mr. R. Timmis, Charnes Old Hall, Eccleshall, who has a grand crop of 50 tons 18 cwt. per acre. For a similar acreage of the same root in the counties of Hereford, Monmouth, Brecon, Glamorgan, Radnor, and Pembroke, Mr. A. Thomas Rowston, Pembroke, leads the way with 41 tons 16 cwt. to the acre. For another five acres of Swedes, in the counties of Oxon, Bucks., Wilts., Hants, Surrey, Worcester, and Gloucester, Mr. W. M. Harvey, Allington Manor, Bishopstoke, secures the premier award with 38 tons to the acre. Mr. W. Scorer, of Givendale Grange, Borobridge, has the best five acres of the same root in Yorkshire, and Mr. J. Hayton, Beck Farm, Wigton, holds the same position in a similar class open to competition from the counties of Bedford, Cambridge, Cornwall, Cumberland, Cheshire, Devon, Derby, Dorset, Durham, Essex, Herts., Huntingdon, Kent, Lancaster, Lincoln, Middlesex, Norfolk, Notts, Northampton, Northumberland, Rutland, Somerset, Suffolk, Sussex, Westmorland, Carnarvon, Carmarthen, Cardigan, Denbigh, Flint, and Merioneth. Mr. Hayton has a crop averaging 56 tons 8 cwt. to the acre. Mr. G. Dodge, Cannon Court Farm, Fetcham, Leatherhead, has the premier three acres of Mangolds.

GARDEN FLOWERS IN THE OPEN.

In looking over your issue of the other week I observed you were noticing the vagaries of "Jack Frost" in the Thames Valley, etc., it just occurred to me how much favoured we have been with October weather. In all my experience (twenty-five years) I never saw tender plants so fresh and nice as they are here just now. Taking a turn round to-day (2nd November) I noticed that many of the Phloxes, Veronicas, etc., were sending up fresh flowering spikes.

All our bedding plants—with the exception of those we had to clear off to make room for spring-flowering subjects—are quite fresh and blooming away as if summer had begun again. Dahlias, Sweet Peas, Verbenas, Ageratums, Begonias, Pelargoniums, etc., make a brave stand for life, even into "cauld November." I take the liberty of sending you a few specimens, picked at random from various parts of the garden. "Mums" have been exceptionally happy this fine weather; the pompons are well over, but the Japanese sorts are quite gay. We use such sorts as Mme. C. Desgranges and its sports G. Wermig, Mrs. Hawkins, and Mrs. Burrell; also Mons. G. Grunerwald, Vicomtesse d'Avène, Harvest Home, Ryecroft Glory, Vice-President Hardy (this fine, but a little tall) and Lady Fitzwygram. This latter we find far surpasses Mme. Desgranges for outdoor work, the colour being much purer, the habit better, and the flowers coming up on one level make a nice hush.

The enclosed samples, I think, amply demonstrate the mildness of the Carrick climate.—*John Simons, Glendoune, Girvan, N.B.*

[A box of flowers accompanied the above letter fully substantiating what Mr. Simons says about the garden flowers in the west of Scotland at the above date. Pompon and decorative Dahlias in numerous varieties were beautifully fresh and fit for use for cut flower purposes. A bunch of Sweet Peas, with flowers as large as they might be in summer, and as rich in colour included many choice varieties, still deliciously fragrant. Chrysanthemums of the early-flowering section were fresh, including several of the above-mentioned varieties. Other flowers were Verbenas in variety, blue Ageratum, Phlox Drummondii, Gaillardias, double Ivy-leaved and zonal Pelargoniums, and the showy Scabiosa caucasica. Truly the autumn months must have been mild in the north as well as the south of Britain.—ED.]

CHRYSANTHEMUM LATIFOLIUM.

EVERYONE who wants a late supply of the hardy Marguerites should grow this kind. I consider it a long way before *C. uliginosum*, although this is a popular plant. To get it good it needs to be well grown in good soil. It may be well watered with manure when showing bloom. This Chrysanthemum is a strong rooting plant, and needs good feeding. It is strong and tall growing; nevertheless it pays for doing by the fine, large, handsome blooms it gives. They are single, large and white, with a bright yellow centre. We grow it at the back of our hardy plant border, and in this position it blooms for three or four months. It is readily increased by division, and will grow in almost any soil.—*J. C., Chard.*

A VISIT TO BADANLOCH,

KINBRACE, SUTHERLANDSHIRE.

A FEW weeks ago I had the pleasure of visiting Badanloch, a famous sporting part of the above county in the extreme north of Scotland, leased by F. S. J. B. Taylors, Esq. But the subject I wish to open at present is how well gardening is done in the north of Scotland. On entering the garden at Badanloch I am sure I have never seen nor had the pleasure of visiting a more exposed garden than the above, yet the marvellous appearance of everything induced me to pen these few remarks.

The garden is comparatively new, the sixth crop being in the ground this season. But it is well stocked with everything that is thought suitable for the climate. I was shown round the gardens by Mr. D. Dingwall the gardener, and noted a splendid collection of dwarf bush Roses, including some good varieties that carried splendid blooms on the occasion of my visit, namely, La France, Baroness Rothschild, Captain Christy, &c. They filled a border 80 yards long by 12 feet wide. Another feature of the garden was two borders of considerable length filled with border Carnations, including some of the best varieties, such as Duchess of Fife, Prince of Wales, Scarlet Princess, Mrs. Muir, Raby Castle, &c.

Chrysanthemums were another class of flowers which got particular attention, as they bloomed splendidly and showed signs of good treatment. Madame Desgranges and its varieties carried some splendid heads.

I also noted that herbaceous plants found favour here, as well as half hardy annuals, the latter making a bright show at the time of my visit. I was also much astonished to see the crop of vegetables that Mr. Dingwall managed to grow here after he had been telling me that it was the 10th of April before he was able to commence sowing, and that on the 1st of May, and afterwards the garden was covered with snow for over eight days.

Anyone on reading the above may easily see that it is not easy for Mr. Dingwall to grow fruit to great advantage, although I saw some splendid cooking Apples on the wall trees. But I understand that small fruits do well, there being a considerable number of nice young fruit bushes, as well as two large borders filled with Strawberries. They were good plants put in last autumn (1896), and last spring, namely, British Queen, Royal Sovereign, Aberdeen Favourite, and the Alpine Strawberry. This took me through the garden to a nice lawn, in front of the commodious lodge, and which had a splendid surface

as well as every other thing, showing that the young gardener here took a particular interest in his work. He is on the point of making a good many improvements this autumn and winter.—*Visitor*.

WINDOW BOXES.

THERE is ample room for a greater variety in the arrangement and planting of these than is generally followed. The selection of plants used for the purpose in most instances is limited to Pelargoniums, Calceolaries, Lobelias, Petunias, and Marguerites, and very showy and decorative many of the boxes are, which are formed of these simple materials. Now, having had a display second to none coming under my notice during this season, made up in a great measure of different materials, and which at the present time is pretty and attractive, I shall instance two of the most prominent among them. The first is the now well known *Campanula isophylla alba*. Nothing more beautiful can be imagined for this purpose, drooping as it does over the sides of the cork box. For a length of time it was one sheet of white, and is not yet totally without flower. The other subject planted among it, drooping even further over the box, is not so well known, and possibly has not been previously used in the same way. It is one of the Rag-worts, *Othonna crassifolia*. This plant seems almost always in flower, but has not been so conspicuous till lately. It is a Composite, with yellow flowers not more than $\frac{3}{4}$ in. in diameter. The growth bears a striking resemblance to some of the *Mesembryanthemums* of straggling habit. The flowers are produced on rather long footstalks, stand out well from the facing of cork, and when the sun is shining upon them look exceedingly pretty against the background of cork, its own foliage, and that of the *Campanula*. The box being immediately over a rockery with a varied selection of suitable plants possibly enhances the effect.—*W. B. G.*

CHRYSANTHEMUM NOTES.

DEVONHURST, CHISWICK.

THE number of Chrysanthemums in the gardens of E. H. Watts, Esq., Devonhurst, Chiswick, has been annually increasing for some time past, which is pretty sure evidence of their popularity. They are distributed through some five houses, including the compartments of the orchard house. A Chrysanthemum show open to the public on payment for admission has been held in November for some years past, and this year took place on the 2nd and 3rd inst., when it proved in every way a success. The proceeds are always devoted to some charitable purpose by Mrs. Watts, who enjoys a wide reputation for the help she renders various causes in this way.

The Chrysanthemums are finer than we have ever seen at Devonhurst before, for Mr. James Gibson is an enthusiastic grower and lover of this flower, and his devotedness has been abundantly rewarded by the response the plants have given to his care. The blooms of *Vivian Morel*, *Charles Davis*, *Phoebus*, *Australian Gold* and *Madame Carnot* are surely as large as any one could desire, yet growers and judges alike never seem satisfied in this respect. The graceful and drooping character of the outer florets of the last-named variety raises it to the first rank as an exhibition flower, and makes it a universal favourite with cultivators and exhibitors. The yellow *Mme. Carnot* or *G. J. Warren* has given growers immense satisfaction everywhere. Mrs. J. Lewis is a massive, deep flower with broad, pure white petals, and belongs to the incurved Japanese section.

White varieties are much in evidence here, and besides those given we may also mention *Lady Byron*, *Souvenir d'Une Petite Amie*, *Western King*, *Mutual Friend*, Mrs. W. H. Lees, and others which have produced very fine blooms indeed. Yellow, bronze, and crimson varieties are also well represented by up-to-date varieties. The quality of *Western King* is excellent, but it is hardly up to exhibition size for this country. *Edith Tabor* is in fine form amongst yellow sorts. *Pride of Exmouth* is white or often tinted with pink on the same plant. *John Neville* has short, stiff, leathery foliage, and drooping orange-crimson flowers, somewhat after the style of Mrs. Falconer Jameson, but larger and very handsome. The crimson-scarlet blooms of Mr. A.

G. Hubbuck, with old-gold reverse are splendid; while the growth of the plant is free and easy. A. H. Wood is a deeper yellow sport from *Primrose League*. *Modesto* and the newer *Sunstone* are also very fine. C. W. Richardson is a clear yellow, hirsute variety that well upholds the merits of its class. The bronzy-gold and yellow *Robert Owen* continues to do well here. *Mme. Ed. André* is an incurved Japanese sort with orange-red florets and a yellow reverse.

Major Bonaffon constitutes one of the newer forms that have been linked with the incurved section, thereby raising the status of the same considerably for exhibition purposes. The blooms are soft yellow and pretty. *Hairy Wonder* continues to take the fancy of all classes of people, for it is now generally admitted to be the best of its section. A taking flower is *Eva Knowles*, being of an orange-crimson hue with old-gold reverse, the latter shade being much shown owing to the incurved arrangement of the flowers. A curious thing has happened in connection with *Vicomtesse René de Chezelles*. The early buds are yellow, and to this form a First-class Certificate was recently awarded by the N.C.S. The later flowers, as seen here, are of a rich bronzy-yellow. Nevertheless, it is a fine flower of the incurved Japanese type.

The whole are beautifully and effectively arranged in rounded, undulating banks, the pathway following the contour of the groups through all the three houses. Coconut fibre covers the boards forming the temporary pathway, and makes a beautiful and decided contrast against the green foliage and bright flowers.

On the 5th inst. between twenty and thirty members of the Ealing Gardeners' Society visited the gardens and inspected the Chrysanthemums by torchlight after their duties for the day were over.

BATTERSEA PARK.

THAT the good people of Battersea and district are enthusiastic lovers of the Chrysanthemum is abundantly proved by their manifest appreciation of the display of the "autumn queen," which is provided for them by Mr. Coppin and his able assistants in Battersea Park. As in former years, the plants are accommodated in the Palm House, which was opened to the public on October 13th, and is to continue open until about the end of the present month. Some 2,200 plants are grown in all, of which the house contains nearly 2,000, the remainder being employed as a reserve to fill up gaps as they occur.

On entering the house the visitor finds the bulk of the plants massed on the right in a bank sloping from 3 ft. in height at the front to 10 ft. at the back. The surface of the bank presents an undulating outline, three prominent mounds being observed, of which the central one is the highest. A remarkably neat finish is given to this arrangement by bush plants loosely tied to the eaves of the house and allowed to droop over the large blooms in graceful sprays. These plants have been grown on specially for this purpose, and have not been disbudded. The wall at either end of the house is decorated in a similar fashion—a distinct improvement upon last year when nothing of the sort was attempted. The narrow shelf on the left-hand side of the path is again filled with naturally grown plants. These are brought down and their branches tied in to form a curving hedge of bloom, which, although somewhat stiff when first constructed, improves as the tips of the growths assume more natural positions. Behind and over these are other bush plants which are slung to the rafters of the house and allowed to hang over the pathway. The number of varieties grown in this way is rather limited, but the choice has been a remarkably judicious one. The creamy-yellow reflexed *Elsie* is a great success thus, and the same may be said of *Margot*. *Golden Madame Marthe*, *Soeur Melaine*, *La Vogue*, *Sunset*, *L'Isle des Plaisirs*, and the *Christines* are others whose services have been well utilised.

Passing to the consideration of the large blooms we found the Japs in overwhelming majority. However, much size may be decried by those of aesthetic tastes there is no doubt that the general public likes to see blooms as large as possible, and plenty of them in a show of this kind. The more refined glories of the true incurves are not so much appreciated because they are less insistent.

We do not expect to see novelties in a public park, for with so many good standard varieties from which

to pick and choose it is manifest that it is the safer plan to grow sorts of approved merit. *Sunflower* was undeniably the best yellow, and its presence was indicated by some capital blooms scattered about the house. *Edith Tabor* was also in fine condition. The most conspicuous among the white flowers was *Lady Byron*, for we noticed several huge samples of it in different places. In the front row *Louise* was a success, and *Avalanche* was looking better than we have seen it this year. *Edwin Molyneux*, *Wm. Seward*, *M. Wm. Holmes*, and the reflexed *John Shrimpton* represented the dark-hued varieties well. *President Borrel* is a noble flower, but at Battersea is rather variable. In the back rows *Graphic* showed up strongly. Its size and height are effective when seen at a distance, but the flowers are apt to be coarse. *M. Chénon de Léché*, *G. C. Schwabe*, *M. Tarin*, *Eda Prass*, *W. H. Lincoln*, *Madame Edouard Rey*, *Mrs. Weeks*, and *Vivian Morel* were all in good form. *Hairy forms* seem to have caught on with the public, and thus a considerable number is grown. These would have shown up better, however, if instead of being scattered about as they were, they had been collected and made a distinctive group. *Hairy Wonder* was in capital condition, and *Louis Boehmer* was also prominent.

Of incurves there was a fair sprinkling, but when we saw them they had not as yet arrived at their best. The two old favourites, *Mrs. Geo. Rundle* and *Mrs. G. Glenny*, are still grown. *White Beverley* and its golden counterpart are not so frequently seen as they might be, for when well grown they are handsome flowers. *Baron Hirsch* is still one of the best, and will compare very favourably with any for the ease with which it may be grown. *Lord Wolseley* was the largest and finest flower to be seen among the incurves, but *Prince of Wales* and *Prince Alfred* were also well represented. *Lord Brooke* was showing well when we saw it.

Anemone-flowered varieties find favour with not a few, on account of their distinctness of build. *Descartes*, *Delaware*, *Gluck*, and *M. Chas. Lebocqz* were some of the best varieties on view.

HEATON GARDENS, CHESHUNT.

A SHORT time ago we paid a visit to the gardens of Heaton House, Cheshunt, which for some years have been carried on by Mr. T. Bones as a market garden chiefly for the cultivation of florists' flowers, Tomatos, and various other marketable subjects. On the occasion of our visit Chrysanthemums were the speciality or seasonable subjects. Five houses were filled with them in various stages of advancement. They are grown in bush form, the branches being numerous and sufficiently disbudded to give flowers of a good and useful size to meet the market requirements. Mr. Bones was accustomed to this style of culture in former years when in private establishments, and considered it the most useful method of growing this favourite flower.

He cultivates a limited number of the most useful varieties, but each in some quantity. The rich bronzy-yellow *Ryecroft Glory* is the earliest of his varieties. *Emily Silsbury* follows, but is rather weak in the stem if left to its own resources, that is, if allowed to grow naturally. The evil is overcome, however, by taking the crown bud of each shoot. These are followed in succession by *Gladys Roul*, a very useful white; *Clinton Chalfont*, yellow; *Modesto*, a grand golden-yellow; and *Western King*, ivory, shining white. The last named is considered perfect in every way in America, and, although rather small for exhibition in this country, is, nevertheless, a refined and charming flower, just a trifle thin in the petal. As a market flower it is also very serviceable, although not yet so widely disseminated as it might be. For the production of large and bold flowers the yellow *Sunstone* is very serviceable, and the same may be said of *C. W. Richardson*.

The succession is continued by *Yanoma*, a good white sort, which proves serviceable for late work. *Mme. Phillippe Rivoire* has already seen some service on the exhibition board, but when grown in bush form it seems more suitable for cutting early in December. The value and beauty of *Niveous* and *Souvenir de Petite Amie* are already well recognised. Both are beautiful and refined white varieties, but perfectly distinct in build and the form of the florets. *Madame Thérèse Pankoucke* is also a good late white variety. *Ivory* and *Pink Ivory*, white and pink respectively, are both very useful sorts for market late in the season, when Chrysanthem-

mums generally are getting scarce. L. Canning is the latest variety to bloom, with Mr. Bones. The above will serve to give some idea of the varieties that are popular for market work. White and yellow are always in demand, and the former more particularly during the winter.

Amongst other subjects we noted in Heaton Gardens was a large batch of *Pelargonium King of Denmark*, of dwarf habit, with large salmon flowers. One house was filled with Tomatos, being smooth, medium-sized, and useful. A very useful Carnation named *Queen of the Yellows* was raised by Mr. Bones, who also grows border varieties largely. Two frames were filled with *Cypripedium insigne* for the sake of cut flowers. *Coelogyne cristata* and *Dendrobium nobile* are grown in some quantity. One house contained a quantity *Epiphyllum* grown as standards, and fine plants they were, having well-balanced heads.

PLANTS RECENTLY CERTIFICATED.

AWARDS according to merit were accorded the under-mentioned subjects by the Royal Horticultural Society on the 9th inst.

Orchid Committee.

CATTLEYA FABIA. *Nov. hybr.*—The seed parent of this fine hybrid was *C. labiata*, the pollen bearer being *C. dowiana aurea*. The sepals and petals are of a soft rose, faintly tinged with yellow. The large lip is of a rich crimson-purple, lined with crimson and orange in the throat and tube as might be expected from the pollen bearer. First-class Certificate. The Right Hon. Joseph Chamberlain (grower, Mr. Smith), Highbury, Birmingham.

CATTLEYA LABIATA LEWISII. *Nov. var.*—In this we have a beautifully chaste variety, having a clear violet-purple lip, bordered with white. The sepals and petals are also pure white, so that the variety is an acquisition to its class. Award of Merit. Messrs. W. L. Lewis & Co., Southgate, N.

CALANTHE VEITCHI ALBA. *Nov. var.*—The value of the typical *C. Veitchi* and its variety *C. V. superba* is well known, so that if the pure white variety responds to the art of the cultivator with equal freedom it will indeed be an acquisition to its class. First-class Certificate. Messrs. Hugh Low & Co., Clapton, N.

CYPRIPEDIUM LEEANUM MAGNIFICUM. *Nov. var.*—The flowers of this variety are of great size, and the richly blotched upper sepal is very handsome, the purple markings making a fine contrast to the white ground. Award of Merit. G. Shorlard-Ball, Esq., (gardener, Mr. A. Hay), Ashford, Wilmslow, Cheshire.

Floral Committee.

SONERILLA LONGIFOLIA LADY BURTON.—The leaves of this beautiful variety are of a bronzy hue, thickly studded all over with pearly white spots, with larger blotches in the spaces between the veins. Award of Merit. Sir Trevor Lawrence, Bart., (gardener, Mr. W. Bain), Burford Lodge, Dorset.

WALLFLOWER PARISIEN EARLY.—This fragrant and beautiful variety is usually treated as an annual, and may be had in bloom at various periods of the summer and autumn from seeds raised under glass early in the year and later on in the open. The flowers are, individually, of large size, and of a beautiful orange-brown and yellow. Award of Merit for the strain. Messrs. J. Veitch & Sons, Ltd., Chelsea.

CHRYSANTHEMUM ADMIRAL ITO.—This new Japanese variety has been giving a good account of itself. The florets are of great substance, narrow, twisted and of a rich yellow. Award of Merit. Mr. W. J. Godfrey, Exmouth, Devon.

BOUVARDIA HUMBOLDTII GRANDIFLORA.—The large white flowers of this variety are chaste, beautiful and bold. The leaves are larger than those of most other species, and the plant altogether more vigorous. Award of Merit. Messrs. Crane & Clarke, March, Cambridgeshire.

DRACAENA ALBO LINEATA.—The long, arching, leaves of this variety are striated with white lines. The habit of the plant is very graceful. Award of Merit. Mr. R. Gulzow, Melbourne Nurseries, Bexley Heath, Kent.

DRACAENA INDIVISA BURTONI.—The leaves of this variety are broader than those of the previous one

and bronzy-green, more or less tinted with red along the veins. Award of Merit. Mr. R. Gulzow.

VEGETABLE CALENDAR.

CABBAGES.—The unusual mildness of the present autumn has forced this crop into such a forward state of growth as to render it liable to serious injury should a spell of severe weather suddenly set in. To guard against this as much as possible the earliest plants may be earthed up when the ground is dry and friable. Previous to doing this a good dressing of soot between the rows will be of great benefit to the plants when spring growth commences. Any plants left in the seed bed or that have been pricked out should be carefully preserved, and if lifted at the present time and relaid in by the heels would act as a check and render them sturdy plants for filling up gaps or for forming a late bed in spring.

ARTICHOKES.—These should be put in order and some protection given at the present time. All the large outer leaves should be removed and the centre of the plants left open. Place some light material such as fern or well-trodden straw around the plants, forming it into a cone. Six inches thick of soil placed around this will keep them safe over the winter. A dozen or two healthy suckers potted up at this season and placed under cover during winter, and planted out early in spring come into use a month earlier than from the protected beds. After the plants are protected the ground between the rows may be roughly dug to expose it to the weather and make it more easily worked with the hoe in spring and early summer.

CELERY.—The late crops of this should be earthed up without delay, as a serious risk will be run by exposing it after the present month. Some light material should also be in readiness for placing over the centres of the plants should a sudden frost occur. A few stout stakes placed at intervals of a few feet apart, and at an angle the same as the sides of the rows, so as to form a rest for a horizontal piece along the centre of the rows to catch the weight of the protecting material will greatly help in saving the plants from getting injured through the weight of the covering material.

MUSHROOMS.—Succession beds must be made up to meet a regular demand. It is sometimes difficult to get the manure sweetened and dried at this season, unless an open shed or some place under cover is to be had. Where such is not the case, some fine loam may be dried over a furnace or in a dry house. This may be mixed with the droppings and frequently turned, when the whole may be made up at once, with the most satisfactory result as the dry loam absorbs the ammonia quickly and retains it to a greater extent than if the manure had undergone fermentation. Dry cow manure may be used in a similar way with good results. Beds that are producing heavy crops, will be benefited by a watering with some rather strong salt water, alternately with liquid from cow sheds.—J. R.

The Orchid Grower's Calendar.

ORCHID FLOWERS FOR CHRISTMAS.—There is no better class of Orchids grown for this purpose than the deciduous *Calanthes*; and as they are fast approaching their flowering stage care should be taken not to allow any water to touch the spikes when damping other occupants of the stove, or the bracts will turn black and the flowers become spotted. Too much moisture at the roots should be guarded against also. A light, airy place near the glass, and a temperature of about 65°, to open their flowers in is what they require. *C. Veitchii*, *C. vestita rubro-oculata* and *C. v. luteo-oculata* are the most serviceable kinds to grow.

Another valuable winter flowering Orchid is *Coelogyne cristata* and its varieties, and one that requires carefully watering at this season, for whilst it would never do to let them get very dry at the roots, it is very necessary that watering overhead must be discontinued if the flowering spikes are to develop properly. We find that the best results are obtained with plants grown in shallow pans, 6 and 7 ins. in diameter. These can be suspended near the

glass when they are coming into bloom. There is then no fear of their damping off, as they do sometimes when down on the stage. With a few dozen plants of the size mentioned you can have a nice succession. Most of the plants are grown cool during the summer months, but a few are kept in the *Cattleya* house all the season, and these give the earliest flowers.

DENDROBIUMS, too, can be depended on for supplying an abundance of cut flowers for the new year. *D. Phalaenopsis* seems to be a perpetual flowerer, and as it has long flower stems with the flowers arranged with the spray-like regularity of *Odontoglossum crispum*, it is justly prized by florists. But for all round excellence and wear and tear work there is no better than the grand old *D. nobile*. A few of this variety should be put into the stove, as it is not advisable to have them all in flower at one time.

WORK IN THE HOUSES.—The damping down, giving air, &c., must to a great extent be regulated by the outside temperature. During foggy and mild weather such as we have been having, very little damping down has been necessary. Consequently the heating apparatus has not been hard pressed to keep the atmosphere from becoming too damp and stuffy.

LEAVES.—We have most seasons called attention to the value of leaves when placed underneath the stages, there is, however, one great and serious drawback, and that is they harbour woodlice and slugs, and on that account we have been reluctantly obliged to discontinue their use. In their stead we have covered the whole of the staging with tiles, which we find to be excellent, preventing, as they do, the plants from drying up so quickly in the winter time from hard firing, and in the summer time from the heat of the sun. The little ammonia, &c., given off by the heating and decomposition of the leaves, can be supplied by pouring weak manure water on the said tiles. I know this is objectionable to some growers who are content to jog along in the old ruts, and we think in the end suffer by being outdistanced by those who believe in its judicious use.—C.

Gleanings from the World of Science.

THE under-mentioned subjects were brought up at the meeting of the Royal Horticultural Society on the 26th ult.

Galls on Oak Roots.—With reference to the specimens exhibited at the last meeting, Mr. McLachlan observed that the name of the insect was now *Biorhiza aptera*, and that only one sex (the female) was known as occurring in the root-galls. As soon as it was hatched, the insect climbed to the terminal shoots and laid its eggs in the buds. The result was the common spongy gall, known as the Oak Apple. In this both male and female insects were produced, and were formerly thought to be a distinct genus, under the name *Teras terminalis*. The females fall down to the foot of the Oak, and lay their eggs in the roots underground, and so reproduce the root-galls. This dimorphism is characteristic of other gall insects on the Oak.

Cattleyas sub-Pelorian.—Mr. Vietch exhibited two sprays, carrying several flowers of *Cattleya labiata autumnalis*, having the two front sepals assuming the form of lips. He observed that the same plant had repeated the peculiarity both last year and this, but the lip markings are now more pronounced. The specimens were received from Mr. F. R. Lloyd, of Coombe House, Croydon.

Carnation Leaves, Malformed.—Mr. Douglas exhibited leaves with peculiar horn-like excrescences on the margins. It was suggested that they might be caused by acari. They were forwarded to Mr. Michael for investigation. Dr. Masters observed that a *Yucca* in the Botanic Gardens, Dublin, produced very similar structures every year.

Cauliflower, Malformed.—Mr. Henslow exhibited a branch bearing a cluster of short Asparagus-like shoots, the leaves being reduced to a bracteate form, suggestive of the name of Broccoli—viz., *Brassica oleracea*, var. *Botrytis asparagoides*. Dr. Masters observed that it bore a very unusual appearance, and was really intermediate between a Cauliflower and Broccoli.

HINTS FOR AMATEURS.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardening or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Seeds of Stocks.—*Entic*: If your Ten-week Stocks have been really good there is no reason why you should not raise a few plants next year from your own seed. The best way to clean the seed is to pick it out from the pods by hand. Keep it in a cool, dry place, and sow it in gentle heat by the beginning of March next year if you want early plants. For later plants April is a good month for sowing.

Asparagus.—*F. L. M.*: The roots obtained from the old Asparagus bed will force well enough, but this will exhaust them, and they will be of no further use. You may lift the roots at once if you like, and store them away in a cool shed, covering them with leaf soil until they are wanted. When you have the early vinery in full swing you will find that by packing the roots closely together on the bed of the house, and covering them with leaf mould or other light soil that you have a capital house for forcing Asparagus. Cut all the young sticks, both thick and thin, as they appear. It is of no use allowing any to remain.

Training a Peach Tree.—*G. Menzies*: It is somewhat difficult to give instructions upon paper for the training of a Peach tree, a practical demonstration being what you really require. There are, however, one or two rules that must not be lost sight of when tying the tree in. The fan-shape, of which your tree is an example, is by far the easiest to manage. First of all tie in the main branches, then deal with the smaller and more pliable growths. These must be distributed regularly over the whole area enclosed by the larger branches. Another point is to see that the branches are not allowed to cross each other, but that they describe a straight course from base to point as the radii of a fan. Take care not to make the ties too tight, or the growth of the shoots will cause strangulation at those points.

Peaches on a Back Wall.—*Medico*: The crevices in the wall will undoubtedly harbour vermin. We should advise you, therefore, to entirely undo the trees from the wall and give the latter a good lime-washing. A little care will be required in doing this, in order to avoid knocking the buds off the trees. The larger branches of the trees should be washed with a solution of Gishurst Compound. From six to ten ounces of the compound to a gallon of soft water makes a capital wash. Apply it with a soft brush.

Malmaison Carnations.—*J. P.*: The plants will do very well in the greenhouse, and the 60-sized pots will be amply large enough until the spring, when a shift may be given into 32's, say about the middle of March. You will need to exercise a considerable amount of caution in watering, otherwise the foliage of the plants will go yellow. It is astonishing, indeed, to see what small quantities of water suffice.

Araucaria excelsa.—*Q.*: It is a great pity that the young branches at the growing point of the plant have been damaged. They will be almost sure to fall off, and even if they remain their beauty will be sadly impaired. The injury done to the health of the plant may not be very serious, but its appearance will be greatly marred by the gap in the whorls of branches. You can do nothing to remedy.

Menyanthes trifoliata.—*Reader*: The Bogbean, Buckbean, or Marsh Trefoil, as it is variously named, may easily be propagated by divisions of the roots. These may be planted in rough skeps or boxes in any garden soil, and just dropped into their places. The water should not be too deep, but may just cover them, although the plants do capitally in wet, marshy places, as well as in shallow ponds.

Dahlias.—*S. R. N.*: The best place to keep your Dahlias in during the winter would be a shed or out-house. Here they may be laid after having been dried subsequent to lifting. They may be covered over with hay, straw, or dry litter of any kind. They should be looked over occasionally in order to remove any portions of the rootstock, in which decay may have set in owing to injury during the lifting or shifting from one place to another. Trade growers commence to propagate as early as January, but this would be a month or two earlier than you need to start.

Roses.—*Fob.*: On your light and kindly soil you may see to the transplantation of your Roses at once. Standard briars for next year's stocks for budding on should be planted as soon as received, and not allowed to lie about with their roots exposed. You may plant them in rows 2 ft. apart, and about 1 ft. apart in a row.

Winter Tomatos.—*Solanum*: You will find it necessary to artificially pollenise the flowers by brushing them over lightly with a camel's-hair brush. They will not set well otherwise.

Funkias in Pots.—*Jas. Robson*: We should advise you to put the Funkias under the stage in the greenhouse for the winter months. The plants are hardy enough in the open ground, it is true, but when in pots they are even more exposed to the effects of frost. Besides, severe frost will be likely to chip or split the pots.

DIAMOND JUBILEE GROUP OF PLANTS AT EDINBURGH.

THE lively excitement over the competition in the four special Diamond Jubilee classes, instituted by the Royal Caledonian Horticultural Society, at their show on the 8th and 9th September last, will still be fresh in the minds of many of our readers. For the benefit of those who were unable to be present at the show we reproduce the photograph of the Diamond Jubilee group of plants exhibited by Mr. John McIntyre, gardener to Mrs. Gurney Pease, Woodside, Darlington, Durham, who carried off the premier award in a spirited competition. The figure on the extreme right of the picture is that of Mr. McIntyre himself. To his right and between him and the group is his brother. On the left of the photograph Mr. McIntyre's son may be seen, inspecting the group.

The principal features of this fine arrangement of plants were the splendid Palms, Crotons, Dracaenas, Lilies, and Ferns. The centre was constructed on a boulder of rockwork, on which was elevated a fine specimen of *Kentia fosteriana*. Round the central mass were three other pedestals, each carrying a splendid plant of *Cocos weddelliana*, which had a remarkable effect in the group owing to their light and graceful character. Alternating with these were tall specimens of *Cocos flexuosa*, the long arching leaves of which may be seen projecting far above the other subjects and towards the extremities of the picture, thus breaking the surface and relieving any stiffness which might otherwise exist.

The Crotons were notable for their colour, freshness and well-furnished condition. They were dotted about and mingled with other plants in a way that showed good taste. Every plant was also so far isolated as to show off its individuality to the best advantage. The varieties of Croton used were *Superbum*, *Brageanum*, *Warrenii*, *Prince of Wales*, *Countess*, *Aigburthense*, *Princess of Wales*, and various others. There were other very noticeable features in the way of *Marantas*, *Dracaenas*, *Sphaerogyne latifolia*, and a well-grown plant of *Leea amabilis*, which was very much admired. The principal flowering subjects brightening the group were *Lilium speciosum*, *Cattleyas*, *Odontoglossums*, &c., which were judiciously arranged amongst the foliage plants.

The arrangement of the group on the whole was universally admired for its lightness and cultured taste in the blending of the colours. There was one spot on which the eyes of the public were concentrated, and that was the miniature lake and rockwork in the centre, the groundwork or setting consisting of moss, from amongst which the Ferns employed had a most natural appearance, as if growing there.

Nothing like this arrangement has ever been carried out at Edinburgh on any former occasion.

THE EVE OF THE EDINBURGH SHOW.

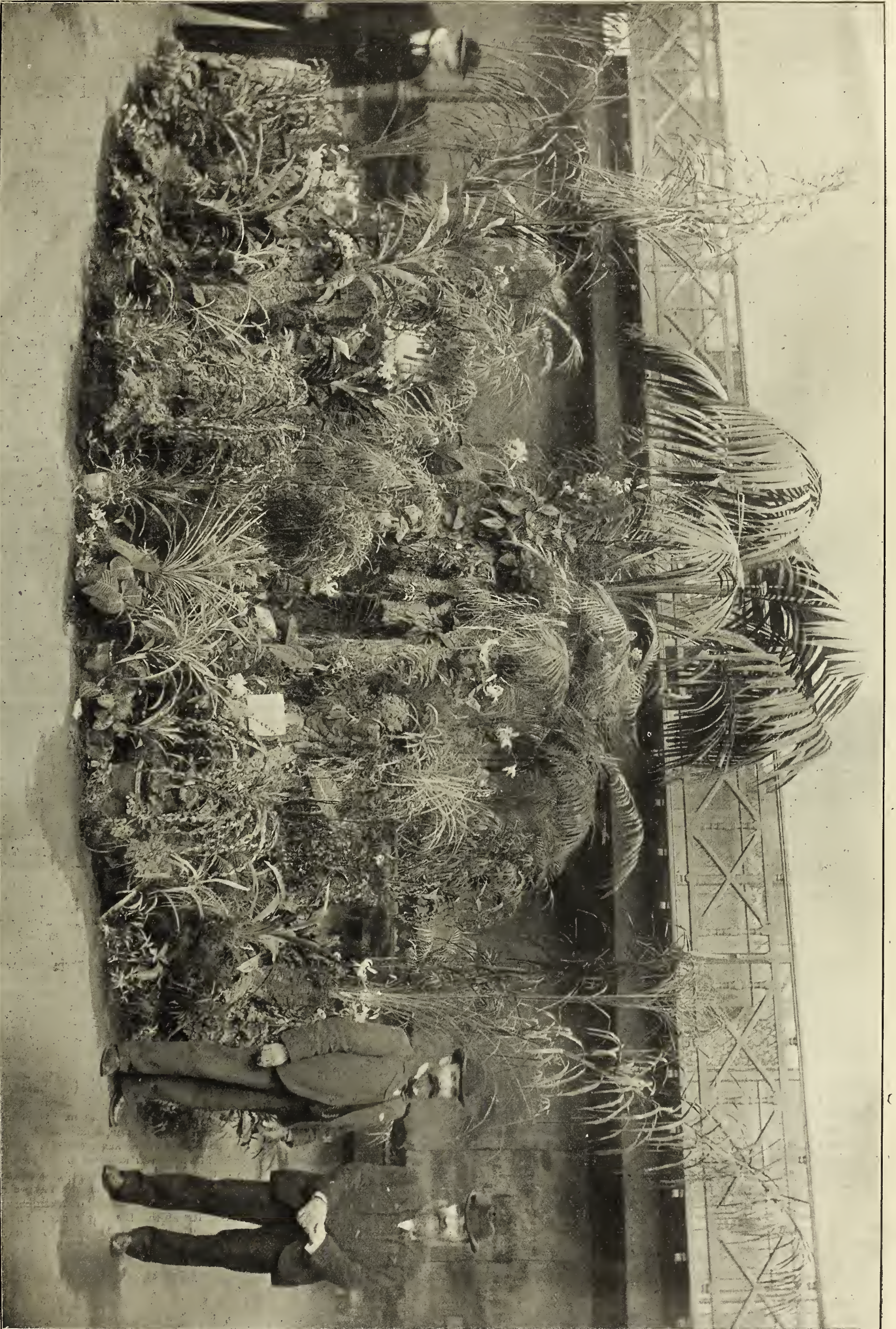
JUST a year ago to-day we were bere to record the doings of our northern friends with a view to placing in permanent print a fitting account of the "Battle of the 'Mums,'" which is again to-day in preparation for the struggle of 1897. Within the last few days the battle ground has shifted from the great metropolis by degrees, which include, of course, Birmingham, Sheffield, Hull, and so forth. The year just past has of course brought with it a good many changes. One or two familiar faces are missing, but the ranks of leading cultivators are never permanently empty. Newer and younger men are ready to fill up the ranks, and from the prospectus before us to-night, it is pretty evident that the 1897 show here will be little short, if indeed it is short at all, of the great events that have gone before it. The same surroundings are present, the now familiar Waverley Market handsome in its proportions and handsomer still in the chaste decorations with which the council, in the exercise of a wise discretion, embue the scene year by year.

Our readers will be familiar with the scene which usually presents itself overnight at the preparation of any of our big shows, the only distinction at Edinburgh being that here we truly have a building worthy of the occasion, and the time will surely come when London ought to be able to house our shows in some place that shall be legitimately capable of sheltering us from the wintry blasts of November. Strolling through the crowd of cultivators we note with pleasure the arrival of several distinguished visitors from the south, most of whom will probably note with gratification the immensely satisfactory way in which the Edinburgh management has carried out with so much success the precepts laid down by the National Chrysanthemum Society in London, and we are quite sure that as officers of the N.C.S., both Mr. T. W. Saunders and Mr. J. H. Witty, no less than Mr. Molyneux himself, who naturally is already on the field of battle, will look upon with pleasure and gratification the show which is offered by our Edinburgh friends. Mr. R. Laird is secretary, and with Mr. J. H. Murray as his indefatigable assistant, again support the machine which produces the motive of power, and to them unquestionable praise is due for marshalling into proper form, and for controlling in good temper and spirit the many interests, which are brought into play on such an occasion as this.

It has been our custom for the past few years to present to our readers portraits of some of the celebrities with whom one meets at these annual gatherings. To-day we have the honour of submitting as worthy members of our portrait gallery the photos of Mr. M. Todd, president of the Scottish Horticultural Society, which body is responsible for the Chrysanthemum show. The second portrait is that of Mr. W. Smith, of Oxenford Castle, Dalkeith, a very well known face at all our Northern meetings, whilst Mr. Grieve, of Redbraes Nurseries, makes a fitting addition.

The great annual Chrysanthemum competition of the Scottish Horticultural Association takes place on the 18th, 19th, and 20th inst., with its usual excitement amongst the competitors, whose hopes and fears are realised on Thursday, the opening day of the show, when the judges fix their decisions to the exhibitor's cards. The extent and character of the Waverley Market make it unique as an under-cover place for the holding of exhibitions at any season of the year, and the horticultural community of Edinburgh have reason to be thankful for this unsurpassed advantage. The thousands of blooms staged at the November contest make the competition very keen, so that the successful are all the more gratified, while the losers feel that they have been beaten in good company.

The opening day of the show makes it impossible for the report to appear in the ordinary issue, but a telegraphic report on Thursday will be published on Friday morning, and at the same time be obtainable in the Waverley Market. As the show promises to be the finest yet held at Edinburgh for size and quality of bloom, the decisions of the judges will be awaited with interest, and readers should make a point of seeing the report in the special edition.



DIAMOND JUBILEE GROUP OF PLANTS SHOWN BY MR. JOHN MCINTYRE AT EDINBURGH ON SEPTEMBER 8TH AND 9TH, 1897.

MARKET GARDENING IN THE QUEEN'S REIGN.

ON the third day of the conference (Oct. 2nd) held by the Royal Horticultural Society at the Crystal Palace, Mr. Assbee, the superintendent of Covent Garden, dealt at some length with this phase of the subject of horticultural progress during the Queen's reign. Mr. W. Marshall occupied the chair.

Originally, said Mr. Assbee, every man must have been his own gardener, but with the discovery of steam as a motive power and its application to the service of man the conditions of life were altered among the working population. The inventor produced the manufacturer, and busy towns sprang into existence, and each individual was no longer able to grow what he wanted for himself, but the task devolved upon men who made it their special business. The growth of market gardening necessarily causes proportional changes in the market grower himself who has to adapt himself to his own particular times. At one time he was to be found at Peckham, Battersea, Camberwell, Fulham, and other places now built upon, but he has had to seek fresh fields which have been opened up by the same motive power that has led to the destruction of the old ones, viz., steam. By its agency gardeners far and near, and wherever the soil is favourable are brought into competition with each other. The present age too demands more in quantity, quality, and variety from the market gardener than the early Victorian era did.

If we were to take a snapshot at the gardener of sixty years ago (a few specimens are still to be seen) we should find him a thrifty and industrious individual who made his business a study, had a fair amount of humour, but no speculation in his character. He would be able to quote prices for produce which the public may be glad it will never be likely to see again. The new man has had a better education, and is characterised by greater skill and energy. Mr. Assbee then divided his paper into three sections each of which was treated in order, viz., vegetables, fruits, and flowers. Each of these were sub-divided into material produced out-of-doors, and that obtained by indoor culture.

VEGETABLES—*Outdoor grown.*

With regard to vegetables the cultural details of sixty years ago remain the standard of present day perfection, with a very few exceptions. It is to improved varieties that we must attribute the bulk of the progress. The lecturer then took the most important market vegetables in their turn.

ASPARAGUS culture gives an illustration of the wondrous progress that has been made. Within the last few years many acres have been devoted to it in favourable localities. Worcester, Cambridge, and Middlesex are the largest producers. Middlesex "grass" is still noted for its quality, but Worcester "grass" holds the market. A few years ago the cultivation of Asparagus was started in the Evesham Valley district, and it is estimated that there are now about 4,000 acres utilised thus. Each acre produces on the average 40,000 sticks or about 400 bundles. About 1,000,000 bundles come to London each year. Many hundred acres are laid down with Asparagus in Lincoln, and in the black soil belt in the Trent Valley it is regarded as an alternate crop.

CELERY.—It is estimated that not less than 50,000 tons of this go to London annually.

PEAS.—The earliest Peas are obtained from Kent, and the latest from Yorkshire, the season extending from the end of May to the end of August.

ONIONS.—The introduction of the Spanish Onions has vastly improved our English ones. Some 6,000,000 bushels of Onions, representing a total value of of £684,000, were imported in 1896. There is also a good demand in the season for young green Onions, bunched.

POTATOS are more of a farmer's crop than a gardener's, at least so far as the market goes. The total area in Great Britain devoted to Potatos in 1896 was 563,741 acres, which produced a crop of 3,562,235 tons weight. Yorkshire alone had 51,495 acres cropped in this way in that year, this area yielding 326,849 tons. In addition to the home grown article foreign importations are large, and last year represented a value of £1,000,000. The earliest ones come from the Canaries, Jersey, and the Mediterranean region. The chief qualities necessary for a market Potato to possess are good cropping, good cooking, and disease-resisting abilities. Spraying

has been largely practised lately, and generally with beneficial results in enabling the plants to resist disease.

BROCCOLI AND CAULIFLOWERS—The chief improvement with regard to these is the extension of the season. This is largely due to the introduction of that popular variety, Veitch's Autumn Giant, which has supplied a long felt want. Cornwall sends us a good deal, and Italy sends us large quantities annually.

VEGETABLES FORCED.

ALL advanced gardeners have been turning their attention of late years to forced goods. In their competition with English cultivators French growers have great natural advantages. Forcing is, therefore, an attempt on the part of the English grower to minimise the advantages possessed by his rivals in other parts of the world.

RHUBARB.—A marked advance upon the old system may be seen in the case of this popular esculent. The method of forcing is to erect large wooden sheds, 8 ft. high in the centre, and 5 ft. high at the eaves, and large enough to contain an acre of roots. The roots are closely packed together on the floors of these, and the structure heated artificially. Champagne and Victoria are the chief kinds grown, the season lasting from the end of January to May. March is the busiest part of the season, and it is estimated that thirty tons come to London in one day at this time. After the roots have been forced they are again planted out to recruit their strength, although they are not available for forcing the next year.

SEAKALE AND ASPARAGUS find a ready market and are highly esteemed.

MUSHROOMS.—The old system of growing in triangular beds out of doors is largely followed. Mushroom culture in sheds is conducted with varying success, and much care and experience is required.

SALADS.—Excepting Mustard and Cress, and a few French Beans we are chiefly in the hands of the French with regard to salads. He, the lecturer, looked forward to the time when glasshouses would be so common as to alter this state of affairs.

OPEN-AIR FRUITS.

A common practice in growing fruit for market is to adopt the mixed system, having both top and bottom fruits, room being given as growth called for it by thinning. The acreage laid down in fruits has increased from 36,742 acres to 76,245 acres during the Queen's reign. Of this area 32,000 acres are devoted to orchards, and the remainder to market work. Kent is the greatest fruit county, with 22,362 acres of fruits and 12,932 acres devoted to market culture. Middlesex, Worcester, Norfolk, York, Hampshire, Essex, Cambridge, Surrey, Sussex, Lincoln, Bedford, Gloucester, Devon, and Cornwall are all busy counties. In Scotland Lanark is the only county of market importance.

Great advance in the way of improved varieties has been made of late years. Foreign competition has had a considerable effect upon the public taste. The main points in deciding as to the varieties to plant for market supply are, quantity, quality, and appearance, and time at which the fruit can be marketed.

APPLES.—The way in which American Apples flood the market makes it necessary for the home grower to adopt one of three courses: 1st, he must grow early sorts to clear before the American fruit comes over; 2nd, to plant mid-season sorts of high quality, such as Cox's Orange Pippin, or Blenheim, which will always fetch a good price; 3rd, to grow late varieties, such as Lane's Prince Albert and Northern Greening. In 1896 no less than 61,771,993 bushels of Apples were imported from abroad, representing a value of £1,500,000.

PEARS.—These pass through the market to the value of £206,674. Williams' Bon Chrétien is a great favourite. So also are Hesse, Louise Bonne of Jersey, Pitmaston Duchess, Winter Nelis, and Catillac for stewing. Mr. Assbee had on view a box of Californian Pears which had been sent over on trial. The variety was Doyenné du Comice, and the fruit could fully hold its own with British grown samples of that variety. They were picked from the trees in California and sold in Covent Garden in a fortnight, of which seven days were occupied in crossing the American continent, and the remaining seven days in the water passage. The cost of carriage for a crate containing three dozen fine fruits carefully packed, was 4s.; and each crate would

fetch in the market from 8s. 6d. to 16s., so that there was a fair margin of profit left.

(To be continued.)

CHRYSANTHEMUM SHOWS.

WEST OF ENGLAND.—November 2nd and 3rd.

THE West of England Chrysanthemum Society has enjoyed an unbroken record of successes in its annual shows, but this year the display has been both in quality and quantity a great improvement upon other years; so numerous, indeed, were the exhibits that the space devoted to them in the Plymouth Guildhall was not large enough, and additional accommodation had to be provided in the shape of a long marquee. The ceremony of opening was performed by the Mayor of Plymouth (Mr. C. H. Radford).

The cut Chrysanthemums were exceedingly well represented, and the competition was keen throughout.

In the open classes the first prize for forty-eight Japanese, consisting of not less than twenty-four varieties, fell to the lot of Hammond Spencer, Esq. (gardener, Mr. G. Foster), Glendaragh, Teignmouth, with a grand lot. The Rev. J. Hutchins, Teignmouth, was second. Mr. H. Spencer was likewise first for twenty-four Japanese in eighteen varieties, six white Japanese, six incurved Japanese, twenty-four incurves in eighteen varieties, and twelve incurves, distinct. Mr. F. Bradshaw, Lifton Park, sent the best stand of twelve large-flowered Anemones in nine varieties; and Messrs. E. Foot & Son contributed the first-prize lot of twelve Japanese, distinct.

Four of the arches in the southern arcade of the building were filled with the groups, which were eloquent witnesses of the care and skill employed in their construction. Mr. C. Watts, of Plymouth, was first, and Mr. J. Webber was second. Messrs. Perkins & Son, of Coventry, demonstrated their taste in handling cut flowers by winning the first prizes for three bouquets and a wreath.

The local classes were exceedingly well patronised. Sir Jas. Jenkins secured the first award for twenty-four and twelve blooms of Japanese, and likewise for twelve incurves. Mr. G. Hoskin contributed the prettiest basket of Chrysanthemums arranged with foliage and grasses.

Amateur growers were well represented both for Chrysanthemums and miscellaneous plants.

The open classes for fruit and vegetables were another centre of interest. Admiral Parker received a first prize for a collection of Apples and Pears. The Earl of Mount Edgecumbe secured first awards for dishes of the following varieties of Apples:—Blenheim Orange, Bramley's Seedling, Cox's Orange Pippin, Ribston Pippin, King of the Pippins, and Cornish Gilliflower. Mr. Chas. Watts had a first-prize collection of vegetables.

Messrs. R. Veitch & Son, of Exeter, made a notable miscellaneous display, which included a number of good Chrysanthemums and a collection of Apples. Mr. Hodgess, of Plymouth, set up a handsome group of Orchids and foliage plants. Mr. W. B. Smale, of Torquay, sent cut Chrysanthemums and new Cactus Dahlias. Mr. H. Hodge, of St. Austell, exhibited a collection of a hundred varieties of double and single-flowered tuberous Begonias.

COVENTRY.—November 2nd and 3rd.

THE officers and committee of the Coventry and District Chrysanthemum and Floricultural Society have to congratulate themselves on a most successful exhibition. In opening the show an effective speech was delivered by Mr. Gulson, who took "flowers," especially the Chrysanthemum, as his theme.

In the open classes there was some capital material displayed. Much interest attached to the class for a group of Chrysanthemums arranged in a space of fifty square feet. Quality of bloom as well as general effect was taken into consideration in awarding the prizes. Sir R. Moon, Bart. (gardener, Mr. J. Morris), was placed first, followed by G. Singer, Esq. (gardener, Mr. Collier), and T. Browett, Esq. (gardener, Mr. E. Carter). Sir R. Moon was also first for twenty-four blooms of Japanese Chrysanthemums, with T. Browett, Esq., for second. Twenty-four blooms of incurves were best shown by S. Loder, Esq. (gardener, Mr. W. Pearce). The

first award for the table of cut Chrysanthemums went to Mr. W. Finch, and the second prize to Messrs. Kimberley & Son.

Certain classes in the schedule were limited to gentlemen living within a radius of four miles, and having not more than three gardeners. Here the best group of Chrysanthemums arranged in forty-five square feet was contributed by Mr. A. H. Drinkwater, Mr. J. K. Stanley, and Mr. W. Turrall, following in the order named. Mr. J. K. Stanley won the special prize presented by Messrs. Sander & Co., St. Albans, for six blooms of Japanese, and Mr. W. Turrall had the best bouquet.

Amateurs and cottagers living within a radius of four miles had another section of the schedule devoted to them. They turned up in strong force showing amongst other things some first-rate vegetables.

Messrs. B. S. Williams & Son, of Upper Holloway, London, N., contributed a very fine non-competitive table of Orchids. Mr. F. J. Curtis showed Ichthemic Guano and horticultural sundries.

SEVENOAKS.—November 2nd and 3rd.

THE thirteenth annual exhibition was held in the Club Room on the above dates, and proved a great success, the hall being crowded with visitors on both days. The exhibition was one of the best held in the district, "all quality" being the remark of a judge of wide experience.

In the class for three bush trained plants Mr. A. Hatton, gardener to Mrs. Swanzy, The Quarry, was first, showing good pieces of J. Shrimpton and Kentish White. Second came Mr. G. Latter, gardener to J. Payne, Esq., Park Grange, with smaller plants.

The class for twelve cut blooms on long stems, arranged with plants or foliage in a space 4 ft. by 3 ft. for effect, was a splendid feature. In a close contest Mr. S. Cooke, gardener to De Barri Crawshay, Esq., was first; Mr. Tebay, gardener to Mrs. Rycroft, Everlands, was second; and Mr. R. Potter, gardener to Sir Mark Collet, St. Clere, third.

Groups of Chrysanthemums arranged for effect, for which, in addition to the money prizes, was offered a twenty guinea cup, the conditions being that it shall be won three times (not necessarily in succession) before it becomes the winner's own property, were far in advance of those seen at any previous show. In a keen competition Mr. A. Hatton, who won in 1895, was placed first; Mr. W. Tebay, who won last year, second; and Mr. S. Cooke, third.

In the class for smaller groups Mr. W. Read, gardener to Admiral Miller, was first; Mr. H. Heath, gardener to Mrs. Petley, Riverhead, second; and Mr. S. Huntley, gardener to the Rev. T. S. Curties, third, all showing good stuff.

Cut Flower.—In the class for twelve Japanese, distinct, Mr. W. Tebay was first, showing well-developed blooms of E. Molyneux, Phoebus, Madame Gustave Henry, and Chénon de Léché. Second came Mr. A. Gibson. Mr. G. Cowper, gardener to H. Foster, Esq., Hillside, who was third, had smaller but highly coloured flowers.

For twelve incurved blooms, distinct, Mr. A. Gibson led, closely followed by Mr. Tebay and Mr. W. Searing, Parkwood, Swanley.

For twelve incurved blooms, not less than eight varieties, Mr. Cooke easily took first with well-finished samples of J. Doughty, J. Lambert, Alfred Salter, Violet Tomlin, Lucy Kendall, and Princess of Wales. Second was Mr. A. Hatton; and third, Mr. Brooker, gardener to J. T. Rogers, Esq., Riverhill.

For twelve Anemones Mr. Brooker was first, Mr. Heath, second, and Mr. Hatton, third. Mr. Hough, gardener to Mrs. Lambarde, Beechmont, had the best twelve Japanese in not less than eight varieties, and was closely followed by Mr. G. Latter and Mr. J. Brooker. Mr. G. Cowper had the best six of one variety, showing the beautiful variety "Mutual Friend." Mr. Searing was second with Australian Gold, and third, Mr. Latter.

FRUIT.—The falling off in the classes showed only too plainly what a bad season it has been in this district.

For four dishes of kitchen Apples Mr. R. Potter was first, showing in good form Lord Derby, Warner's King, Annie Elizabeth, and Gloria Mundi. Mr. Edwards was second, Lord Derby, Blenheim Orange, and Warner's King being his best. Mr.

Searing was third. For four dishes of dessert Apples Mr. Potter was again first, Orange Pippin, Melon Apple, and King of Tomkins County being highly coloured.

Four dishes of Pears were best shown by Mr. R. Edwards, gardener to C. Field, Esq., Beech Lees. He had good dishes of Durondeau and Beurré Bachelier. Mr. Gibson was second, and Mr. Hatton third. For his bunches of black Grapes Mr. G. Latter was first, and Mr. R. Potter second.

In the class for table decorations, bouquets, and sprays, confined to under gardeners, Mr. A. Westcott was first with light and pretty arrangements, closely followed by Mr. J. Reeve. Baskets of Chrysanthemums for gardeners' wives and daughters were well shown, Mrs. Searing being first, Mrs. Fox second, and Miss E. Cooke third.

Zonal Pelargoniums were well shown by Messrs. Adams, Cooper, and Reed, who were first, second, and third respectively. Mr. Huntley and Mr. Heath were the most successful exhibitors in the second division, whilst Messrs. Latter, Buckland, and Farmer secured the chief awards in the vegetable classes.

A grand display of Dahlias by Mrs. Seale helped to make the show what it was—a brilliant success, of which the committee, with their secretary, Mr. S. Cooke, must feel proud.

EVESHAM.—November 3rd and 4th.

THIS annual exhibition which was held in the Town Hall at Evesham on the above date was equal if not superior to that of previous years, and this despite the fact that the present season has not been a favourable one in the district. The arrangements were carried out by the hon. secretary, Mr. Geo. Witts, who was ably assisted by Mr. F. Norman and the committee.

Miss Edith Burlingham (gardener, Mr. Martin), Landsdowne, Evesham, was placed first for the group of Chrysanthemums occupying 40 sq. ft. The choicest varieties in this exhibit were Madame Carnot, Edith Tabor, Edwin Molyneux, Col. W. B. Smith, Chas. H. Curtis, Louise, Sunflower, and Chas. Davis; Mr. Alfred Epsley (gardener, Mr. Humprey), St. Ecgwin's, Evesham, was second, also with a capital group; Mr. J. H. Leigh (gardener, Mr. W. Clarke), Hill Crest, Evesham, was third.

Miss Burlingham scored another success for the smaller group of Chrysanthemums and foliage plants occupying 20 sq. ft. Mr. G. L. Eades (gardener, Mr. W. Davis), The Lodge, Evesham, was first for three specimen plants.

Mr. Eades also had the best specimen plant in the show.

In the classes for cut blooms there were three entries for eighteen Japanese. Lady Northwick came first showing very prominently Emily Silsbury, Duke of York, and Beauty of Teignmouth; Mr. Witts received the second prize; and Colonel Rogers was a close third.

For twelve incurves Lady Northwick again headed the list, but Colonel Rogers was second. There was a very close competition between Lady Northwick and Mr. Witts in the class for twelve Japanese, but Lady Northwick ultimately carried off the chief honours. Lady Northwick added to her already splendid list of successes, the first prize for six incurves and six Japanese of one variety, showing in the former section C. H. Curtis, and in the latter Duke of York.

In the classes reserved for the ladies great taste was displayed in the arrangement of the flowers, and the judges had considerable difficulty in arriving at a decision.

The fruit shown although not great in quantity was of first-rate quality, Apples being especially fine. The vegetables too were worthy of the district, which is sufficient commendation.

Mr. Ward staged a very attractive exhibit of Pure Ichthemic Guano, a well-known stimulant for plants

CARDIFF.—November 3rd and 4th.

THIS show was held at the Park Hall, Cardiff, the weather being fine and mild. The quality and quantity of exhibits were extremely good, the cut blooms of Japanese being excellent. A special prize offered by Messrs. The Ichthemic Guano Co. for best specimen plant grown with their pure Guano, was won by Mr. G. Drake with a fine plant of William Seward, and was much admired by the visitors. The

show was a great success from every point of view, and amongst the different trade exhibits was one by the above firm, represented by Mr. J. Pride, commanding one of the best positions in the hall. The Diamond Jubilee Challenge Cup was won by Mr. Dumble, Picton Castle, whose blooms were grown entirely by Ichthemic Guano, as were also the winners of Messrs. Case Bros. Cup. A fine show of Primulas and Cyclamens testified to the efficacy of using Ichthemic.

SWINDON.—November 5th and 6th.

THE fourth annual show of the Swindon Amateur Chrysanthemum and Horticultural Society took place on Friday and Saturday, November 5th and 6th.

The members of this Society are chiefly mechanics and railway servants, resident in Swindon. The society started with a very small exhibition four years ago, and has gradually improved, until at the present show an extremely creditable exhibition has been brought together taxing the capacity of the large swimming bath to hold the exhibits.

Seven exhibitors competed for the prize for groups of Chrysanthemums in pots arranged for effect, the first prize being awarded to Robertson Bertram, Esq.; the second to Messrs. Rigg and Fixter, Reading; and the third to the Hon. Mrs. Bouveni. Mr. Tom Fox, Mr. G. Gibbs, and T. Hooper Deacon, Esq., were prize winners in the smaller classes for groups.

The principal class, viz., that for twenty-four Japanese blooms, brought exhibits from far and wide, the first prize being taken by Mr. H. Joy, Cardiff, whose blooms were a remarkably fine lot. F. P. Bulley, Esq., Fairford, Gloucester, was second; J. L. Burgess, Esq., Fairford, Gloucester, third. Messrs. H. A. Joy and F. P. Bulley, Esq., were first and second for twelve Japanese.

Mr. S. Haines, of Faringdon, secured first for six blooms of any one variety, with six remarkable blooms of C. H. Curtis, the prize being awarded to these in preference to six extremely fine blooms of Phoebus shown by Mr. A. J. Joy, who received second prize.

F. P. Bulley, Esq., and J. L. Burgess, Esq., received first and second for twelve incurved blooms.

Two nice boxes of Anemone flowered varieties were staged for the special prizes offered in this class by J. L. Burgess, Esq., Maiseyhampton, Fairford, the first prize being taken by F. P. Bulley, Esq. Some very creditable exhibits were made by the members of the society, the collection of twelve cut blooms set up by Mr. A. Bown, receiving very high praise from the judges. This it thoroughly deserved; and with a little more variety it would have held its own in many open competitions. It received the Rycroft Gold Medal presented by Mr. H. J. Jones, the celebrated Chrysanthemum specialist.

The Ichthemic Guano Co., had a stand of their well-known fertiliser, and Mr. Looms, Messrs. Rigg & Fixter, and Mr. Trowbridge, collections of plants and cut flowers not for competition.

DEVON AND EXETER.—November 4th and 5th.

THE Victoria Hall, at Exeter, was the scene of this annual function. The entries for cut blooms of Chrysanthemums were exceptionally numerous, whilst in other sections they were well up to the average. The arrangements were admirably carried out by Mr. D. Cann, the hon. secretary, and an enthusiastic committee.

The premier award for thirty-six cut blooms of Japanese varieties was carried off by Mr. G. Foster, gardener to H. H. Spencer, Esq., Glendaragh, Teignmouth, with Mr. V. Stukey, of Langport, as second. H. H. Spencer, Esq., was also first for eighteen Japanese, six yellow Japanese of one variety, and six of any other colour, one variety. Mr. G. Elms, Teignmouth, led for twelve Japs., and was also credited with having the premier bloom in the show. Mr. V. Stukey sent the best stand of twelve incurves, and Mr. H. H. Spencer the second stand in point of merit. He attributes his success largely to the use of Ichthemic Guano. Twelve blooms of Anemone varieties were best shown by Mr. Macadam Smith, Weveliscombe, and six pompons by Mr. M. Farrant.

Mr. W. Brock, Exeter, secured the leading award for a circular group with a diameter of 10 ft. Mr. W. Pring, also of Exeter, was second. A class for smaller group, with a diameter of 8 ft., enabled Lady Duckworth to secure a well-deserved first. Mr. W.

Brock likewise led for a group of miscellaneous plants.

There were some capital Grapes forthcoming. Mr. G. W. Matthew headed the list of competitors for three bunches of Black Alicante. The Rev. H. Dell, Winslade, was first for three bunches of Muscat of Alexandria. Sir T. D. Acland, Bart., led in the class for a collection of thirty dishes of Apples; and Sir D. D. King occupied a similar position in a smaller class for twelve dishes. Sir T. D. Acland also had the best nine and six dishes of Pears.

Certificates of Merit were awarded to the following:—The Exeter Nursery Co. for a group of Chrysanthemums, and for a display of wreaths, crosses, and other floral devices; Messrs. Rach & Co. for floral decorations; Mr. W. J. Godfrey, Exmouth, for a grand array of cut Chrysanthemums and table decorations; Mr. W. B. Smale for cut Chrysanthemums and Cactus Dahlias; Messrs. R. Veitch & Son, Exeter, for an excellent collection of Apples and miscellaneous plants; Messrs. Bunyard & Co., Maidstone, for a superb lot of Apples; Mr. T. Williams, Wonford, for a collection of the same fruit; Messrs. Jarman & Co., Chard, for a collection of fruit and vegetables; Messrs. C. G. Sclater for a collection of Apples; and Lord Poltimore for a collection of Apples and plants.

ASCOT.—November 4th and 5th.

Ascot and District Horticultural Society held its fourteenth annual Chrysanthemum, Fruit, and Vegetable Show, at the Grand Stand, Ascot. The weather was all that could be desired. A capital hon. secretary is the Hon. Col. H. Neehan, supported by a good committee. Mr. J. Cowie acted as stage manager, and right well did he manage everything. The chief feature was the cut blooms. The open class for twenty-four Japanese brought ten competitors. T. B. Heywood, Esq. (gardener, Mr. C. J. Salter), Woodhatch, Reigate, was first with good solid blooms, viz.: Mrs. J. Lewis, Australia, Mrs. C. Orchard, Mrs. C. H. Payne, Rose Wynne, E. Molyneux, C. Davis, Edith Tabor, Pride of Exmouth, Mrs. C. Blick, Pride of Madford, Elsie Teichmann, Vivian Morel, Australian Gold, Mutual Friend, Lady Hanham, Phoebus Mrs. C. Molln, Mme. Ad. Chatin, M. Chénon de Léché, Thos. Wilkins, Lady Isabella, Lady Ridgway, and A. H. Fewkes. Second came Mr. W. F. Cole, gardener to Sir George Russel, Bart., M.P., Swallowfield Park; Mr. A. Sturt, gardener to N. L. Cohen, Esq., Round Oak, Englefield Green, was a good third; Mr. E. Johnson, gardener to A. Gilliat, Esq., Duffield, Stoke Poges, was fourth with a nice even lot.

Nine competitors did battle for twenty-four incurves, distinct. Mr. W. Neville, gardener to F. W. Flight, Esq., Cornstiles, Twyford, Winchfield, was first with neat but very small blooms. The varieties were Jeanne d'Arc, Mrs. R. C. Kingston, George Haigh, Princess of Wales, M. R. Bahuant, Queen of England, Globe d'Or, Prince Alfred, Baron Hirsch, Miss Haggas, Novelty, R. Petfield, Golden Empress, Lord Wolesley, Rose Owen, Annie Hoste, Mrs. H. Heale, Violet Tomlin, Golden Queen, Mr. J. Murry, Alfred Lyne, Empress of India, Perle Dauphinoise. Mr. Salter was second with large blooms but not quite so fresh. Mr. A. Jones, gardener to Miss Fryburn, Hadley Manor, Barnet, was third.

For thirty-six blooms, distinct, consisting of half incurved and half Japs., Mr. W. Lane, gardener to Miss Durning Smith, King's Ride, Ascot, had the best boards in the show. His Japs were Vivian Morel, Phoebus, C. Davis, Mme. Carnot, Beauty of Exmouth, Graphic, Mrs. J. Lewis, E. Molyneux, Mrs. C. H. Payne, M. Chénon de Léché, Edith Tabor, Australia, Duke of York, Louise, Oceana, Jalena, Commandant Blusset, Lady Northcote.

Some of the best incurves were Empress of India, Major Bonaffon, Queen of England, John Doughty, C. H. Curtis, Mrs. R. C. Kingston, R. Petfield, Globe d'or, Lucy Kendal, Miss Haggas, Mme. Darrier. Mr. W. L. Farmer, gardener to H. P. Lasehallas, Esq., Highiams, Windlesham, was second with fresh flowers.

For twelve incurves Mr. W. Wilson, gardener to R. C. Christie, Esq., Ribsden, was first. The same exhibitor was first for twelve Japanese.

For a group of Chrysanthemum and foliage Mr. Farmer was first with a very light arrangement. Mr. Hereman, gardener to Lady Isabella Keane, Rose Mount, was second.

In another class Mr. Lane led the way with a grand group of 'Mums, only very dwarf with large fresh blooms.

Mr. Farmer had two grand bunches of Muscats; Mr. Cooper, The Vineries, Sunninghill, had two bunches of Gros Colman; Mr. Lane had a fine collection of nine dishes of vegetables.

LIVERPOOL HORTICULTURAL ASSOCIATION.

November 9th and 10th.

THE seventeenth autumn show was held in the St. George's Hall, under the most favourable auspices as regards weather. The entries show a slight decrease, being 330 against 364 last year. The mode of arrangement has been somewhat altered, the groups being staged down the centre of the Hall making them more effective. The merits of arrangement and quality were seen to advantage.

THE CUT FLOWERS, as usual, were considered of the greatest importance. The Challenge Vase, perhaps, accounted for this interest. The successful man last year was not to be the winner, the prize being adjudged to Mr. G. Burden, gardener to G. B. Cockburn, Esq., Birkenhead, who staged the finest forty-eight ever seen in Liverpool. The Japanese were large, even, fresh blooms, the finest out of a fine lot being Edith Tabor, E. Molyneux, E. J. Payne, Duke of York, Vivian Morel, Thos. Wilkins, Violetta, Rob. Owen, Modesto, Lady Hanham, G. C. Schwabe, Col. A. Smith, Mrs. J. Lewis, &c. The incurved formed the front row, being a smart equal lot. The best were J. Lambert, Pearl Dauphinoise, C. H. Curtis, Jas. Agate, W. Tunnington, Miss M. A. Haggas, Miss V. Tomlin, Jeanne d'Arc, Mme. Darrier, Miss Lucy Kendal, Baron Hirsch, &c. Mr. E. B. Townsend, gardener to Col. Lloyd, Oswestry, who lacked colour in the Japs., and depth in the incurved section, was second. Mr. J. Heaton, gardener to R. P. Houston, Esq., M.P., Aigburth, came in third. Mr. Haigh, gardener to W. H. Tate, Esq., taking the remaining position.

For eighteen incurved varieties, Mr. P. Greene, gardener to Thos. Gee, Esq., won with a good lot of fair sized blooms. Mr. J. Haynes, gardener to Mrs. B. C. Nicholson, Wavertree, was second.

For twelve varieties, Mr. J. Bracegirdle, gardener to W. H. Watts, Esq., secured first honours with heavy blooms.

For eighteen Japs. Mr. J. Haynes was to the fore with heavy flowers, Vivian Morel, Simplicity, Mutual Friend, Edith Tabor, &c., being fine. There were fourteen entries in this class.

PLANTS.—For the group of Chrysanthemums, six lots were staged down the centre of the hall. Mr. T. Gowen, gardener to J. A. Bartlett, Esq., Mossley Hill, being first with fresh plants carrying good blooms, brightened by a base of Maidenhair Fern, Crotons, Palms, &c. For a basket of plants, Mr. Geo. Haigh secured first honours, with a light arrangement, chiefly with single varieties. For four stove or greenhouse Ferns, Mr. Thos. Gowen won with good plants, his Dicksonia being very fine. For three trained pompons, Mr. J. Rose, gardener to J. G. Kitchen, Esq., won with good plants. For the basket of miscellaneous plants, Mr. E. Taylor, gardener to E. Pryor, Esq., had a charming arrangement, chiefly Orchids and Ferns, being first. For the single large-flowered Chrysanthemum, Mr. W. Wilson, gardener to H. Cunningham, Esq., won with Mrs. G. Rundle. For the single untrained plant, Mr. Thos. Gowen led the way; whilst a special Certificate of Merit was awarded to Mr. E. Taylor, for a grand plant of Vivian Morel, carrying fully fifty-five blooms. For four large-flowered trained plants, Mr. Thos. Gowen, was first with good plants. For a group arranged for effect, Mr. J. Harrison, gardener to Mrs. W. G. Bateson, led with a grand lot. For three Orchids, Mr. E. R. Finch, gardener to Jos. Smith, Esq., Wavertree, won with *Cattleya labiata autumnalis*, *C. bowringiana* and *Ansellia africana*, all fine plants. The same exhibitor scored for the single with *Cattleya labiata*. For two Orchids, Mr. A. Randall, gardener to A. L. Jones, Esq., was to the fore with *Cypripedium insigne* and a small *Laelia*. For two Palms, Mr. J. Bracegirdle staged the best with two well-grown Kentias. For the single specimen, Mr. J. Pattison, gardener to S. J. Waring, Esq., won with a handsome plant.

FRUIT was staged in quantity of fine quality. For six dishes, Mr. T. Elsworthy, gardener to Messrs. W. & R. Gladstone, Broad Green, won with Black

Alicante and Muscat of Alexandria grapes, good Beurré Diel and Marie Louise Pears, Ribston Pippin and Cox's Orange Pippin Apples.

For two bunches of Alicante grapes, the same exhibitor won with splendid bunches out of eight entries. Two bunches any other black, Mr. T. Ferguson, gardener to Mrs. Paterson, Rock Ferry, won with heavy bunches of Barbarossa. For two bunches Muscats, Mr. A. Hughes, gardener to W. Garrett, Esq., Lancaster, led the way with fine coloured berries. Any other white was won by Mr. G. Eaton, gardener to Col. Shirley, Allerton, with good bunches of Trebbiano.

For six dishes of dessert Peas, Mr. F. Bible, gardener to Lord Trevor, Chirk, won with fine Marie Louise Durondeau Beurré Diel, &c. For four dishes, Mr. R. Hanagan, scored with immense Pitmaston Duchess, Marie Louise, &c.

For Culinary Peas, Mr. J. Davis, gardener to W. E. King-King, Esq., Leominster, was easy first with fine samples of Catillac. For six dishes dessert Apples, Mr. J. Davis was well in front with finely coloured varieties, such as Blenheim and Princess Pippin, grand, and Ribston Pippin, very large.

For four and one varieties, Mr. John Lee, Higher Bebington, had good specimens.

The minor classes were well filled, the nursey-men doing no mean part in making a highly satisfactory exhibition.

BROMLEY.—November 10th and 11th.

THE Grand Hall at Bromley was again the scene of a very animated and brisk competition amongst Chrysanthemum growers on the above date. The entries were more numerous than ever, and of surpassing quality; indeed, it is not too much to say that in several classes, including the "forty-eights," every exhibitor would have won a first prize in an ordinary competition.

The platform was charmingly decorated by Mr. J. R. Box, of Croydon.

In the premier class for forty-eight blooms, consisting of twenty-four incurves in not less than eighteen varieties, and twenty-four Japanese, there was a capital competition. No fewer than six exhibitors competed for the Challenge Cup (value £10), and the money prize of £4, which were offered as the chief award in this class. Mr. Chas. Blick, gardener to Martin R. Smith, Esq., The Warren, Hayes, Kent, was first with some superb samples. His best incurves were C. H. Curtis, Queen of England, Duchess of Fife, Lord Alcester, Wm. Tunnington, Robt. Cannell, Princess of Wales, Golden Empress, and Major Bonaffon; and his premier Japanese Etoile de Lyon, G. C. Schwabe, Mutual Friend, Chas. Davis, Madame Carnot, Niveus, Phoebus, and M. Chénon de Léché. Mr. C. Payne, gardener to C. J. Whittington, Esq., Elmhurst, Bickley Park, was second also with a grand lot. Mr. R. Leadbetter, gardener to A. G. Hubbuck, Esq., Elmhurst Lodge, was third, and Mr. E. Dore, gardener to H. E. Try, Esq., Bickley Hall, was fourth.

Mr. C. Blick scored another success for twenty-four Japanese, distinct, showing Mrs. Hume Long, Phoebus, Mutual Friend, Mrs. H. Weekes, and Jules Ferry, in capital condition. Mr. J. Blackburn, gardener to John Scott, Esq., Elmhurst Grange, was second.

The first award for eighteen blooms consisting of six Japanese, six incurved, and six reflexed, fell to the lot of Mr. Wm. Thomas, gardener to J. Grieg, Esq., Chislehurst. Mr. J. Lyne, gardener to H. F. Tiarks, Esq., Foxbury, Chislehurst, ran a close second.

Mr. J. Lyne, gardener to H. F. Tiarks, Esq., Foxbury, Chislehurst, led in a splendid competition for twenty-four blooms, consisting of twelve incurves and twelve Japanese. Mr. H. Redden was second.

Eleven entries for twelve incurves distinct were forthcoming. Here Mr. G. Pribble, gardener to M. Hodgson, Esq., Shirley Cottage, near Croydon, was the most successful exhibitor. He had capital blooms of C. H. Curtis, Violet Tomlin, D. B. Crane, Miss Haggas, William Tunnington, Lord Alcester, and Duchess of Fife. Mr. J. Lyne was second; and Mr. Harvey, gardener to R. B. Martin, Esq., M.P., Chislehurst, third.

In the smaller class for six incurves, Mr. Harvey was first, a like position being taken by Mr. M. E. Mills, gardener to Frank Lloyd, Esq., Coombe House, Croydon, for twelve Japanese, and by Mr. C. Blick for six Japanese. Mr. Harvey staged the best

six incurved blooms of one variety, in Queen of England, and Mr. H. Redden, gardener to G. W. Bird, Esq., The Manor House, West Wickham, had the best six Japanese blooms of one variety in Mme. Carnot.

There were three groups staged in competition for the prizes offered for a group occupying 50 sq. ft., a margin 10 ft. wide of foliage plants being allowed. Mr. G. Brister, gardener to F. Charlesworth, Esq., Bickley, led with a grand array of superior blooms. Mr. E. Dove, gardener to H. G. Fry, Esq., Bickley Hall, was second, and Mr. J. Lyne, third. The best trained specimen came from Mr. G. Brister, who showed a large, well flowered bush plant of Mrs. G. Glenny. Mr. G. B. Lees, gardener to R. de Quincy, Esq., Oakwood, Chislehurst, won the premier award for a group of miscellaneous flowering and foliage plants. Mr. J. Amey, gardener to F. G. Liebreich Esq., Log's Hall, Chislehurst, was second. Mr. W. Pascoe, gardener to Captain Torrens, Baston Manor, Hayes, was third.

MAIDEN EXHIBITORS AND SINGLE-HANDED GARDENERS.—In the amateurs' classes there was some excellent stuff staged. Mr. H. Redden won for six incurves; Mr. E. Legg for twelve Japanese; Mr. W. Toogood, gardener to Mrs. Parr, Powis Lodge, Bickley, in another class for six incurves; and Mr. E. Legg for twelve Chinese Primulas.

In the classes for fruit and vegetables there was much to admire. Mr. C. Jordan, gardener to H. Hoskier, Esq., Coney Hill, had the best bunch of Gros Maroc Grape, and Mr. J. Blackburn, the finest bunch of Muscat of Alexandria, and also the best three of any black Grape in Gros Maroc.

Mr. W. A. Seating, Parkwood, Swanley, led for four dishes of culinary Apples.

Mr. C. Blick won yet another first for a collection of nine varieties of vegetables. A smaller collection of six varieties sent by Mr. P. Field, gardener to J. H. Simpson, Esq., Oak Lawn, Beckenham, also received a first.

CHELTENHAM.—November 10th and 11th.

FOR a number of years past the Cheltenham Winter Show has included a Chrysanthemum section, which year by year has been growing in popularity and in representative merit.

The groups of plants arranged for general effect were surpassingly good this year. Mr. G. W. Marsh, gardener to T. P. W. Butt, Esq., Arle Court, secured the premier prize, and was followed by Mr. W. Lusty, gardener to Colonel Rogers, Battledown Court, who was second; and Messrs. E. Smith & Sons, St. George's Road, who were third. The last named exhibitors staged the best six blooms distinct of incurved varieties. The winning stand of twenty-four incurves was contributed by Mr. G. W. Marsh, with Mr. W. Lusty as second. Mr. W. Lusty had the best eighteen incurves.

Mr. J. Martin, gardener to T. W. Swinburne, Esq., Cordean Hall, distanced all competitors for a stand of thirty-six Japanese blooms, distinct. Mr. G. Marsh was second, and Mr. W. Lusty, third. For eighteen blooms of Japanese varieties, distinct, Lady Northwick led, and Mr. G. Marsh, and Mr. W. Lusty followed in order of mention. The winning twelve Japanese came from Mr. J. L. Burgess.

In the classes for fruit Viscount Deerhurst led for a collection of twelve dishes of culinary Apples, and also for twelve dishes of dessert Apples, showing capital fruit in each case. In another class for twelve dishes of dessert Apples, Earl Coventry carried off chief honours.

Viscount Deerhurst completed a fine list of successes by winning the first prizes for a collection of twelve dishes of Pears, two bunches of black Grapes, of distinct varieties, and two bunches of the same variety.

Mr. Alfred Cook took first for a collection of eight varieties of vegetables, and also for Celery, Parsnips, and a dish of twelve Tomatos. The premier award for a collection of six varieties of vegetables in which the prizes were given by Messrs. Sutton & Sons, of Reading, fell to the lot of Earl Coventry.

TUNBRIDGE WELLS.—November 12th.

THE twenty-first annual show was opened in the Corn Exchange and Assembly Rooms, Tunbridge Wells, on this date. A departure has been made this season in the disposal of the Chrysanthemum groups. Instead of being placed, as formerly, against the dingy walls of the Corn Exchange, they were set up in circular pyramidal style in the centre of the Assembly Rooms, where they appeared to much greater advantage. The number of competitive entries was about the same as last season. Mr. J. Douglas, Great Bookham, and Mr. Norman Davis, Framfield, were the judges for the plants and cut flowers; and Mr. Geo. Woodward, gardener to Roger Leigh, Esq., Barham Court, Maidstone, and Mr. W. A. Henderson, gardener to John Deacon, Esq., Mabledon, Tonbridge, decided the relative merits of the fruits and vegetables.

In the class for a group of Chrysanthemums, Mr. J. Howes, gardener to W. Cobb, Esq., Broadwater Down, secured the first prize; and Mr. W. Turner, gardener to J. A. le Lacheur, Esq., The Wilderness, occupied the second place. Mr. L. Dupond, gardener to C. B. Powell, Esq., Southborough, led for a miscellaneous group of plants.

Mr. J. Smooker, gardener to Mrs. Hall, 24, Broadwater Down, had the best eight Chrysanthemums in pots; and Mr. H. Kimber, gardener to Captain W. Alcock, Alshurst, won the premier award for four dwarf-trained Chrysanthemums, and also for the best single specimen in two different classes.

In the open classes for cut blooms, Mr. J. Howes staged the premier twenty-four Japanese, with a fine lot of material, and likewise the best twelve. In another class for twelve Mr. J. Legge was first. For twelve large-flowered Anemone varieties (Japanese included) Mr. G. Ware, gardener to Mrs. Morgan, Hungershall Park, was the most successful exhibitor.

The special classes for gardeners and amateurs were well-patronised both in the matter of cut blooms and plants.

The competition for fruit open to cultivators living within a radius of fifteen miles was a great success. Mr. T. Palmer, gardener to H. J. Metcalfe, Esq., Southborough, staged the best three bunches of black Grapes, and Mr. C. Earl, gardener to D'Avigdor Goldsmith, Esq., the best three bunches of white Grapes. Mr. F. Bridger, Penshurst Place, scored for six dishes of dessert Pears, and also for a like number of dishes of dessert Apples.

QUESTIONS AND ANSWERS

Pruning of Lime Trees.—*W. J. Godfrey*: We have examined the photograph of both the pruned and unpruned Lime trees, and must confess great surprise that it should have been considered pruning at all. We have seen many forms of pruning, but in this instance should consider it one of the worst forms of hacking we remember having seen. The lopping of so many large branches must render them liable to decay at so many points, as the cut ends must take a long time to heal over, if ever they do so properly. At the same time the lopped tree is very unsightly. The unpruned tree is an object of grace and beauty, in our estimation, by comparison with the other. We consider that so long as the trees do not overhang the highway to such an extent as to interfere with the traffic, all the pruning that need be given should consist of thinning the branches where too crowded, and shortening back the tips of long straggling ones. If large branches are too low for the traffic they should be cut close to the main stem and the wounds painted over to keep out wet.

Profitable Strawberries.—*Rom.*: If the reader of the paper you mention is willing to send a copy of it we should be pleased to publish it, when space will permit. Some time must elapse, however, before that could be done. In the meantime we can ascertain the opinion of the gentleman who read the paper.

Dwarf dark-flowered H. P. Roses.—*Omega*: Besides General Jacqueminot, you may add Ahel Carriere and Prince Camille de Rohan to your dark Roses. A. K. Williams and Charles Lefebvre are two excellent crimson varieties, and Duke of Edinburgh is rich velvety crimson. The above make half a dozen free flowering varieties; and you might augment the list by adding Alfred Colomb, carmine crimson; Senateur Vaisse, glowing scarlet; and Horace Vernet, brilliant velvety crimson.

Angle of Elevation for a plant house.—*Omega*: The best angle of elevation must vary to some extent according to circumstances. If the house is intended for forcing purposes the roof should be constructed at a pretty high or sharp angle, so as to catch the rays of the sun in the early part of the year. For a span-roofed greenhouse or cool conservatory an angle of 45° would be a good average, if the house is constructed so as to face the east and west.

Planting Carnations.—*W. S.*: Should the weather continue open for some time you might expect a fair amount of success. The weather after this period of the year becomes more and more uncertain, and planting would be attended with considerable risk if frost were to supervene. In such cases you would have to go over the beds or plantations after a thaw and press the plants into the soil with the fingers in those cases where they have been partly raised out of the soil by the action of frost. Make the soil firm by treading before planting. The other alternative is to wait till March.

Names of Fruits.—*W. Tolby*: 1, Royal Somerset; 2, Cellini; 3, Rymer.—*J. C. S.*: Warner's King.

Names of Plants.—*T. W.*: 1, Fittonia argyro-neura; 2, Peperomia Saundersii; 3, Calathea zebrina; 4, Dracaena Lindenii.—*J. A.*: 1, Berberis Aquifolium; 2, Gaultheria procumbens; 3, Podocarpus pedunculata fastigiata; 4, Jasminum nudiflorum; 5, Euonymus japonicus maculatus; 6, Cupressus nutkaensis.—*A. R.*: 1, Oncidium varicosum; 2, Cattleya labiata var.; 3, Skimmia japonica; 4, Senecio Kaempferi aureo-maculatus.—*J. W., N.*: 1, Eranthemum nervosum; 2, Coleonema alium; 3, Myrtus communis narrow-leaved var.; 4, Osmunda regalis palustris.

Communications Received.—*Wm. Angus*.—James Grieve & Sons.—*Jno. Dalgleish*.—*Wm. Keen*.—*James Campbell*.—*John Battersby*.—*B. Lockwood*.—*A. Wallace*.—*James Laird*.—*W. J. Godfrey*.—*M. T.*—*Robert R.*—*Tenacity*.—*S. Young*.—*W. Squires*.—*B.*—*Amateur Page*.



MACKENZIE & MONCUR, LIMITED,

Hothouse Builders, Heating and Ventilating Engineers.
UPPER GROVE PLACE, EDINBURGH.

London Office:—8, CAMDEN ROAD, N.W.

Branch:—43, VICTORIA ROAD, GLASGOW.

Telephone N.
WESTERN, No. 78,
EDINBRO'.



Telegrams:
"HOTHOUSE,
EDINBURGH."

Horticultural Buildings of Every Description Erected, either in Wood or Iron, in any part of the Kingdom.
TEAK WOOD HOUSES A SPECIALITY.

HEATING.—Public Buildings, Churches, Schools, Mansions, Warehouses, Coach-houses, Harness Rooms, &c., heated in the most efficient manner on the Low and High Pressure Hot Water Systems or with Steam.

Carnations, strong rooted layers of the best varieties, 3s. 6d. and 6s. per doz.; 25s. 100.
Fancy Pansies, best sorts for competition, including many of the newest and best, 3s. 6d. per doz.
Violas for bedding, 2s. doz.; 10s. 6d. 100.
 „ for competition, 2s. 6d. doz.; 12s. 100.
 Write for Catalogue of **Pansies and Violas**.
Post Free on Application.

New Strawberries, highly recommended.
Prince of Wales, 3s. doz.; £1 per 100.
Princess of Wales, 3s. doz.; £1 per 100.
W. E. Gladstone, one of the best main crop Strawberries, 3s. doz.; £1 100.
H. P. Roses, grand plants, our selection, 7s. doz.

All the above Post Free at prices quoted from—

JAMES GRIEVE & SONS,
REDBRAES NURSERY,
BROUGHTON ROAD, EDINBURGH.

TODD & CO.,
Art Florists,
7, MAITLAND STREET, EDINBURGH.

SPECIALITIES:—

Wedding and Ball Bouquets.
Floral Decorations, Cut Flowers,
Wreaths, Crosses, &c., &c.

THE TRADE SUPPLIED.

GLASS
 MANUFACTURERS
 TO



HER
 MAJESTY
 THE QUEEN.

JOHN FORD & CO.,
China and Glass Showrooms,
 39 & 40, Princes St., Edinburgh.

ART POTTERY A SPECIALITY.

Plain and Decorative Flower Pots and Pedestals.
 Show vases as supplied to the principal Horticultural Societies.

PRICES ON APPLICATION.

THE BEST
CHRYSANTHEMUMS, ZONALS AND CANNAS.

A special list of all the varieties that were shown at the last great National Exhibition at the Royal Aquarium, sent free to all intending purchasers.

H. CANNELL & SONS,
SWANLEY, KENT.

The Gardening World.
 ESTABLISHED 1884.

Price One Penny; Post Free, Three-halfpence
 Subscription (including postage): 3 months, 1s. 8d.
 6 months, 3s. 3d.; 12 months, 6s. 6d., prepaid.
 Foreign Subscriptions to all countries in the Postal
 Union, 8s. 8d. per annum, prepaid.

Published every Thursday morning, and can be obtained through all Newsagents and Booksellers, and from all Railway Bookstalls.

SUBSCRIPTION FORM.

Please send me "THE GARDENING WORLD,"

for _____ months, commencing on _____

for which I enclose _____

Name _____

Address _____

Telegraphic Address: "BAMBUSA, LONDON."

1, CLEMENT'S INN
STRAND, LONDON, W.C.

TRADE CATALOGUES RECEIVED.
 W. P. LAIRD & SINCLAIR, Dundee and Cupar-Fife.—Descriptive Catalogue of Roses, Hardy Herbaceous and Alpine Plants.
 FOTHERINGHAM & KING, Dumfries—Forest and Ornamental Trees, Shrubs, Roses, Fruit Trees, &c.
 ROBERT OWEN, The Floral Nurseries, Castle Hill, Maidenhead.—Descriptive Catalogue and Price List of New and Select Chrysanthemums.

FIXTURES FOR 1897.
 NOVEMBER.
 23.—R.H.S. Committees and Lecture.
 25.—Leamington Chrysanthemum Show.
 25, 26, 27.—Dundee Chrysanthemum Carnival.
 26, 27.—Aberdeen Chrysanthemum Show.

INDEX TO ADVERTISEMENTS.

| | |
|---------------------------------|--------------------------------|
| Auction Sales. | Heating Apparatus. |
| Protberoe & Morris.....178 | W. Cooper, Limited191 |
| Bulbs. | Thames Bank Iron Co177 |
| Barr & Sons179 | Horticultural Builders. |
| Z. Gaye177 | J. Boyd & Sons.....177 |
| W. B. Hartland177 | W. Cooper, Ltd.....191 |
| Sutton & Sons177 | J. Gray.....177 |
| T. Turner177 | Mackenzie & Moncur.....189 |
| C. G. Van Tubergen177 | W. Richardson & Co177 |
| Catalogues. | J. Weeks & Co., Ltd.177 |
| Barr & Son179 | Insecticides. |
| Bunyard & Co.177 | Gilshurst Compound177 |
| M. Chapman.....177 | Manures. |
| H. Deverill177 | Clay & Son.....178 |
| R. Smith & Co.....191 | W. Colchester191 |
| Sutton & Sons177 | Ichthemic177 |
| Chrysanthemums. | R. B. Laird & Son178 |
| Cannell & Sons190 | W. Thomson & Sons192 |
| Dobbie & Co.177 | Miscellaneous. |
| W. J. Godfrey.....179 | Epps's Cocoa.....191 |
| R. Owen177 | J. Ford & Co.190 |
| G. Stevens177 | Gishurstine177 |
| W. Wells.....179 | Potter's Felt177 |
| Florists' Flowers. | Smyth's Baskets177 |
| Cannell & Sons190 | Orchids. |
| J. Downie179 | J. Cypher191 |
| J. Douglas177 | Leeds Orchid Co.177 |
| J. Forbes.....179 | W. L. Lewis & Co.....177 |
| J. Grieve & Sons190 | P. McArthur179 |
| Hood Gardens177 | F. Sander & Co177 |
| Kelway & Son177 | Publications. |
| Mrs. Lakin.....177 | F. C. Edwards177 |
| Todd & Co.190 | Roses. |
| C. A. Young177 | G. Cooling & Sons179 |
| Flower Pots. | J. Downie179 |
| Sankey & Sons, Ltd.191 | J. Grieve & Sons191 |
| Fruit Trees. | J. Laing & Sons178 |
| G. Bunyard & Co.177 | R. Smith & Co.....191 |
| J. Downie179 | James Walters177 |
| J. Laing & Sons.....178 | Seeds. |
| R. Smith & Co.191 | R. Smith & Co.....191 |
| J. W. Todman177 | D. W. Thomson.....179 |
| Garden Sundries, &c. | Strawberries. |
| J. Arnold177 | J. Grieve & Sons191 |
| W. F. Gunn & Co.177 | Laxton Bros.177 |
| Hirst, Brooke & Hirst.177 | A. Metcalfe.....177 |
| A. Outram191 | Trees & Shrubs. |
| H. G. Smyth191 | J. Downie179 |
| | Laing & Sons178 |

COVENT GARDEN MARKET.

November 17th, 1897.

FRUIT.—AVERAGE WHOLESALE PRICES.

| | |
|-------------------------------|------------------------------|
| s. d. s. d. | s. d. s. d. |
| Apples.....per bushel 3 0 7 0 | Grapes, per lb 0 9 2 0 |
| Black Currants ½ sieve | Pine-apples |
| Red ½ sieve | —St Michael's each 2 6 8 0 |
| Cherries half sieve | Plums per ½ sieve..... |
| Nova Scotia Apples | Strawberries, per lb. |
| Cobbs 22 6 24 0 | |
| per 100lbs. | |

VEGETABLES.—AVERAGE WHOLESALE PRICES

| | |
|-------------------------------|-------------------------------|
| s. d. s. d. | s. d. s. d. |
| Artichokes Globe doz. 2 0 3 0 | Herbsper bunch 0 2 |
| Asparagus, per bundle | Horse Radish, bundle 2 0 3 0 |
| Beans, French, per | Lettnes ...per dozen 1 3 |
| per lb. 0 6 0 8 | Mnsbrooms, p. basket 1 0 1 6 |
| Beet..... per dozen 2 0 | Onions.....per bunch 0 4 0 6 |
| Brussel Sprouts, | Parsley ... per bunch 0 3 |
| per half sieve 1 6 2 0 | Radishes... per dozen 1 0 1 3 |
| Cabbages ... per doz. 1 0 1 3 | Seakale...per basket 1 6 2 0 |
| Carrots ... per bunch 0 3 | Small salad, pnnnet 0 4 |
| Cauliflowers.....doz. 1 6 3 0 | Splnach per bushel 2 0 3 0 |
| Celery.....per bundle 1 0 1 6 | Tomatos..... per lb. 0 6 1 0 |
| Cncnbers per doz. 2 6 3 6 | Tnrnips per bun. 0 3 |
| Eudive, French, djz. 1 0 2 0 | |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| | |
|--------------------------------|-------------------------------|
| s. d. s. d. | s. d. s. d. |
| Arum Lilies, 12 blms. 4 0 6 0 | Orchids, doz. blooms 1 6 9 0 |
| Asparagus Fern, bun. 1 6 3 0 | Petargoniums, 12 bun. 4 0 6 0 |
| Bouvardias, per bun. 0 6 0 8 | Pyrethrum doz. bun. 1 6 3 0 |
| Caruations doz. blms. 0 6 3 0 | Roses (Indoor), doz. 6 1 0 |
| Chrysantbemums | „ Tea, white, doz. 1 0 2 0 |
| dozen blooms 0 6 3 0 | „ Nels 1 6 4 0 |
| Eucharlis ...per doz 3 0 6 0 | „ Safrano 1 0 2 0 |
| Gardenias ...per doz. 2 0 4 0 | (Englsb), |
| Geranium, scarlet, | Red Roses, doz.1 0 2 0 |
| doz. bunches 4 0 6 0 | Pink Roses, doz. 2 0 4 0 |
| Lillam longiflorum | Roses, doz. bun. 4 0 9 0 |
| per doz. 4 0 6 0 | Smlax, per bunch ... 1 6 3 0 |
| Lily of the Valley doz. | Tuberoses, doz. |
| sprays 1 0 2 0 | blooms 0 3 0 4 |
| Lilac (French) per | Violets (Parma), per |
| bunch 2 6 3 6 | bunch 2 6 3 6 |
| Marguerites, 12 bun. 2 0 4 0 | „ doz. bun. 1 6 2 0 |
| Mardenbair Fern, 12bs. 4 0 8 c | |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

| | |
|-----------------------------------|---------------------------------|
| s. d. s. d. | s. d. s. d. |
| Arbor Vitae | Ferns, small, per 100 4 0 6 0 |
| per doz. 12 0 36 0 | Ficus elastica, each 1 0 5 0 |
| Aspidistra, doz..... 18 0 36 0 | Follage Plants, var., |
| „ specimen 5 0 10 0 | each 1 0 5 0 |
| Chrysantbemume, per | Lilium Harrissii, |
| doz. pots... 6 0 30 0 | per pot 2 0 4 0 |
| Dracaena, various, | Lycopodlums, doz. 3 0 4 0 |
| per doz. 12 0 30 0 | Marguerite Daisy doz 4 0 9 0 |
| Dracaena viridis, doz. 9 0 18 0 | Myrtles, doz. 6 0 9 0 |
| Euonymus, var. doz. 6 0 18 0 | Palms in variety, each 1 0 15 0 |
| Ev rgreens, invar. doz 6 0 24 0 | Palms, Specimen ...21 0 63 0 |
| Erica Hyemalis p. doz. 9 0 15 0 | Pelargoniums |
| Erica Gracilis, per doz. 6 0 9 0 | Scarletsper doz 2 6 6 0 |
| Erica, various, per doz. 8 0 12 0 | |
| Ferns, invar. per doz. 4 0 12 0 | |

A Special Offer to Readers of THE GARDENING WORLD.

25/- BOOK for 8/-
 NO HOME SHOULD BE WITHOUT ONE
Ogilvie's Encyclopædia
 OF
 USEFUL INFORMATION
 AND WORLD'S ATLAS.

No Single Book ever before contained such a Wealth of Knowledge.

By Special Arrangement with the Publishers of the "Encyclopædia of Useful Information and Atlas of the World," we are enabled to offer to the Public a Magnificent 25s. Volume for 16 of the coupons, which will appear weekly, together with 6d. each, accepted in Weekly Instalments, or the Coupons may be held until the whole period has elapsed and brought or sent to the Office with 8s., and 6d. towards carriage.

A COMPLETE ILLUSTRATED LIBRARY IN ITSELF.

A universal assistant and treasure-house of information on every conceivable subject, from the household to the manufactory. In short, gives information about everything, is absolutely indispensable to everyone in all walks of life; the contents being so separated, indexed, and arranged that they can be turned to at once. It is

THE BEST { BOOK OF } EVER
 { INFORMATION } ISSUED.
 Size of Encyclopædia: 9 by 11½ inches. 656 Pages.

It contains
 MANY MAGNIFICENTLY ENGRAVED
 COLOURED MAPS,

and a description of every country under the sun, besides much other matter relative to the Home, the Farm, the Factory, a Dictionary of Statistics—many Useful Tables, Poetical Selections, Synonyms, Famous Bridges and Ships, How to Calculate, How to Cook, How to Get Rich, How to Cure all Diseases, How to Succeed in Business, Table of Weights and Measures, and

HUNDREDS OF OTHER TOPICS OF GREAT VALUE TO EVERY PERSON

who desires to be up to the times. To see the Book is to want it. To Members of Mutual Improvement Societies it will prove of inestimable value.

The articles are written by men whose lives have been devoted to the subjects treated, are short and concise, but contain full information up to date. It is to be consulted on every subject that arises in everyday life, by old and young alike. It contains a complete Illustrated Atlas of the World.

IN THESE DAYS OF COMPETITION it is imperative that a Gardener should be a well-informed individual. Here is an Encyclopædia containing an immense amount of knowledge that will be of the greatest service to him.

YOUNG GARDENERS, do you wish to be successful? Then remember that to possess knowledge is the surest way to achieve success.

It is elegantly bound in Morocco Cloth, with beautifully designed Gilt Side-stamp and Red Edges, making at once the most handsome and durable as well as THE MOST USEFUL BOOK EVER MADE or sold for 25s.

201197. **COUPON.**

OGILVIE'S ENCYCLOPÆDIA OF
 USEFUL INFORMATION,
 AND WORLD'S ATLAS,
 (Published PRICE 25s.).
 16 COUPONS, AND 6d. WITH EACH.

Name _____

Address _____

Postal Orders or ½d. stamps may be sent.
 COUPONS AND CONTRIBUTIONS MAY BE LEFT at or SENT TO the Office for
 THE PUBLISHER OF

THE GARDENING WORLD.
 COPIES OF THIS BOOK CANNOT BE BOUGHT. They can be obtained only by using these Coupons.

CHRYSANTHEMUMS.

Norman Davis

Begs to intimate that he has in preparation his List of Novelties for 1898. As this list will contain particulars of some of the finest Novelties ever sent out, growers should secure an early copy. (Will be forwarded soon as ready to old customers.)

CATALOGUE OF GENERAL COLLECTION FORWARDED POST FREE ON APPLICATION.

Chrysanthemum Nurseries, Framfield, Uckfield, Sussex.

W. P. LAIRD & SINCLAIR,
73, Nethergate, Dundee.

FOREST TREES (Seedling & Transplanted) in immense quantity, and of quality that cannot be surpassed. Samples free to any part, and special quotations for large quantities. Write for Catalogue, containing valuable information for planters.

Telegraphic Address: "LAIRD," DUNDEE.

Telephone: Seed Warehouse, 673; Nurseries, 5, Monifieth.

DAVID W. THOMSON'S

Flower Seeds Specialities.

THOMSON'S DWARF WHITE ANTIRRHINUMS.
THOMSON'S DALKEITH CALCEOLARIA.
THOMSON'S SUPERB BEGONIAS.
THOMSON'S UNRIVALLED CELOSIAS.
THOMSON'S CINERARIAS.
THOMSON'S CYCLAMEN.
THOMSON'S PANSY.
THOMSON'S PETUNIA.
THOMSON'S PRIMULAS.
THOMSON'S EAST LOTHIAN STOCKS.

Vegetable Seeds Specialities.

THOMSON'S PRIZE BRUSSELS SPROUTS.
THOMSON'S PROLIFIC LONG POD BEANS.
THOMSON'S SUPERB RED BEET.
THOMSON'S SELF-PROTECTING BROCCOLI.
THOMSON'S IMPROVED HORN CARROT.
THOMSON'S MARKET CARROT.
THOMSON'S INCOMPARABLE WHITE CELERY.
THOMSON'S MAMMOTH GREEN COS LETTUCE.
THOMSON'S SUPERB CURLED PARSLEY.
THOMSON'S EXCELSIOR TOMATO.
THOMSON'S DUKE OF YORK MELON.

See Catalogue of Selected Seeds for 1898, Post Free on application in December.

Nurseries—WINDLESTRAWLEE.

Seed Warehouse—

24, Frederick Street, EDINBURGH.

SPECIALITIES—

BEGONIAS.

JOHN DOWNIE CRAB APPLE

(Pyramid and Standard).

ORNAMENTAL TREES, SHRUBS & CONIFERS.

STOVE AND GREENHOUSE PLANTS.

ROSES. FRUIT TREES, ETC.

Catalogues on application,

JOHN DOWNIE, Nurseryman, EDINBURGH.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, NOVEMBER 27th, 1897.

THE FEATURES OF THE EDINBURGH SHOW.

Those who visited the great annual show of the Scottish Horticultural Association last week, naturally found their way towards the Diamond Jubilee class for which £150 was awarded in six prizes. Crowds of the flower-loving public, even those unacquainted with the mysteries of Chrysanthemum growing, wanted to see the flowers for which such a sum of money was being expended. The long table, with its double row of exhibits, had a much more imposing effect than the blooms which were cut and arranged upon the show boards in the usual trim fashion. The long stems, clothed with their own foliage, carried the blooms aloft, so that crowds of the visitors, several rows deep, could easily see the blooms and judge of their respective merits without being obliged to stoop over them at close range; indeed, during the evenings of all three days of the show, this was impossible. Should this style of exhibiting the favourite flower become anything like general, the character of the autumn exhibitions will become entirely altered. There are several phases of the

question that will have to be taken into consideration. The principal of these is that societies will have to exercise the same control over the vases as at present they do over the size and other details of exhibition boards. The vases must, in fact, be of uniform size and design so as to put the flowers all on the same footing, and give judges and exhibitors alike equal chance of doing justice to their respective duties. At this phase of the question, societies have not had time to determine upon the best form of vases, but for competitive purposes they must be uniform, and sufficiently heavy at the bottom to stand firmly and avoid accidents. So long as the flowers are upright and equally balanced, there is no danger of their toppling over; but on the second or third days of an exhibition, the flowers of various sorts begin to lean in different directions, and the slightest accident is liable to upset them. To avoid a dead uniformity at exhibitions, those who set up exhibits not for competition, should be allowed to use vases of various sizes and of ornamental design as at present, to give variety and interest to the whole display.

In the class for twelve vases of Chrysanthemums cut with long stems there was a considerable amount of variety in the methods of arrangement adopted by exhibitors. The most significant fact in connection with this class was that the leading award was won by an amateur, although gardeners were also allowed to, and did, compete. The winner grew and staged his own flowers, and by the meritorious character of his exhibit secured the Gold Victorian Medal of the association, of which he felt very proud. Nor was he the only amateur who weighed himself in the scales against the professional gardeners, and beat them too. This is a point that might be noted by those who have hitherto given most or all of the credit to the professional element. The amateur growers also showed well in the classes for trained plants, being in some cases successful, though at Edinburgh, as at London, one gardener takes the lion's share of the leading prizes for this class of exhibit. The trained plants were numerous and some of them were creditable specimens for this northern latitude and its shorter season of growth.

The groups of Chrysanthemums, foliage and other flowering plants fell short of what we have seen at Edinburgh, though it must be admitted that no special nor great encouragement had been given them. The fact that the Waverley Market has to be partly cleared on some of the mornings of the week for the sake of the market gardeners also militates against the staging of fine groups, the arrangement of which would have to be destroyed on the evenings before the market, and the whole group have to be reconstructed the following day before the admission of the public. There were two classes for small tables of plants, but the lack of space prevented their being staged in positions where they would be seen to the best advantage. The lack of space even in the roomy Waverley Market prevented the placing of these tables down the centre of the building. They had in fact to be placed under the shadow of the overhanging gallery. The large Tree Ferns and Palms down the centre of the area on former occasions were also lacking for want of space. The visitors varied in numbers from 8,040 during the first day to 15,000 on the third day, and during the three days the number of visitors was calculated at 35,000, and the receipts at the gates as £1,000. This accounts for the lack of space, and is a suitable answer to those who complain of the expenses of bringing the band of the Grenadier Guards to Edinburgh.

Another feature of this show we cannot overlook was the grand exhibit of dried grasses, living flowers, and plants, got together by Mr. M. Todd, the president of the association, on behalf of the Royal Gardeners' Orphan Fund. All these things were on sale, besides which there was a piano, valued at £45, and other prizes to be drawn for by tickets, the proceeds to be devoted to the same charitable purpose. This was a pet scheme conceived and carried out by the president himself. The whole of the surplus proceeds of the show is also to be devoted to charitable purposes, including sums in favour of the Royal Gardeners' Orphan Fund and the Gardeners' Royal Benevolent Institution.

We missed a considerable number of important exhibits in the non-competitive class, which we expected to witness at Edinburgh, and which were entirely crowded out for want of space. This says much for the liberal spirit of the Edinburgh nurserymen, who were pleased to forego their accustomed privileges of staging their exhibits—and that, too, at their own local show—in favour of exhibitors from a distance, some of whom came from the south of the Tweed and Cheviots.

Autumn Strawberries—Strawberries (not Alpine varieties) have been gathered during the last fortnight from plants growing in the open at Kingsbridge.

Mr. Donald Chisholm, outside foreman in Glasgow Botanic Gardens, formerly head gardener to Capt. S. F. Charles, Lancashire Fusiliers, Wardie House, Edinburgh, has been appointed head gardener to Lady Belhaven, Udston, Hamilton, N.B.

A Competent Gardener.—A man wanted as a competent gardener. The situation is well adapted for a retired pensioner from Her Majesty's Navy. Where does the practical part come in, eh? I noticed this advertisement, recently, in one of your contemporaries.—*Rusticus*.

Cold Weather must soon, in the natural course of the seasons, make its appearance. The autumn has so far been exceptionally mild, witness the untimely flowering of so many hardy plants, but there must be an end to this soon. Hence we should do well to make all preparations for "winter's stern embrace." The value of Anthracite coal becomes more than ever manifest year by year, and its superiority over coke for heating purposes more evident. Moreover, it is more cleanly to use, and in addition to the lightening of labour is far more durable than coke. We notice that our friend, Mr. William H. Essery, of Swansea, is again offering Anthracite in three sizes, ready for burning in boilers of various sizes. The prices quoted are for Anthracite delivered in Mr. Essery's own trucks at the nearest railway station.

Mr. Robert Henderson, Botanical Gardens, Glasgow, has been appointed head gardener of the King Williamstown Botanical Gardens, Cape Colony. Mr. Henderson has undergone a course of 3 years' training in the inside department of the Glasgow Botanical Gardens under the well directed superintendence of Mr. Dewar, the curator, and has held previously several important charges, which well fit him for the responsible undertaking that he is now about to take up in South Africa. Previous to his entry into the Glasgow Botanical Gardens, Mr. Henderson was general foreman in the celebrated gardens of Beil, East Lothian. He is the son of John Henderson, Riddlesworth Hall, Norfolk, late manager to the once well known firm of Ireland and Thompson, Edinburgh. Mr. Henderson sails for his new destination on the 24th of this month.—*Gamma*.

Uckfield and District.—A Chrysanthemum show was held in the Town Hall at Uckfield, Sussex, on Tuesday, the 18th inst., the proceeds being devoted to the assistance of the local charities. All the exhibits were non-competitive. Cut hlooms were shown in good condition, and several gardeners in the neighbourhood contributed groups of Chrysanthemums and miscellaneous plants. One end of the hall was occupied with a very fine display of Chrysanthemums, set up with Ferns and Palms, which was

contributed by Mr. Norman Davis, of The Vineries, Framfield. Mr. H. Prinsep, gardener to the Hon. Viscountess Portman, illustrated the quality of the fruit and vegetables he grows at Buxted Park, by sending a collection of each. Both fruit and vegetables were excellent.

November Gardens.—A contributor to *The Morning Post* states that in his garden there are blooming at the present time—Roses, Chrysanthemums, Tritomas, Heliotropes, Dahlias, Lemon-scented Verbena, Tobacco plants, Salpiglossis, Sweet Peas, Mignonette, and Violets, while the autumn foliage is still beautiful. November is exceedingly kind to both him and his garden.

East End Flower Show.—The People's Palace and East London Horticultural Society's fourth annual Chrysanthemum show was opened in Queen's Hall, Mile End Road, on the 11th inst. There were forty-six classes and about four hundred and twenty entries. Mr. C. E. Shea presided at the opening ceremony, and said the show was better than it had ever been before. During the afternoon Mr. J. H. Witty delivered a lecture on "how to grow Chrysanthemums," which found a very attentive audience.

The very last of old Cremorne.—Under this heading one of our daily contemporaries discusses the sale of Mr. W. J. Bull's Ashburnham Road Nursery, in King's Road, Chelsea. The article states that this nursery is the last remnant of what was once Cremorne. This, however, is erroneous, for the Ashburnham Park Nursery of Messrs. J. W. Wimsett & Son, which is hard by, is another remnant of London's old pleasure garden; in fact there is even now to be seen in this establishment part of the identical rockery belonging to the gardens of Cremorne. As Messrs. Wimsett & Son have no intention of selling any portion of the site occupied by their nurseries, at least part of this famous old haunt of the *beau monde* will be preserved from the encroachments of the brick and mortar fiend.

Crippled Children's Christmas.—We have received the following appeal from Alderman Treloar, and in view of the near approach of Christmas present the same to our readers:—

SIR,—By a vote of the Court of Common Council to-day, the Corporation of the City of London has, for the fourth time, granted the use of the Guildhall for the Christmas entertainment to Ragged School children, which it has been my privilege annually to promote. The guests are drawn from all the poorest parts of the metropolis. I am sure that the sight of their radiant faces at the well-spread board under the eye of those genial giants—Gog and Magog—must have repaid the kind-hearted donors of this joyful feast. I have every confidence that the generous public will once more assist as liberally as heretofore, but this year I ask for your co-operation to make a special and wider appeal.

There are over 5,000 little crippled children passing a monotonous existence in crowded courts and alleys in this great city. Many of them are stretched on beds of suffering and are prisoners from year's end to year's end. Others are quite unable to participate in the pleasures offered to the more robust. Realising how sad was the lot of these afflicted little ones, last year the surplus of the funds entrusted to me for the Children's Banquet at the Guildhall was spent in providing 1,000 Christmas hampers for crippled children. There was not the smallest difficulty in distributing them to the more deserving cases; for every cripple is registered and visited systematically by the Ragged School Union. But in making the selections it gave great pain to be obliged to refuse four out of every five applicants. Why should not all the 5,000 homes be brightened and made happy for one day at least in the year?

It rests simply with sympathetic people to provide the means. The Cripples' Christmas Hamper may be large or small according to the measure of support I may receive. Last year it contained a 2lb. meat pie, a plum pudding, a substantial cake, a packet of tea, and a parcel of sweets. And, judging from the pathetic letters of thanks, these unaccustomed dainties—the mere elements of Christmas fare—gave untold satisfaction. That is why I want to disappoint no child-cripple this year out of the 5,000, and that is the reason why I would earnestly ask for contributions, large or small, to be sent to the Little Cripples' Christmas Fund, care of Alderman Treloar, Ludgate Hill, E.C.—I am, Sir, your obedient servant,

W. P. TRELOAR.
Ludgate Hill, Nov. 18th.

Laburnums are flowering at St-Leonard's-on-Sea.

Dover is favoured.—Primroses and Strawberries have been gathered during the last week at Dover.

Mr. Alexander Thompson, late gardener at Arcog, Bute, has been appointed gardener to Miss Maitland, of Sanchie, Stirling, N.B.

Mr. Charles Scream, who for some years has had charge of the gardens at Ratcliffe Hall, Leicester, has left, owing to Captain O'Neal, the owner, having broken up his establishment at that place. Mr. Scream goes as gardener to Edward Elsley, Esq., Hopwell Hall, Derby.

Mr. John McIntyre's Group at Edinburgh.—In connection with our illustration in last week's issue of the fine group put up by Mr. John McIntyre, The Gardens, Woodside, Darlington, at Edinburgh in September last, we unfortunately omitted to state that the fine photograph, from which it was prepared, was the work of Messrs. J. Horsburgh & Son, Edinburgh, the same artists who executed the photographs of "Mr. J. Hunter," "Lambton Castle Gardens," and the "Octagon Group of the Ichthemic Guano Co." in our issue for October 2nd, also the photograph of Mr. A. Outram, London, in this week's "Supplement."

Ulster Horticultural Society.—In our report of this society's show, which appeared in the supplement to our issue of last week, owing to inadvertence on the part of our reporter, mention was not made of the grand exhibit of Chrysanthemums made by Mr. W. Wells, of the Earlswood Nurseries, Redhill, Surrey. This included four dozen blooms of novelties of both the Japanese, and incurved sections; also a hundred varieties of singles, in the improvement of which Mr. Wells has taken such a prominent part. It is scarcely necessary to add that the singles evoked the warmest appreciation of all the visitors to the show.

Shirley Gardeners.—The monthly meeting was held at the Parish Room, Shirley, Southampton, on the 15th inst. There was a strong meeting of the members, and Mr. B. Ladhams, F.R.H.S., occupied the chair. Mr. Shrivell, F.L.S., Tonbridge, gave a very interesting lecture on "Chemical Manures for the Garden." He said his remarks were derived from a series of experiments extending over four years, carried out at Tonbridge by himself and Dr. Bernard Dyer. There was an enormous amount of detail given as to the quantities of the various manures placed on the ground, the cost of the same, and the values of the different crops resulting therefrom. The conclusions arrived at seem to point out that the most economical use of manures is a combination of stable or farmyard manure, with chemicals in proportion and kinds suitable for the intended crops. The lecturer permitted questions to be put to him at any time during his lecture, and the result was a large number had to be answered during the evening. At the close of the discussion a hearty vote of thanks was accorded to Mr. Shrivell for his excellent address. There was a very large and attractive display of Chrysanthemums by the members consisting of both plants and cut blooms.

MARKET GARDENING IN THE QUEEN'S REIGN.

(Concluded from p. 186.)

PLUMS.—Victoria, appropriately enough is the favourite variety, although River's Early, Orleans, Czar, Monarch, Gisborne's Prolific, and Coe's Golden Drop are also largely grown. Plums are largely imported, but the French fruit comes over before our own is ready, and the Dutch fruit is of bad quality, and does not stand a chance with the British. California, however, has entered as a competitor, and samples were placed on the table of Californian fruit. Coe's Golden Drop as grown across the water has no reason to blush by comparison with British fruit of the same variety, for size, appearance, and flavour are all equal to the best we can produce. Samples of a cooking variety, Coe's Late Red, were also shown from the same source, and as an example of careful grading and packing were worthy of the highest commendation. The value of the Plums that passed through the market in 1896 was £241,782.

CHERRIES are largely grown in Kent. May Duke, Bigarreau, and Morello are the favourites, and command a ready sale. No less a quantity than 219,367

bushels, representing a value of £105,246 passed through the market.

SOFT FRUITS.—Under this heading are included Strawberries, Gooseberries, Raspberries, and Red, White, and Black Currants. Strawberries head the list in quantity and acreage, the Cornish and Southampton fields supplying a huge quantity. Sir Joseph Paxton is the variety most largely grown. Sir Charles Napier is too soft to travel well. President is a good old mid-season variety that finds favour. Royal Sovereign is undoubtedly the best of the new varieties. There is a good demand for Gooseberries, both green and ripe, and Currants might be more largely grown than they are. Raspberries are a very difficult crop to market, and most of them find their way into the jam factories.

The total amount of fruit consumed in 1896 was 18,641,871 bushels, a value of £5,540,069, and an increase in value of £2,000,000 since 1871. The English fruit crop is very uncertain, and the returns can only be reckoned by averages, since they fluctuate from year to year.

FORCED FRUIT.

In the last twenty-five years immense strides have been made in the forcing of fruits, for in 1837 the amount of material thus obtained was scarcely worth considering. Tomatos were unknown to the poorer people, and many others regarded them as poison. The cheapening of materials for building purposes, and the improved methods of heating have enabled the grower to face the altered state of affairs, and to supply the demand at fairly remunerative prices. Profits, however, are not large, for an eminent fruit grower had said that he had had to invest more capital, employ more labour, and work harder himself for a less percentage of profit.

A circle with a radius of fifteen miles from Covent Garden would be found to embrace the greater part of the glass. The Lee valley probably contains more than any other locality. Finchley and the Thames valley are also busy near centres, whilst Bexley, Worthing, Chelmsford, East Grinstead, and Swanley represent remoter districts. Worthing is a remarkable instance of the development of culture under glass. The movement was first started about twenty-six years ago, and now the houses show a rateable value of about £8,500 per year. The united efforts of the local growers have compelled the railway company to give more favourable rates of transport. This is an example that should be followed in other parts of the country. In the whole of the United Kingdom there are about 32,000,000 square feet of glass, covering an area of 735 acres. This means that there is sufficient glass to form a continuous chain of glasshouses 15 feet wide, 400 miles long.

(To be continued.)

CHRYSANTHEMUM NOTES.

SYON HOUSE.

ALTHOUGH Mr. Wythes has made a name for himself, chiefly as a successful cultivator and exhibitor of fruit and vegetables, he has devoted a good deal of attention to the Chrysanthemum. The demands of a large establishment for cut flowers have to be met, and in addition to these the numerous extraneous calls that are made on the resources of the garden render it necessary that flowers for cutting should always be ready, however short the notice. Thus Chrysanthemums are grown to the tune of some 1,300 plants, of which no fewer than 1,000 are treated to produce big flowers.

The plants are accommodated during their flowering season in a long range of roomy fruit-houses, where they enjoy plenty of light and air. True, the smoke and hacks of London do their utmost to spoil the beauty of the flowers; but despite the drawback, Mr. Wythes produces each year a very creditable and comprehensive display. This year the blooms are fully up to the usual standard, although they came in rather earlier than they did last year. The very fine October was, of course, responsible for this.

One of the chief features of the array was a grand batch of Avalanche. The flowers were larger and finer than any we have seen this season, and although they cannot compare for size with the newer whites, say, for instance, Madame Carnot, they are yet sufficiently distinct and beautiful. The last-named variety was in fine condition. That

universally favourite variety Chas Davis was exceptionally well coloured on the terminal buds. Etoile de Lyon, also on the terminal bud, was very rich, and did not exhibit that coarseness of build to which it is prone, and yet the blooms in this case were very large and fine. Madame Marie Hoste, Miss Elsie Teichmann, Sunflower, Phoebus, Col. W. B. Smith, Silver King, Australie, John Lightfoot, J. Shrimpton, Eda Prass, and Souvenir d'une Petite Amie, were all represented by some first-rate samples.

Hairy varieties are well looked after. The large blooms and stiff wiry stems of Hairy Wonder are familiar in most collections. Not the least merit of the variety is its unfailing good temper. Here, at Syon, this was once more demonstrated. Esau closely resembles Hairy Wonder in build and constitution, but the colour is a rich lilac shading to yellow towards the circumference. Louis Boehmer is also well done.

Incurved varieties were strong, and as the best of the blooms were massed together in one house they appeared to advantage. Jeanne d'Arc, Baron Hirsch, Queen of England, Golden Empress of India and the nearly related Lord Alcester, Brookleigh Gem, and D. B. Crane, are all well-known standard varieties without which collections would wear an unfamiliar appearance. Under Mr. Wythes' fostering care they have done remarkably well. Perhaps the most notable variety of all was Lord Brooke, for seldom indeed have we seen such well built and magnificently coloured blooms as Mr. Wythes had.

In other houses some of the later bush plants were much in evidence. Souvenir d'une Petite Amie does first-rate when grown thus, and the same may be said of such old favourites as Val d'Andorre, Cullingfordi, and the pretty pink Madame M. Fabre. Among the single-flowered varieties the most conspicuous was Miss Rose. A number of splendidly grown bush specimens attracted our attention. They were excellent specimens of the specimen trainer's art, being both symmetrical and full of flower.

THE HIGHGATE NURSERIES.

MESSRS. W. Cutbush & Son grow from 700 to 900 Chrysanthemums at their Highgate Nurseries. The majority of this lot of plants is destined to produce large flowers, and among them we observed some very good samples. Sarnian Gem is a new variety that is to be sent out by the Messrs. Cutbush next year. It is a large handsome flower, very much after the style of the popular M. Chénon de Lèche, but rather deeper in colour. Mrs. Chas. Blick, Madame Carnot, Niveus, and Western King are some of the best white Japanese varieties, whilst the credit of the yellows is more than sustained by Sunflower, Sunstone, Oceana, Phoebus, and Edith Tabor. Mrs. W. H. Lees, Miss Rita Schroeder, Gloire du Rocher, and C. E. Geffiock were also very conspicuous by reason of the large handsome blooms they bore. W. H. Morter is a new variety of great promise. It may be described as being a fancy Japanese, for on the ground colour of yellow are numerous stripes of crimson majenta. The flower is thus very gay and distinct, and when well grown must prove an acquisition. The habit is exceedingly dwarf, and the tough and leathery foliage bespeaks a constitution of no mean strength.

The value of Souvenir d'une Petite Amie for supplying flowers for cutting when grown naturally, or as a bush plant, has been fully proved during the last two years, and here at Highgate we had still further testimony, if such were required. A batch of such plants, each carrying from a dozen to twenty relatively large flowers, was one of the special features. In the same house we noted another fine lot of that useful late white Japanese Jessica. The plants, although only in 7-in. pots, were large and bushy, and bore promise of an abundant crop of flowers to come within the next month or six weeks. A few of the earliest had commenced to open at the period of our visit. There is no doubt that this variety is well worth growing in quantity for late work, or to come in just before L. Canning.

Incurved varieties were not so much in evidence as the Japanese, but there were some creditable samples of Golden Empress of India, Baron Hirsch, and Miss Dorothy Foster.

HALE FARM NURSERIES.

By dint of unremitting care and the exercise of no small amount of skill, Mr. Jones, the Chrysanthemum

mum grower to Mr. T. S. Ware, has succeeded in producing a capital display of the Autumn Queen at the Hale Farm Nurseries, Tottenham. Upwards of a thousand plants are grown. This year, owing to great stress of business, the 'Mums have had to rough it somewhat, there having been room to house only a portion of the stock, for the houses have been occupied with other things. Still, the plants that are under glass have behaved very satisfactorily. Possibly the most noteworthy variety in the whole collection is a new incurve obtained from home-saved seed. It is named Countess of Warwick—a name that will doubtless soon become familiar to 'Mum growers. The bloom is the counterpart of Duches of Fife and Lady Isabel for size, and leaves the old style of true Chinese incurve far behind. The colour is creamy-white, with a suffusion of rose upon the lower florets. Rena Dula is a comparatively new variety that makes a capital front row flower for a stand of incurves. The blooms are of medium size, but very compact, and almost globular in shape. The colour is a delicate silvery-rose. At Hale Farm we observed a number of plants, all of which were noticeable not only for the symmetry of the flowers they bore, but also for their dwarf habit.

Coming to the Japanese varieties, one of the most promising new ones was named General Roberts. It is after Milano in build, but the florets are rather shorter, and the colour is deeper. Yellow Madame Carnot was remarkable for the great width and substance of the petals, as contrasted with G. J. Warren, which has been shown in remarkably good condition this year. Ella Curtis is one of the most distinct of the newer forms. The rich bronze-yellow hue is most attractive, and the enormous width and length of the florets constitute it one of the largest of show flowers. Duke of Wellington was represented by some of the finest flowers we have seen this season. When well grown, as in this case, the flowers are very imposing, and of the colour there is nothing better among the ranks of the incurved Japs. Western King, Simplicity, Graphic, Milano, and Lady Oporto Tait were all in capital condition. The curious Madame Edmond Roger has a charm all its own. The particular shade of green it exhibits is not at all unpleasing.

Single flower varieties are by no means forgotten. Miss Mary Anderson and other flowers of that type are among the most useful and handsome. Ethel Suter is one of the finest of the larger flowered forms from a decorative point of view. It cannot be fairly said to be a single, since there are four rows of ray florets, but the flower is striking nevertheless, being over 4 in. in diameter, and rich, full yellow in hue.

Bessie Conway is another semi-double of value. It has large white flowers prettily blotched with rose. Miss Rose represents another useful section of singles. Here we may place the small white Gladys Foster, a variety of some two years' standing.

BOTANIC GARDENS, GLASGOW.

AMONG the many improvements which Mr. Dewar has made since his appointment as Curator of the Glasgow Botanic Gardens, perhaps one of the happiest was the introduction of an annual display of the flower of the period—the Chrysanthemum.

This grand show is each year held in the gorgeous Kibble Palace, a magnificent building now used as winter gardens. The happy idea has elicited, as would naturally be expected, the highest approbation of the public, and notwithstanding the odourate contempt with which the commercial denizens of the good old city of St. Mungo behold the arts and devices of the horticulturist, the labours of Mr. Dewar have successfully gained their admiration.

This we confess is one of the most powerful indications of not only the professional resources of the Curator, but what is more, his ability to foresee the way and means whereby to meet the requirements of a public constituted such as in a city like Glasgow.

On Saturday afternoon the yearly exhibition was opened to the public by Bailie Dickson, who, in his opening address, bestowed high praise on the deserving exertions of Mr. Dewar and his assistants for the beautiful treat that the public received at their hands. The present display is undoubtedly the finest yet produced by Mr. Dewar, and this is no small matter in the estimation of those who are conversant with the difficulties which surround the higher cultivation of the Chrysanthemum, and its ever increasing development. Each year's produc-

tion clearly proves that it is possible by the application of art and untiring energy to bring forward material that would seem only a year before to be impracticable.

The chief object of attraction, which absorbed the attention of the many thousands of visitors during the evening, was the conical bank of Chrysanthemums built on the site of the circular pond at the entrance dome of the Palace. This cone, 30 ft. in diameter and 20 ft. high, terminating at the apex with a fine specimen of *Kentia fosteriana*, was composed of nearly 1,000 well-grown plants.

This formed, so to speak, the centre piece of the show; and on account of its position was eminently effective. On either sides open outwards the two large side houses, which were, on this occasion, one mass of Chrysanthemum bloom. The sight was in the highest degree grand and imposing, and one that the visitors will long remember, and which well merits the multitudinous plaudits bestowed upon it by all on Saturday afternoon. The blooms were exceptionally large and uniformly so throughout; the colours were exquisitely and artistically arranged, and combined to produce the most pleasing and telling effect.

Each plant was labelled in such a style that the name could be distinctly read by all the inquisitive 'Mum hunters, as they paced around the prodigious pile. We would fain give a list of the choice varieties, did space allow, but we cannot withhold giving that of a few which were exceedingly fine, viz., Mrs. D. Dewar, and Mrs. Bisland (two garden seedlings raised by Mr. Dewar), Surprise, Mrs. W. H. Lees, General Roberts, Julia Scaramanga, E. Tabor, William Tricker, Mrs. H. Weeks, Mutual Friend, Duchess of York, M. J. Allemand, Phoehus, Commandant Blusset, G. C. Schwabe, M. Pankoucke, Amiral Avellan, Majory Kinder, Vicar of Exmouth, Louise, Pride of Madford, Amy Sbea, and many more equally worthy of notice.

The band and pipers of the Argyll and Sutherland Highlanders discoursed a fine selection of music during the evening, and the throng of visitors was unprecedented in the annals of the gardens. —Gamma.

THE VINERIES, FRAMFIELD.

THE removal of Mr. Norman Davis' establishment from Lilford Road, Camberwell, S.E., to the clearer and more kindly atmosphere of southern Sussex has been productive of marvellous results. The critical character of the modern cultivation of the Chrysanthemum is such that light, air, and sunshine are all important factors if good blooms are to be forthcoming. Mr. Davis has undoubtedly risen to the height of his opportunities, as those of us with whom his magnificent display of the Autumn Queen at the November show of the National Chrysanthemum Society is still fresh will fully admit. Such blooms as he then exhibited have never been surpassed, if indeed they have ever been equalled in the history of the cult of the Chrysanthemum.

With regard to natural surroundings Mr. Davis' lot is cast in pleasant places. The Framfield Nurseries, which have an area of some sixteen acres, are within sixteen miles of that metropolis of southern coast watering-places—Brighton, and about one and a half miles distant from the country town of Uckfield. The country bereabouts is charmingly hilly, and is well wooded, and watered by the Ouse and its tributaries.

The nurseries themselves are situated on the gentle slope of a hill facing to the south, and within view of the breezy tops of the South Downs, which run in a misty blue line along the southern and south-western horizons.

We were astonished to find that two acres of ground are covered by well-built and substantial glasshouses. There are eight roomy span-roofed erections, each measuring 200 ft. in length and varying from 20 ft. to 25 ft. in width. The giant, however, is a veritable palace of glass, which is 312 ft. in length, 65 ft. in width, and of proportionate height. All these houses are filled with Chrysanthemums in the autumn months, the large house above referred to being devoted to early flowering varieties, many of which are planted out. Upwards of thirty thousand Chrysanthemums are grown in pots, which fact alone is sufficient evidence of the gigantic scale upon which Mr. Norman Davis conducts business.

We were too late to see the flowers at their best,

for they expended early this season, owing to the summer-like character of the first three weeks in October, but there were thousands of grand blooms still on view, in the third week in November, sufficient evidence of what skilled cultivation can effect.

The Framfield collection includes a vast number of varieties, but year by year inferior forms are weeded out, or only grown for stock to supply orders, while all the best varieties are grown and flowered in quantity.

With the eye of a true artist Mr. Davis has arranged the several varieties in hatches or breaks by themselves. In this way each variety is enabled to display its charms and its distinctive features of colour and build to the greatest advantage. Thus the eye is greeted with a succession of breaks of colour that makes a far greater impression on the mind than does the kaleidoscopic effect of a mixed arrangement.

With the sight of those gigantic blooms of Madame Carnot shown at the Aquarium still looming largely in our mind's eye we were naturally somewhat curious to see the plants from which they were taken. We found, somewhat to our surprise, be it confessed, that as a rule one plant in a small 8-inch pot had produced three of these floral giants. Some of the huge flowers were still left, and towering high up above their fellows, for Madame Carnot does not lack stature, were determined not to be passed by. As Mr. Davis markets a great many of the flowers, Japanese and incurved Japanese varieties were the most conspicuously in evidence. We may include in these what is popularly known as the decorative section. Varieties of this class must be possessed of good habit, the colour of the flower must be good, and the plants must be floriferous, whilst a stiff strong stem, not necessarily a thick one, is a *sine qua non*. Golden Gate, which was certificated in 1896 by the N.C.S. is the *beau ideal* of a market variety. The habit of the plant is everything that could be desired, and the flower is of good size and exhibits a rich shade of bronze-orange, while the florets are stout and substantial. Such varieties as Mme. Felix Perrin, pink, and Clinton Chalfont were also first-class. King of Plumes is a curious flower of medium size with very deeply lacinated florets. The colour is rich butter-yellow.

Than Sunstone it would be difficult to find anything more charming, for the breezy Sussex hills have developed the delicate colour to perfection. The same may be said of Etoile de Lyon, which, however much it may be inclined to coarseness elsewhere, with Mr. Davis is exceedingly handsome.

We have now so many good yellows that it is hard indeed to choose between them, and here at Framfield they faced us in almost bewildering profusion. Sunflower, Phoebus, Edith Tabor, and Modesto are all too well known to need further praise. It must suffice to say that here we saw them at their best, and those who know what that "best" is will be able to judge for themselves. Strea is a rather tall yellow variety that is not so well known. Its great merit is that its flowers expand about Christmas, although the general earliness of the season has affected it somewhat this year. Tuxedo is another excellent late yellow form. Kentish Yellow may be best described as a yellow counterpart to Niveus.

White varieties were in equal abundance. Next to Madame Carnot, the most striking was without doubt Western King. This is one of the best of the seedlings sent out by Mr. Nathan Smith, of Adrian, Mich., U.S.A. Mr. Norman Davis distributed it in this country, and from the first averred that of its kind there would be nothing to beat it. How true this forecast was our visit abundantly proved to us, for over 600 magnificent blooms were then open and many hundreds had been already cut. Mrs. Weeks is undeniably good, but Western King is better, as may easily be seen when the two varieties are grown side by side. We may remark, *en passant*, that of the eight American seedlings from Mr. Nathan Smith, Mr. Davis has received First-class Certificates for seven of them—a handsome record.

Of the newer whites which have been certificated during the coming season, Simplicity may be mentioned as a good and useful sort, and sufficiently distinct. Niveus, another American variety, also does remarkably well, and is still one of the best whites. Souvenir d'une Petite Amie must likewise not be forgotten.

Hairy Wonder was represented by some mar-



CHRYSANTHEMUM ROSE QUEEN.

vellously fine blooms, whose rich colour might well be envied by the productions of the town and city. Mrs. W. J. Godfrey is a new white hairy form of considerable merit. Louise, Geo. Seward, Mme. Ad. Chatin, Mme. J. Bernard, Chas. Davis, Vivian Morel, G. W. Childs, and the white, buff, and pink Good Gracious, have all rendered a capital account of themselves.

Those cultivators who are lamenting the decadence of that erstwhile fine variety, Edwin Molyneux, will be joyed to learn that Mr. Davis has a seedling that bids fair to supersede it. The build and colour of the bloom is very nearly the same as in Edwin Molyneux, but the habit of the plant is more robust, and it promises to be an incomparably better doer. It is to be named Joseph Chamberlain, and was raised by Mr. Weeks, of Thrumpton Hall Gardens, Derby.

Amongst the incurved section we noted very many grand samples, Mrs. R. C. Kingston being especially fine. Lord Wolseley, George Haigh, Perle Dauphi-

noise, Baron Hirsch, C. H. Curtis, Major Bonaffon, and the new varieties, Mme. Ferlat, and Mdle. Lucie Faure were all first class.

In conclusion we may say a word of the health and vigour of the plants, which were remarkably good. In every case they presented a wiry appearance that bespoke judicious treatment with regard to feeding. Like most other successful cultivators, Mr. Davis is extremely careful how he applies chemical stimulants, and his plants are not slow in repaying the care. Mildew is almost sure to make its appearance amongst the plants towards the end of the season, but it has been kept so well at bay at Framfield that only a stray spot or two met our gaze.

The Framfield Chrysanthemums are from all points of view first-class!

Wheat averaged 2s. per ton from the time of Alexander the Great down to the time of Columbus; but from 1751 till 1800 the average price was four times as much.

CHRYSANTHEMUM ROSE QUEEN.

THE accompanying illustration of this Japanese variety was prepared from a photograph sent us by Mr. W. J. Godfrey, Rolle Street, Exmouth, Devon, who has been remarkably successful with his Chrysanthemum novelties during the past few weeks. He has been accorded fifteen certificates, for various exhibition varieties, by the National Chrysanthemum Society and the Royal Horticultural Society. This fact alone, in the absence of other evidence, would show that Mr. Godfrey not only understands the culture of the golden flower, but also the qualities that are requisite in a variety to claim the attention of exhibitors. Rose Queen is represented natural size, and the general contour of the bloom as well as its perfectly double character, will be apparent to the eye of the experienced cultivator. There is much material in the bloom and Mr. Godfrey has every confidence in its sterling qualities for exhibition purposes.

HINTS FOR AMATEURS.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Newly-Planted Wall Trees.—*F. C.*: You must on no account permanently nail the trees to the wall yet, for no matter how firmly you have trodden the ground, it will be sure to sink to some extent during the next two or three months. The branches would then be strangled by the ties, and the roots would be disturbed in the ground. You may untie the branches from the "bunched" state in which they have been placed by those who packed them, and you must give the tree some support to prevent it being twisted at the collar by the wind. You may either loop the main branches loosely to the wall, or drive a stout stake into the ground on either side of the central stem of the tree and tie a few of the branches to that.

Planting Roses—I have received a small consignment of Roses from the nurseryman. They are lightly covered with earth, waiting to be planted. Would you advise me to plant now, or let them wait as they are until spring?—*F. C.*

Plant them at once, by all means. You gain nothing by leaving them where they are.

Roses.—Please say when is the best time to make a Rose border, and the best way.—*Reader.*

As you make no mention of glass, we assume that you mean an out-of-door Rose border. In making such a border the first thing to do is to see that the soil is well drained. If this is not so naturally, then drains must be put in to carry off the surplus water. If the soil is a loam of medium texture varying to heavy you will do well to trench to a depth of about 2 ft., throwing the surface soil loosely up for the frosts of winter to break up and sweeten. If, on the other hand, the soil is inclined to be poor and gravelly, the lower strata should be loosened, but not brought up to the surface—in other words the ground should be double dug. A liberal dressing of good rotten stable manure should be worked in. For very heavy soils a dressing of burnt earth, charcoal, or wood ashes would be very serviceable. You may set about the digging and trenching at once, the sooner the better, as the soil is now in a favourable condition for working, and this part of the operation should be completed before winter sets in. In the spring all you have to do is to level the soil down and plant. A bed or border prepared in this way will suit the Hybrid Perpetuals well. For the more delicate Tea Roses, on the other hand, a little more care must be exercised. A warm south border is the best for them, and the greatest care must be taken to see that the soil is well drained and that it is mellow and friable.

Crocuses.—*Amateur*: Crocuses will grow and produce capital flowers without any soil whatever. Place the corms close together in a saucer or shallow dish containing a little water. All you have to do is to keep the water supply constant. An ordinary dwelling-room will suffice for accommodation. These saucers of Crocuses form a very pretty ornament for a room, and the wonder is that more people do not try to grow this pretty spring flower in this way. You need not be afraid of the corms rotting off if you do not put in too much water. We were quite prepared to hear you suggest that they would rot, however, when treated in the way suggested, but give the matter a trial, and then you will be convinced.

Lobelia cardinalis.—*S. Young*: Lift the plants, place them in shallow boxes with a little soil, and house them in a cold frame. Divide the roots in spring if you wish to propagate.

Nepenthes.—*W. Squires*: You have not a sufficiency of heat to grow the Pitcher Plants properly, although your house might be warm enough through the summer. Through the winter months the tem-

perature should not fall below 60° Fahr., or at the very lowest 58°.

Strawberry.—*Robert R.*: We are afraid, from what you say, that the Strawberry crowns are too weak to be of much use for forcing purposes. Still apparently weak crowns will occasionally give good results. Have you no practical man in the neighbourhood to whom you may show the plants and whose advice you may seek. It is impossible for us to say definitely without a look at the plants.

Muscat of Alexandria Grapes.—*Y.*: The Grapes may be allowed to stay on the vines until the sap begins to move in the spring, after which they must be removed and bottled if you wish to keep them longer. Meanwhile the house should be kept as cool as possible and fairly dry. A little fire-heat may be required during cold and damp weather, but it must not be overdone.

Winter Cucumbers.—*J. Reeves*: There are not very many growers in the vicinity of London that make very great attempts with winter Cucumbers. The plants grow well enough up to a certain point, but when late autumn and winter come with dense fogs they make but little headway; indeed, it is a great question whether they pay at all. Now you have your plants started, however, you must make the best of things. Do not do too much stopping or pinching, for vigorous growth is wanted, and the plants will have all that they can do to make sufficient growth during the dull months. A temperature of from 60° to 65° Fahr. will be required, the former temperature being maintained during the night.

A VISIT TO MR. PETER COCKBURN'S VINEYARD, DRUMCHAPEL.

ABOUT the beginning of August I paid my annual visit to the above vineyard, and I was amply paid for my trouble. The houses are five in number, each 150 ft. long, except one which is 70 ft., span-roofed, and standing on iron pillars, of the very newest design. One of these houses is planted with Vines about two-thirds of which are Gros Colman, and the remainder Alicante; and to get a sight of it is worth going many miles to see. The Vines were planted green in the month of June, 1895, allowed to run over the house for the first year, and the canes being strong they were cut back to about 6 ft., and in the following year, 1896, Mr. Cockburn exhibited both Gros Colman and Alicante Grapes cut from Vines two years old. They were the admiration of everyone who saw them, and he was told by a good number of growers that he would have to be content the next year with a good deal less; but instead of that there is a crop of Grapes hanging at Drumchapel just now that could not be beaten in all Scotland, which any gardener can prove by going and seeing for himself. At the time of my visit Gros Colman was beginning to colour, and some of the berries were almost as large as a penny. He begins to send away Gros Colman about Christmas, and can always command a good price for them.

I next visited the Tomato houses, which are four in number. Three of them, each 150 ft. long, are planted with Mr. Cockburn's own seedling, a beautiful, smooth-skinned Tomato of a delicious flavour. One other house, 70 ft. long, is also planted with Tomatos, but whichever house you go into the same excellence is observable. Plants are laden with fruit from the first joint right up to the top, and some of the bunches are over 3 lbs. in weight. He will put between five and six tons in the market this year. I may state that the Glasgow water has been laid all over the house, and by a patent system of his own, Mr. Cockburn can at all times draw either hot or cold water in all parts of his houses.

Mr. Peter Cockburn's name as a Grape grower is known all over Scotland. The first time we heard of him was in 1878; he was then gardener to D. T. Stewart, Esq., of Barassie, who took a great interest in his gardener as a Grape grower, and allowed him everything he required to produce the best Grapes procurable; nor was he disappointed. As a proof of this some of the Grapes that were sent to London drew the handsome sum of 18s. per lb., a price never realised by any other grower in the country, and which was commented on by the London press.

In the year 1888 or 1889 Mr. Cockburn was appointed head gardener to the Right Hon. Lord Blantyre, Erskine House, where he had great scope to test his ability as a fruit grower, which he took full advantage of by making Erskine famous for its fruit.

In 1892 he started for himself, and is now fast adding to his fame by his straightforward and honest dealing in all his business matters. I understand that he has lately brought out a manure for Grape and Tomato growing, and the crops produced by it at Drumchapel are ample proof of its virtue.—*A Scotch Grape Grower.*

THE HORTICULTURAL CLUB.

THE usual monthly dinner and conversazione took place at the rooms of the Club, Hotel Windsor, on November 9th. The chair was occupied by the Rev. W. Wilks, and notwithstanding the attractions of the Chrysanthemums elsewhere, there was a good attendance of members, amongst whom were Messrs. Shea, Selfe-Leonard, C. E. Pearson, A. H. Pearson, G. Bunyard, George Nicholson, G. Masee, James H. Veitch, and the secretary.

The discussion was opened by Mr. G. Masee, president of the Mycological Society, who gave a very interesting address on "Lilies and their Diseases," and a very instructive and practical conversation followed, in which most of the members present joined. A cordial vote of thanks was accorded to Mr. Masee for his valuable address. We give an outline of it, which, however, only gives a very faint idea of its value and importance.

Among the various fungoid diseases to which Lilies are subject, three kinds require special notice, on account of the wholesale destruction caused by their presence. One of these, unfortunately too well known in this country, especially during damp seasons, first appears under the form of small, yellowish spots on the leaves and flower-buds; these spots soon change to a dark olive-green colour, and if a fragment of the fungus taken from one of these spots is examined under the microscope, it is seen to consist of a number of dark coloured threads, each bearing two or three clusters of fruit or conidia near the tip. These conidia are produced in rapid succession during the summer months, and are capable of germination the moment they are ripe. The conidia are readily distributed by wind, insects, or rain, which carries them from diseased to healthy leaves. All conidia alighting on the damp surface of a Lily leaf or flower germinate at once, enter the tissues of the plant, and form new centres of disease, which quickly produce conidia. From the above account, it will be readily understood how easy, and also certain, it is for the disease to spread rapidly after it has once gained a foothold in a bed of Lilies. At this stage spraying with a fungicide is of great service in preventing the spread of the disease, as all germinating conidia are destroyed. A solution of potassium sulphide, in the proportion of one ounce of the sulphide dissolved in three gallons of water, serves the purpose. During the summer the mycelium of the fungus becomes aggregated into numerous minute, compact, black lumps, in the tissues of the leaves, stem, and often also in the outermost bulb-scales. As the leaves and stems decay during the winter, the sclerotia are liberated and lie on the ground, where they remain in an unchanged condition until the following spring, when they produce conidia, which find their way on to the leaves or flowers of Lilies, and the disease commences its life-cycle anew. From what has been said, it is scarcely necessary to indicate the importance of not allowing leaves and stems of diseased plants to decay on the ground; all such should be collected and burned. All bulb-scales showing the minute black sclerotia imbedded in their tissue should be removed before the bulbs are planted. The conidial form of this fungus is called Botrytis; it is probably a stage in the life-cycle of a higher form called Sclerotinia, but this has not yet been definitely proved.

A second disease, caused by a fungus called *Phyllosticta liliicola* causes the appearance of reddish patches on the stems and leaves of Lilies, followed by a bronzing of the leaves; the flowers of such plants are usually distorted, or not infrequently fall in the bud stages. Promptitude in spraying on the first appearance of the disease would check its spread, and the burning of all diseased stems and



CHRYSANTHEMUM MME. FERLAT.

leaves would tend to prevent a recurrence of the disease.

A third disease which has during the past two years proved most disastrous to the bulb industry in Japan, is known as *Rhizopus necans*. To the naked eye this fungus presents the appearance of numerous miniature pins, with round black heads springing from a white downy felt of mycelium. The minute black heads contain numerous conidia, and such of these as alight on any injured portion of a bulb, germinate at once, enter the tissues, and eventually kill the bulb. In addition to conidia, a second form of fruits is formed by the fungus in the tissues of the decaying bulb; these remain in a resting place until the following spring, when they produce conidia, by which the crop of bulbs is again infected. The

fungus cannot enter the unbroken tissues of a bulb, but gains access through some wound, usually broken root fibres.

It has been shown that bulbs are much more susceptible to the disease when lifted before they are quite mature. Furthermore, such bulbs are usually packed for exportation before they are dry, consequently sweating takes place during the journey, and all the conditions tend to favour the development and spread of the disease.

A full account of this disease, along with illustrations, is given in the *Kew Bulletin*, February—March, 1897.

CHRYSANTHEMUM MADAME FERLAT.
This pure white incurved Japanese variety is one of

the best growers M. Calvat has ever distributed. The plant grows only $3\frac{1}{2}$ ft. to 4 ft. high, and is of grand habit. It may be taken on the first or second crown bud, but does best on the first crown, every one coming good. The objection which holds with regard to many of the coloured varieties does not apply here. The pure white of Madame Ferlat remains constant from either bud. The blooms measure 6 in. across, which, for an incurved Japanese variety, is ample to insure their success on the exhibition boards. The accompanying illustration was prepared from a photograph sent us by Mr. William Wells, Earlswood Nurseries, Earlswood, Redhill, Surrey, with whom the variety has proved of the easiest cultivation. A First-class Certificate has also been accorded it.

CHRYSANTHEMUM SHOWS.

ORLEANS.—November 6th, 7th, 8th, 9th, and 10th.

The second Congress under the auspices of the "Société Française des Chrysanthémistes" was held on the above dates.

The Prize of Honour, offered by the President of the Republic, fell to MM. Montigny & fils for their Chrysanthemums in pots and collection of cut blooms. The special prize offered by the Conseil Général was awarded to M. Mourand, Horticulteur, Nantes, for his good culture of Chrysanthemums. The special prize offered by the Lady Patronesses was won by M. Calvat, of Grenoble, for his new seedlings. The special prize offered by the City of Orleans went to M. Liger-Ligneau, Horticulteur, Orleans, for excellent Chrysanthemums in pots.

The special prize offered by the president of the society was won by M. Couillard, Vice-President of the Chrysanthémistes Society, for his good collection of cut blooms. The special prize offered by M. le Marquis de St. Paul, vice-president of the society, fell to M. Gué, Poitiers, for his collection of large blooms.

A special prize, offered as a souvenir of M. and Mme. Chevrier, went to Mr. Dejoux for a good collection in pots. A special prize by the society was carried off by MM. Vilmorin, Andrieux & Cie., of Paris, for Chrysanthemums in pots.

A special prize offered by Mme. Sainjon, presidente of the Lady Patronesses, went to M. Ragueneau, of Chateaufieux, for his large blooms.

The Gold Medal offered by the Minister of Agriculture went to M. Mourand, Chrysanthémiste, Nantes, for his good culture of standards, which, we may add, were the main feature of the show.

The Gold Medal given by the Société Française des Chrysanthémistes went to M. Foucard, of Orléans, for his Chrysanthemums in pots, and standards.

The following awards were also made:—A Silver Medal to M. Proust-Gallianand, Orléans; Silver Medal to M. Liger-Ligneau, Orleans, for his new *Begonia gigantea*; Silver Medal to M. Dubois, for his *Begonia Rex*; also to M. Champdavoine, for his Primroses; and to M. Fortepaule, for his Cyclamens.

The prizes for cut Chrysanthemums were awarded as follows:—The Silver Gilt Medal offered by the Minister of Agriculture, to M. Drussy, Vineuil; Silver-Gilt Medals to M. A. Charvet, and to M. Socquard-Martin, of Troyes; large Silver Gilt Medals to MM. Nonin and Morières for their new varieties. Small Silver Gilt Medals to MM. Héraud, of Pont d'Avignon; Rozain-Boucharlat, of Lyons; and M. Dumas de Busset, for their new varieties; the Silver Medals offered by the Minister of Agriculture, to MM. Rivoire, père & fils, of Lyons; and to M. Juge, of Lille-sur-Sorgue.

The other small Silver Medals went to M. de Reydelet, of Valence; M. Bonnefons, M. Roux, M. Ragueneau, M. Giraudin, and to M. de Fondettes.

The Ichthemic Guano Company, of Ipswich, England, were awarded a First-class Diploma of Honour for their fertilizer. The firm was represented by their continental representative, M. W. J. Le Cornu.

We are pleased to learn that the Medal of Honour of the Congress was given to M. de Reydelet, of Valence. This gentleman, we all know, is one of the oldest French Chrysanthemists.

The town chosen for next year's Congress is Troyes.

LEEDS PAXTON SOCIETY.—November 9th and 10th.

The ninth annual Chrysanthemum exhibition of the Leeds Paxton Society was opened on the 9th inst. in the Town Hall, by the President, E. B. Faber, Esq., J.P., in a very appropriate and neatly worded, short speech, in which he jocularly remarked that human beings were more inclined to show gratitude for favours to come, but plants and flowers had gratitude for favours that were past. Plants were always truly grateful.

The show was continued on the 10th. Under the management of that energetic body—the members of the Paxton Society—it has now taken front rank among the Chrysanthemum shows of the north of England. The entries were more numerous than on any previous occasion, being considerably above 500. The quality of the exhibits was also better

than formerly, especially that of the Chrysanthemum groups, and the cut blooms in the local classes.

On entering the hall it presented a truly picturesque appearance. The specimen and foliage plants were tastefully arranged in the orchestra. The Chrysanthemum groups were arranged on one side of the hall, and the miscellaneous groups on the other. The cut flowers, table plants, and fruits were staged on tables placed across the hall. The bouquets, sprays and buttonholes were arranged in front of the orchestra, on each side of an artistic design of fruit, flowers, and autumn tinted leaves, set up by Mr. Grix, gardener to Sir J. Kitson, and Mr. A. Walker, of Shaw Bros., florists, Leeds. This was frozen in a large block of ice by Mr. Thomson, of the Leeds Storage Company, which was a great attraction to the show. The vegetables were all arranged in an ante-room. The whole management reflected great credit on the curators, Messrs. Bailey, Benham, Daniels, and Charge.

In addition to the improvement in quality in the Chrysanthemum groups, we were pleased to notice a departure—which might, with still better effect, be carried a little farther—from the stiff banks of Chrysanthemums we usually see. The addition of six foliage plants and Ferns relieved the stiffness considerably. The first prize was justly awarded to Mrs. Bowring, Allerton Hall, Gledhow, Leeds (gardener, Mr. W. Moore). The quality of the blooms in this group was such as is seldom seen in groups, indeed it was superior to many that we see on the boards. The blending of the colours was charming, and relieved with well-grown plants of Cocos, made it the most pleasing group of Chrysanthemums we ever had the pleasure of seeing.

J. Rhodes, Esq., Potternewton House, Chapeltown, Leeds (gardener, Mr. R. Mason), was placed second with a well-arranged group. Mrs. Tetley, Fox Hill, Weetwood (gardener, Mr. Eastwood), was third, and Mrs. Taylor, Buckingham House, Headingley (gardener, Mr. Leech), was fourth.

The miscellaneous groups in the local class showed good cultural skill, but the arrangement was perhaps too stiff and flat, with the exception of the first-prize group exhibited by M. Kitchen, Esq., Eller Close, Roundhay (gardener, Mr. Gamble), who showed great decorative taste. J. Rhodes, Esq., was again second in this class; and J. W. Oxley, Esq., J.P., Spenfield, Headingley (gardener, Mr. R. Riches), third.

In the open class for miscellaneous groups, there was only one exhibitor, E. B. Faber, Esq., J.P., Belvedere, Harrogate (gardener, Mr. W. Townsend), who set up a splendid group.

In the open class for twenty-four Japanese blooms, R. A. Bowring, Esq., The Heath, Cardiff, took first honours with a most magnificent stand made up of the following varieties:—Simplicity (a superb bloom which gained the special prize as the best Japanese in the show), Etoile de Lyon, Chas. Davis, V. Morel, John Seward, Duke of York, Phoebus, Australian Gold, W. Seward, Miss Elsie Teichmann, Mrs. H. Weeks, Mrs. Hermann Kloss, Edith Tabor, Pride of Exmouth, M. Chénon de Léché, Mrs. G. W. Palmer, Gen. Roberts, and Mad. Carnot. A. Wilson, Esq., Tranby Croft (gardener, Mr. Leadbetter), was second with a good stand, but not quite so heavy as the first, made up with the following varieties:—Mad. Carnot, C. Davis, E. Tabor, M. G. H. de Clermont, Primrose League, T. Wilkins, Australian Gold, M. Chas. Molin, Phoebus, M. Joseph Allemand, Pride of Madford, Pride of Exmouth, V. Morel, E. Molyneux, Amiral Avellan, Baron Alf. De Rothschild, Modesto, and Niveus. Mr. J. W. Backhouse, florist, Beverley, was placed third with a very creditable stand.

In the open class for eighteen incurve blooms, The Right Hon. The Earl of Harrington (gardener, Mr. Goodacre), had a splendid stand with which he won the society's Challenge Cup. Having won the Cup in this class twice in succession, it becomes Mr. Goodacre's own property. The varieties on this stand were C. H. Curtis, two blooms (one of which gained the special prize as being the best incurve in the show), Duchess of Fife, H. Flight, M. O. Blanch, Globe d'Or, Queen of England, Golden Empress, John Doughty, John Lambert, Lord Alcester, Mrs. S. Colman, Violet Tomlin, Princess of Wales, and two blooms of Miss Haggas. A. Wilson, Esq., was again second in this class with a good stand of the following varieties: C. H. Curtis (2) R. C. Kingston,

(2), Queen of England (2), J. Agate, Lord Alcester, Princess of Wales (2), Empress of India, Violet Tomlin, John Lambert, Miss Haggas, Globe d'Or, Mrs. J. Kearns, Alfred Salter, and Ma Perfection. G. H. Cockburn, Esq., Lingdale Lodge, Birkenhead (gardener, Mr. Burden), was third with neat well-formed blooms, but not quite so heavy as the other two lots.

In the open class for twelve incurves, distinct, A. Wilson, Esq., was first, Mrs. Whitaker, Cliffe House, Hessle, near Hull (gardener, Mr. Jarvis), was second.

In the local classes for cut blooms there was noticeable a marked improvement, and some of them would have scored well had they been placed in the open classes, especially the twelve incurves, distinct, and the twelve Japanese distinct, exhibited by Mr. Moore, gardener to Mrs. Bowring, Allerton Hall, Gledhow, with which he won the two Challenge Cups. The cup offered in the incurve class becomes his own property, this being the second time in succession he has won it. His stands were made up as follows:—Incurves: J. Agate, Golden Empress, Lord Alcester, Empress of India, C. H. Curtis, Mrs. R. C. Kingston, Madame Darrier, Duchess of Fife, R. Petfield, Alfred Salter, J. Doughty, and Perle Dauphinoise. Japanese: Chas. Davis, E. Tabor, G. C. Schawbe, Lady Ridgeway, Madame C. Ricoud, M. Chénon de Léché, M. Pankoucke, Niveus, Phoebus, Pride of Madford, V. Morel, and T. Wilkins.

Sir J. Kitson, Bart., M.P. (gardener, Mr. W. Grix), Gledhow Hall, Leeds, was a good second in both classes. Mrs. Tetley, Fox Hill, Weetwood, Leeds (gardener, Mr. J. Eastwood), was placed third in the incurved class, and Mrs. Taylor (gardener, Mr. Leech), Buckingham House, Headingley, in the Japanese class.

For a stand of twelve blooms, consisting of six incurves and six Japanese, Mrs. Bowring was again first; Sir J. Kitson, Bart., second; and Mrs. Tetley, third.

For a stand of twelve blooms, consisting of three incurves, three Japanese, three reflexed, and three Anemones, the same three exhibitors were placed in the same positions. In the class for six incurves of one variety, Mrs. Taylor exhibited six superb blooms of C. H. Curtis, with which, of course, she obtained first honours, Mrs. Bowring being second, and Sir J. Kitson, third.

There was a fine display of bouquets, sprays, and button-holes.

Vegetables were extensively shown, but the exhibits of fruit were not so numerous, nor of such good quality as in former years.

The judges were Mr. Jellicoe, Liverpool; Mr. Wilson, Swanland Manor, Hull; Mr. Folkard, Sand Hutton, Yorks; and Mr. Daniels, Dewsbury.—*Cor.*

PARIS.—November 10th, 11th, 12th, and 14th. The exhibition under the auspices of the "Société Nationale d'Horticulture de France" was held in a large marquée erected for the purpose in the Jardin des Tuilleries.

As in the past, we again met the great Chrysanthemists, MM. Vilmorin, Andrieux & Cie., Auguste Nonin, Calvat, Leveque & fils, Boutreux, Régnier, Patrolin, de Reydelet, and Molin. Last year and the three or four preceding years it was M. Aug. Nonin who obtained the first grand prize of honour, but this year it went to MM. Vilmorin Andrieux & Cie., and the second to M. Nonin.

M. Calvat, of Grenoble, exhibited a few new varieties, and we were not astonished to learn that he obtained for his new seedling Chrysanthemums the Medal of Honour offered by the Société d'Horticulture. The second medal went to M. Patrolin, his Chrysanthemums being particularly admired.

The following were the principal prize-takers: MM. Calvat, Auguste Nonin, Scalarandis, Chantrier, Morières, Molin of Lyons, de Reydelet, Bernard, H. Defresne fils et Delvert, and Cordonnier. These names are already familiar to our readers interested in Chrysanthemums.

In the competition for Chrysanthemums in pots, it was again M. Nonin and MM. Vilmorin, Andrieux & Cie. who obtained the highest awards, the order of the awards being as follows: MM. Nonin, Vilmorin Andrieux & Cie., Leveque & fils, J. B. Géraud, and Boutreux.

The other competitions were for the best collections of single blooms of a hundred varieties. Principal

awards as follows : 2nd competition, MM. Vacherot père & fils, Yvon & fils, Lenaerts, and J. B. Géruad ; 4th competition, MM. Bontreux and Yvon & fils ; 5th, M. Magne ; 7th, M. Héhulerne ; 8th, M. Nonin ; 10th, MM. Vilmorin Andrieux & Cie., and M. Patrolin ; 11th, M. Patrolin ; 12th MM. Vilmorin Andrieux & Cie., and Leveque & fils ; 14th, MM. Constant and Duval & fils ; 15th, M. Ragout ; 16th, MM. Leveque & fils ; 17th, M. Laveau ; 18th, MM. Nonin, and Vilmorin Andrieux & Cie. ; 19th, MM. Vilmorin Andrieux & Cie. ; 20th, MM. Cappe & fils ; 21st, 22nd, 23rd, and 24th, MM. Bernard, A. Auger and Gourbron.

For cut blooms the principal awards went to MM. Rosette, of Caen ; Vilmorin Andrieux & Cie. of Paris ; Molin, of Lyons ; Launay, Liébaut, Guérard, Digeon, Ragueneau, H. Leroux, Cordonnier, Leveque & fils, etc.

A gold medal was awarded to M. Nonin for his good collection of Carnations. Medals were also awarded to M. Maxime-Jobert for his Cyclamens ; to M. J. Sallier fils for his new Begonia, Rex-Danemark, and to M. Georges Boucher for his Clematises in good bloom.

The Ichthemic Guano Company had a group of Chrysanthemums in pots, grown with their well-known fertilizer. The firm was represented by their continental representative, M. W. J. Le Cornu.

We address our best felicitations to MM. Aug. Nonin and Vilmorin-Andrieux & Cie. for their success at this show.

The exhibition was visited on the first day by the President of the Republic, M. Felix Faure, and we may add that the show was as good as could be seen on this side of the Channel.

SHEFFIELD.—November 12th and 13th.

THE annual show of the Sheffield Chrysanthemum Society was opened on the 12th inst., by the Countess of Wharnclyffe. It was held in the Corn Exchange. The number of entries are this year considerably in excess of those of the last show. Amongst those who were on the platform, and took part in the opening proceedings were the Lord Mayor of Sheffield (Alderman George Franklin), the Master Cutler (M. Rodgers, Esq.), the very Rev. Canon Gordon, and Colonel the Hon. C. Dutton. The arrangements made by the energetic and genial Secretary, Mr. Housely, were in every way excellent, and the quality of the exhibits was the subject of general comment.

Mr. C. Crooks, gardener to the Dowager Lady Hindlip, Droitwich, was successful in carrying off first prize for a stand of twenty-four incurved blooms, and also for twenty-four Japanese blooms, whilst the premier honours for a group of Chrysanthemums, interspersed with foliage plants was secured by Mr. M. H. Willford.

A special feature, which was introduced last year, is the class for ornamented fireplaces. The designs set up were extremely pretty and effective. The first prize was offered by Mr. Wm. Colchester, of Ipswich, and was secured by Mr. M. H. Willford.

Amongst the trade exhibits may be mentioned those of Messrs. Crossland Bros., Richmond Nurseries, and Mr. S. W. Seagrave, of the Norfolk Market Hall, both of whom exhibited large groups of ornamental flowering and foliage plants. Messrs. Dobbie & Co., of Rothesay, had a stand of cut Chrysanthemums, amongst which were some fine blooms of Lady Hanham, Mrs. Maling Grant, and Lady Isabel.

Messrs. Isaac House & Son, Bristol, exhibited their New Giant Violets, and certainly, judging from the specimens shown, they deserve the name. Trade stands were also put up by Messrs. Wm. Artindale & Son, and an interesting exhibit of pure Ichthemic Guano, by Mr. Colchester, of Ipswich.

GRASSENDALE AND AIGBURTH.—November 13th.

THE seventh annual exhibition was held in the Parish Room, and was fully equal to past shows. The room was utilised to its utmost capacity, in fact the society is crippled for want of space, to show to advantage the exhibits.

For a group of Chrysanthemums not to exceed 40 sq.-ft., E. Pryor, Esq. (gardener, Mr. E. Taylor), staged the premier lot with a somewhat formal arrangement with many bright good flowers.

For three staked plants, Mrs. Duncan (gardener, Mr. J. Keightley), had the finest in three naturally trained plants with an abundance of bloom.

For a single specimen, Mr. E. Taylor won with a large well-flowered plant of Vivian Morel.

For cut blooms the competition was the keenest yet seen at the societies' show. The twenty guinea Challenge Vase, presented by Alfred L. Jones, Esq., Liverpool, for twelve incurved and twelve Japanese blooms, was secured by R. G. Allen, Esq. (gardener, Mr. W. Whittle), with a smart stand, the finest being Queen of England, John Lambert, Mrs. J. Agate, Golden Empress, C. H. Curtis, Vivian Morel, Primrose League, E. Tabor, and Chas. Davis. Last year's winner, R. P. Houston, Esq., M.P., followed with a good lot, the incurves failing slightly in solidity.

For six incurved and six Japanese, Mr. E. Taylor won with a good lot. For six incurved, six Japanese, three incurved and three Japanese, and six Japanese, Mr. J. Heaton was to the fore in each class. For six pots Roman Hyacinths, A. L. Jones, Esq., and Mr. A. Randall won with a nice lot. Mr. Keightley won for two Palms, and six pots Roman Hyacinths. Mr. J. Heaton was successful for four table plants ; one Fern (Davallia mooreana) ; H. A. Saunderson (gardener, Mr. R. Dickson), for two bunches white Grapes in Muscat of Alexandria.

R. Singlehurst, Esq. (gardener, Mr. J. Kelly), led the way with four Cyclamens. Mr. E. Taylor won for the most tastefully arranged basket of pot plants, with Maidenhair Fern, Palms, and good Cattleyas, Odontoglossums, &c., also the single dish of Pears with Catillac ; and the single dish of Apples with Warner's King.

J. Davey, Esq. (gardener, Mr. G. Leadbetter), took the lead for two bunches of black Grapes, with smart samples of black Alicante. For four dishes of dessert Apples, and the single dish of Ribston Pippins, T. H. Bingham, Esq. (gardener, Mr. W. Jones), led the way with four dishes dessert Pears, and for the single dish with Doyenné du Comice.

Nearly the whole of the prizes were presented by friends of the society.

The arrangements throughout were of a satisfactory character and reflect great credit upon Mr. R. Fawkes and his committee. Messrs. J. Jellicoe, and J. J. Craven were the adjudicators.

EDINBURGH.—November 18th, 19th, and 20th.

THE annual Chrysanthemum show of the Scottish Horticultural Association has again been a huge success, fine weather favouring the exhibition during the whole time. During the first day £402 was taken at the doors of the Waverley Market, and £321 on the second day. This was calculated to reach £1,000 for the three days ; and about 35,000 visitors attended during the course of the three days. There were 1,254 entries. All these figures are greatly in excess of last year. This success must be due in part to the liberal schedule of prizes, amounting to £554, offered by the Scottish Horticultural Association. The band of the Grenadier Guards cost £235 for the three days, but it drew an immense concourse of people. Altogether the charges upon the show amounted to £1,029, but it generally happens that a liberal outlay is the truest economy.

CUT FLOWERS.

The Silver Medal offered by Mr. H. J. Jones, Rycroft Nursery, accompanying the first prize for twelve Japanese Chrysanthemums, distinct, was taken by Mr. T. Lunt, Keir, Dunblane, who had twelve grand blooms, in fresh condition, including Mutual Friend, Louise, Phoebus, Simplicity, Col. Chase, Mdle. T. Rey, Dorothy Seward, Lady Byron, and Préfet Robert, all in fine form. Mr. J. Martin, Corndean Hall, Winchcombe, was second with grand blooms of Graphic, Mme. Carnot, Matthew Hodgson, Miss Elsie Teichmann, Australian Gold, Robert Owen, &c. The third award was taken by Mr. W. Nicholson, Cowden Castle, Dollar, who also had some very fine blooms. There were eleven fine stands in this class. Mr. T. Lunt again scored for three varieties, four blooms each of Mutual Friend, Duchess of York, and Lady Byron. Mr. T. Gordon, Ewenfield, Ayr, took the second award ; and Mr. R. Addison, Blackhouse, Skelmorlie, took the third place. Mr. G. Chaplin, Ravenswood, Edinburgh, staged the best six Japanese distinct. Mr. D. Mackay, Cardross Villa, Cardross, was second ; and Mr. G. H. Pearson, Viewforth, Stirling, was third, all the three exhibits being good. There were eighteen exhibits.

Mr. T. Lunt was again the most successful com-

petitor for six Japanese blooms of one variety, showing Col. Chase in fine form. Mr. A. Haggart, Moor Park, Ludlow, took the second place, showing a new incurved Japanese sort named Moor Park. Mr. J. Martin was third with Simplicity. For six blooms of Australian Gold, Mr. W. Galloway, Ferneyside, Liberton, led the way ; Mr. J. Martin and Mr. R. Addison being second and third respectively. The latter came to the front for six blooms of Chas. Davis, which were grand ; Mr. J. Foster, Wellwood Park, Selkirk, and Mr. G. H. Pearson were second and third respectively. Mr. R. Addison also scored for Duchess of York. Mr. J. Fraser, Ardenlee, Dunoon, was a good second, though his blooms were paler ; and Mr. W. Nicholson came in third.

Mr. D. Buchanan, Bargany, Girvan, took the first prize for six blooms of E. Molyneux, in a keen contest of eleven entries ; Mr. R. Addison was a good second ; and Mr. J. Day, Galloway House, Garlieston, came in third. The latter came to the front with six grand blooms of Edith Tabor. Mr. J. Henderson, Ellera, Windermere, was second ; and Mr. T. M. Whitehead, 14, Tower Street, Selkirk, was third. Mr. J. Bird, Raehills, Lockerbie, led the way in the class for Emily Silshury ; he was followed by Mr. J. Martin, and Mr. J. Foster in this order. Mr. J. Bird led the way for six blooms of President Borrel, which were magnificently coloured ; Mr. T. Maxwell, West Park, Skelmorlie, was a good second ; and Mr. J. Forsyth, Torrwood, Row, was third. Mr. R. Addison took the lead for Vivian Morel ; and was followed by Mr. Wm. Hamilton, St. Mary's Isle, Kirkcudbright, and by Mr. D. Cavanagh, St. Edwards, Murrayfield, in the order named.

Incurved Chrysanthemums were best represented in the smaller classes. In addition to those reported in our special edition last week, we now add that the first award for twelve incurved, distinct, was taken by Mr. W. H. Lees, Trent Park, New Barnet, with neat and fine blooms of Duchess of Fife, Bonnie Dundee, Mrs. R. C. Kingston, Miss Haggas, Major Bonaffon, Austin Cannell, J. Agate, Robert Petfield, &c. ; Mr. J. Martin was a good second with large blooms of Charles Curtis, Blush Queen, and F. W. Flight ; Mr. J. Day, who was third, had a handsomely coloured bloom of Bonnie Dundee. Mr. J. Martin took the lead for six incurved blooms, C. H. Curtis, C. B. Whitnal, and J. Agate being fine ; Mr. J. Day was second ; and Mr. P. Blair, Trentham, Stoke-on-Trent, third. Mr. Martin had by far the finest six blooms of C. H. Curtis ; Mr. E. Horn, Netherhall, Maryport, was second ; and Mr. J. Henderson third. The latter came to the front for six incurved of one variety. He was followed by Mr. T. Dale, Aikenhead, Cathcart, and by Mr. J. Clark, Bannerfield, Selkirk, respectively. Mr. J. Martin had the best six blooms of Hairy Wonder, being an easy first ; Mr. J. Foster was second ; and Mr. T. M. Whitehead was third.

The various classes for vases, hand bouquets, epergnes, &c., brought out a large number of exhibits, making the competition keen in several of the classes. The first prize for a hand bouquet of Chrysanthemums was taken by Miss Todd, Stoneybank, Musselburgh, whose shower bouquet was very graceful and charming. Competition was keen. She also had the best arranged epergne. The best epergne or vase filled with coloured vine leaves was also staged by Miss Todd, being quite ahead of Mrs. Jobson, Coltbridge Avenue, who was a good second. Both exhibits were mounted on high pedestals.

Mr. J. Foster led the way in the class for four vases of Chrysanthemums, showing grand triplets of Mrs. W. H. Lees, V. Morel, M. Chénon de Léché, and Mutual Friend. Mr. D. Mackay, Kingston Grange, Liberton, was a good second. Mr. R. W. E. Murray, Blackford House, came in third, in a competition of ten entries. The latter came to the front for a single vase of twelve Japanese blooms ; and was followed by Mr. J. Foster, and Mr. C. Harris, Carfin, Carlisle, respectively, in a competition of fifteen. Mr. W. Armstrong, Musselburgh, led the way for a vase of six Japanese blooms. Mr. D. Airdrie, Larbert House, Larbert, and Mr. J. Henderson were second and third respectively. Mr. T. M. Whitehead had the best vases of single Chrysanthemums, showing Miss Rose and Mary Anderson chiefly, both being particularly graceful. Mr. John Wardie, Dollarby, Dollar, had the best three vases of decorative Chrysanthemums not disbudded, and shown with their own foliage. They were pretty and effective. Mr. T. Gordon was second.

The premier award of £5 for thirty-six blooms of *Chrysanthemums*, distinct, and open to nurserymen only, was taken by Mr. W. Wells, Earlswood Nurseries, Earlswood, Redhill, Surrey. His blooms were fresh, of grand dimensions, and many points ahead of the second prize exhibit, shown by Mr. Robert Grossart, Clarendon Nursery, Perth Road, Dundee, whose blooms were also good, especially when latitude is taken into consideration.

GROUPS AND PLANTS.

The circular tables were a distinct feature of the show, but unfortunately they were too much under the shade of the galleries. Mr. A. E. Todd, Stoneybank, Musselburgh, was an easy first for a 4 ft. table of plants, flowers and foliage, with a fine arrangement of *Chrysanthemums*, *Lily of the Valley*, *Roman Hyacinths*, &c. Mr. Geo. Wood, Oswald House, Edinburgh, was a good second, having long sprays of *Orchids*. Mr. Wm. Small, Blackford Park, was third in a competition of six. Mr. D. Kidd, Carberry Tower, Musselburgh, had the most effective arrangement on a 3 ft. table. Mr. A. Bogie, Auchans, Kilmarnock, followed; and Mr. J. Forsyth was third. There were eight tables in this class.

In the open class for the best new *Chrysanthemum* not in commerce, the first prize (the Silver Medal of the association) was won by Mr. W. Stewart, Ellenbank, Maryport, for a white sport from *V. Morel*, named Mrs. John Ritson, for which two certificates have already been given. In another open class for the best *Chrysanthemum* plant having one of Mr. Porter's (Maidstone) patent invincible crocks in the pot, the special award offered by Mr. Porter was won by Mr. D. Cavanagh, St. Edwards, Murrayfield.

The first prize for a group of *Chrysanthemums*, foliage and other flowering plants was secured by Mr. Geo. Wood, whose circular and conical group was surmounted by a large and well grown *Phoenix*. The *Chrysanthemums* were interspersed with *Dracaenas*, *Crotons* and other subjects. Mr. D. Jardine, Ravelston, Blackhall, took the second place with a similarly constructed group. Mr. P. Hunt, Coltbridge Hall, came in third. Mr. D. Mackay took the leading award for eight stove or greenhouse foliage plants, showing some large, well coloured *Crotons*, *Aralia Chabrieri*, *Dracaena*, *Palms* and *Nephtytis*. Mr. M. McIntyre, The Glen, was second; and Mr. J. Cocker, Chester's Hall, Northwood, third. Mr. M. McIntyre also had the best *Dracaena australis*, and the best six *Dracaenas*, distinct. Mr. J. Cumming, Greenpark, Liberton, had the best six specimen *Ferns*. Mr. G. Chaplin, St. Leonards, had the best *Chinese Primulas*. There was a fine display of *Primula obconica*, Mr. J. Briggs, Cochna, Duntochar, being first, and Mr. M. McIntyre, second. Mr. C. Comfort, Broomfield, Davidson's Mains, had the best *Christmas Roses* in pots. Mr. D. Mackay had the best table plants; Mr. M. McIntyre being second, but coming to the front for four decorative or foliage plants of large size. Mr. Jas. Shearer, Ratho Lodge, Ratho, had the best *Roman Hyacinths*.

NURSERYMEN.—Only a few classes were set apart for nurserymen. Messrs. R. B. Laird & Sons, Pinkhill, Murrayfield, had the best six specimen *Palms*, having amongst other things a grand plant of *Pritchardia (Licuala) grandis*. Mr. R. Grossart, Clarendon Park Nursery, Dundee, was second. Mr. John Downie, 144, Princes Street, Edinburgh, also had some prizes for *Palms* of different sizes.

AMATEURS exhibited well both in the classes for plants, cut blooms for exhibition, and in vases. The leading award for twelve *Japanese blooms*, in not less than six varieties, was taken by Mr. A. Brydon, Tweedbank, Innerleithen, who had fine blooms of *Australia*, *M. Chénon de Léché*, *Duchess of York*, *Eva Knowles*, &c. He was also first in the class for six blooms. Many of the amateurs competed successfully in the gardeners' classes, their names being already recorded.

FRUIT AND VEGETABLES.

Several of the fruit classes were recorded in last week's issue. There was strong competition in the class for two bunches of *Gros Colman Grapes*, the first prize being secured by Mr. J. Paterson, Benochie Park, Kirkcaldy. Mr. J. Potter, Whitehall, Mealsgate, was a good second with finely shaped bunches. Mr. J. Leslie, Pitcullen House, Perth, was third. Mr. J. Paterson maintained the first place for *Lady Downes*, and was followed by Mr. P. Hunt and Mr. D. Buchanan, respectively. Mr. W. Williamson, Tarvit, Cupar, took the lead for any

other variety, showing Mrs. Pearson. Mr. D. S. Melville, Poltalloch, Lochgilphead, was second with Mrs. Pince.

Mr. J. Day secured the first award for eighteen varieties of *Apples*, showing even samples. Mr. Geo. Mackimlay, Wrest Park, Ampthill, was second; and Mr. P. Melville, Rosemount, Monkton, third. Mr. J. Day also had the best eighteen varieties of *Apples* grown in Scotland: and was followed by Mr. J. Cairns, The Hirsell, Coldstream, and Mr. W. Hamilton, St. Mary's Isle, Kirkcudbright, in this order. Mr. J. Day again led the way for six varieties of dessert *Apples*. Mr. T. Thomson, Cherrytrees, Kelso, showed the best six varieties of *Pears*. Mr. Wm. Laing, Wellfield, Gateside, had the best *Pears* grown in Scotland.

The prizes for the two collections of vegetables brought out a large number of exhibits of excellent quality, as recorded in our last issue. The other classes were scarcely less important. The first prize for a collection of salads was taken by Mr. J. W. Scarlett, Inveresk, and Mr. J. Joss, Arnhall, Dundee, was second, both showing very good collections. Mr. Wm. Smith, Newtownards, Dumfries, had the best *Tomatos*. *Leeks* were abundant, and of excellent quality, Mr. G. Ormiston, Knowesouth, Jedburgh, being first with specimens scarcely shorter than 2 ft.; Mr. D. Pitt, Eccles, Kelso, was second; and Mr. G. Wood, third. There were about twenty entries. Mr. P. Main, Avondale, Polmont, was first for *Leeks*. Mr. J. Brown, Houstoun, Renfrew, took the lead for any other vegetable, not specified, showing a grand dish of *Peas*. The competition for *Cauliflowers* was great, Mr. W. Wilson, Loretto, Musselburgh, taking first, and Mr. J. Waldie the second prize. Mr. A. Bryden had the best *Brussels Sprouts* in a big competition; and was followed by Mr. J. Potter.

Mr. Wm. Bennett, Hanley, Gogan, had the best *Cabbages*; Mr. J. W. Wright, Preston, Prestonpans, the best *Savoys*; and Mr. T. Galloway, Broxburn, the best curled *Greens*, which were in great force. Mr. A. Brunton, Lindsaylands, Biggar, had the best *Celery*; Mr. A. C. Cameron, Binrock, Dundee, the best *Beet*; Mr. Jas. Scott, Newton, Pencaitland, the best *Parsnips*; Mr. J. Maule, Balcaskie, the best *Carrots*; Mr. E. J. L. Joss, Hattonburn, Milnathort, the best *Turnips*; and Mr. P. Melville, the best *Onions*.

In the class for twelve varieties of *Potatos*, open to all, the leading award was carried off by Mr. A. Gemmell, Flakesfield, Chapelton, with shapely and beautiful tubers. Mr. R. Wilson, Devonvale, Tillinoultry, was a good second. The third award was taken by Mr. McAndie, Edgerston, Jedburgh.

For a collection of ten varieties of vegetables, open to market gardeners only, the first prize was taken by Mr. J. W. Scarlett, Inveresk; Mr. D. Logan was second, and Mr. D. Lorne, Broxburn, third. The first prize for a basket of *Apples*, open to market gardeners, was taken by Mr. D. McCutcheon, Doonfoot, Ayr.

MISCELLANEOUS.

Mr. H. J. Jones, Hither Green, Lewisham, London, was accorded First-class Certificates for *Chrysanthemums* *Western King*, *Chebang* (a large pink *Japanese variety*), and *Middle Laurence Zède* (a large, silvery-pink, incurved *Japanese variety* that is certain to make its appearance on the show boards next year). He was also awarded a special *Diamond Jubilee Gold Medal* for his magnificent and unique group of splendidly-grown *Begonia Gloire de Lorraine*, bordered all round with three lines of exhibition blooms of *Chrysanthemums*.

Messrs. Alex. Cross & Sons, Limited, Port Dundas Chemical Works, 19, Hope Street, Glasgow, had some stands of exhibition blooms of *Chrysanthemums*, *Gros Colman* and *Alicante Grapes*, *Tomatos*, *Belle de Jersey* and *Catillac Pears*. A basket of the latter variety was filled with samples 2 lbs. in weight each. They also had a pneumatic pump for spraying water and insecticides. A *Silver Gilt Medal* was awarded to the fine exhibit of Messrs. J. Ford & Co., 39, Princes Street, Edinburgh.

THE BANQUET.

On Thursday evening, the opening day of the great show held under the auspices of the *Scottish Horticultural Association*, a dinner was given in honour of the invited guests. The menu was elegantly served in superb style in the beautifully decorated, new restaurant of the *Royal British Hotel* by host Clark. The chair was occupied by Mr. M. Todd,

the president, supported by *Baillie Pollard*, *Baillie Robertson*, *Admiral McKenzie*, and other municipal dignitaries. Mr. Malcolm Dunn (croupier), was supported by Mr. Robert Laird (the secretary), Mr. W. M. Welsh, and Mr. D. P. Laird; whilst seated in places of like honour were Mr. T. W. Sanders, (chairman of the N.C.S. executive), Mr. P. Waterer (vice-chairman), Messrs. E. Molyneux, W. Mease, W. H. Lees, H. J. Jones, J. H. Witty, J. McHattie, C. Orchard, and A. E. Stubbs (hon. auditor), all of whom represented the parent society. Others were Mr. G. M. Ross, secretary of the *Royal Horticultural Society of Ireland*, Mr. Crawford, also from Dublin, and a thoroughly representative gathering of the *Scottish Horticultural Association*.

After dinner the chairman proposed "The Queen," the toast being accompanied by musical honours. Mr. M. Dunn proposed the "Navy, Army, and Reserve Forces," which was responded to by *Admiral McKenzie* in an excellent speech. Mr. D. P. Laird next proposed the "Lord Provost, Magistrates, and Council of Edinburgh," in a humorous speech in which he compared some of them to plants in thumb pots and other sizes up to full blown specimens, some being in the timber trade, which he considered closely allied to horticulture. *Baillie Sloan* responded, complimenting the meeting on being men of culture. He spoke of the membership of the society as growing, being highly satisfactory, and they (the council) were glad to come.

Baillie McKenzie proposed "Success to the *Scottish Horticultural Association*" which was ridiculed at its beginning. He remembered the first show, which was held on a snowy day in *Dowell's Rooms*, a small beginning which vegetated to the present great exhibition. *Dowell's Rooms* and the *Music Hall* became successively too small for the show, which had to be taken to the *Waverley Market*. Mr. M. Todd, as president, responded, returning thanks and corroborating the remarks of *Baillie McKenzie*. He urged upon their attention three points—(1), that the *Town Council* was a munificent patron, (2) that the big prizes were an example for other cities, (3) that the excellent music was a reward for their speculation. If a trifle reckless at first, it brought good in the end. Another remark he made was that every farthing of the surplus taken at the show was to be given in charity for the benefit of the *Royal Gardener's Orphan Fund*, *Gardeners' Royal Benevolent Institution*, &c.

Mr. Alex. Milne proposed "the judges," to which Mr. W. Mease and Mr. E. Molyneux responded. The latter assured them that he was delighted to come amongst them again, and that no society had done so much to encourage the cult of the *Chrysanthemum* during this, the *Jubilee year*. The groups might have received better prizes; but the special prizes, amounting to £150, offered for twenty vases of *Chrysanthemums* was a bold venture, but well repaid the finest show ever got together. He hoped the day was far away when the *Chrysanthemum* would decline in popularity. He had just come from *East Anglia*, where the *Chrysanthemums* in the cottage gardens were the best answer to those who decry the "Mum." Referring to foreign varieties, he looked forward with pleasure to the day when *English* and *Scotch* raised varieties would enjoy even greater fame, so that we could send them abroad to counterbalance those we were now receiving.

"Kindred Societies" was proposed by *Baillie Haigh*, who referred to the deputation of the *National Chrysanthemum Society*, and what that and other societies had done for the favourite flower. Mr. T. W. Saunders, F.R.H.S., and Mr. G. M. Ross, of the R.H.S., Dublin, responded on behalf of their respective societies. Mr. Welsh proposed the "Exhibitors," and said that the fresh entries had risen from 190 in 1896 to 242 on this occasion, making a total of 1,254, being one-third in excess of last year. Mr. Haggart suitably responded, saying that it was the proudest moment of his life. Mr. McHattie also added a few suitable remarks in reference to his successes.

Mr. R. W. E. Murray, convener of finance, proposed the "Press," and said that "good wine needs no bush" and a good toast no introduction. Mr. W. M. Gilbert and Mr. J. Fraser responded. Mr. A. E. Stubbs proposed the "Secretary and Treasurer," coupled with the name of Mr. Robert Laird. The latter, in responding, said that his efforts were ably and loyally supported by the hearty co-operation of every member of the council, so that the results and

success of the show were not wholly due to his efforts.

Bailie Mackenzie proposed the "Chairman," who, he said, had proved in every way capable for his duties, not only in his official capacity, but by his tact and courtesy. He fully recognised all the various interests of the society. Mr. M. Todd in rising to respond was received with applause, and said that everything was a pleasure to him and gratifying since it was appreciated. Mr. Wm. Mackinnon proposed the "Croupier," to which Mr. M. Dunn responded.

THE PRESIDENT'S "AT HOME."

Not the least interesting innovation in the reception of the various bodies of delegates was the thoughtful kindness of the president of the S. H. A. in holding a reception on the second afternoon of the show. The function took place at 4.30, and continued until about 7 o'clock, the new restaurant of the Royal British Hotel, most beautifully furnished, being utilized for the occasion. The principal guests included:—Provost Smith, of Kilmarnock; Mr. G. M. Ross, of the R. H. S., Ireland; Mr. Waterer, of Swanley; Messrs. D. P. Laird, W. P. Laird, James Grieve, W. Smith, A. E. Stubbs, Joseph Murray, H. J. Jones, A. Mackenzie, E. Molyneux, R. W. E. Murray, Flemming, W. Mease, A. Milne, John Methven, A. Carlisle, J. Calderhead, and J. Fraser. Everything that could be done had been munificently looked after by the president personally, and the four o'clock tea or coffee at the choice of the guests was most enjoyable. Later the various toasts submitted were honoured in a fitting manner, and sentiment and song found ready helpers and willing listeners.

We are quite sure our London, Dublin, Belfast, and Dundee friends, who formed the various deputations, will have gone back with the strong impression that the present year's show, and the functions connected with it, have all tended to make it a memorable and record celebration of the Diamond Jubilee, which event it was intended should be celebrated by one or two new, departures of which, as we have said, the worthy President's Reception was by no means the least popular or enjoyable. The musical arrangements were under the direction of Mr. Fleming. Mr. Paterson, of Glasgow, sang in his accustomed humorous way. Mr. E. R. Murray also assisted with a well-rendered Gaelic song. Mr. Jos. H. Murray brought down the audience in his A.B.C. sketch, and another ditty about what happened "In the morning." Mr. Fleming obliged with a song from his repertory, and Mr. Stubbs also sang. Master Wilmot, from the establishment of Messrs. Pentland's, very ably accompanied the vocalists, besides rendering a well-executed overture and a selection from "Faust" on the piano.

SOCIETIES.

ROYAL HORTICULTURAL.—November 9th.

OWING to the clashing of so many Chrysanthemum shows on the above date the meeting was smaller than usual. The principal exhibits consisted of Chrysanthemums, Orchids, tree Ivies, Dracaenas, tree Carnations, and smaller lots of interesting subjects.

Messrs. J. Veitch & Sons, Ltd., Chelsea, staged a fine collection of their now famous hybrid Orchids, consisting largely of Laeliocattleyas and Cypripediums, Laeliocattleya Daphne, L. Decia, L. Novelty, L. statteriana, L. Pallas, and others of great beauty. Amongst hybrid Cypripediums, C. Niobe, C. Euryades, and C. Tityus, are highly meritorious (Silver Flora Medal).

G. Shorland-Ball, Esq. (gardener, Mr. A. Hay) set up a group of well-grown and flowered Orchids, including Cypripedium leeanum magnificum, a richly spotted variety of the first water. A Cultural Commendation was accorded to a fine piece of C. insigne Sanderæ carrying half a dozen of its delicately choice flowers (Silver Banksian Medal).

Messrs. F. Sander & Co., St. Albans, staged a group of Orchids, amongst which a piece of *Sophrontis grandiflora* was conspicuous on account of the number of its flowers. Other good things were *Cattleya dowiana aurea*, *C. labiata* in variety,

Laeliocattleya broomfieldensis, *Laelia autumnalis delicata* and others (Silver Banksian Medal).

Messrs. W. L. Lewis & Co., Southgate, N., also exhibited Orchids, including a batch of fifty plants of their now famous importation of *Laelia pumila praestans*, no two of which were exactly alike. Twice as many more of the same *Laelia* were flowering at Southgate on the same date as the meeting. *Cattleya labiata Lewisii* was particularly handsome. Interesting were *Mormodes pardinum* and *M. p. citrinum*.

Messrs. Hugh Low & Co., Clapton, exhibited another fine batch of *Vanda caerulea*, a number of choice Cypripediums and the beautiful *Calanthe Veitchii alba*.

The Right Hon. Joseph Chamberlain, M.P. (grower, Mr. Smith), Highbury, Birmingham, exhibited a group of Orchids, including some handsome Laeliocattleyas, of which the most striking was *Fabia*. Others were *L. Semiramis*, *L. Sallieri*, and *Cattleya Miss Endicott* (Silver Banksian Medal).

Mr. Wm. Bull, Chelsea, showed Cypripedium insigne *Bulliae*, *Dendrobium Phalaenopsis album* and others.

J. T. Bennett Poë, Esq. (gardener, Mr. J. Downes) Holmewood, Cheshunt, exhibited the showy *Vanda sanderiana* Holmewood var., Cypripedium Charles Canham, with large flowers, and other hybrids. C. L. N. Ingram, Esq. (gardener, Mr. T. W. Bond), Elstead House, Godalming, staged a hybrid *Cattleya* named *C. Comfrey*. W. Vanner, Esq. (gardener, Mr. W. H. Robins), Camden Wood, Chislehurst, showed cut flowers of choice Orchids, including many hybrids, in fine form. Henry Tate, Esq., Allerton Beeches, Liverpool, staged some Cypripediums.

A Silver Banksian Medal was awarded to Mr. John Russell, Richmond, for a group of Ivies in pots. The standard and bush forms of training were well exemplified in this exhibit.

Sprays of *Vitis heterophylla humulifolia* were shown by A. Kingsmill, Esq., Harrow Weald.

Mr. R. Gulzow, Melbourne Nurseries, Bexley Heath, Kent, set up a handsome and effective group of foliage plants, principally Dracaenas. The group took the form of an imposing bank of foliage with a charmingly undulating outline. At either end was a superb piece of *Dracaena Doucettii*, and in the centre was a noble mass of *D. sanderiana*. The Dracaenas were most of them seedlings recently raised by Mr. Gulzow. They were all clean and well coloured symmetrical samples. Several new varieties that should be heard of again were included (Silver Flora Medal).

Mr. G. Wythes, gardener to Earl Percy, Syon House, Brentford, sent a nice lot of cut Chrysanthemums. The blooms were furnished with long stalks and were arranged with Maidenhair Fern. Some of the best varieties were Lord Brooke, Pride of Madford, Brookleigh Gem, Silver King, Col. W. B. Smith, Mme. Gustave Henry, H. L. Sunderbruch, Miss Elsie Teichmann, Florence Davis, and Etoile de Lyon (Silver Banksian Medal). Messrs. Hugh Low & Co., Bush Hill Park, Enfield, contributed a nice batch of the handsome and useful Carnation Mathews' Winter Red. The plants were of clean habit, and the flowers of good substance, colour and form.

Messrs. J. Veitch & Sons, Ltd., sent a basketful of the Wallflower Parisian Early, also a basketful of *Aster grandiflorus*, a very distinct and beautiful form. A group of seedling Pentstemons came from C. F. Thompson, Esq. (gardener, Mr. T. Mann), Llandaff. The last-named exhibitor also had cut blooms of Chrysanthemum. Mr. C. Caddell, The Gardens, Camfield, sent six blooms of Chrysanthemum Ellen Lady Clark.

Twenty-four capital blooms of Chrysanthemums came from Mr. W. J. Godfrey, Exmouth, Devon. Eight varieties were included, of which Duke of Wellington, Admiral Ito, Lady Northcote, and George Gover were some of the best.

At a meeting of the Fruit and Vegetable Committee a Silver Banksian Medal was awarded to Mr. W. H. Divers, Belvoir Castle, Grantham, for thirty-two dishes of Pears in as many varieties. *Beurré Diel*, *Beurré Clairgeau*, *Marie Louise*, *Beurré Jean Van Geert*, and *Emile d'Heyst* were represented by some capital samples.

Mr. O. Thomas, gardener to Her Majesty The Queen, Frogmore, had a box of twenty Cucumbers

of a new variety named Frogmore all the Year Round.

Six dishes of Apples and nine dishes of Pears were submitted for the Veitch flavour prizes. Mr. T. Turton, gardener to E. Hargreaves, Esq., Maiden Erleigh, Reading, was first for Apples with Cox's Orange Pippin; Mr. G. Woodward, gardener to Roger Leigh, Esq., Barham Court, Maidstone, was second with Ribston Pippin. Mr. G. Woodward was first for Pears with Doyenné du Comice; Mr. Osborn, gardener to Rev. H. Golding Palmer, Holme Park, Sonning, was second with Glou Morceau.

A Silver Banksian Medal was awarded to Mr. W. Iggulden, Frome, Somerset, for 48 lbs. of superb Gros Colman Grapes.

Messrs. Harrison & Sons, Leicester, showed a collection of garden Beet that comprised no fewer than twenty varieties (Bronze Banksian Medal).

NATIONAL CHRYSANTHEMUM.—November 15th. THE Floral Committee of this society met on Monday, November 15th, at the Royal Aquarium. There was a fair amount of material sent for consideration, including some good novelties. A number of Certificates were given for which see a succeeding issue. The committee also requested to see several varieties again.

Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey, had seven dozen grand show blooms of Japanese and incurves, amongst which Madame Ferlat, Mrs. F. A. Bevan, Ma Perfection, Julia Scaramanga, and Georgina Pitcher were some of the best. A small Silver Medal was awarded. Mr. R. Owen, Maidenhead, sent some new seedling varieties. Mr. W. J. Godfrey, Exmouth, Devon, had three dozen capital blooms. Mr. H. J. Jones also exhibited.

Mr. P. Waterer demonstrated an improved system of attaching names of varieties to show boards, which was commended by the committee. In this device, labels bearing the names of the varieties placed on the show board printed in bold type are contained in neatly made tin frames. The latter are affixed to the board by means of small but strong clips.

QUESTIONS AND ANSWERS

* * * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Gladioli.—*Enquirer*: The largest flowers and some of the finest and most varied colours are to be found in the Gandavenis and nanceanus sections. With regard to the late flowers that you saw in October we cannot say definitely without description. *G. brenchleyensis*, if planted in a part of the garden shaded from the sun, will flower until cut down by frost, and in seasons when the frost comes on early the spikes never have time to expand their flowers. *G. psittacinus* is also a valuable late-flowering form, and *G. saundersii* and *G. floribundus* are well worth growing, although the flowers are smaller than in the other three sections. You will be able to obtain what you require from any of the larger nurserymen. We may, however, say that Messrs. Kelway & Son, Langport, Somerset, and Messrs. J. Burrell & Co., Howe House Nurseries, Cambridge, have made the Gladiolus a speciality. On the Continent M. Lemoine, of Nancy, France, has done much for the flower.

Tea Roses.—*Omega*: The following six varieties of Tea Roses, in addition to Catharine Mermet and Marie Van Houtte, will be found to be free flowering and of good constitution:—Anna Olivier, Cheshunt Hybrid, Comtesse de Nadaillac, Madame Cusin, Madame de Watteville, and Innocent Pirola. The last-named is one of the best white varieties, and Madame Cusin is one of the finest of the darker flowered forms.

Dessert Cherry.—*Omega*: Either Royal Duke or Archduke Cherries will come in as a succession to May Duke. Archduke is especially a fine Cherry. It ripens its fruit from eight to ten days after May Duke.

Planting Clematis.—*Omega*: As Clematises are generally kept by nurserymen in pots all ready for planting out, the month of June is a good time of the year to plant them, as they can then grow away without check.

Vines.—*A. Beginner*: The foliage of the Vines is simply fading with the wear of the seasons. The Vines have evidently been neglected. Have you

allowed them to lack water? as this would account for the shivelling of the berries, which, by the way, are perfectly sweet. The lack of fire-heat would account for the berries rotting. We should advise you to cut the Grapes, and apply a little fireheat to the house to assist in ripening the wood. You may then be able to make a good start with them next year.

Forcing Asparagus.—*Omega*: The quantity of soil that should be put beneath the roots of Asparagus lifted for forcing will depend upon the bench or stage on which they are placed. If the benches are immediately over hot-water pipes, a fair quantity—say 2 in. or 3 in.—will be necessary to prevent the roots from getting quickly dried up. Place the roots as thickly together as you can pack them, and put as much soil between the roots and over the crowns as will cover them and no more. Light sandy soil, and leaf mould should be used. Give a watering with a rose watering-pot when necessary. If exposed to light, cover up the glass with mats.

Cyclamen Diseased.—*F. G. Brewer*: Your plants appear to be suffering from a fungoid attack of some kind, brought on by allowing the plants to become weakened, possibly by too dry and arid an atmosphere. Try and keep the air moister and more kindly. You may spray the plants with a solution of one ounce of potassium sulphide in three gallons of tepid water. This will effectually destroy any spore that may be present and does not harm the plants in the least degree.

Mimulus cardinalis, etc.—*Choice Plants*: This species is hardy and very easily managed, according to our experience. It may be planted in light, rich soil where the roots will find sufficient moisture to enable them to make vigorous growth and flower well. The seed pods ripen at different times and you will, therefore, have to make several gatherings. There are now some beautiful varieties of different colours in cultivation, and you should endeavour to secure them. *M. cupreus* Brilliant is equally hardy and may be treated in the same way. If you care to, you could grow both of them in pots in a cold frame. *M. radicans* may be dealt with in the same way. The first two seed freely if grown well. They should be kept fairly dry when ripening their seeds.

Names of Plants.—*J. Williams*: 1, *Desfontainia spinosa*; 2, *Olearia Haastii*; 3, *Osmanthus Aquifolium illicifolius*; 4, *Pyrus japonica*.—*W. M.*: 1, *Odontoglossum crispum* var.; 2, *Maxillaria punctata*; 3, *Cattleya labiata*; 4, *Cattleya dowiana aurea*.—*T. S.*: 1, *Nephrolepis exaltata*; 2, *Davallia hirta cristata*; 3, *Asplenium bulbiferum minus*.—*A. Dally*: 1, *Cestrum aurantiacum*; 2, *Acacia longifolia*; 3, *Acacia dealbata*. The latter comes from the south of Europe, especially about the neighbourhood of Cannes.—*A. L.*: 1, *Uniola latifolia*; 2, *Gynerium saccharatum*.—*W. J. S.*: 1, *Adhatoda cydonifolia*; 2, *Maxillaria picta*.

Communications Received.—*S. Cooke*.—*B. E.*—*M. C.*—*J. Fraser* (three wires).—*Gyp* (press wire).—*W. Keen* (next week).—*Aurore*.—*Franco*.—*J. R. G.*—*Ohio*.—*L. S.*—*C.*—*Kitchener*.—*Choice plants* (next week).

TRADE CATALOGUES RECEIVED.

WILLIAM WATSON, Clontarf Nurseries, Dublin.—*Roses, Fruit, Ornamental, and Forest Trees.*
A. FINDLAY, Markinch, Scotland.—*Abridged List of new disease-resisting Potatoes.*

To Greenhouse Builders and Contractors.

THE LONDON COUNTY COUNCIL is prepared to receive tenders for the erection and completion of a greenhouse at Peckham Rye Park. Persons desiring to submit tenders may obtain the drawings, specification, form of tender, and other particulars at the Architect's Department, County Hall, Spring Gardens, S.W., upon payment of the sum of five shillings. This amount will, after the Council or its Committee has come to a decision upon the tenders received, but not before, be returned to the tenderer, provided he shall have sent in a *bona fide* tender and not have withdrawn the same. Tenders must be upon the official forms and the printed instructions contained therein must be strictly complied with. The contractors will be bound by the contract to pay to all workmen (except a reasonable number of legally bound apprentices) employed by them, wages at rates not less and to observe hours of labour not greater than the rates and hours set out in the Council's list, and such rates of wages and hours of labour will be inserted in and form part of the contract by way of schedule. Tenders are to be delivered at the County Hall in a sealed cover addressed to the Clerk of the London County Council, and marked Tender for Greenhouse at Peckham Rye Park. No tender will be received after 10 a.m. on Tuesday, the 7th day of December, 1897. Any tender which does not comply with the printed instructions for tender may be rejected.

The Council does not bind itself to accept the lowest or any tender, and it will not accept the tender of any person or firm who shall on any previous occasion have withdrawn a tender after the same has been opened unless the reasons for the withdrawal were satisfactory to the Council.

T. BELL,

for the Clerk of the Council.

SPRING GARDENS, S.W., 16th November, 1897.

NATIONAL CHRYSANTHEMUM SOCIETY.
Last Great Exhibition at the Royal Aquarium.

DECEMBER 7th, 8th, 9th, 1897.

Chrysanthemums, Table Decorations, Winter Flowering Plants, &c. Schedule of Prizes on application. RICHARD DEAN, Secretary, Ealing, London, W.

THE NEXT

BIRMINGHAM

GREAT

CHRYSANTHEMUM EXHIBITION

WILL BE HELD ON

November 8th, 9th, & 10th, 1898.

J. HUGHES, Secretary.

INDEX TO ADVERTISEMENTS.

| | |
|---------------------------------|---------------------------------|
| Auction Sales. | Heating Apparatus. |
| Protheroe & Morris.....194 | W. Cooper, Limited208 |
| Bulbs. | Messenger & Co.....208 |
| Barr & Sons194 | Thames Bank Iron Co193 |
| Z. Gaye193 | Horticultural Builders. |
| W. B. Hartland193 | I. Boyd & Sons.....193 |
| T. Jannoch207 | W. Cooper, Ltd.....208 |
| Sutton & Sons193 | J. Gray.....193 |
| T. Turner193 | W. Richardson & Co208 |
| Catalogues. | J. Weeks & Co., Ltd.2193 |
| Barr & Son193 | Insecticides. |
| Bunyard & Co.....193 | Gilshurst Compound193 |
| M. Chapman.....193 | Manures. |
| H. Deverill193 | Chemical Co.....193 |
| R. Smith & Co.....207 | Clay & Son.....207 |
| Sutton & Sons193 | W. Colchester193 |
| Chrysanthemums. | Ichthemlc208 |
| Cannell & Sons194 | R. B. Laird & Son194 |
| J. W. Cole.....193 | W. Thomson & Sons227 |
| Devon Nursery.....193 | Miscellaneous. |
| Norman Davis.....195 | Epps's Cocoa.....207 |
| Dobbie & Co.193 | Gishurstine193 |
| W. J. Godfrey.....194 | Potter's Felt193 |
| R. Owen193 | Smyth's Baskets193 |
| G. Stevens.....193 | Orchids. |
| W. Wells.....193 | J. Cypher194 |
| Ferns. | Leeds Orchid Co.193 |
| L. Wye.....193 | W. L. Lewis & Co.....193 |
| Florists' Flowers. | P. McArthur194 |
| Cannell & Sons194 | F. Sander & Co193 |
| J. Downie195 | Publications. |
| J. Douglas193 | F. C. Edwards193 |
| J. Forbes.....194 | Roses. |
| J. Grieve & Sons194 | G. Coolling & Sons194 |
| Hood Gardens193 | J. Downie195 |
| Kelway & Son193 | J. Grieve & Sons194 |
| Mrs. Lakin.....193 | R. Smith & Co.....207 |
| Todd & Co.194 | James Walters193 |
| Flower Pots. | Seeds. |
| Sankey & Sons, Ltd.208 | R. Smith & Co.....207 |
| Fruit Trees. | D. W. Thomson.....195 |
| G. Bunyard & Co.193 | Strawberries. |
| J. Downie195 | J. Grieve & Sons194 |
| R. Smith & Co.207 | Laxton Bros.193 |
| J. W. Todman193 | A. Metcalfe.....193 |
| Garden Sundries, &c. | Trees & Shrubs. |
| J. Arnold193 | J. Downie195 |
| Essery's Coal208 | W. P. Laird & Sinclair195 |
| W. F. Gann & Co.....193 | |
| Hirst, Brooke & Hirst.193 | |
| A. Outram207 | |

COVENT GARDEN MARKET.

November 24th, 1897.

FRUIT.—AVERAGE WHOLESALE PRICES.

| | |
|-------------------------------|------------------------------|
| Apples.....per bushel 3 0 7 0 | Grapes, per lb 0 9 2 0 |
| Cobhs 22 6 24 0 | Pine-apples |
| per roolhs. | —St. Michael's each 2 6 8 0 |

VEGETABLES.—AVERAGE WHOLESALE PRICES

| | |
|-------------------------------|-------------------------------|
| Artichokes Globe doz. 2 0 3 0 | Herbsper bnch 0 2 |
| Asparagus, per bundle | Horse Radish, bnndle 2 0 3 0 |
| Beans, French, per | Lettuces ...per dozen 1 3 |
| per lb. 0 6 0 8 | Mushrooms, p. basket 1 0 1 6 |
| Beet..... per dozen 2 0 | Onions.....per hnnch 0 4 0 6 |
| Brussel Sprouts, | Parsley ... per hnnch 0 3 |
| per half sieve 1 6 2 0 | Radishes... per dozen 1 0 1 3 |
| Cabbages ... per doz. 1 0 1 3 | Seakale...per basket 1 6 2 0 |
| Carrots ... per bnch 0 3 | Small salad, pnnnet 0 4 |
| Canthflowers.....doz. 1 6 3 0 | Spinach per busbel 2 0 3 0 |
| Celery.....per bundle 1 0 1 6 | Tomatoes..... per lb. 0 6 1 0 |
| Cncmbers per doz. 2 6 3 6 | Tarriips per hnn. 0 3 |
| Endive, French, doz. 1 0 2 0 | |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| | |
|-------------------------------|-------------------------------|
| Arm Lilies, 12 blms. 4 0 6 0 | Mimosa, white, French, |
| Asparagus Fern, hun. 1 6 3 0 | doz. bunches 9 1 0 |
| Bonvardias, per hnn. 0 6 0 8 | Narcissus, white, |
| Carnations doz. hms. 0 6 3 0 | French, doz. huns. 6 1 6 |
| Chrysanthemums | Orchids, doz. blooms 1 6 9 0 |
| dozen blooms 0 6 3 0 | Pelargoniums, 12 bun. 4 0 6 0 |
| Chrysanthemums, doz. | Pyrethrum doz. hun. 1 6 3 0 |
| hunches 2 0 6 0 | Roses (indoor), doz. 6 1 0 |
| Euocharis ...per doz 3 0 6 0 | Tea, white, doz. 1 0 2 0 |
| Gardenias ...per doz. 2 0 4 0 | Peates 1 6 4 0 |
| Geranium, scarlet, | Safrano 1 0 2 0 |
| doz. hunches 4 0 6 0 | (English), |
| Lillium longiflorum | Red Roses, doz.1 0 2 0 |
| per doz. 4 0 6 0 | Pink Roses, doz. 2 0 4 0 |
| Lily of the Valley doz. | Roses, doz. hun. 4 0 9 0 |
| sprays 1 0 2 0 | Smlax, per hunch ... 1 6 3 0 |
| Lilac (French) per | Tuberose, doz. |
| bunch 2 6 3 6 | blooms 0 3 0 4 |
| Merguerites, 12 hnn. 2 0 4 0 | Violets (Parma), per |
| Mardenhal Fern, 12hs. 4 0 8 0 | bunch 2 6 3 6 |
| | doz. hun. 1 6 2 0 |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

| | |
|-----------------------------------|---------------------------------|
| Arbor Vitae | Feras, small, per 100 4 0 6 0 |
| per doz. 12 0 36 0 | Ficus elastica, each 1 0 5 0 |
| Aspidistra, doz..... 18 0 36 0 | Foliage Plants, var., |
| speolmen 5 0 10 0 | each 1 0 5 0 |
| Chrysanthemum, per | Lillium Harrissii, |
| doz. pots... 6 0 30 0 | per pot 2 0 4 0 |
| Diacaena, various, | Lycopodiums, doz. 3 0 4 0 |
| per doz. 12 0 30 0 | Marguerite Daisy doz. 6 0 9 0 |
| Dracaena viridis, doz. 9 0 18 0 | Myrtles, doz. 6 0 9 0 |
| Euonymus, var. doz. 6 0 18 0 | Palms in variety, each 1 0 15 0 |
| Evergreens, invar. doz. 6 0 24 0 | Palms, Specimen ...21 0 63 0 |
| Erica Hyemalis p. doz. 9 0 15 0 | Pelargoniums |
| Erica Gracllis, per doz. 6 0 9 0 | Scarletsper doz 2 6 6 0 |
| Erica, various, per doz. 8 0 12 0 | |
| Ferns, invar., per doz. 4 0 12 0 | |

A Special Offer to Readers of THE GARDENING WORLD

25/- BOOK for 8/-

NO HOME SHOULD BE WITHOUT ONE

Ogilvie's Encyclopædia

OF USEFUL INFORMATION AND WORLD'S ATLAS.

No Single Book ever before contained such a Wealth of Knowledge.

By Special Arrangement with the Publishers of the "Encyclopædia of Useful Information and Atlas of the World," we are enabled to offer to the Public a Magnificent 25s. Volume for 16 of the coupons, which will appear weekly, together with 6d. each, accepted in Weekly Instalments, or the Coupons may be held until the whole period has elapsed and brought or sent to the Office with 8s., and 6d. towards carriage.

A COMPLETE ILLUSTRATED LIBRARY IN ITSELF.

A universal assistant and treasure-house of information on every conceivable subject, from the household to the manufactory. In short, gives information about everything, is absolutely indispensable to everyone in all walks of life; the contents being so separated, indexed, and arranged that they can be turned to at once. It is

THE BEST { BOOK OF } EVER
{ INFORMATION } ISSUED.
Size of Encyclopædia: 9 by 11½ inches. 656 Pages.

It contains

MANY MAGNIFICENTLY ENGRAVED COLOURED MAPS,

and a description of every country under the sun, besides much other matter relative to the Home, the Farm, the Factory, a Dictionary of Statistics—many Useful Tables, Poetical Selections, Synonyms, Famous Bridges and Ships, How to Calculate, How to Cook, How to Get Rich, How to Cure all Diseases, How to Succeed in Business, Table of Weights and Measures, and

HUNDREDS OF OTHER TOPICS OF GREAT VALUE TO EVERY PERSON

who desires to be up to the times. To see the Book is to want it. To Members of Mutual Improvement Societies it will prove of inestimable value.

The articles are written by men whose lives have been devoted to the subjects treated, are short and concise, but contain full information up to date. It is to be consulted on every subject that arises in everyday life, by old and young alike. It contains a complete Illustrated Atlas of the World.

IN THESE DAYS OF COMPETITION

it is imperative that a Gardener should be a well-informed individual. Here is an Encyclopædia containing an immense amount of knowledge that will be of the greatest service to him.

YOUNG GARDENERS,

do you wish to be successful? Then remember that to possess knowledge is the surest way to achieve success.

It is elegantly bound in Morocco Cloth, with beautifully designed Gilt Side-stamp and Red Edges, making at once the most handsome and durable as well as THE MOST USEFUL BOOK EVER MADE or sold for 25s.

271197. **COUPON.**

OGILVIE'S ENCYCLOPÆDIA OF USEFUL INFORMATION, AND WORLD'S ATLAS, (Published Price 25s.). 16 COUPONS, AND 6d. WITH EACH.

Name _____
Address _____

Postal Orders or ½d. stamps may be sent. COUPONS AND CONTRIBUTIONS MAY BE LEFT at or SENT TO the Office for

THE PUBLISHER OF

THE GARDENING WORLD.

COPIES OF THIS BOOK CANNOT BE BOUGHT. They can be obtained only by using these Coupons.

CHRYSANTHEMUMS.

DON'T Order your requirements for the coming season from Catalogues published early in the Autumn, and long before plants were in bloom. Early published Lists can only contain descriptions and hints of the previous year, and are therefore one season in the rear.

NOW in course of preparation, the most **RELIABLE CATALOGUE** published, containing valuable cultural hints pertaining to introductions of the past season. It will not be ready before the middle of December, when it will be sent Post Free to all applicants.

ORDERS for cuttings of any kind you may be anxious to have will be executed immediately, and at prices which in no case shall exceed those of other reliable firms. Good value is guaranteed in every case.

THE MOST extensive display of well grown novelties made at the meetings of the National Chrysanthemum and Royal Horticultural Societies were those exhibited by the undersigned, who has taken **MORE CERTIFICATES** (16 in number) than all other trade growers combined.

No comparison can be made with cuttings obtained from stock grown in the pure country air and those grown in the smoke and fog of the big towns.

W. J. GODFREY, F.R.H.S., F.N.C.S., EXMOUTH, DEVON.

RETARDED
Lily of the Valley Crowns
NOW FROM ICE.

A LADY writes:—"These 'retarded' Crowns are the most delightful, inexpensive floral invention of the age, and Mr. Jannoch deserves the universal gratitude of all lovers of flowers."

WRITE FOR LIST.

T. JANNOCH,

Lily of the Valley Grower to P.R.H. the Prince of Wales.

DERSINGHAM, KING'S LYNN, NORFOLK.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, DECEMBER 4th, 1897.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, December 7th.—National Chrysanthemum Society's Mid-winter Show at the Royal Aquarium (3 days). Meeting of the Floral Committee at 1 p.m.

FRIDAY, December 10th.—Sale of imported and established Orchids by Messrs. Protheroe & Morris.

SIR WILLIAM HARCOURT AS A GARDENER.

On the occasion of the Dundee Chrysanthemum Society's show, on the 25th ult., and the two succeeding days, the services of Sir William Vernon Harcourt were secured to perform the opening ceremony. Sir William was three quarters of an hour late on account of his arduous duties that day; but the large audience which had come to hear him, was entertained in the interim by the Anglo-Swiss Ladies' Cyclist Band, which is a string orchestra of seventeen instrumentalists, and proved a novelty in its way at Dundee. He left the City Chambers in company with Lord Provost M'Grady, who took the chair, being supported by Sir Henry Campbell Bannerman, Bart., Sir John Leng, M.P., Sir T. D. Gibson Carmichael, Bart., Sir Thomas Thornton, LL.D. and other distinguished citizens. Sir William had that morning been presented with the freedom of the city and enrolled as its youngest burgess. Lord Provost M'Grady said he had pleasure in introducing Sir William Vernon Harcourt whose transcendent abilities in various walks of life had induced the Corporation to offer him the freedom of the city; and they had the honour of addressing him as the youngest burgess. They had already heard him speak that morning in two rooms, and he had to attend another meeting after leaving the Drill Hall, so that it was no easy task to deliver four addresses in one day, the task cut out for him the first day he became a Dundonian.

Sir William Harcourt, who was received with cheers, said that though he was a very young burgess, he was a very old gardener, and an old gardener knew that the very worst thing that could be done was to exhaust the soil by growing too many crops one after the other. Since he entered Dundee he had been speaking continuously, and had been telling them in the Council Chamber that morning that he preferred the language of flowers to the figures of rhetoric. In that unimportant section of

the United Kingdom, called England, it was known that Scottish gardeners had the preference, and that they were the best gardeners in the world. He had sometimes heard it discussed why that happened to be the case. Some ill-natured people had said it was because they had to overcome the difficulties of climate; but he never accepted that conclusion, because he had observed that there was nothing upon which people were more sensitive than that of their climate. He had come to the conclusion that it was a hereditary virtue belonging to them by long descent, and that, probably, the country of their birth was the site of the first garden. So far as his own gardening was concerned, he had for some time past been trying to acclimatise in the south of England some of the flowers of Scotland. The most beautiful flower he had seen, and which is particularly abundant in the west of Scotland, was *Tropaeolum speciosum* the Flame Nasturtium. It was seldom seen in England, though a common cottage garden flower in the west of Scotland. He had tried it for years, and was happy to state that he had at last succeeded in growing it. This he considered as his great achievement in gardening. He could tell the secret to his English friends that they coddled it, put it in the sun, manured it, and did everything that was bad for it. Put it in the sun, he continued, put it in wet ground, let it grow over the Rhododendrons, and it could be grown in England as well as in Scotland. He offered that as a wrinkle to his horticultural friends.

Chrysanthemums were the subjects before them on that particular occasion, and to him they had always seemed interesting flowers. They took a position between the flowers of summer and the absence of them in winter. We were indebted to the Japanese for Chrysanthemums in their present form, and that race of people used them largely in the language of flowers and otherwise. As he came up the hall, the Chrysanthemums appeared to be largely cultivated about Dundee, and cultivated with great success. In his opinion there were few greater enjoyments than that obtainable from gardening. He would not attempt to dwell upon the praises of gardening, but would refer his audience to the description of the garden of Eden by Milton, or to the gorgeous lyric of Cowley, addressed to John Evelyn, in which the poet describes the grandeur and beauty of Solomon's palace, when the Queen of Sheba visited it. In some respects gardening might be compared to politics. Gardening was subjected to sudden and unexpected frosts, which were inimical to favourite flowers; but gardeners had perfect confidence in the return of spring and the revival of flowers; so in politics. For himself he preferred the occupation of gardening, and as a humble gardener he had been allowed the privilege of attending the show that afternoon.

Forfarshire men at the Edinburgh Show.—In face of the fact that so many of the leading prizes at the Scottish capital are taken by men from the southern side of the Cheviots and Tweed, it may be as well to mention the fact that Forfarshire men came out strongly. Mr. Haggart himself served his apprenticeship at Panmure House Mr. Martin, for some years foreman at Fotheringham, was, however, born in Fife. Mr. David Nicoll, of Rossie, gained much of his experience at Usan House, Montrose, and, like the rest, may be considered a Forfarshire man. Mr. Beisant, of Castle Huntly, just across the border in Perthshire, was the strongest supporter of Scottish Chrysanthemum culture, but, strange to say, he is of English nationality.

FOR PLEASURE AND PROFIT

FRUIT SEEDS

Nothing so profitable and easy to grow.
80 Acres of Saleable Trees.

ROSES

HUNDREDS of THOUSANDS.
Bushes in variety. Packing and Carriage free for Cash with order.
8/- per doz., 60/- per 100.
All other Nursery Stock carriage forward.

ROSES IN POTS From 15/- a doz.

Ornamental Trees, 91 Acres,
A Superb Collection of
Herbaceous Plants,
Four Acres of Glass,
Clematis (80,000) from 15/- doz.
N.B.—Single Plants are sold at slightly increased prices.

GENERAL CATALOGUE
(Over 100 pages) of Nursery Stock, artistically produced containing some hundreds of illustrations, and full of valuable information, free on receipt of 3d. for postage. Please mention this Paper.

RICHARD SMITH & CO., WORCESTER.

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue

JAMES CYPHER,

Exotic Nurseries, CHELTENHAM.

CANNELL & SONS' CHRYSANTHEMUMS.

The most remarkable results that have ever occurred in supplying cuttings and plants is the great success and the highest awards that have followed those forwarded from us, yes, in the remotest parts of the World, New Zealand and Australia, South Africa, as far as Bulawayo, Egypt and Constantinople, Tenneriffe, besides Italy, France, Holland, Belgium and Portugal, to say nothing of Mr. Mease's remarkable record at home again this season with what we have sent him, and which history must describe by and bye as wonderful.

Our unrivalled stock of unbloomed plants especially for the supply of cuttings is now in perfect condition, so full of health that they at once give growers heart and confidence the moment they see them, striking more quickly, and making strong and healthy roots, success naturally follows our pure country grown stuff.

New Catalogue is in the press, and we hope to post off 20,000 shortly. Any client failing to receive a copy will please intimate.

SWANLEY, KENT.

Mr. A. Mc Donald for four years head gardener to Mrs. Stephens, Helenslea, Broughty Ferry, has been appointed in a similar capacity to G. Paton, Esq., Avonside, Leamington, Warwickshire.

The weather at New York, U.S.A. is as mild as that which we have experienced in these Islands, for such tender plants as Coleuses, Heliotropes, and Tomatos were, according to the mail advices of last week, flourishing in the open, and without any other shelter from the wind than that afforded by a fence

Societe des Chrysanthemistes du Nord de la France.—We have received a communication from M. J. Lefebvre, the president of this society, to the effect that the project of holding Chrysanthemum exhibitions on November 21st and December 6th has had to be abandoned, owing to the abnormally warm and sunny character of October, which has caused the flowers to expand so early that the flowering season is now practically finished.

To the list of curious addresses the following may be added:—

Dobies Seedsman and
Florist

Scotland

i know no other

address kindly

find them.

This communication came from Nuneaton, and thanks to the vigilance of the Post Office authorities was safely received at Rothesay by Messrs. Dobbie & Co.

Mr. James Simpson, formerly of Cults, Aberdeenshire, and whose father resides at Banchory-Devenick in the same county, has recently received an appointment from Thomas M' Meekin, Esq., Falkland Park, South Norwood Hill, on his Tea Estates, Assam, India. During his apprenticeship with Messrs. James Cocker & Sons, Aberdeen, Mr. Simpson received the Royal Horticultural Society's certificate for an examination in horticulture in 1893. In April, 1894 he was transferred to the said society's gardens at Chiswick, London, taking full advantage of the experience to be gained there till the end of October last. He was honorary secretary and treasurer of the Chiswick Gardeners' Mutual Improvement Association for more than two years, faithfully fulfilling his duties till he left the neighbourhood. He also held certificates in botany, drawing, and mathematics, from the Department of Science and Art, South Kensington. He sailed for Assam by the British India Steam Navigation Company's s.s. Manora on the 12th ult.

Ealing Gardeners' Society.—On the 16th ult. there was a very good attendance of members of this society at the usual meeting place, to hear an address from Mr. Alexander Wright, of Falkland Park Gardens, South Norwood Hill, S.E., on "Cattleyas all the Year Round." The subject seemed so easy and familiar to Mr. Wright, that he dealt with it fluently and exhaustively without the aid of notes. He described the most suitable house for their welfare, gave a list of species, hybrids, and varieties, specially recommended small pots for their culture, and otherwise condensed a large amount of information into a small compass. As gardeners are very keen and practical in matters which concern their craft, it is hardly necessary to add that Mr. Wright was not only well received, but also accorded a very hearty vote of thanks. Mr. C. B. Green presided. In addition to the usual weekly exhibition of plants, etc., in season, which were very meritorious, there was also a special competition for a "Collection of Twelve Miscellaneous Plants," which brought out six entries. The first place was awarded to the hon. secretary, Mr. W. Roberts, who, however was very closely pressed by Mr. R. Green—one point only being the difference between them—the third and fourth places going to Mr. W. J. Simpson, Acton, and Mr. H. Holloway, respectively. The plants for the most part were clean, well-grown, creditable specimens, and consisted chiefly of such things as Orchids, Crotons, Pandanus Veitchii, Cocos weddeliana, Kentia australis, Eulalia japonica, Primula sinensis, and P. obconica. Mrs. W. B. Smith, a local florist, sent a collection of well-berried Solanums.

Raspberries are in bloom on the Wiltshire Downs.

Primroses and Strawberries have been picked at Dover during the past few days, owing to the remarkably mild weather. Last week ripe Strawberries were gathered in an open field at Stanwell, near Staines.

Leeds Paxton Society's Chrysanthemum Show will be held at the Town Hall, Leeds, Tuesday and Wednesday, November 15th and 16th, 1898. The hon. secretary is Mr. James Campbell, the Gardens, Methley Park, Leeds.

Syndical Chamber of Belgian Horticulturists.—At a recent meeting of this body in the Casino, Ghent, the jury awarded a Certificate of Merit for Cattleya labiata De Volderiae, presented by M. De Volder. On the same occasion certificates for culture and flowering were accorded to Sonerila, Mne. De Warelles, and Amasonia punicea, presented by M. L. De Smet-Duvivier; to Acacia platyptera, presented by M. E. Bedinghaus; to Manettia bicolor, shown by M. G. De Saegher; to Ixora coccinea, for culture and flowering; Dichorisandra musaica, Calamus ciliaris, Heminiotis palmata, Hymenodium crinitum, and Maranta fasciata, all exhibited by M. A. Rigouts; and Oleandra nodosa, presented by Mme. la Comtesse de Kerchove de Denterghem, with unanimity. From Dichorisandra to Oleandra the awards were for culture only.

Chrysanthemum Pennsylvania.—The other week a specimen of this new American variety was brought into our office by Mr. McNab, of Messrs. F. Sander & Co., St. Albans. The variety is similar in form to that of Philadelphia, being an incurved Japanese sort, but it is much darker in colour, and almost golden-yellow. The florets are incurved, twisted, pointed, more or less interlaced with one another, and paler on the outer face, which is rather strongly ribbed. The stems are stout, 4½ ft. to 5 ft. high, so that they support the flower heads very easily after they are cut. The leaves are leathery in texture and good. Hugh Graham, Esq., of Philadelphia, was the raiser of the variety, which promises to be a good thing if grown on by cultivators on this side of the Atlantic. The blooms occupied about eight days on the passage from Philadelphia to London, and were in tolerably good condition for some days after their arrival.

Messrs. Cockers' Chrysanthemums.—In proximity to the show of the Aberdeen Chrysanthemum Society we were pleased to note a fine display of the Autumn Queen of Flowers, in the window of Messrs. James Cocker & Sons, Union Street, Aberdeen. It was not only an object lesson, but tangible evidence that Chrysanthemums are being appreciated at their full value at this northern capital, where climate is against the grower, though not to the extent we had suspected. More than that the Aberdonians are well advanced in the aesthetics of the Chrysanthemum as in other matters of this kind, as we had evidence by observation in various quarters. The flowers in Messrs. Cockers' window were of the kind usually employed in house decorations, and included many of those which have proved suitable for a misty northern clime in autumn and winter. They were tastefully arranged in free and graceful bunches of different varieties in bright and telling colours—white, yellow, crimson, and other shades, such as are appreciated by the general public. We had ocular demonstration of the fact that Niveus is the most popular white, because the most serviceable and useful for late work. The broad, pure white florets in heads of suitable size are carried erect on stout stalks—a great recommendation for any variety employed in this way. The single or rather semi-double variety named Admiral Sir T. Symonds is also very popular here, because the large yellow heads of numerous florets attain their full size under ordinary conditions of cultivation. Lord Brooke also stands up well, and many others of which we have insufficient time to take note. The Chrysanthemums were supplemented with Paper White Narcissus, Lily of the Valley, Roman Hyacinths, and other forced flowers, together with Orchids. Amongst the latter we noted sprays of Calanthe Veitchii, Odontoglossum crispum, O. Rossii majus, O. crispum, O. grande, and flowers of Cypripedium insigne. Here also was Begonia Gloire de Lorraine, now blooming in Aberdeen.

Chrysanthemums, Tea Roses, and Primroses are flowering contemporaneously in the open-air at Dundee and Broughty Ferry, on the northern shore of the Firth of Tay.

Royal Horticultural Society of Ireland.—A vacancy having occurred on the Council of this body, owing to the resignation of Mr. J. H. Cumming, at the request of his friends, Mr. W. J. Michison, The Gardens, Mullaboden, Ballymore-Eustace, Co. Kildare, has allowed himself to be nominated a candidate for the same. He hopes to be able to attend most of the meetings, and give his best attention to the interests of the society if he should be elected.

Juno Cycles at the Crystal Palace.—December 3rd to 11th.—In the centre transept of the Crystal Palace, at Stand No. 196, about a score of these well-known machines are staged. The new models of the Junos for the year 1898 will be built on the same admirable lines as in the past, improved and perfected up to date in numerous points of detail suggested to the Metropolitan Machinists' Co., by their prolonged experience in cycle building. The Juno Ladies' Safety, light and elegant as ever, catches the eye by reason of the graceful outlines of its frame, etc., and its marvellous weight for such a thoroughly reliable machine—only 27 lbs. The Diamond Juno Light Roadster, with barrel hubs and new design bottom bracket, reducing yet further the width of tread, retains for this machine its more than foremost place among old competitors. The Juno Safety, No. 11, for heavy-weight riders, has had a record season and earned golden opinions in 1897; the new pattern for 1898 is the very acme of strength and lightness combined; the special mechanism of the bottom bracket being of unique design and of exceptional simplicity. The Juno Diamonds for boys, and the juvenile drop-frame pattern for girls will, we are sure, continue to command to the full all that meed of popularity which they have always had in the past; they are well made, light and strong—great desiderata for machines intended for use of growing and lusty youth. The Juno Tricycle for 1898 will be noticeable for its reduced weight, which makes it as easy to manage, lift, or ride as a safety for those of us who prefer three wheels to two.

"The House"—a Journal of Domestic Art for the Home.—(Horace Cox, London), has, since its inception ten months ago, fully sustained its original and high-class character. If we may judge from the programme of the Christmas Number, which was published on December 1st, it will be, in every way, worthy the enviable reputation which "The House" has so rapidly won. The Editor claims that the lady of the house will find this coming issue of valuable assistance to her in the arrangement of Christmas hospitality and festivities. "Christmas Decorations" are dealt with, showing how the commonplace scattering of Holly and evergreens behind pictures and over doors may be superseded, with practically no extra expense and very little trouble, by truly artistic adornment. Then, the Christmas Dinner, with a selection of special and seasonable menus, and recipes for their production is given; supplemented by a scheme of table decoration, which, if followed, would certainly enable the hostess to enhance the enjoyment of the repasts provided, by giving them an extremely decorative setting. The Christmas Play is not forgotten. Amateurs desirous of making a suitable set-off to their histrionic triumphs, have the fullest instructions for the painting of scenery and mounting, a perusal of which would prevent many a *fiasco*. Apart from these seasonable articles the usual amount of useful and original information on subjects associated with the furnishing, decoration, and management of the home will be included. Perhaps the most important feature, however, is the introduction to the public, for the first time, of a new work for artistic fingers, invented by the proprietors. It is styled "Tarsia," and takes the form of beautiful designs executed in actual woods of various colours. The Editor states that these designs may, by following the instructions given, be executed by any person without the least previous training, the only tools required being scissors—and patience. These particulars indicate that this Christmas Number (price 6d.) will certainly not lack interest for those who love their homes, and who wish to improve their surroundings.

National Chrysanthemum Society.—We understand that the Annual Outing for Members of this Society, in 1898, is arranged, and that Ipswich and its neighbourhood are to be the rendezvous.

The shape of Mushrooms.—Willie: "It's always in damp places where Mushrooms grow, isn't it, papa?" Papa: "Yes, my boy." "Is that the reason they look like umbrellas, papa?"

Jubilee of M. P. J. de Pannemaeker.—This professor of design and the painting of flowers at the School of Horticulture of the State of Ghent, on the occasion of the 25th anniversary of his entry into the professorship, was awarded the Civic Medal of the first-class by the Government. The royal command bears the date 6th September, 1897. The colleagues, friends and co-workers of M. de Pannemaeker entertained him to a banquet on the 7th October.

Instruction for Apprentice Gardeners.—Our contemporary *Bulletin d'Arboriculture, de Floriculture, &c.* says that the Royal Agricultural and Botanical Society of Ghent announced its intention of opening at the Casino, Ghent, on the 8th inst., a public and gratuitous course of instruction for apprentice gardeners after work hours. It is intended for the sons of workmen who have not the means to attend the School of Horticulture. When will that excellent example be followed in Britain?

Storing Apples.—A dry room should be selected in which to store the Apples. After the fruit has been gathered for a week or ten days there will be considerable sweating, and at the expiration of that time the fruit should be rubbed dry with a cloth, or failing that turned once or twice. The windows of the room may be kept open by day when the atmosphere is dry outside, even until frost threatens. Then if nearly a foot of clean dry wheaten straw is spread over the Apples it will keep the frost out. Newspapers also answer this purpose well.

Sidmouth Chrysanthemum and Fruit Show.—The ninth annual exhibition of the Sidmouth and District Horticultural Society was held recently at the Manor Concert Hall, Sidmouth. The number of entries (upwards of 200) compared very favourably with those held on previous occasions, and the quality was first-rate. The judges were:—Messrs. J. Mayne, Bicton; Underdown, Escot, Ottery St. Mary; Pragnell, Sherborne Castle; and J Reynolds, Sidbury Manor. The premier award for the group of Chrysanthemums fell to Mr. Cross, who was followed in order of mention by the Rev. W. Vickers, and Mr. Earland. In another class for a group of similar material the Rev. H. Clement led. Mr. Cross had the best twelve cut Japanese Chrysanthemums, grown by the aid of Ichthemic Guano, the prize being given by the Ichthemic Guano Co. of Ipswich. Mr. Cross also won for six mixed, twelve cut blooms, three of a kind, for the best bloom in the show. Mr. R. Carnell was another successful exhibitor. Mr. T. Dingwall had the best six table plants. Miss F. Street won for table decorations. The prizes for the collection of twelve kinds of vegetables were awarded to Messrs. G. Cox, W. H. Underdown, and R. Ashton, in order of mention. One of the features of the show was the large and effective exhibit of decorative plants made by Mr. H. Berwick, of the Fortfield Nurseries.

PEOPLE WE HAVE MET.

MR. ALEXANDER HAGGART.

A NEW and worthy addition to our gallery of notable horticulturists is Mr. Alex. Haggart, of The Gardens, Moor Park, Ludlow, the winner of the Diamond Jubilee Gold Medal and £50 cash prize of the Scottish Horticultural Association, besides the trophy prize; and I have had the pleasure of an interview with him. Mr. Haggart received me most cordially, and in reply to my inquiries as to his early days I learned that he was born in the year 1854, in Forfarshire.

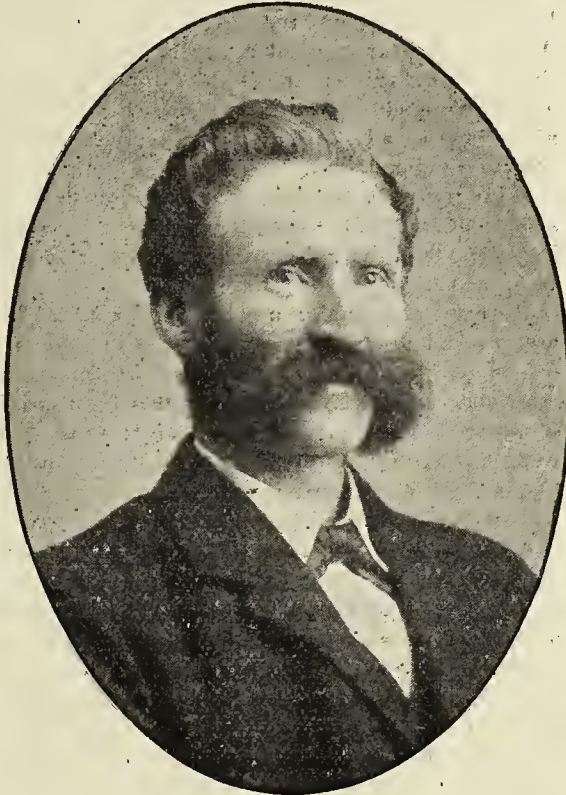
"Will you give me a short outline of your start in life, Mr. Haggart?"

"I was at the age of sixteen apprenticed to Mr. James Mitchell, gardener to the Earl of Dalhousie, at Panmure, and to his able tuition I attribute most of my ultimate success. I was there about four years, after which I went to Auchinleck House, Ayrshire, the county seat of Lady Boswell, under

Mr. Watson, where I spent two years as foreman of the glass."

"And where did you move to next, Mr. Haggart?"

"My next move was to Tarvit, Cupar-Fife, the residence of Capt. Rigg, under Mr. Williamson, whom I found to be a good master, and a clever gardener. I spent but one year here, and I may say that I learnt many useful things connected with horticulture. After that I went to Buchanan Castle, the seat of the Duke of Montrose, under Mr. Crosbie,



MR. ALEXANDER HAGGART.

who is still there, although seventeen years have passed since I left the Castle. After being there for one year, and gaining a useful knowledge of culture under glass, I again moved, and this time I pitched my tent for good."

"Will you give me an idea of how you first started growing for exhibition, and what induced you to do so?"

"With pleasure. I had read many articles on 'Mum growing by Mr. E. Molyneux, and was tempted to show a few at Shrewsbury, afterwards at Birmingham; but the best growers in Liverpool kept me in check, and although I exhibited for many years at Birmingham Mr. Parker always proved best man with the exception of once, when I was placed before him for eighteen Japs."

"But even then, Mr. Haggart, you did not despair?"

"No. In November, 1895, I visited the Royal Aquarium show for the first time, and was much struck with the wonderful specimens of skill then exhibited. I thought I had as good blooms at home, and entered for the December show, and was successful with twenty-four, twelve, and six Japs; second for incurved, and received a First-class Certificate for a new variety, Mrs. C. E. Shea."

"This, naturally, stimulated you, and induced you to enter the lists for a greater honour?"

"Yes. In the next year I entered for the Great Jubilee Prize for sixty blooms, in which there were twelve entries, mine being placed third."

"Unfortunately for me the show was a week too early for my blooms, and bearing this in mind I had them early this year, but the weather interfered and we were again late; but, fortunately, the greatest prize ever offered by any Chrysanthemum society was late, and I entered for the two big classes at Edinburgh, with the result that is already known."

"To what do you attribute your success, Mr. Haggart?"

"Well, to a determination never to give in, and to an observant look out for new ideas in the course of my wanderings."

"Have you encountered many difficulties in the way of exhibiting?"

"The difficulty I have had has chiefly been with my employers, whose rule when engaging has been to bar exhibiting; but my present employer, the

Hon. Lucius O'Brien, son of Lord Inchquin, of County Clare, very kindly withdrew the rule. Beyond this I have encountered few difficulties, my entry into the list of competitors being welcomed by most of the leading lights of the horticultural world, and I have found that little, if any, cold water is thrown over a new competitor in this particular branch, as is too frequently the case with others."

Mr. Haggart, it may be mentioned, is a non-smoker, an abstainer, and, what is strange for a Scot, takes no snuff. I am sure that his entry in the already large list of competitors for honours in the Chrysanthemum growing world will be cordially welcomed by my many readers. Mr. Haggart is a typical man of his race, and to my many Scotch readers this short description of his life will be especially welcome. I hope to have the pleasure of again seeing Mr. Haggart at some of the larger shows, and trust that he will continue to be as successful as heretofore. He has certainly taught some of the other cracks a lesson.—Gyp.

[Our photo is from a picture specially taken for THE GARDENING WORLD on the day of the award at Edinburgh by Messrs. Horsburgh & Son, Edinburgh and London.—ED.]

FLORAL DECORATIONS AT LAMBTON CASTLE.

DURING the visit of the Prince of Wales to Lambton Castle, Fence Houses, last week, the floral decorations were carried out in a most elaborate manner. The large, magnificent entrance hall, 100 ft. long by 45 ft. wide, and 60 ft. high, is well worthy of record. Gigantic and stately Palms, Kentias 30 ft. high, and other fine foliage plants, intermingled with Chrysanthemums, Poinsettias, Violets, Roman Hyacinths, and Azalea mollis, were beautifully arranged with telling effect. Over 150 glasses were used during the four nights of H.R.H. visit for table decorations. Each night a complete change of flowers and arrangements were made by Mr. James Hunter, the gardener-in-chief, who was congratulated upon the beautiful arrangements by many of the distinguished guests.

One night hundreds of sprays of Lily of the Valley, combined with dozens of flowers of the old *Cypripedium insigne*, were employed. On another occasion the table was decorated with Roman Hyacinths and Violets, and on the third night with *Poinsettia pulcherrima*, Lily of the Valley, and Roman Hyacinths. On the fourth night a complete change was made. The whole of the tables were decorated with Chrysanthemums, which produced a grand display. Fruit, one may be sure by the reputation Lambton has, was everything that could be desired. Great credit is due to Mr. J. Hunter for the various products of the garden he used on this occasion.—A. O.

NATIONAL CHRYSANTHEMUM SOCIETY.

THE annual dinner of this society was held on Wednesday evening, 24th November, at Anderton's Hotel, Fleet Street, London. The excellent menu supplied by Mr. Clemow, and the delightful chairmanship of Mr. T. W. Sanders, combined with the tasteful floral decorations of Miss Dean, and the musical arrangements of Mr. H. Myers constituted a very pleasant evening to a full gathering.

In proposing a toast, "The Glorious Chrysanthemum and its Devotees," the chairman said, "for 1,000 years the Easterns have worshipped the Chrysanthemum. Its cultivation unites all brotherhood, as the flower is second to none. The Rose is beautiful because it blooms in the summer sunshine and light, but the 'Mum sends out all its glory and beauty during the times of cold and murky atmosphere. The influence it has exerted in western countries and here has made horticulture more inviting to hundreds of thousands of persons. Even in the East of London the results of 'Mum culture are surprising by reason of the grand masses of blooms produced. The suburban amateurs also make grand displays, whilst the nurserymen and professional gardeners, who are to be congratulated upon their spirit of enterprise, are striving to make the flower even more popular."

Mr. Sanders claimed that the N. C. S. was the cause of all this enthusiasm, and gave the statistics

as to affiliated branches in England and the Colonies, showing that 148 affiliations had already been effected, ten of them being since the commencement of 1897. Mr. Sanders paid a warm tribute to the council and members of the Scottish Horticultural Association for the grand reception given and hospitality shown to himself and colleagues from London, at the great Edinburgh Festival the previous week.

Much enthusiasm was evinced when the chairman presented the National Challenge Trophy to the Bromley and District Chrysanthemum Society, and the various medals and awards to the successful exhibitors at the recent show.

In rising to respond to the toast of "Our Able Secretary," Mr. Richard Dean was received in a manner well befitting the subject of the toast, and he announced that the infirmities of age necessitated that he should very shortly ask the committee to relieve him of some part of the onerous duties required from him as secretary and superintendent of shows.

Several toasts and songs pleasantly filled up a long evening's entertainment.

HOSPITALITY OF THE SCOTTISH HORTICULTURAL ASSOCIATION.

WHILE the show inaugurated by this association was being held the other week, there were English, Scotch, and Irish visitors, many of whom were accorded a hearty welcome in more ways than one, and who will long remember the hospitality accorded them by the council of this influential body in the Scottish capital.

On the last day of the show a number of the visitors were invited to luncheon in the Royal British Hotel, at 1 p.m., when the chair was taken by Mr. Robert Laird, the secretary. Several of the visitors being about to return to the south and west, the opportunity was taken of according them a friendly good-bye. Amongst those present on this occasion were Messrs. E. Molyneux, R. W. E. Murray, W. Mease, A. E. Stubbs, M. Todd (the president of the association), D. P. Laird, H. J. Jones, T. W. Saunders (chairman of the N.C.S. committee), A. Williams (bandmaster of the Grenadier Guards), G. M. Ross (secretary of the R.H.S., Ireland), and J. Fraser (of THE GARDENING WORLD).

After the show was cleared away from the Waverley Market, there was another good instance of the hospitality of the Scottish Horticultural Association, when a number of friends and visitors to the show were invited to supper in the Royal British Hotel. The president, Mr. M. Todd, occupied the chair, and Mr. R. W. E. Murray, convener of finance, acted as croupier. Among the guests assembled were Messrs. A. Mackenzie (treasurer), James Grieve, James Grieve, Junr., H. J. Jones, Greig, Proctor, D. P. Laird (of Messrs Laird & Sons, Edinburgh), A. E. Stubbs, Robert Laird, Wm. Mackinnon (of Mr. John Downie, Edinburgh), A. Milne, and J. Fraser.

Speeches were made by several of the gentlemen present during the course of the evening, when it transpired that the idea of organising a society in Edinburgh originated with Mr. McMillan of that city. The idea was taken up, and greatly augmented by Mr. Carruthers, of Corstorphine, the outcome being the establishment and evolution of the Scottish Horticultural Association. The latter gentleman, being unfortunately unwell, was unable to be present at the show.

Mr. James Grieve made a humorous speech, according to his wont on such occasions, during which he remarked that Mr. R. W. E. Murray was the only man who had a railway station in his "gardening." The latter, it may be remembered, was the amateur who took the Gold Medal of the association for twelve vases of Chrysanthemums. A railway runs through his garden, with a station actually in it.

Bandmaster A. Williams, on leaving Edinburgh on Saturday night (the last day of the show) was made the recipient of a handsome bouquet of Chrysanthemums. He returned a message of thanks to the council of the association, this being appropriately delivered at the supper table during the course of the evening. Many invitations were given the association by members of other societies anxious to reciprocate the kindness and hospitality accorded them by this flourishing horticultural body at the Scottish capital.

NOTES FROM THE OPEN FROM FORDE ABBEY.

OCTOBER has been a glorious month. It is astonishing what lessons we learn from such autumns as the one we are passing through. It is seldom we get such autumns as this one, although when one comes to look back over forty years there have been several in that time, and the re-occurring of each teaches one some important lessons.

This has been brought forcibly to my notice, as I look on the hardy plant borders and notice what a fine display has been made for the last few weeks with the Michaelmas Daisies or Asters. I never remember seeing these so fine as they have been this year in borders, amongst shrubs, and growing out of the turf in the wild garden. We grow them in all of these positions, and all have their recommendation.

Many cultivators think the plants must have a good "lander." By giving them this the blooms are large, but then the tall-growing kinds get too high to be effective.

We grow about a dozen of the best kinds. Some are more adapted for growing out in the turf than others, by reason of their stronger habit and more rigid nature. We have some that have been growing in the same position for the last eight years in the turf, which have had no assistance in the way of feeding, and yet at the present time (October 27th) are a mass of blue flowers.

Amongst the best for this system of culture is Robert Parker.

LOBELIA CARDINALIS QUEEN VICTORIA has had a good time, and given a good account of itself. Growing in clumps amongst Dwarf Roses, the effect has been good, the bronze foliage and red blooms contrasting grandly with the Rose leaves. This plant deserves to be more grown. It is readily raised from seed, which is by far the best way.

This autumn has taught me the value of the old saying, namely "that it is not wise to carry all your eggs in one basket," and I say it is not wise to depend on one sowing of many things. This is especially true of Dianthus; the late sowing has given us splendid material to cut from during the last six or eight weeks, and few things are more useful. What can be more beautiful than the double white or the single crimson forms, and they stand a long time in a cut state. If you want them good obtain seed from the best source; the plants grow well and few things outdistance them.

PHLOX DRUMMONDI never gave better returns than this year, and the continuing of their blooming is a very strong recommendation to them. I find them most useful for table decoration when used in separate colours. This evening I used some white and coloured ones with good effect. I grow them in batches of separate colours, obtaining the best seed I can get, regardless of cost, and grow only self colours, and those with a clear eye.

BORDER CHRYSANTHEMUMS give a bright effect in themselves, and when used amongst other hardy plants that are gone over, they are most valuable. There are so many good sorts now to be had that there is no excuse for not growing them.

A bed of bright yellow Chrysanthemum *Précocité* and white *Scabious* is now most effective.

It is seldom one sees Dahlias and Chrysanthemums of the Japanese section blooming at this time of year together. But this may be seen in many places, and in cottage gardens in this neighbourhood, and they associate well together.

I was astonished to see how well the Dahlias were in bloom in the cottage gardens in our village to-day. There seems to be a great love for these flowers amongst cottagers. Every cottage can boast of some six or eight colours.

In tender plants a season like this teaches one the advantage of being able to cover any tender things such as Begonias and things of this class. By so doing for a few nights a few weeks ago we have been keeping our beds gay, and now at the end of October they are very bright.

SALVIAS deserve to be more planted in warm, sheltered spots. Amongst the best are *S. Pitcherii*, *S. Bethelii*, and *S. splendens*, and although they do not begin to bloom till the autumn, they produce a bright picture when they are in flower. We have some big plants growing in a narrow border in front of the Abbey, from 3 ft. to 4 ft. across, of these kinds, and nothing could be more lovely than these three colours—pink, blue, and bright scarlet. If the

severe frost keeps off they will continue a long time in beauty.

Agatheae *coelestis* deserves notice at this season, as does also *Sternbergia lutea*. *Mina lobata* is blooming fine here in a sunny spot, and the Canary Creeper, grown over Sweet Pea stumps and on the stakes, is a glorious mass of yellow.

In the kitchen-garden much is learnt by observations, and here, too, the same thing applies: you must not depend on any one sowing.

No two seasons could have differed more than this and last in our garden as to Winter Spinach. We sowed three times last year, and the last sowing was not strong enough to be of use. The two first sowings gave good returns; but this year the last sowing will be most valuable, as the others are too forward if we get severe cold.

All the late-planted Cabbage and Cauliflower will be the most useful. Everything has grown so fast that Veitch's Autumn Giant Cauliflower, planted after Potatoes were lifted, is now too forward and has heads a foot across.

LATE TURNIPS will be most valuable, as they are growing fast. Endive is looking splendid, and if stored in frames before frost cuts it, there will be abundance of this most valuable winter salad.

Lettuces have grown too fast. Those we intended to stand the winter have grown too high, and we are now planting again from a later sowing.

It has been a fine time to allow late Pears and Apples to hang on the trees to ripen; Pear Winter Nelis I gathered on the 25th, and hope to allow Easter Beurré and Josephine de Malines to hang till November. I find all mid-season kinds coming into use too fast, as the store house cannot be kept cold.

I never remember seeing the foliage die off such a high colour. Some of the shades of crimson and yellow are most gorgeous and seldom have the bees had such a good time for working the Ivy bloom. Over the ahhey there is a good deal of Ivy, and the air is in a hum with bees working the bloom.—J. C., *Chard*.

MARKET GARDENING IN THE QUEEN'S REIGN.

(Concluded from p. 197.)

GRAPES.—Over a thousands tons of Grapes are marketed each year. The favourite varieties are Black Hamburgh, Gros Colman, and Madresfield Court.

TOMATOS are marketed at the rate of 6,000 tons a year. The old wrinkled varieties have disappeared, and their places have been taken by fruits of the Perfection type. Seedlings of Challenger, Trophy, and Chemin Rouge are amongst the best.

CUCUMBERS are sold at the rate of about 500,000 dozen annually. There is a considerable export trade in Cucumbers. Telegraph and the white-spined varieties dominate the market.

PEACHES AND NECTARINES are grown, but there is comparatively little profit attached to them. The best fruit will always fetch a high price, but the greater part of the fruit is allowed to get too ripe before it is gathered for market.

FLOWERS.

The crowning point of modern gardening is shown in the rise and progress of flower culture for market. No comparison can be drawn in this respect between 1837 and 1897. We make an increased outlay upon flowers, for they are as much the occupants of the sick room and the humble lodging as they are necessities at the highest of social functions—the Drawing Room; in fact, flowers are Nature's most charming production.

From the Snowdrop in early spring we pass on to the Violets, Narcissi, Pinks, Stocks, and Roses, and from them to the Dahlias and Chrysanthemums of autumn. In the spring, too, thousands of rooted plants are daily sold.

HOTHOUSE FLOWERS AND PLANTS are becoming more and more in demand. Palms, for instance, have vastly increased in quantity, and decreased in price since our home growers have found that they can raise them without the help of the Continental cultivator.

The grower of flowers for market has to compete not only with foreign competition (from the Riviera particularly), but also with the surplus material from private gardens which is not infrequently sent to market. The Narcissus trade of the

Scilly Isles is a good instance of the development of the industry in remote parts of the kingdom. The first consignment of flowers was sent to London in 1865, and fetched exactly £1. In 1896, 496 tons of flowers, and 59 tons of Tomatos left the Isles, chiefly for the London markets. On the busiest day this year 1,600 boxes came to London from thence.

Lilies, Roses, Gardenias, and Orchids are all grown in tremendous quantities to supply the market. The practice of retarding Lily of the Valley crowns by freezing them in order to lengthen the season has met with abundant success.

The market gardener of to-day occupies a high position, and there is no doubt that his skill and energy will still further advance both him and his chosen industry, but, said Mr. Assbee in conclusion, I must add a word of caution, just as the agricultural crisis through which we are even now passing is due not only to foreign importation, but also to the fictitious value imparted to farms by the rushing in of retired capitalists who thought farming a delightful occupation to fill their time, I am afraid that something similar may happen to the production of garden produce for market. The signs are not wanting of such a development, and I would therefore advise a cautious policy.

An interesting but not lengthy discussion followed the reading of the paper.

Mr. Roupell remarked that Mr. Assbee had made no allusion to the invasion of Apples from the Antipodes. He also said that the growers of Victoria, Australia, are on the look out for a new early Apple, and he suggested something after the style of King of the Pippins or the new Allington Pippin. He alluded to the splendid way in which Mr. Peter Kay grew Grapes at Finchley, particularly Cannon Hall Muscat, for, continued he, bringing into play a most extravagant comparison, there are numbers of bunches as big as horses' heads.

Mr. Bunyard referred to Mr. Assbee's recommendation to grow more Currants. He said the difficulty was in the prevalence of the mite that, during the last few years, had attacked the Black Currant bushes, to the dismay and loss of the growers, since no remedy had been found. His only advice was in such a case to cultivate highly and keep in as much young wood as possible. With regard to Peaches, he was of opinion that many people send their fruit to the market too ripe. Large fruits always fetched a good price, but it would pay a grower better to keep the rubbish at home than to send it to market.

In replying to the questions raised, Mr. Assbee said that the influx of Antipodean fruit did not affect the market for British fruit, since the season for the latter was over before the former came in. He also said that Mr. A. Bloc, of Santa Clara, was making arrangements to send over large quantities of fruit to this country in cool chambers.

After a cordial vote of thanks to Mr. Assbee for his comprehensive and interesting lecture the conference terminated.

PLANTS RECENTLY CERTIFICATED.

THE Floral Committee of the National Chrysanthemum Society, which assembled at the Royal Aquarium on the 15th inst., awarded First-class Certificates to the Chrysanthemums mentioned hereunder.

MASTER H. TUCKER.—This is a large rich crimson Japanese variety. The florets are long, heavy, incurve considerably, and have a reverse of crimson-gold. The bloom is not of great depth and is rather flat. Mr. H. Shoemith, Claremont Nursery, Woking.

GEORGINA PITCHER.—A huge Jap with massive incurving, ribbed florets. The colour is rich yellow. It is a first-class show variety. Mr. W. Wells, Earlswood Nurseries, Redhill.

MIDDLE. LAWRENCE ZEDE is a rosy-lilac Japanese bloom with heavily incurving and inter-twisting florets. The reverse is silvery. Mr. W. Wells.

EARLSWOOD BEAUTY.—This is the latest addition to the ranks of the single-flowered section. In this form there are two or three rows of long, slightly drooping white florets. The length of the latter gives the bloom a large size. Mr. W. Wells.

MIDDLE. LUCIE FAURE.—This is one of the 1897 introductions of M. Calvat, of Grenoble, and is certainly one of the finest of them. It was certificated

as an incurve, but it undoubtedly has a great deal of Japanese blood in it. The size is tremendous, and leaves the old type of incurve far behind. The colour is creamy-white, and the florets are long, pointed, and have divided apices. Mr. W. J. Godfrey, Exmouth, Devon.

ERNEST CANNELL.—This is another instance of the larger type of incurves that has been so strongly pushed of late. The florets are broad and massive, and the bloom is of globular shape. The colour is a pretty shade of buff-yellow. Messrs. H. Cannell & Sons, Swanley, Kent.

MRS. G. CARPENTER.—A very handsome Japanese flower, although occasionally inclined to coarseness. The colour is rich lilac, shading to purple-lilac at the base of the florets and towards the centre of the flower. The reverse is silvery. Mr. Carpenter, West Hall, Byfleet.

The following varieties were commended:—

MATTHEW HODGSON.—A dull crimson Japanese bloom with gold reverse. Mr. J. Ollerhead, Wimbledon House.

MRS. EGAN.—An incurve of medium size, the colour lilac, shading to white. The bloom is much after the style of Hero of Stoke Newington, but it has rather more colour. Mr. R. Owen, Maidenhead.

MADAME FERLAT.—Another of M. Calvat's '97 introductions. It belongs to the large flowered modern incurves. The colour is dead white, and the bloom is striking enough from its very size. Mr. W. Wells.

LADY NORTHCOTE.—A large Jap with long, drooping, tubular outer florets. The colour is light lilac, shading to white in the centre. Mr. W. J. Godfrey.

PHILIP MANN.—A medium sized Japanese flower. The colour is the chief feature, for it is bright purple, and very handsome, but the flower is not large enough for a show variety—at least at present. Mr. W. J. Godfrey.

Chrysanthemums.

THE following received First-class Certificates from the Floral Committee of the N. C. S., at the meeting held at the Royal Aquarium on November 22nd:—

JOSEPH CHAMBERLAIN.—A magnificent Japanese variety. The colour is crimson-red, with a gold reverse; in fact, much the same colour as Edwin Molyneux. The florets are long, drooping, and of medium width. This is one of the finest dark varieties exhibited this year. Mr. H. Weeks, The Gardens, Thrumpton Hall, Derby.

JULIA SCARAMANGA.—A large Japanese form, in colour bronze-terra-cotta, with a paler reverse. The lower florets are exceptionally long and quilled, thus giving the bloom great depth. Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey.

MME. FERLAT.—One of the large modern types of incurves. The colour is pure white, the florets stout and substantial with acute apices. This is a very handsome flower when well grown. Mr. W. Wells.

A commendation was bestowed upon the under-mentioned variety.

DON DE LA MADONE.—A medium-sized reflexed Japanese variety with white blooms of great solidity. It is much after the style of Avalanche. M. Anatole Cordonnier, Roubaix, France.

Gleanings from the World of Science.

THE subjects mentioned hereunder were brought up for the consideration of the Scientific Committee of the Royal Horticultural Society on the 9th ult.

Cattleya labiata, Sport.—Dr. Masters observed that sports similar to those produced at the last meeting, in which two sepals were more or less resembling the labellum, had been sent to him from numerous localities this year. The species was introduced some fifty years ago, and subsequently lost; but it has been lately rediscovered in, and introduced from, Pernambuco.

Carnation Leaves with Horn-like Marginal Outgrowths.—Mr. Michael reported that no trace of acari could be seen, as suggested as a possible cause. Dr. Müller observed that a plant of Solanum jasminoides was covered all over with horn-like excrescences. Dr. Masters suggested that they were probably spongy outgrowths from the epidermis.

Stocks, &c., Attacked by Beetles.—Mr. Michael observed that Stocks, Virginia Stocks, and Nasturtiums in his garden were attacked and utterly spoilt in a fortnight by thousands of beetles eating the flowers of the two former plants, but the leaves as well of the last-named. They do not entirely kill the plants, which renew both leaves and flowers after the beetles have disappeared. A partial remedy was found in shaking the plants over a basin of hot water. It appears to be Phyllotreta atra, one of the numerous "flea beetles." Miss Ormerod, to whom they were sent, suggests "trying a mixture of equal parts of fresh gas lime and quicklime, with a much smaller proportion of soot, and about half as much sulphur as of soot. These should be powdered up together very finely, well mixed, and dusted on to the foliage when the dew is on it, morning or evening. Just a sprinkling is enough. It usually acts well if applied as above, so as to adhere to the beetles and foliage." She was under the impression, however, "that lime similarly applied would do equally well."

Ivy Attacked by Dodder.—Mr. Chas. Herrin, of Dropmore, sent specimens of Ivy badly attacked by a *Cuscuta*. He remarks, "This parasite has established itself on the west wall of our church, destroying the Ivy with which it is covered. It has been thoroughly destroyed, Ivy and all, once, a few years ago; but now that the Ivy has begun to grow nicely again, half covering the wall, it has again appeared, and is destroying it." As the seeds must germinate in the ground, or perhaps in the chinks in the wall as well, the aim must be to kill them before germinating. If the ground by the wall receive a good dressing of slaked lime, such might prove effective.

Cox's Orange Pippin Apple Striped.—Mr. G. Swailes of Beverley, sent an Apple, mostly red, but striped with green on one side, the latter colour being on the most exposed side. The cause was unknown. Dr. Masters suggested the possibility of accidental crossing having been the cause, for Darwin had described similar results in an Orange pollinated by a Lemon ("An. and Pl. under Dom." I., p. 399). Mr. Wilks mentioned that a Beurré d' Amanlis Pear in his garden had thrown out a green striped sport, also a bough bearing golden foliage.

Gall on Jessamine.—Mr. Henslow exhibited a large globular gall which he had taken from the stem of this plant. As no fungus was present, it was sent to Mr. MacLachlan for examination.

Composition of Potatos.—Prof. Church gave some account of the late recent researches of MM. Coudod and Bussard on the distribution of the constituents in Potatos. They found that a slice of a Potato revealed three zones; the external one beneath the epidermis contained 73 per cent. of water, the central holding about 80 to 84 per cent.; that the central part contained the greater amount of nitrogen, the exterior the greater quantity of starch. This accounted for the "bursting" in a floury Potato, which is relatively more free from albuminoid matters. The cause of the interior portion being more consistent is that the starch cells, though bursting, are held altogether by the curdling of the albuminoid matters during cooking. The same peculiarities appear in the thirty-four varieties examined. The intermediate zone was also of an intermediate character with regard to its structure and cell contents. It was to be regretted that the authors did not distinguish between the true albuminoids and the amides in estimating their percentage of nitrogenous matter. As a rule the former amount to 1.3 in Potatos, but they had estimated them from the total nitrogen as from 1.8 to 2.5. Dr. Masters remarked that these observations corresponded with the stem-structure of the Potato, which would have the cortex as a starch reservoir as it is in trees, while the deeper layers would correspond with the phloem or proteid-holding sieve tubes.

Ribes aureum in Fruit.—Dr. Masters, at a recent meeting of the Scientific Committee of the Royal Horticultural Society, exhibited a branch bearing a raceme of ripe purple-black berries, of this common shrub. Though introduced by Mr. Douglas from California, the fruit has rarely, if ever, been seen before. It was received from Mr. Veitch.

HINTS FOR AMATEURS.

Single Chrysanthemums.—There is no doubt that the large-flowered Japanese, incurved Japanese, and incurved Chrysanthemums monopolise a great deal of the attention of the 'Mum-loving public by reason of their very size and imposing appearance, but we turn to the singles with a feeling of something like relief. We do not wish in any way to detract from the value of the larger flowers, for they are all of service in their particular direction, but we may say without exaggeration that in the single flowers we get a pleasing and useful break-away from the large flowers.

There are not wanting persons who, from an aesthetic point of view, prefer the singles to anything else, and who aver that they see neither grace nor beauty in the large flowers that the skill of the florist has called into existence. However much truth there may be in these remarks, and although the greater majority of cultivators would not be prepared to endorse them fully there are very few persons indeed who have not a very warm corner in their affections for the single varieties.

This is not at all surprising when we consider how very useful the plants are to those who have to keep up with large demands for cut flowers and plants for decorative purposes. Most of the plants are very floriferous, and as they are, as a rule, not subjected to quite so much feeding as the large-flowered varieties, consequently the constitutions of the plants are not submitted to so great and continuous a strain. As a result the plants are generally good doers, and repay fully any trouble and care that may be exercised on their behalf.

Perhaps a word or two upon the definition of a single may not be inopportune. There are numbers of varieties upon the market that pass for singles, and are often regarded as such, but which are in reality not true singles at all, but semi-doubles. Examination will reveal that there are several, sometimes as many as four or five rows of ray florets. Such varieties, therefore, although they may be very pretty in themselves, cannot be properly styled singles, and can only be placed in the decorative section, which is a sort of waste-paper basket to hold sorts about the classification of which it is difficult to decide, or which do not fall readily into the various existing classes.

A true single variety should, strictly speaking, only have a single row of ray florets, but according to the decision of the National Chrysanthemum Society, a variety is accepted as a single if there are not more than two rows of ray florets.

The laxity that has been permitted in allowing varieties to be placed upon the market as singles, when they do not fulfil this requirement has doubtless caused a good deal of disappointment, and, it may be, not a little anger on the part of those who have attempted to show such varieties as singles, and have been disqualified by the judges as the natural result. In such cases the judges have only performed their duty, but this does not remove from the disqualified exhibitor's mind the sense of an injustice done, which remains even after the reason for the disqualification has been given. This all goes to show that cultivators who intend to exhibit cannot be too particular when they are obtaining their plants to see that they satisfy the condition of the section under which they are nominally placed.

There are several types of single flowers, and these together cover a good deal of ground. For the sake of convenience the section may be divided into large and small flowered varieties, but the large flowers again exhibit a good deal of distinctness in build and style. The varieties with long, drooping, rather pointed florets, and a corresponding looseness of build in the bloom are deservedly much admired and very popular. There is a good deal of difference between them, however, and the group of which Miss Mary Anderson is the type, which may, if desired, be regarded as a section with medium-sized flowers. Here we have a compact flower, with the florets very broad, of medium length, and touching each other along the greater part of their length. They are somewhat stiffer also, and the outline is very regular and circular.

One of the greatest merits of the singles is their continuity of blooming. From the beginning of October right up to Christmas they will furnish

flowers in quantity, providing a suitable selection of varieties is made, and that some discretion in forwarding some plants and retarding other is employed. Damp, which usually plays so much havoc with the larger flowers during the month of November, has comparatively little effect upon the singles, and the flowers preserve their colour and freshness for a very long season. Not only, moreover, do they last well upon the plants, but they stand for a long time in water when cut.

For table decoration, and for the filling of vases during the months of November and December, they are simply invaluable. In skilled hands exceedingly fine effects may be produced by them, and their grace and elegance cannot well be over-praised.

We have a long list of varieties from which to pick and choose, and as these represent a considerable range of colour a liberal selection of them may be grown with advantage. The following will be found to include some of the finest and most useful varieties. A few of them it will be observed are not strictly singles, but semi-doubles, but where we have included a few of these by reason of their value and beauty, mention has been made of their ineligibility to be shown at an exhibition as singles.

Miss Rose may be taken as one of the finest types of the small-flowered section. It is deservedly a great favourite with many people. For conservatory decoration there is nothing that surpasses it. The habit is very dwarf and bushy, and the plants take on a very symmetrical habit. As ordinary bush plants in six, seven, or eight inch pots, they are great successes, and there is no gainsaying their beauty when they are covered with the delicate pink flowers. Of late years the greenhouse number IV. at Kew has accommodated a number of plants of this stamp, and these have been much admired by visitors to the famous gardens. Occasionally we see this variety subjected to elaborate training. To this it takes kindly, and although it does not make such large specimens as some other single forms, it develops into very neat samples.

The Star is an improved form of Miss Rose, raised by Messrs. H. Cannell & Sons, of Swanley, Kent. The habit of the plant is the same, but the flowers are larger and of a deeper rosy-pink hue. There is no doubt as to the distinct character of the two forms when they are grown side by side and compared with each other.

Mary Anderson is another deservedly popular form. The habit here is somewhat taller, but still not tall. The flowers are large, bluish-white in colour and of perfectly circular outline. Messrs. H. Cannell & Sons have been very busy of late years in raising a lot of seedlings, of which one of the parents has been this variety. The object of course is to get a number of colours with flowers of the same build and style.

Blanche Chapman.—This is one of the finest of the seedlings above referred to. The colour is pearly pink, with a light rose reverse. The build of the flower is similar to that of its parent. The habit is good, and the plant is very free flowering. We were much struck with this variety during a recent visit to the Swanley Nurseries.

Irene is another very handsome form belonging to the same batch of seedlings. The flowers are large and pure white, and produced with exceptional freedom. The habit is very dwarf and bushy, and we have no doubt when the variety is better known that the plant will receive a good deal of the attention of the public.

Miss Annie Holden is an older sort that has been awarded a First-class Certificate by the National Chrysanthemum Society. It is certainly a charming form, and worthy of inclusion in every collection. The colour is bright canary-yellow, a colour that shows up well either by night or day. Habit and constitution are alike good.

Jane, which also has been named Snowflake, is one of the handsomest of the large-flowered section. The ray florets are long, drooping, inter-twisting, white, and with acute apices. There are several rows of florets, however, especially when the plants are subjected to high cultivation; hence the variety must be regarded as being strictly a semi-double. It was sent out by the Messrs. Cannell in 1885, so that it has been before the public for twelve years.

Yellow Jane, sent out by the Messrs. Cannell in 1889, is the exact counterpart of Jane as far as build of bloom goes, but the colour is bright yellow. Both

it and the white form are midseason varieties. Yellow Jane is, however, considerably taller than its white counterpart, and rather more straggling in habit.—*Rex*.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Forcing Rhubarb.—*Aurore*: You will scarcely have time now to get Rhubarb by Christmas, unless you are willing to forego a good deal of the produce of the roots by reason of the hard forcing that will be necessary. You must lift the roots at once. If you have space beneath the stage of a warm house close to the pipes you may pack the roots closely together, covering them over lightly with leaf soil, and surrounding them with boards to keep the heat of the pipes from drying them up too much. Keep the roots well sprinkled with tepid water, and cover them up with mats to exclude the light.

Border Carnations.—*Franco*: You need have little fear of the effect of cold weather upon the Carnations. What you have to dread far more is the damp. Your plants will not require watering for some time yet to come. The lights may be pulled completely off the frame when the thermometer is above freezing point and it does not rain. During very cold weather you may cover the frames with a few mats, or, if these are not forthcoming, with dry litter of any kind.

Chrysanthemum Sport.—*L. S.*: The bloom you forward is of no value whatever. The colour is bad, and the appearance rather coarse. The stem, moreover, is too weak to uphold the flower. We are sure that you will be only courting further disappointment in trying to grow it.

Why do Chrysanthemums Sport? is the question propounded by C., and we must confess that it is one to which we cannot give a direct answer as to the immediate causes of the phenomenon. After a few years of continuous cross-breeding the stability of the plant becomes upset, although this may not be apparent. The result is that we never know when a plant is going to break away into another direction, and any small influence, such as a very dry or very wet season, overfeeding, or starving, may turn the scale. The modern Chrysanthemum is a very highly bred plant, and its stability must be correspondingly precarious, hence we find that every year "sports" make their appearance. These sports may exemplify a hitherto new colour, or they may be reversions to a former type. The grower can never definitely foretell which way the balance is going to turn.

Early Grapes.—*T. S.*: You may start the vinery at the beginning of December if you like, but you should make sure that the heating apparatus is capable of keeping the house at the requisite temperature during January and February, or you would be well advised to leave it until a little later. By starting thus early you will have two of the colder months of the year to fight against, and the gradually increasing temperature of the house will by that time have reached a fair height, and you may have difficulty in keeping it up.

Greenhouse.—*F. Lawrence*: If, as you state, you would not be allowed to have a greenhouse in your back garden with the roof higher than the 5 foot wall, the only plan seems to furnish it with a sunk floor, and thus bring the eaves of the house close to the ground, when you would be able to get it within the prescribed height. This arrangement would cost you more than the ordinary one would, and you have to consider whether your trouble and expense are likely to be repaid. A frame heated with a flow and return pipe would enable you to grow a lot of plants, and it would probably be the wiser plan to invest in this rather than the greenhouse under the circumstances.

Agathaea coelestis is the name of the plant to

which you refer, *O.R.* It is occasionally employed as a summer bedding plant, but is even more useful as a pot subject for the cool greenhouse or conservatory. It is practically a continuous flower, and the bright blue flowers look very gay at this time of the year. Cuttings may be struck at almost any season if they are given a gentle heat. The plant is a native of the Cape of Good Hope.

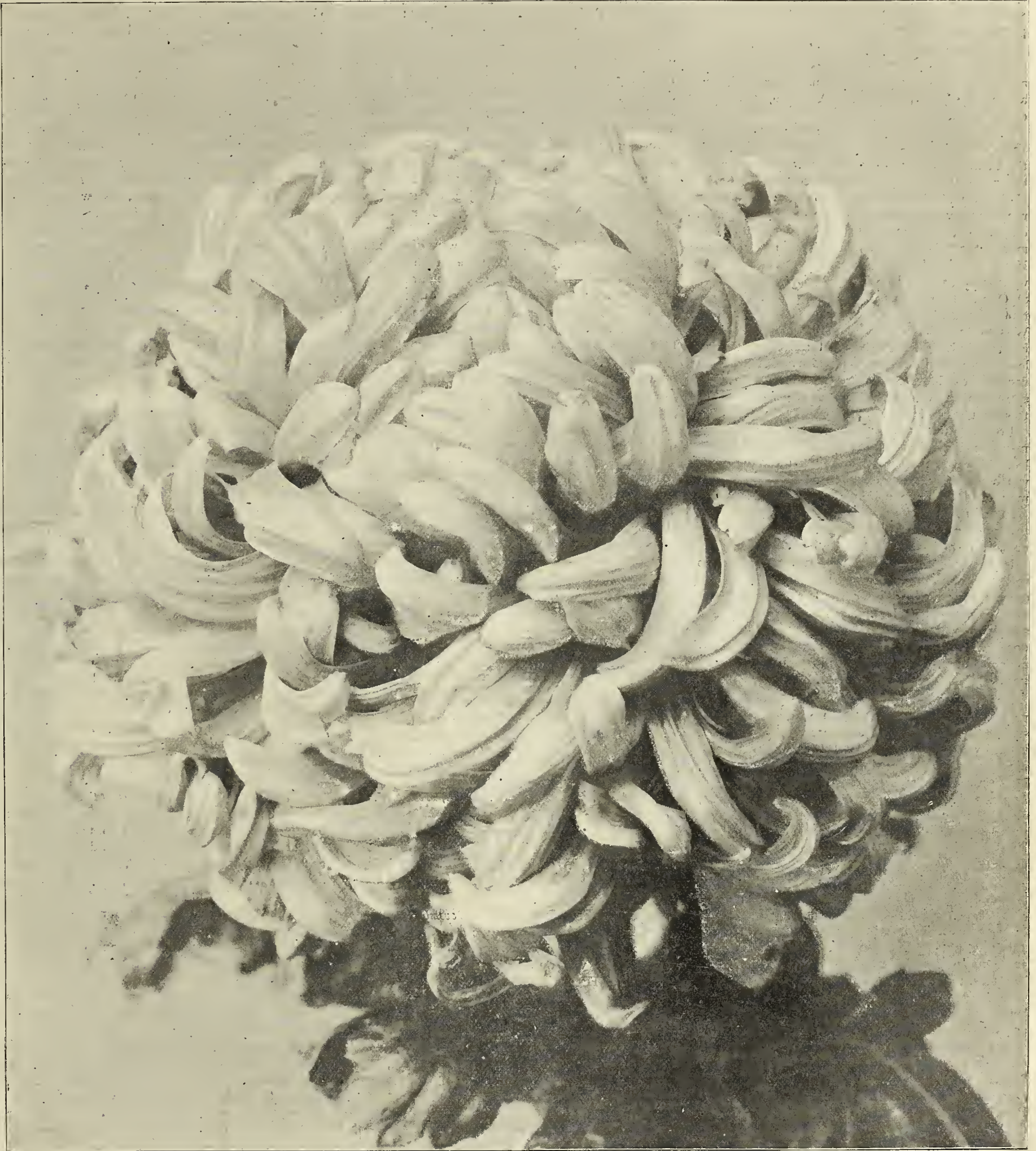
CHRYSANTHEMUM GEORGE FOSTER.

STILL another good thing has been added to the list of incurved Japanese Chrysanthemums that are sure to make a history for themselves on the show boards in the near future. The long florets are broad, of good substance, twisting more or less to the right and left, as well as at the centre of the bloom, which is deep, massive, and altogether well

very successful this year. The accompanying illustration was prepared from a photograph sent us by Mr. Godfrey, and shows the natural size of the bloom.

ARDENLEE, DUNOON, N.B.

IN the neighbourhood of Dunoon on the shores of



CHRYSANTHEMUM GEORGE FOSTER.

Hollyhocks.—*M. T., York:* Your best plan with regard to the choice varieties still in the open ground will be to cut them down close to the ground, lift them with as many as possible of the roots intact, and lay the stools close together in shallow boxes, covering them with soil. Place the boxes in a cold frame to winter. No water will be needed for the present.

built and attractive. The colour is a rich, clear yellow. The habit of the plant is strong and robust. Its merits have already been recognised by the National Chrysanthemum Society, which awarded it a First-class Certificate on the 1st November last. It was raised and will be disseminated by Mr. W. J. Godfrey, Rolle Street, Exmouth, Devon, along with his very numerous other novelties, which have been

the Firth of Clyde, there are numerous pretty villas and well-appointed stately houses which nestle, so to speak, amid a wealth of foliage. Many of these charmingly situated residences occupy sites that are more or less elevated, and are literally embosomed in the richest verdure. The hills also, in the background, are clothed in an emerald sheen; or the purple of the Heather, or the gold-brown of the

Bracken, each after its kind, lend a lustre or give a colour to the landscape, which no mere description can possibly compass.

Higher up still—up to the mountain summits—colour goes merrily along; but *there* it depends upon the rosy or the melancholy morn, the condition of the mid-day air, the subdued evening light, or the glories of the setting sun. Here, also, originate those tiny tinkling streams which gain in volume as they descend to lower altitudes, and which, ever and anon, during their downward course, sparkle in the sun like mirrors of burnished silver. But enough of poetising; let us give up—

"Dreaming upon the wonderful, sweet face
Of Nature, in a wild and pathless place,"

and come down to more mundane matters. Let us attempt a succinct account of Ardenlee, the subject of our cares.

Ardenlee, then, is about a mile from Dunoon, on the southern side, is beautifully situated, commands the Firth of Clyde and the hills of Renfrewshire on the opposite side. Ardenlee is occupied by C. M. Hogg, Esq., a Glasgow sugar-refiner, and is fairly representative of its class in this moist, but favoured, clime. The mansion is painted a dead white, so much that I feel I must call it the "White House of the Woods." Woods prevail here, and what is called the "Bull Wood" consists principally of Oaks. Two things, however, contribute to the reputation of Bullwood—one is that *Hymenophyllum Wilsoni* was first found here as a British habitat—and fortunately it still survives—and the other, though less tangible is really interesting, because it solemnly declares that Mary Stuart may be sometimes seen in ghostly mien. Alas, who would not have a ghostly eye to see a ghostly queen!

Probably this story has had some effect on my mental vision in intensifying the whiteness of Ardenlee. However that may be, the "White House" is worth a visit. To show the nature of the ground, I may state that the conservatory, which is at the back of the house, is up among the chimneys, and that the servant's entrance is through a tunnel cut out of the solid rock.

In such a position, then, one may expect art to come to the aid of Nature; and so it does—especially gardening art, for Mr. J. Fraser—a potent name in horticulture—tells me that, in mowing the steep slopes, the machine has to be worked up and down with a rope. As a matter of fact the garden—about six acres—is all steeps and terraces, the upper portion being about 200 ft. above the lower.

Notwithstanding these natural difficulties some very good results are obtained where the soil is sufficiently deep to permit of success. Fruit trees, it is hardly necessary to add, are not grown in the best of mediums, but by root-pruning and other details, Mr. Fraser has secured on a wall a fair crop of Apples and Pears. King of Pippins, Stirling Castle, and Cellini are his best Apples; while Marie Louise, and Bellissime d'Hiver, represent the two sections of Pears. Fruit trees, however, are much subject to canker. Moss and lichen also abound, due, no doubt, to the excessively moist conditions which prevail. Bush fruits, however, and Strawberries give a large return. In the houses, of course, better results are obtained, because the conditions are more under control. Vines look well, Foster's Seedling and Alnwick Seedling bringing up the closing year. Tomatos, too, are still bearing a "mickle" of fruit, Challenger, Conference, and Frogmore Selected, being the favourites grown. These are cultivated on what may be termed a sliding scale; *i. e.*, the shelves are lowered as the height of the plants increase, so that a good crop is thus taken all up the stems.

In a miscellaneous collection of plants I noticed *Pelargonium Agnes*, a fine pure white, and probably the best of its class.

Among Conifers under glass Mr. Fraser thinks a lot of the Bermuda Cedar (*Juniperus bermudiana*), its graceful feathery foliage and general elegant appearance, rendering it a fit subject, in a small state, for cool greenhouse work. Although this is a somewhat tender species and is "rarely seen in England," it survives the winters in this mountain garden. Other trees and shrubs of a half-hardy character, as, for instance, *Chamaerops Fortunei*, *Fuchsia Riccartoni*, *Viburnum Tinus*, etc., also seem to be at home.

Chrysanthemums are well represented and well grown. In fact, I must pay Mr. Fraser a well-merited compliment—they are the most promising

lot in the district as far as my peregrinations enable me to compare. About 200 of the large-flowering plants have his attention, and these are quite up to exhibition standard, besides others which are grown as specimens or for cut flowers.

At the time of my visit—the third week in September—the most forward were being transferred to their blooming quarters to save them from their too-attentive friend, the daily drizzle.

Summer-flowering varieties, such as Piercy's Seedling, Blushing Bride, and the lovely golden-yellow *La Petite Marie* were doing well; but methinks the *season* is slightly out of gear.

But still there are some things which this "season" suits, and which find a place in every Highland garden—to wit, herbaceous plants; the Scotch climate being such as these and alpines revel in. I wish, therefore, the purely business aspects of the GARDENING WORLD, would permit a description; but they will not. Space is too valuable; time too important. Brevity is wanted; but, alas, I fear I do not possess "the soul of wit." Anyhow, my notes on this subject can stand over, although I must mention the *Viola*, another favourite N.B. flower.

Violas are *par excellence* the flowers of Caledonia "stern and wild"; they scent the air, they love the weeping skies. Bullion betrays its colour; *Clivia* is sweet-scented; *Nora May* is silvery-white; *Duchess of Fife* and *Countess of Kintore* are generally admired; *Ariel* is light and graceful; while *Dobbie's Iona* is said to be "one of the finest grown."

I cannot, however, close these notes without reference to Eckford's Sweet Peas which, under Mr. Fraser's culture, literally become "hybrid perpetuals," as they have been flowering continuously since June, and still exhibit their beautiful colours, their freshness of form and their quality of size.

Roses, also, have been a success—the old "Glory" (*Gloire de Dijon*) being so prolific that fears are entertained for its vitality.

Many other observations must be reserved from necessity, and so I will only add that many of the ordinary operations of gardening are here attended with great difficulties; such as the carting of manure, the mowing of grass, the repair of the paths, or the trundle of the wheelbarrow.

Who would not be a gardener?

In such a clime as this?

Where Nature triumphs all the year
And man has little bliss.

Where rains descend—and gravel too,

And stones roll down the glen;

Who would not be a Sisyphus

And roll them up again?

Still, Phoebus sometimes does attend

With fiery steeds, and wiles—

Oh! then the weeping skies depart

And all the garden smiles.

C. B. G., Acton, W.

CHRYSANTHEMUM SHOWS.

WARE AND DISTRICT.—November 10th.

THE Chrysanthemum show in connection with the Ware and District Horticultural Mutual Improvement Society was opened on the 10th ult. by Mrs. Barclay, of High Leigh, Hoddesdon; the weather being all that could be desired helped to increase the numbers at the opening ceremony. Many ladies and gentlemen of the district were present, including Mr. and Miss Agatha Hanbury, the president, E. S. Hanbury, Esq., of Poles; Abel Smith, Esq., M.P., of Woodhall; S. Croft, Esq., of St. Margaret's, Bury; R. Walters, Esq., of the Priory; and R. Barclay, Esq.

After the show was declared open, Miss Agatha Hanbury was called upon, in the unavoidable absence of Miss Hanbury, to present a "Silver Cup," which was given to the society by the president, to Mr. Fulford, gardener to R. Walters, Esq., for the best thirty-six blooms—eighteen Japanese and eighteen incurved—not more than two of one variety. In the prize blooms many of the leading sorts in cultivation were represented, all in good form and character, notably a fine bloom of the beautiful yellow incurved *C. H. Curtis*, to which was awarded the Society's Certificate as the best incurved bloom in the show.

Mr. Asher, gardener to R. C. Berkley, Esq., Collett Hall, was awarded second in the contest for

the silver cup. Among his blooms was the best Japanese bloom in the show which also obtained the Society's Certificate. Mr. Dover, gardener to R. Barclay, Esq., was awarded second place in this class.

Mr. Barclay was then called upon to present another silver cup to Mr. F. Durrant, New Road, Ware, which was given by W. Richardson, Esq., of Sawbridgeworth, for the best twelve Japanese blooms in the amateur class.

There were only two entries for the group of Chrysanthemums, that by Mr. Baulk, gardener to S. Croft, Esq., being first; and Mr. Asher, second, there being a creditable lot of blooms in both groups.

Mr. Asher was an easy first in the group for miscellaneous plants (*Chrysanthemums* excluded) he having a nice effective arrangement of *Bouvardias*, *Begonias*, *Roman Hyacinths*, *Cattleyas*, *Oncidiums*, etc., on a groundwork of Fern backed by a nice Palm. Mr. Dover was second; and Mr. Surridge third. Mr. Fulford also took first for six foliage plants, twelve incurved blooms, and twelve Japanese, distinct, and six dishes of culinary Apples. Mr. Gull was first for zonal *Pelargoniums*, single and double *Primulas*, and winter-flowering *Begonias*.

Mr. Sanding, gardener to D. Ludgate Flack, Esq., was first for a group measuring 6 ft. by 4 ft. of *Chrysanthemums*; first for six *Anemone* blooms; and first for three dishes of dessert Pears. Mr. Dover was first for six reflexed blooms; first for six Japanese, one variety; six dishes dessert Apples and collection of vegetables. Mr. Surridge, gardener to C. Sandeman, Esq., led for two bunches black Grapes and six dishes dessert Pears.

The amateur and cottager sections were also well contested, many first-class vegetables and fruit being shown by them.

Plants not for competition were kindly sent from the gardens at Poles, Easneye, Prisdale, and St. Margaret's, Bury.

The trade was represented by Mr. E. P. Francis, Hertford; and Mr. Chapman, Blue Coat Nurseries, Ware.

The judging was satisfactorily accomplished by Mr. G. Gordon, Kew, and Mr. C. Cox, Brickendon Grange, for flowers and plants; Mr. J. Dean, Cheshunt, and Mr. R. Smith, Brickendon, Bury, for fruit; Mr. Alexander, Walton-on-Thames, and Mr. G. Kimmins, Allenry Hall, for the vegetables.

This is the eighth Chrysanthemum show held by this society, they having commenced in 1889 and it is very gratifying to notice the progress year by year, also the interest shown by the members and committee to make not only the show but the society a success, and well worthy of the name Mutual Improvement Society.

BIRKENHEAD.—November 16th and 17th.

THE eleventh annual exhibition under the auspices of the above society was held in the Music Hall, Birkenhead. The exhibits were hardly as numerous as in previous years, but quality, with the exception of stove and greenhouse plants, was fully sustained. The groups of "Mums" were a distinct feature, whilst the cut blooms and fruit were of a high order.

The first prize winners in the more important classes were:—For twenty-four Japanese distinct, A. Ellis, Esq. (gardener, Mr. J. Davies), the finest blooms being *Duke of York*, *Phoebus*, *International*, *Etoile de Lyon*, *Mutual Friend*, *Viv. Morel*, *Chas. Davis*, *M. Gruyer*, *Western King*, *Edith Tabor*, and *G. C. Schwabe*.

For eighteen incurved varieties, Mrs. Cockburn (gardener, Mr. G. Burden) was first, the best samples being *J. Agate*, *W. Tunnington*, *Chas. H. Curtis*, *R. Petfield*, *Miss M. A. Haggas*, *Prince of Wales*, and *Bonnie Dundee*. *W. H. Watts*, Esq. (gardener, Mr. J. Bracegirdle) secured second position in each class with good blooms.

For twelve Japanese, C. J. Procter, Esq. (gardener, Mr. J. Williams), was first with a good stand.

For twelve incurved, R. Balfour, Esq. (gardener, Mr. T. Pink), led.

For six Japanese, C. McIver, Esq. (gardener, Mr. H. Holford), was first; for six incurved, J. H. Ismay, Esq. (gardener, Mr. W. Neish), led the way. Six Japanese were best shown by C. H. McCleay, Esq. (gardener, Mr. H. Ledsome); the last named exhibitor won in the maiden class for six Japs. The best six incurved came from H. B. Smith, Esq. (gardener, Mr. E. Neil).

The groups contained an abundance of good flowers, but no name was attached to the leading arrangement. Mr. W. H. B. Yeo was second with a more varied arrangement.

For the single Palm, W. Laird, Esq. (gardener, Mr. J. W. Totty), won with a good Phoenix. C. J. Gostenhofer, Esq. (gardener, Mr. J. Benyon), staged the finest Primulas; Mr. J. W. Totty the leading stove and greenhouse foliage plants. P. McGuffie, Esq. (gardener, Mr. J. Stephenson), staged the premier collection of fruit; Mrs. Pattison (gardener, Mr. T. Ferguson), the best black (Barbarossa) Grapes; R. Hobson, Esq. (gardener, Mr. McClary), the best white (Muscat of Alexandria). W. King-King, Esq., Hereford (gardener, Mr. W. Davies) excelled in eight dishes culinary Apples, Emperor Alexander, Mère de Ménage, Warner's King, and Stirling Castle being excellent. For a single dish of Apples, W. Johnson, Esq. (gardener, Mr. H. Reynolds), took the lead. Mr. W. Davies again scored for six dishes of dessert Apples including Blenheim Orange, Ribston Pippin, and Court Pendu Plat, &c. Mrs. Porter (gardener, Mr. M. Quirk) won the prize for the single dish with Blenheim Orange. For single dish of Pears Mr. H. Reynolds scored.

For four dishes (local) Mr. J. Lee staged in fine condition Alfriston, Bramley's Seedling, Blenheim Orange, and Gloria Mundi. For single dish Mr. S. E. Haines took highest honours with Warner's King.

The arrangements were somewhat late through the fault of one of the contractors, otherwise everything was satisfactory. Mr. W. Bassett and his committee proved themselves most capable officials.

KIDDERMINSTER.—November 16th and 17th.

THE fifth annual show of the St. George's Institute Chrysanthemum Society, Kidderminster, was held on Tuesday and Wednesday, November 16th and 17th, at the Town Hall, Kidderminster. The society, though a small one, and confined to exhibitors residing within a certain radius of the Town Hall, made a very interesting display, being aided very much by exhibits not for competition staged by F. Elzington, Esq., and T. S. Lea, Esq., whose groups of Chrysanthemums and foliage plants occupied the centre of the Corn Exchange, and Messrs. W. B. Rowe & Son, 65, Broad Street, Worcester, who staged an extensive and interesting collection of Apples and Pears, and whose collection of new Chrysanthemums showed marked excellence in culture and finish.

C. W. Wigsted, Esq., also exhibited a fine collection of Apples.

The judges, Mr. Cowan and Mr. Roberts exercised great care in their awards, and in the classes for groups awarded first to Lady Knight for the group of Chrysanthemums with Ferns and foliage plants, the Lord Bishop of Worcester being second.

W. Adams, Esq., secured first prize for the group of flowering and foliage plants, including Chrysanthemums, E. Cheesman, Esq., being second.

W. Probert, Esq., was first for twenty-four blooms, comprising twelve Japanese and twelve incurved. A. Barham, Esq., was second, and E. M. Wakeman, third. W. Probert, Esq., was also first for twelve Japanese and also for twelve incurved, the second prizes in these classes going to A. Baldwin, Esq., and S. Baldwin, Esq.

Epergues and bouquets were well shown, and some very handsome decorative work was exhibited.

Fruit was not well represented, the exception being Apples, which were numerous and good, the principal prizes being taken by Viscount Cobham, Mr. C. Cope, J. H. Crane, Esq., G. Baker, Esq., and E. M. Wakeman, Esq.

Some very fine collections of vegetables were shown by the Lord Bishop of Worcester, J. H. Pease, Esq., and W. Probert, Esq.

Amateurs' and cottagers' classes were well filled, and drew considerable interest to the exhibition. A collection of new Chrysanthemums shown by Mr. W. Wells, Redhill, and an exhibit by the Ichthemic Guano Company also met with much attention; and a very interesting collection of twenty-four incurved and twenty-four Japanese blooms sent for exhibition by Mr. W. Harvey, gardener to R. B. Martin, Esq., M.P., were likewise much admired.

HULL.—November 17th and 18th.

THE fourteenth annual show of the Hull and East

Riding Chrysanthemum Society, was held in the Artillery Barracks, Hull, on Wednesday and Thursday, the 17th and 18th November. From every standpoint it may be pronounced one of the most successful in the annals of the society. The arrangements of the show were ably carried out by the hon. secretaries, Mr. Edward Harland and Mr. James Dixon, F.R.H.S., and must have entailed an enormous amount of work. The building is constructed in such a manner as to enable the committee to place the large groups, the cut blooms, and the floral and table decorations in separate halls. The main hall was utilised for the large groups, which were ranged along the sides, and in the centre with the "Mirror" or "Panel" groups alternating.

In the class for a group of Chrysanthemums, interspersed with foliage plants, and arranged for effect in a space of 100 ft., the first prize of £6 and a Challenge Vase was carried off by Sir James Reckitt, Bart., Swanland Manor, Brough (gardener, Mr. George Wilson). It was an effective and tasteful arrangement, and included Palms, Bamboos, Crotons, Asparagus plumosus, etc.

Sir James Reckitt was also the successful competitor in the class for a group of miscellaneous plants arranged for effect in a space of 100 square ft., the second place being secured by Mrs. Whittaker, Cliffe House, Hessle.

In the class for twenty-four blooms of incurved Chrysanthemums, Mr. T. B. Haywood (gardener, Mr. C. J. Salter), of Reigate, was placed first, and Mr. Alfred Tate, of Leatherhead (gardener, W. Mease), second. These lots were as near perfection as possible, whilst in the class for twenty-four Japanese, distinct, splendid examples were staged by Mr. Alfred Tate (first), and Mr. T. B. Haywood (second).

There was a number of exhibits not for competition.

Mr. Wm. E. Martin, Market Street, Hull, had a large stand extending across the end of the hall in which the cut blooms were staged, upon which was shown a large variety of bulbs and tubers, relieved with some excellent pots of Roman Hyacinths in bloom, and backed by photographs of beds of spring flowering bulbs.

Messrs. Cutbush & Son, Highgate Nurseries, had a stand of the new Begonia, "Gloire de Lorraine," with Kentias and Cocos weddeliana to give the necessary greenery.

A very pretty stand of Cyclamen in bloom was shown by Messrs. R. P. Ker & Son, of Aigburth Nursery, Liverpool.

Mr. W. J. Godfrey, of Exmouth, exhibited a stand of specimen blooms of Chrysanthemums all of fine quality, amongst which we noticed some examples of Mrs. Charles Birch, and Phillip Mann, the latter being a very distinct colour.

Mr. Wm. Wells, Earlswood Nursery, also had a stand of cut blooms backed by sprays of single and decorative varieties, amongst which may be noted "Old Gold," "Earlswood Beauty," and Mignonette.

The Ichthemic Guano Company, of Ipswich, had an attractive exhibit of their speciality, which is now very largely used for the production of finished blooms.

The judges were Messrs. Richard Dean (Ealing), G. Gordon ("Gardeners Magazine"), E. Molyneux (Swanmore Park Gardens), and Mr. John Wright ("Journal of Horticulture").

WISBECH.—November 17th and 18th.

THE seventh annual show of this society was opened on November 17th in the Corn Exchange by the Mayoress, Mrs. R. Farrow, the judges being Messrs. G. Langdon, of London, and Geo. F. Barrell, J.P., of Spalding. The exhibits were of excellent quality, and did great credit to the amateurs.

The principal prizes were as follows:—For a group of Chrysanthemums, bordered with foliage plants, first, Mr. Ward Layle, gardener to Mr. J. Groom; second, Mr. G. W. Miller, Nurseryman, Walsoken. The first prize also carries the N.C.S. Silver Medal.

In the competition for a group of miscellaneous plants, Mr. G. W. Gooch, Holland House, Spalding, was first, and Mr. T. Powley, Wisbech, second.

The stove plants were a strong class, Dr. G. Mason, Wisbech (gardener, Mr. J. Rutter), securing first, and Mr. G. W. Gooch the second prize, while Mr. W. S. Collins, Wisbech, was third.

The cut blooms were a large class, and of good quality.

For twenty-four blooms of any varieties, Mr. H. Wilcox, Spalding, gained first, and Mr. W. J. Gleed, Spalding, second. In twelve blooms of Japanese, Mr. Crabtree, Wisbech, took first, and Mr. Gleed, Spalding, second.

For twelve incurved, the prizes both went to Spalding, Mr. Gleed and Mr. Wilcox dividing the honours. The class of six incurved shared the same fate as the twelve.

There were many other classes for cut blooms, all of which were well filled, the decorative classes including wreaths and emblems, tables, &c., being very fine. Mr. McIntosh, of Wisbech, took the lead in this department.

The fruit and vegetables being a small class, the competition was not so keen as in the flowers.

The attendance generally was good, and the committee have every reason to congratulate themselves upon a successful show.

At the top of the hall on each side of the band platform were two stands not for competition, one occupied by the Ichthemic Guano Co., Ipswich, which appears to be well known in this district; the other by Messrs. W. & J. Brown, the well-known nurserymen and seedsmen, of the Midlands.

BURY ST. EDMUNDS.—November 18th and 19th.

THIS spirited and popular society held its annual meeting in the Corn Exchange, Bury St. Edmunds, on Thursday and Friday, November 18th and 19th. The society was only started about four years since without any capital, and has now a good balance in hand, besides £100 invested in town bonds.

The hall is a spacious one, and the exhibits were well arranged. On one side were large groups of Chrysanthemums in pots, and on the other groups of foliage plants, &c. In the centre was a grand group of flowers (including Orchids), fruits, &c., put up by Mr. R. Davidson, gardener to the Earl of Cadogan, K.G. This group had a very pleasing effect. One rather singular feature about this show was that no one was allowed to stage any fruit, flowers, or other things not for competition. Hence we missed the usual display of the Ichthemic Guano Company, from Ipswich, which has been seen at nearly every show in the country this season.

Some of the principal prizes were as follows:—

Group of Chrysanthemums in pots.—First prize, £4. This was secured by Mr. Bishop, gardener to R. Burrell, Esq., Farnham. The second prize, £3, was taken by Mr. Manning, gardener to G. A. Partridge, Esq., of Bury St. Edmunds.

In the class for cut blooms, which was not so strong as usual, Mr. Messenger, gardener to C. H. Berners, Esq., Wolverstone Park, Ipswich, took the first prize, £5, for the best thirty-six blooms of Japanese varieties. Mr. Notcutt, Ipswich, won the second award.

Mr. Messenger also took first for the twelve blooms. Mr. Musk, gardener to Lord de Ramsey, was second.

In the class for twenty-four cut blooms, Mr. Musk was first, and Mr. Messenger second.

For twelve varieties, incurved, J. Watts, Esq., gained first and second.

In the division of the schedule for members only, the first-prize group of Chrysanthemums in pots was taken by Mr. A. Kemp, and did him great credit. Second came J. Gough, Esq., who stood first in the group of miscellaneous plants, with Mr. J. Harris as second.

We next come to the cut blooms in this division. For twelve cut blooms in twelve varieties, Mr. Bishop, gardener to R. Burrell, Esq., won the first, and Mr. Tallack, gardener to E. Dresden, Esq., came in second. For twelve incurved blooms, Mr. Gilby, gardener to B. B. Booth, Esq., Plashwood Park, came first, and Mr. Bishop, second. Mr. Gilby also stood first for six blooms in six varieties, and for six blooms of one variety, with six beautiful blooms of Miss E. Curtis. Mr. Bishop came next.

For a very nice lot of table plants, Messrs. Frewer Brothers, Stowmarket, secured first, and Mr. Manning, gardener to G. A. Partridge, Esq., second.

In the miscellaneous class, which includes table decorations, bouquets, fruit, &c., we notice Messrs. Frewer Brothers, Stowmarket, were first for a very choice hand bouquet; also shoulder spray for lady's dress. This firm is very popular for this class of goods.

There was an excellent show of fruit.

Mr. Burges, gardener to Lord Ellesmere, came first for a collection of six varieties. Mr. W. Low, gardener to His Grace the Duke of Grafton, was first for two bunches of Grapes. Mr. Musk, gardener to Lord de Ramsey, was second. For Apples the honours were very much divided between Messrs. Frewer Brothers, of Stowmarket, and Mr. Notcutt, of Ipswich and Woodbridge.

Mr. Henly, gardener to E. J. Johnson, Esq., Rougham Hall, was well to the front with various dishes of fruit.

There was quite an army of table decorations, which brought forth much criticism.

There was a good show of vegetables in collections. An excellent one from Mr. Rogers, gardener to Lord Rendlesham, taking first, and Mr. Tallack, gardener to E. Dresden, Esq., second. The competition for a collection of eight varieties went to Mr. Marks, gardener to G. M. Gibson Cullum, Esq., Hardwick, and another to Mr. Ungless, gardener to J. H. P. Oakes, Esq., Nowton Court.

The attendance was large.

BOLTON.—November 19th and 20th.

THE eleventh annual show of the Bolton Horticultural Society was held on Friday and Saturday, the 19th and 20th November. This show has made steady progress since its inauguration, and the present exhibition establishes a record both for number of entries and the quality of the exhibits.

The competition in all classes was keen, and the judging proved no light or easy task. Nothing could be finer in its way than the appearance of the hall from the galleries, and the periodical organ recitals by Mr. Mullineux, the borough organist, proved a welcome change from the usual instrumental band.

The area of the hall is somewhat inadequate, and it would be desirable, in view of the annual increase of exhibitors and the sight-seeing public, to secure a larger and more commodious place.

There were six groups of miscellaneous plants. J. W. Makant, Esq., J.P., Gilnow Lodge (gardener, Mr. H. Shone), was placed first, and Messrs. J. and G. Bury, Darwen, second.

In the class for a group of Chrysanthemums, arranged with Ferns for effect, James Musgrove, Esq. (gardener, Mr. J. Abbott), secured the coveted place; and John Haywood, Esq. (gardener, Mr. Pawson), followed him up.

In the class for twenty-four cut blooms of Japanese Chrysanthemums, Sir C. W. Boughton was first, and His Grace the Duke of Sutherland second, with Lord Trevor as a good third.

For twenty-four blooms, twelve Japanese and twelve incurved, Mr. R. G. Allan was successful in securing the first prize, and Sir C. W. Boughton second.

There was a strong entry for six pots of Roman Hyacinths, and the competition was keen and healthy. G. Shaw, Esq., Leigh (gardener, Mr. E. J. Castree), was declared the winner in this class. The second place was awarded to J. P. Lord, Esq. (gardener, Mr. J. T. Bramhall).

Some very fine Primulas were shown, as also some tastefully arranged bouquets. Amongst the vegetables there was nothing worthy of particular notice, and taken as a whole the exhibits in this section can hardly be said to have reached the high water mark of excellence.

The Ichthemic Guano Co. had an exhibit of their famous fertiliser.

DUNDEE.—November 25th, 26th, and 27th.

MISCELLANEOUS EXHIBITS.

MESSRS. W. P. Laird & Sinclair, Dundee, showed a very fine collection of plants, consisting of Palms, Crotons, and other ornamental foliage plants. They were artistically grouped on a stage 40 ft. by 4 ft., and gave a very beautiful effect. Three magnificent spray bouquets, composed of Chrysanthemums and long sprays of Ampelopsis Veitchii, attracted considerable attention, and other floral devices were much admired. Roman Hyacinths, Ericas of sorts, and well-grown specimens of Cyclamen gave a brightness to the exhibit, etc., etc. The same firm also exhibited Laird's Excelsior Brussels Sprouts in very fine condition. Laird's Jubilee Shallots, to which a Certificate was recently awarded, were in very fine condition on this occasion.

Mr. Wm. Wells, Earlswood Nurseries, Earlswood,

Redhill, Surrey, exhibited a stand of very large blooms of G. J. Warren, Mme. Carnot, Julia Scaramanga, Georgina Pitcher, Mdlle. Lawrence Zède, and other fine new varieties.

Messrs. Chas. Buick & Sons, Hilton Pottery Alloa, had a fine stand of pottery.

Messrs. D. & W. Buchanan, Forth Vineyard, Kippen, Stirling, had a fine display of coloured Vine leaves, treated by their patent process.

Messrs. D. & W. Croll, Dundee, staged a group of Chrysanthemums cut with their own foliage and set up in vases. Interspersed with them were Heaths, Palms, Ferns, Dracaenas and Acacia ovata. Some shower bouquets were very fine.

Messrs. Page Brothers, Ferneyside Vineries, Liberton, staged some baskets and bunches of Tomatos as grown and sent to market. They were of even size and very attractive, banked up as they were with coloured Vine foliage.

Messrs. George Bunyard & Co., Maidstone, Kent, exhibited a table of Apples of great size and colour. Very handsome were the samples of Tibbet's Pearmain, Mére de Ménage, Gascoigne's Seedling, Bismarck, Gloria Mundi, Bramley's Seedling, Bamuann's Red Winter Reinette, Lane's Prince Albert, and various others which took the public fancy immensely.

AWARDS AT THE SHOW.

DURING the evening of the first day the committee of the Dundee Chrysanthemum Society met to consider what awards were merited by the numerous miscellaneous exhibits. A Gold Medal was accorded to the superb exhibit of Chrysanthemums staged by Mr. Norman Davis, Framfield, Sussex.

Messrs. George Bunyard & Co., the Royal Nurseries, Maidstone, Kent, received a Gold Medal for his meritorious exhibit of a collection of Apples.

Similar awards were made to Messrs. John Laing & Sons, Forest Hill, London, for a collection of plants and fruit, and to the Ichthemic Guano Co., Ipswich, Suffolk, for their Octagon group.

Silver Medals were accorded to Messrs. H. Cannell & Sons, Swanley, Kent, for Zonal Pelargoniums, Cannas, &c.; and to Messrs. Dobbie & Co., Rothesay, N.B., for a collection of Chrysanthemums.

The premier Japanese Chrysanthemum bloom in the show was a grand flower of Mme Carnot, exhibited by Mr. David Nicoll, gardener to J. W. Bell, Esq., Rossie, Forganenny, who had it in his second-prize lot of twenty-four blooms. That mentioned last week was the premier bloom in the amateurs' classes.

Mr. David Keillor, gardener to J. M. Smieton, Esq., Seabourne House, secured the leading award for four pot Chrysanthemums, showing large, well-flowered specimens of W. H. Lincoln, Niveus, V. Morel, and Chas. Davis. Mr. Jas. Joss, gardener to Lord Provost McGrady, Arnhall, Dundee, was second.

Fine weather favoured the show during the first and third days, the second being somewhat showery. The gate money reached £52 the first day, being greatly in excess of that taken during the three days of last year. The takings during the second day were £38, in spite of the weather, and £45 on the last day. The total income from all sources was £270, and the expenses £225, leaving a good balance in hand. Ten times as many people saw the show, as compared with last year. The presence of Sir William Vernon Harcourt at the opening of the show, and the Anglo-Swiss Ladies' Cyclist Band each day contributed to this success.

ABERDEEN.—November 26th and 27th.

THE second exhibition of the recently re-established Chrysanthemum show, and the first under the auspices of the Aberdeen Chrysanthemum Society was held on the above dates in the Art Gallery in connection with the grounds of Gordon's College, School Hill, now the leading preparatory school in the Granite City. The show itself was far superior to that of last year, so that it may now be considered as fairly established. We were really surprised at the quality of the blooms grown in this northern locality. The first prize lots of twenty-four Japanese and twelve incurved blooms were grown in the Howe of Buchan, and were very creditable to the grower, though several others were not far behind. Hardy fruits and vegetables were well represented. The weather was mild though misty, and it being "Muckle Friday" the city was busy. Mr. Norman

Davis, Framfield, Sussex, judged the Chrysanthemums, and some of the local gardeners judged the fruit and vegetables. The show was opened by the Right Hon. James Bryce, M.P. for the city of Aberdeen.

POT PLANTS.—The feature of the show was the group of Chrysanthemums exhibited by Mr. Alex. Grigor, gardener to Alex. O. Gill, Esq., Fairfield, Aberdeen. His plants were grown in bush form and consisted of Japanese, incurved and single varieties, including fine bushes of Miss Mary Anderson, and Miss Annie Holden. A fine plant of Cocos weddeliana occupied the centre, and the base was surrounded with Adiantums. The first award for three plants was taken by Mr. Wm. Middleton, gardener to Mrs. Rennie, Deemount, whose specimens carried fresh and well-formed blooms. Mr. James McDonald, gardener to Mrs. Crombie, Balgowrie Lodge, Bridge of Don, was a good second with dwarf plants that would have required another week to be fully developed. Mr. John Robertson, gardener to A. G. T. Cumine, Esq., Ferryhill House, was third. Mr. Alex. Robb, gardener to James Murray, Esq., Glenburnie Park, Aberdeen, had the best specimen in a fine plant of W. H. Lincoln. He was followed by Mr. Wm. Ogg, gardener to Miss J. F. Taylor, of Morkeu, and by Mr. James McDonald, who were second and third respectively.

Mr. Wm. Ogg had the best Mignonette. Mr. John Johnston, gardener to G. A. Cornwall, Esq., Howburn Cottage, 145, Holburn Street, Aberdeen, was first for Palms. Mr. Alex. Grigor was second. Mr. James McDonald took the lead for Ferns, with well-grown specimens, and was followed by Mr. J. Johnston. Mr. Wm. Ogg again led for Chinese Primulas, and took the second prize as well; Mr. Kiloh, gardener to R. Collie, Esq., of Woodlands, Cults, being third. Mr. Andrew Reid, gardener to Henry Robert Baird, Esq., of Durris, had by far the finest Cyclamen, beating Mr. John Robertson, and Mr. Wm. Ogg, who followed in this order. Mr. Alex. Robb took the lead for Orchids. Mr. A. Grigor was a good second; and Mr. J. Johnston came in third. The first prize for Primula obconica went to Robert Kiloh.

CUT FLOWERS.—The first award for twenty-four Japanese blooms was carried off by Mr. James Grant gardener to Lady Carnegie, Crimonmogate, Lonmay, who had very creditable blooms indeed for so northern a latitude. He had grand blooms of Mrs. W. H. Weeks (the premier Japanese bloom in the show), Charles Davis, Mme. Ad. Chatin, M. Chénon de Léché, Mrs. W. H. Lees, Australia, Thos. Wilkins, Mrs. C. H. Payne and various others. Mr. Wm. Ogg was a very good second, his blooms having 6 in. of stem above the boards. The third prize was taken by Mr. Frank Fraser, gardener to Col. Hunter, Tillery.

The prizes for twelve Japanese blooms were also well contested. Mr. John Fraser, gardener to Sir Thos. Burnett, Bart., Crathes Castle, took the lead with a grand stand of M. Chénon de Léché, Australia, Dorothy Shea, M. Gruyer, Niveus, &c. Mr. R. Soutar, Montrose, was second; and Mr. Wm. Morrice, gardener to Ex-Dean of Guild Macdonald, Mount St. Ternan House, Banchory, came in third with blooms elevated on their own stems. Mr. David Chapman, gardener to General Russell, of Aden, M.P., led for six blooms, followed by Mr. Robert Kiloh, and Mr. A. Murray, gardener to J. F. White, Esq., Seaton Cottage, in this order. The blooms were good in all three cases.

The leading place for twelve incurved blooms was again taken by Mr. James Grant, who had neat and fresh blooms of Violet Tomlin, Miss Haggas (the premier incurved bloom in the show), Mrs. Coleman, Empress of India, &c. Mr. Wm. Ogg was a very close second with grand blooms of J. Agate, Globe d'Or, Baron Hirsch, and others. Mr. James McDonald had the best six incurved, and Mr. Alex. Grigor was second.

Mr. E. Noonan, gardener to A. G. Pirrie, Esq., Stoneywood House, had the best three white Japanese blooms, beating Mr. James Grant and David Chapman in this order. Mr. James Grant, Mr. David Chapman, and Mr. A. Murray took the prizes for yellow Chrysanthemums in this order. Mr. David Chapman was first for any other variety, showing enormous blooms of Graphic.

In the class for twelve varieties of any kind, in bunches of three trusses each, not dis-budded, the premier award—a Silver Teapot, presented by Mr.

A. Grigor—was taken by Mr. James McDonald, whose stand was very effectively displayed. Mr. Alex. Robb was second, and Mr. John Fraser was third, both having effective exhibits. Mr. Andrew Reid had the best cut flowers of stove and greenhouse plants, showing grand Anthuriums, Ixoras, Lasiandra, &c. Mr. Wm. Ogg was second, and Mr. John Robertson, third. Mr. Andrew Reid came to the front again for cut flowers of Orchids. Mr. Wm. Maver, 86, Holburn Street, Aberdeen, had the best hand bouquet and the best wreath of Chrysanthemums; Mr. George Stephen, Cuparstone Lodge, Aberdeen, the best buttonhole bouquet; and Mr. Wm. Ogg the best lady's spray. The floral decorations, generally, received considerable attention from the visitors.

FRUIT.—Mr. John Fraser took the first prize for Grapes, showing Lady Downes. Mr. James Grant had the best collection of Apples, Mr. Andrew Reid being second. Mr. John Fraser staged the best baking Apples. Mr. James Grant took the lead for dessert Apples, Mr. Wm. Black being second. The first prize collection of Pears had the exhibitor's name accidentally misplaced; Mr. Wm. Black The Gardens, Aboyne Castle, took the second award. Mr. Andrew Reid had the best dish of dessert Pears, and was followed by Mr. Black. Mr. E. Noonan was first for Tomatos. The quality of the Apples and Pears was really wonderful.

VEGETABLES.—Mr. John Ogston, gardener, Bourtie House, had the best collection of vegetables showing fine samples of Potatos, Cauliflowers, Onions, Celery, Carrots, &c. He was followed by Mr. E. Noonan, and Mr. John Smith, gardener, Mannofield, both having fine vegetables, well displayed. Mr. John Paterson, gardener, Sunnybrae, Ruhislaw, had the best Savoys. Mr. Alex. Thom, Woodside, was first for Cabbages. Mr. Alex. Paterson, gardener, Ruthrieston, Aberdeen, had the best Brussels Sprouts. The lead for Cauliflowers was taken by Mr. John Ogston. Mr. E. Noonan led the way for Celery, which was fine. Mr. Wm. Lawson, gardener, Oak Bank School, had the finest Carrots and yellow Turnips. Mr. A. Mortimer, Tullos, Nigg, had the best Swedes. Mr. Frank Fraser was first for Beet; Mr. Alex. Grigor for Parsnips; and Mr. John Ogston for Leeks and Onions, both kinds being first-class. Vegetables on the whole were excellent.

Potatos were a strong feature of the show, the samples being of a highly meritorious character. Mr. Alex. Paterson took the lead for round white Potatos; Mr. John Ogston for round coloured; Mr. William Lawson for long white; and Mr. James Ferguson, gardener to J. B. Craigie, Esq., of Linton, Cluny, for long coloured. The latter also had the best four varieties, showing very fine samples. Mr. John Ogston had the best two varieties. Competition was very keen in all these classes, and the prizes well earned.

MISCELLANEOUS EXHIBITS.—Messrs. H. Cannell & Sons, Swanley, Kent, staged a magnificent collection of their zonal Pelargoniums, now well known in all parts of the country. The flowers were cut, and done up in massive and effective bunches. The also had cut flowers of Chrysanthemums, including the new incurved Mdle. Lucie Faure, with Ferns and Festuca ovina to set off the flowers. Messrs. William Smith & Son, Exchange Seed Warehouses, Aberdeen, exhibited wreaths, harps, bouquets, and other floral devices.

Mr. Wm. Wells, Earlswood Nurseries, Earlswood, Redhill, Surrey, exhibited new varieties of Chrysanthemums, including G. J. Warren, Mdle. Lawrence Zede, Mme. Carnot, Julia Scaramanga, and several other fine new things. He also showed a collection of new single varieties. The Ichthemis Guano Co., Ipswich, had a stand of their widely known fertiliser. Messrs. Ben Reid & Co., Aberdeen, had a collection of Conifers, Hollies, Aucubas, and other ornamental shrubs.

SOCIETIES

NATIONAL CHRYSANTHEMUM.—November 22nd. With so many important shows taking place in the north of Britain, it is not surprising that the matter brought up for the consideration of the Floral Committee of the National Chrysanthemum Society, at the Royal Aquarium, on the above date, was not very great. Mr. W. Wells, Earlswood Nurseries,

Redhill, staged an excellent lot of cut blooms, amongst which were fine samples of M. Chénon de Léché, G. J. Warren, Mme. Carnot, Mrs. F. A. Bevan, and Georgina Pitcher. Mr. Gibson, The Gardens, Morden Park, sent a half-dozen blooms of the Japanese Mustapha, an Algerian variety, for which he received a vote of thanks. M. Anatole Cordonnier, Roubaix, France, represented the French exhibitors, but his blooms were not in sufficiently good condition to warrant certificates being awarded, although there were some promising novelties among them. For the list of certificates see p. 215. Mr. Norman Davis, The Vineries, Framfield, showed a vase of cut blooms of the market variety Mrs. J. J. Glessner. Mr. G. Harry, Forest Hill, showed his new label, but no award was made, as the committee did not consider it a new idea.

ROYAL HORTICULTURAL.—November 23rd.

There was a fair sized meeting on this date, Chrysanthemums, of course, forming the bulk of the exhibits. A few Orchids were shown, and Carnations, Poinsettias, and table decorations were bright and showy.

Messrs. James Veitch & Sons, Ltd., Chelsea, staged a small group of Orchids in which Cypripediums figured conspicuously. C. leeanum, C. chamberlainianum, C. Euryades, C. Aeson, C. Io Grande, and C. Niobe, were well shown. Laeliocattleya Pallas was represented by beautifully coloured pieces (Silver Flora Medal).

Mr. Ballantine, gardener to Baron Schroder, The Dell, Egham, showed a small piece of Odontoglossum dayanum.

Messrs. F. Sander & Co., St. Albans, received a Silver Banksian Medal for a group of Orchids that included a number of hybrid Cypripediums. Plants of Calanthe Bella, and C. Florence, carrying fine spikes were also shown. The pretty Habenaria carnea was conspicuous here.

A Silver Flora Medal went to Messrs. Hugh Low and Co., Upper Clapton, N., for a choice and showy group of Orchids. Cattleyas figured very strongly here, C. bowringiana var. lilacina being specially noticeable.

The Right Hon. J. Chamberlain (grower, Mr. J. Smith), Highbury, Moor Green, Birmingham, received a Silver Banksian Medal for a small group of choice Orchids, which was composed chiefly of Laeliocattleyas. L. gottoiana, L. Ophelia, and L. Clive were some of the handsomest forms.

Mr. H. J. Jones, Ryecroft Nursery, Lewisham, S.E., filled a table running the whole length of the hall with a tastefully arranged exhibit of cut Chrysanthemums, set up with small pot Ferns and Palms. In the centre was a row of vases, in which the grand white Western King appeared to great advantage. Stands containing cut blooms of such varieties as Mrs. G. W. Palmer, M. Desblanc, Duchess of Fife, Yellow Mme. Carnot, Mdle. Laurence Zede, and W. Wright were distributed throughout the exhibit (Silver Gilt Flora Medal).

A Silver Flora Medal went to Mr. L. H. Calcutt, Fairholt Road, Stoke Newington, for a superbly arranged floral table. The centrepiece was a massive erection surmounted by a bunch of large Chrysanthemums. The same flower in smaller sizes was used abundantly for the other devices, associated with suitable foliage.

Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey, staged a comprehensive exhibit of cut Chrysanthemums, for which a Silver Gilt Banksian Medal was awarded. Ma Perfection, Julia Scaramanga, Georgina Pilcher, Mdle. Laurence Zede, and Vicomte Roger de Chezelles were some of the best varieties.

Mr. A. H. Rickwood, gardener to the Dowager Lady Freake, Fulwell Park, Twickenham, staged a collection of cut Chrysanthemums, the flowers having long stalks (Silver Banksian Medal).

A Silver Banksian Medal also went to Messrs. W. Cutbush & Son, Highgate, N., for a group of well-berried seedlings of Pernettya mucronata, set up with a background of Kentias.

Mr. W. J. Godfrey, Exmouth, Devon, contributed some capital cut Chrysanthemums, among which a dozen blooms of Lady Northcote, and a similar number of Mrs. Maling Grant were the chief features. Some blooms of new Chrysanthemums came from M. Anatole Cordonnier, Bayonne, France.

Messrs. Cripps & Sons, Tunbridge Wells, staged a handsome group of Poinsettias. The plants were

dwarf, bore large heads of fine bracts, and were arranged in a semi-circular group edged with small Palms and Eurya latifolia variegata (Silver Banksian Medal).

Mr. F. Cuhberley, gardener to J. W. Temple, Esq., Leyswood Gardens, Groombridge, received a Silver Gilt Banksian Medal for a magnificent array of Begonia Gloire de Lorraine. The plants were large, sturdy, and profusely flowered.

Messrs. Jas. Veitch & Sons, Limited, staged a batch of the new scarlet winter flowering Begonia, Mrs. Heal, a very handsome form.

From Messrs. Hugh Low & Co., Bush Hill Park, Enfield, came a batch of Carnation Winter Scarlet, and a few plants of Begonia Gloire de Lorraine.

Five dozen blooms of new seedling 'Mums came from Mr. Robert Owen, Maidenhead, for which a Bronze Banksian Medal was voted.

At a meeting of the fruit and vegetable committee Messrs. T. Rivers & Son, Sawbridgeworth, staged six baskets of magnificent Apples, all taken from pot trees. Cox's Orange Pippin, Buckingham, Bijou, and Ribston Pippin were especially good (Silver Banksian Medal).

A Silver Banksian Medal went to Mr. Bayford, gardener to C. Lee Campbell, Esq., Glewston Court, Ross, Hereford, for thirty dishes of fine App'es. Bess Pool, American Mother, Golden Noble, Cox's Pomona, Peasgood's Nonsuch, Gloria Mundi, and King of Pippins were some of the best samples.

Nine dishes of Apples were submitted for the flavour prizes. Mr. Woodward, gardener to Roger Leigh, Esq., Barham Court, Maidstone, was first with Cockle Pippin. Mr. Bayford was second with Cox's Orange Pippin.

Only four dishes of Pears were shown, Mr. J. Crooke, gardener to W. H. Evans, Esq., Forde Abbey, Chard, being first with Winter Nelis. Mr. Woodward was second with Nouvelle Fulvie.

Mr. W. J. Granfield showed samples of a new Walnut from Germany, which was referred to Kew for identification.

A Silver Banksian Medal was voted to Mr. E. Beckett, Aldenham House Gardens, Elstree, Herts., for a grand display of Onions. Ailsa Craig, Cocoa Nut, Sutton's Ar, Barnet Hero, White Anglo-Spanish, Prizetaker, and Cranston's Excelsior were the varieties shown.

NATIONAL CHRYSANTHEMUM.—November 29th.

As the end of the Chrysanthemum season is now well within view it was only to be expected that the amount of material brought before the Floral Committee of the N.C.S. at the Royal Aquarium on November 29th was not great. Two certificates only were awarded, for which see next week. A Commendation was given to the two feathery Japanese varieties, Mrs. W. Butters and Sam Caswell, which the committee thought would prove of value for late cutting. These were shown by Mr. Wells, of Earlswood Nurseries, Redhill. Mr. Wells also had samples of the late yellow Japanese form, Setting Sun. Mr. A. Haggart, Moor Park, Ludlow, showed half-a-dozen blooms of Moor Park, a flower after Pride of Madford build, but with a deep buff reverse. A box of blooms was sent from Germany by Mr. Alexander Bornemann, but there was nothing of merit amongst them.

CHEMISTRY AND HORTICULTURE.

THE *Annales Agronomiques* of September 25th, 1897 contains a somewhat long study of this question by Messrs. Hebert and Truffaut, the general conclusions of whose work are as follows:—Horticulture has every reason to profit by chemical teaching. Numerous results obtained during late years by the application of methods recommended demonstrate their value. Special experiments made with a view to the particular object for which the plants are grown will teach the grower what soils and manures are best. The different utilisable elements of various soils should be considered. Secondly, the needs of plants should be ascertained, at least as regards nitrogen and mineral substances, in order to judge whether the soil is suitable. One should then have the composition of the chief ornamental plants. A certain number of authors have already undertaken this ungrateful task, amongst whom we must mention Dr. Griffith. Finally when the difference between the quantities of elements required by plants, and those given by the soil has indicated the kind of manure, the best method to supply the plants with these elements

must be ascertained. Horticultural varieties on account of their delicacy require special care in the question of manures; thus was recommended watering with solutions varying from $\frac{3}{10}$ to 1 per cent. in order to avoid all accident. This is somewhat troublesome in horticultural establishments where workmen are not accustomed to these special manipulations. It would be good to distribute manure to ornamental plants under a form or in conditions where it could be gradually assimilated so as to avoid any sudden addition of fertilisers which might burn or injure the plant.

GARDENING MISCELLANY.

PEA, THE GLADSTONE.

As a whole the past season has not been a good one for Peas, but from what I have seen and grown of this, I think more of it than the G.O.M.'s politics. Indeed, a good boiling of the real esculent itself, will do more good, possessing greater liberality of strength, and is likewise more digestible.

The haulm is $3\frac{1}{2}$ ft. high, of sturdy habit, bearing deep green, long, scimitar-shaped pods with eight to ten large peas of excellent flavour. It is a desirable variety for those who may rule their own, or anybody else's, garden.—*B.L.*

SPECIMEN BOUVARDIAS.

THE finest plants that ever came under my notice were exhibited recently at the Plymouth Chrysanthemum Show, and grown by Mr. George Chamberlain, gardener to Lady Blackford. They stood over 5 ft. high, nearly 3 ft. through, and were one mass of flower. They comprised such sorts as Alfred Neuner, Vreelandii, Hogarth, and President Garfield, and what is most remarkable concerning them I gathered from the grower that they had not been re-potted for the past five years. Merely the surface soil was removed, and a rich top dressing given each spring, using a good percentage of bone-meal. They were certainly a credit to the gardener.—*J. Mayne, Bicton.*

STRIPPING THE LEAVES OF TOMATOS.

Even in humanity it is an old saying, that those who stand humbug will have plenty. The same might be said of the Tomato, for we invariably find plants existing under all sorts of conditions. But to my mind nothing is more contemptible than to see the plants slashed and denuded of their foliage, under the impression of swelling the fruits, especially when we consider that the leaves are the real workers, elaborating the sap for the feeding of the same. If we wish to do a little pinching, then be judicious with the finger and thumb, when the leaves are young. Plenty of good pots, and a good covering of clothes on their back, are two first essentials to the production of large fruits.—*B.L.*

DIGITALIS FERRUGINEA.

THE stately individuality of the Foxgloves either when growing in the herbaceous border, in the wild garden, or rejoicing by themselves amidst the surroundings in which nature has placed them cannot be denied. With the exception of *Digitalis purpurea*, our native Foxglove, we do not cultivate them much, however. This species has given rise to a number of varied and beautiful colours and there is no more honoured occupant of the herbaceous border than they. *D. ferruginea* is a comparative rarity in our gardens, on the other hand, and it is very probable that hundreds of gardeners have never seen it, although it is a handsome, and withal a useful plant. It is biennial in duration, and throws up a fine strong raceme the second summer of its existence, some time from the middle of July to the middle of August usually. The raceme is fully 5 ft. in height and occasionally exceeds that height on very strong plants. It is densely packed with relatively small rusty coloured flowers—whence the specific name "ferruginea." The lip of the corolla is ovate in shape, entire, and bearded. The stem itself is glabrous, but very leafy. Propagation is effected by seeds which are produced with remarkable freedom. The plant is a native of Europe, being brought here about the end of the sixteenth century although to use an Americanism it never

seems to have "caught on" with gardeners generally. The only private establishment at which we have seen it growing is at Park Place, Henley-on-Thames, where Mr. Stanton has accorded it an honoured position amongst the fine collection of herbaceous plants. One has only to see it there when in flower to admit that it is well worthy its place.

QUESTIONS AND ANSWERS

* * * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Leaves of Apples and Pears.—*Sigma*: For the purpose of manuring the ground the leaves of the fruit trees you mention would be as suitable as any other kind; but their actual value would depend upon the nature of the soil of your garden, and the plants you intend growing in the same. If the soil is heavy, that is of a clayey nature, the leaves would tend to lighten and improve it as much mechanically as chemically. On the whole the leaves would be more suitable for flowers than vegetables; but fruit trees and hedges would be benefited by the potash they contain. There are reasons, in the matter of tidiness, why they should not be spread over the surface of beds and left there for the winter. The wind would blow them all over the place, and the birds would also scrape them up. The best plan of all would be to rake them off and pile them in a heap in some out of the way corner to rot for a year, after which they could be utilised for a great variety of purposes in the garden.

Delphinium cardinale.—*Choice Plants*: This is somewhat tender, and is usually grown in pots in a cold frame, where it can be protected to some extent from frost, wet, and slugs in the winter time. It may be planted out in a sunny position to bloom, or plunged in the pots out-of-doors in the spring of the second year of the seedlings. The flowers are more likely to set when thus kept airy. *D. brunonianum* and *D. sulphureum* (*zailii*) may be treated in the same way. Some cultivators, however, find that the latter proves tolerably hardy on rockwork, and flowers freely. All the three species should be grown in a light, sandy, but rich soil. Neither of them possess the hardness of the ordinary *D. formosum*, *D. grandiflorum*, and *D. elatum*, so that they require a little attention to keep them dry, and care to prevent the crowns from being destroyed by slugs in their earlier stages, and in winter when at rest.

Runners on Violets.—*Omega*: During the growing season you may allow a sufficient number of runners to grow for a stock of young plants to bloom the following season. All the rest may be cut off to concentrate the energies of the old plants on the production of flowers.

Angle of Elevation.—*Omega*: You do not tell us the width of your Melon frame. You might do that and we will help you next week.

Flower of *Laelia autumnalis*.—*Len.*: The flower you sent was a very large one for the species, being $4\frac{3}{4}$ in. across the petals. The sepals are dark purple almost to the base, and crimson-purple at the tips. The petals are similarly intensified at the upper end, but fade much paler towards the base. The side lobes are pure white on both faces; but the lamina is intense crimson-purple. The size and colours of the flower, here given, show that it is the variety *L. autumnalis atrovirens*, and therefore, one of the finest forms of the species, though some are slightly darker in hue.

Names of Fruit.—*K. W.*: 1, Pear Thompson (there is a little doubt about it as it was decayed; send earlier next year); 2, Fearn's Pippin; 3, Golden Spire; 4, Improved Keswick Codlin.

Names of Plants.—*B. E.*: *Cymbidium giganteum*. *G. W.*: 1, *Physalis Alkekengi*; 2, *Jasminum nudiflorum*; 3, *Maxillaria picta*; 4, *Oncidium ornithorhynchum*; 5, *Coelogyne speciosa*.—*W. R.*: 1, *Crataegus Pyracantha*; 2, *Griselinia littoralis*; 3, *Retinospora plumosa aurea*.—*A. C., L.*: 1, *Begonia corallina*; 2, *Begonia haageana*; 3, *Selaginella uncinata*; 4, *Camellia japonica* var.; 5, *Reidia glaucescens*; 6, *Ruellia longifolia*.—*T. Mitchell*: 1, *Abies nordmanniana*; 2, *Abies nobilis*; 3, *Hamelis virginica*; 4, *Erica carnea*.

Communications Received.—*A. P.*—*B. L.*—John Ianson. — *C.*—Dunfermline Chrysanthemum Society.—*J. R.*—*Wm. Yea.*—*Thos. Dale.*—*W. P. Laird.*—*J. Bryson.*—*A. E. S.*—*S. N. S.*—*W. P.*—*S. Langholt*—*T. W.*—*C.*, Reading.—*C. L.*—*A. Marney.*—*Y.*

TRADE CATALOGUE RECEIVED.

JOHN H. KNOWLES, 15, Rush Hill Road, Lavender Hill, London.—Catalogue of Ancient and Modern Books on Gardening.

A Special Offer to Readers of THE GARDENING WORLD 25/- BOOK for 8/-

NO HOME SHOULD BE WITHOUT ONE

Ogilvie's Encyclopædia OF USEFUL INFORMATION AND WORLD'S ATLAS.

No Single Book ever before contained such a Wealth of Knowledge.

By Special Arrangement with the Publishers of the "Encyclopædia of Useful Information and Atlas of the World," we are enabled to offer to the Public a Magnificent 25s. Volume for 16 of the coupons, which will appear weekly, together with 6d. each, accepted in Weekly Instalments, or the Coupons may be held until the whole period has elapsed and brought or sent to the Office with 8s., and 6d. towards carriage.

A COMPLETE ILLUSTRATED LIBRARY IN ITSELF.

A universal assistant and treasure-house of information on every conceivable subject, from the household to the manufactory. In short, gives information about everything, is absolutely indispensable to everyone in all walks of life; the contents being so separated, indexed, and arranged that they can be turned to at once. It is

THE BEST { BOOK OF } EVER
 { INFORMATION } ISSUED.
Size of Encyclopædia: 9 by 11 $\frac{1}{2}$ inches. 656 Pages.

It contains

MANY MAGNIFICENTLY ENGRAVED
COLOURED MAPS,

and a description of every country under the sun, besides much other matter relative to the Home, the Farm, the Factory, a Dictionary of Statistics—many Useful Tables, Poetical Selections, Synonyms, Famous Bridges and Ships, How to Calculate, How to Cook, How to Get Rich, How to Cure all Diseases, How to Succeed in Business, Table of Weights and Measures, and

HUNDREDS OF OTHER TOPICS OF
GREAT VALUE TO EVERY PERSON

who desires to be up to the times. To see the Book is to want it. To Members of Mutual Improvement Societies it will prove of inestimable value.

The articles are written by men whose lives have been devoted to the subjects treated, are short and concise, but contain full information up to date. It is to be consulted on every subject that arises in everyday life, by old and young alike. It contains a complete Illustrated Atlas of the World.

IN THESE DAYS OF COMPETITION

it is imperative that a Gardener should be a well-informed individual. Here is an Encyclopædia containing an immense amount of knowledge that will be of the greatest service to him.

YOUNG GARDENERS,

do you wish to be successful? Then remember that to possess knowledge is the surest way to achieve success.

It is elegantly bound in Morocco Cloth, with beautifully designed Gilt Side-stamp and Red Edges, making at once the most handsome and durable as well as THE MOST USEFUL BOOK EVER MADE or sold for 25s.

41297.

COUPON.

OGILVIE'S ENCYCLOPÆDIA OF
USEFUL INFORMATION,
AND WORLD'S ATLAS,
(Published Price 25s.)
16 COUPONS, AND 6d. WITH EACH.

Name _____

Address _____

Postal Orders or $\frac{1}{2}$ d. stamps may be sent.
COUPONS AND CONTRIBUTIONS MAY BE
LEFT at or SENT TO the Office for

THE PUBLISHER OF

THE GARDENING WORLD.

COPIES OF THIS BOOK CANNOT BE
BOUGHT. They can be obtained only by using
these Coupons.

"Hardy Ornamental Flowering Trees and Shrubs"

By **A. D. WEBSTER.**

SECOND AND CHEAP EDITION

This book is a valuable guide to planters of beautiful trees and shrubs for the adornment of parks and gardens. **Price 2s.; post free, 2s. 3d.**

"GARDENING WORLD OFFICE," 1, Clement's Inn, STRAND, LONDON.

RETARDED Lily of the Valley Crowns NOW FROM ICE.

A LADY writes:—"These 'retarded' Crowns are the most delightful, inexpensive floral invention of the age, and Mr. Jannocho deserves the universal gratitude of all lovers of flowers."

WRITE FOR LIST.

T. JANNOCH,

Lily of the Valley Grower to H.R.H. the Prince of Wales.
DERSINGHAM, KING'S LYNN, NORFOLK.

FOR PLEASURE AND PROFIT

FRUIT SEEDS ROSES

Nothing so profitable and easy to grow.
80 Acres of Saleable Trees.

SEEDS
THE BEST PROCURABLE.
Lists Free.

ROSES
HUNDREDS of THOUSANDS.
Bushes in variety. Packing and Carriage free for Cash with order.
8/- per doz., 60/- per 100.
All other Nursery Stock carriage forward.

ROSES IN POTS From 15/- a doz.
Ornamental Trees, 91 Acres, A Superb Collection of Herbaceous Plants, Four Acres of Glass, Clematis (80,000) from 15/- doz.
N.B.—Single Plants are sold at slightly increased prices.

GENERAL CATALOGUE
(Over 160 pages) of Nursery Stock, artistically produced, containing some hundreds of illustrations, and full of valuable information, free on receipt of 3d. for postage. Please mention this Paper.

RICHARD SMITH & CO., WORCESTER.

ORCHIDS.

Clean Healthy Plants at Low Prices.
Always worth a visit of inspection. Kindly send for Catalogue

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

CANNELL & SONS' CHRYSANTHEMUMS.

The most remarkable results that have ever occurred in supplying cuttings and plants is the great success and the highest awards that have followed those forwarded from us, yes, in the remotest parts of the World, New Zealand and Australia, South Africa, as far as Bulawayo, Egypt and Constantinople, Tenneriffe, besides Italy, France, Holland, Belgium and Portugal, to say nothing of Mr. Mease's remarkable record at home again this season with what we have sent him, and which history must describe by and bye as wonderful. Our unrivalled stock of unbloomed plants especially for the supply of cuttings is now in perfect condition, so full of health that they at once give growers heart and confidence the moment they see them, striking more quickly, and making strong and healthy roots, success naturally follows our pure country grown stuff. New Catalogue is in the press, and we hope to post off 20,000 shortly. Any client failing to receive a copy will please intimate.

SWANLEY, KENT.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, DECEMBER 11th, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, December 13th.—Meeting of the Floral Committee of the National Chrysanthemum Society at the Royal Aquarium.
TUESDAY, December 14th.—Royal Horticultural Society: meeting of committees at 12 o'clock.
WEDNESDAY, December 15th.—Sale of Orchids, etc., at 39, North End, Croydon, by Messrs. Blake & Carpenter.
FRIDAY, December 17th.—Sale of Orchids by Messrs. Protheroe & Morris.

THE CARNATION MANUAL.*—The first edition of this work was issued in 1892 some time after the present revival of the popularity of the Carnation was fairly well established. One could hardly expect much that was actually new in the course of five years, except perhaps in the matter of varieties, of which there are multitudes pressing for recognition annually. Some of them remain by virtue of superior merit, while others pass into oblivion almost as quickly as they appear. The chapter on "Selection of Varieties" has accordingly been entirely revised, and a fresh selection made. A new chapter, entitled "The Malmaison Carnation," has been added, the section having greatly increased in importance since the book first saw the light. As a florists' flower the Carnation was recently brought into cultivation by comparison with the Rose; nevertheless, it must have been highly appreciated by our forefathers over three hundred years ago when they spoke of garden Gillofers, Clove Gillofers, and Coronations or Coronations, by all of which names they meant the species we now recognise as *Dianthus Caryophyllus*, the parent of all the garden races of Carnation. The specific name is also recognisable under the appellation of *stoves Garryophyllis* of those old-time writers and gardeners. The botanical name, *Dianthus*, is much more recent; but the botanists must have had a very high estimation of the race when they applied the word *Dianthus*, which signifies flower of the gods.

Double varieties of the Carnation existed more than three centuries ago, and some of them at least were not unlike the Old Clove. In matters of cultivation we have, apparently, not greatly improved upon the system pursued more than a century and a half ago. Pod-bursters were well known

(* THE CARNATION MANUAL. Edited and issued by the National Carnation and Picotee Society (Southern Section). Second Edition. Cassell and Company, Limited, London, Paris, and Melbourne, 1897. All rights reserved. Cloth boards, 3s. 6d.

then as now, and pot-culture as a partial remedy was equally well known and advocated according to the means then prevalent for the dissemination of information upon the subject. Yellow ground Carnations existed at least more than three-quarters of a century ago, and at that time were obtained from Germany. All these and other facts suggest that Carnations have been favourites in this country ever since their introduction, for old writers do not admit that either Carnations or Pinks were natives. It may also be taken for granted that Carnations as a race have from time to time risen to the highest pitch of fame as a florists' flower, and again sunk into comparative neglect except amongst those who cherished old-time garden flowers for their own intrinsic beauty and grateful fragrance, as in the case of Wall-flowers, Pinks, Primroses, and Polyanthus.

How long the present popularity of Carnations will endure it would be difficult to say, except that it will co exist with the appearance of new, beautiful and improved varieties. The authors of the present book do well to record all the leading and more important facts in connection with cultivation, the present stage of progress, methods of raising new varieties and improving upon the race generally. Numerous authors have been employed in recording the many phases of this important race of flowers, so that the information tendered is varied and useful in proportion to the number of cultivators that each system or method of treatment can command. This depends largely upon the section or sections most admired and approved by the respective cultivators. It is highly satisfactory that border Carnations should have received such prominent recognition in a book largely written by florists who still adhere to their tenets with regard to the flower of the specialists or select few, but have yet been led to appreciate the self-coloured and more natural types now generally spoken of as border flowers. Such recognition on the part of florists of the old school would have been regarded as rank heresy a few years ago, but more particularly in the case of varieties having toothed petals, or such as could not be spread out flat on the orthodox and ornamental paper cards. Border Carnations are now the dominant race, inasmuch as they are hardier, of more vigorous constitution, more replete with beautiful and lively shades of colour, and have more admirers and cultivators than the orthodox florists' flower.

As the most distinguished raiser and cultivator of this class, Martin R. Smith, Esq., has been deputed to write the chapter on border Carnations, as well as that on Malmaisons for similar reasons. He admits that all Carnations are more or less able to withstand the vicissitudes of our climate, and in that respect may be regarded as hardy; but there are sorts which do not by any means reach the stage of perfection of which they are capable when subjected to this kind of treatment. The yellow ground varieties more particularly may be placed in this category, and on that point we are in entire agreement with him, for the yellow sorts have always been weak growers as far as we can ascertain. Why this should be so would be difficult to explain, perhaps, except that they are more removed from the natural character of the wild or original form of the species. Yellow varieties do not occur in this or any other species of the genus in a wild state, so that the evolution of the yellow Carnation is a triumph of man, and the "art that does mend nature." The yellow of the cultivated flower is far more pronounced than in the case of the yellow Hyacinth, Stock, or Sweet Pea.

In 1892 there were no Malmaisons except the original type, and such as have arisen from it by sporting. The ovary is perfectly barren in the old Malmaison, so that other varieties, having similar characteristics, can only be obtained by utilising it as a pollen parent; but it took many years before cultivators recognised this fact. Mr. Martin R. Smith, who writes the chapter, has certainly been the most active raiser of new varieties of this huge and deliciously fragrant type. The new varieties already exist in all the leading shades of colour except, perhaps, yellow, which is almost certain to come in a few years if not already in existence. The marked similarity of the seedlings to the original, in all its more characteristic traits, is due to the prepotency of the pollen parent, a fact which we have proved in other races of flowers, so that it can no longer be said that the pollen parent imparts merely its colour to the progeny. Mr. Smith finds the first crosses to be the best, but that merely proves that seedlings raised in this way have already lost part of their stability and prepotency. That a large proportion of the seedlings, particularly of second and further crosses, should be practically worthless, is not at all surprising, but what we should expect. He further states that one layer in a pot and one flower to a plant is the usual method adopted by growers in order to secure the largest and finest blooms; but that two-year-old plants will develop from ten to fifteen equally fine flowers, under good treatment. This entails systematic and regular feeding, otherwise a small pot of soil would be unable to supply the nutriment requisite to develop a perfect flower of the desired size.

Royal Gardeners' Orphan Fund.—We are pleased to learn that Mr. P. C. M. Veitch, of the Royal Nurseries, Exeter, will preside at the friendly dinner of the committee and friends of the Royal Gardeners' Orphan Fund, to be held at Anderton's Hotel, on the 18th February, 1898.

Royal Horticultural Society.—The last meeting this year of the above society will take place next Tuesday, the 14th, in the Drill Hall, James Street, Westminster, when the fruit, floral, and Orchid committees will meet as usual at 12 o'clock. A lecture on "Sporting in Chrysanthemums" will be given by the Rev. G. Henslow, M.A., at 3 o'clock.

A Royal Forester.—King Oscar, of Sweden possesses Mr. Gladstone's ability as a tree feller. King Oscar is never happier than when roaming about among the Pine forests of Sweden, axe in hand, and he will often spend a whole day hard at work chipping away at some specimen that he has decided to bring down.

Chester Horticultural Show.—Diamond Jubilee year has been anything but a blessing to not a few institutions which depend upon public support for their existence, and on no such institution has the burden fallen more severely than upon the Chester Horticultural Society. At the recent general meeting of the subscribers and officers of this body it transpired that there was a loss of some £400 over the last show. This loss is fully accounted for by the fact that the aggregate of gate money was fully 50 per cent. less than that of last year, and that the prizes were £100 in excess of those given in the same year. Defective organisation and administration has also to be blamed to some extent. By private subscription the debt of £400 has been reduced to £98 10s. 7d., and efforts are being made to rid the society entirely of the incubus. In this laudable intention we wish the workers all possible success, for a city like Chester should easily be able to support even such a big affair as the Chester Fête. It would seem, however, from remarks made by Alderman Charles Brown at the meeting that a thorough reorganisation is necessary if the society is to go on its way and prosper.

Omnipresent.—Teacher: "What is that which pervades all space, which no wall, or door, or other substance can shut out?" Johnnie Sharpe (a flat dweller): "The smell of Cabbage, miss."

The name "Stock" explained.—Our contemporary, *The Orcadian*, says "The Stock received its name from the fact that it was principally sold in the old Stocks Market, in London, the market itself having derived its title from a pair of stocks that stood there." We are much obliged, *Orcadian*, but have got the idea that stock meant the woody portion of the plant, and was so used to distinguish the Stock Gilliflower (*Matthiola incana*) from the Clove Gilliflower (*Dianthus Caryophyllus*).

Ailsa Craig Onions at Edinburgh.—The competition for the prizes offered for Onions at the Chrysanthemum show, Edinburgh, was very keen, but the judges had no difficulty in awarding the premier position to Mr. P. Melville, gardener to J. G. Baird Hay, Esq., Rosemont, Monkton, Ayr. His samples were large, firm, and well ripened, each weighing over 2 lbs. Besides weight and quality, the Onions also had the recommendation of being true to the Ailsa Craig type. Mr. Melville is a good vegetable and fruit gardener, being particularly successful with Onions, of which he grows a large quantity. We understand that Mr. John Downie, 144, Princes Street, Edinburgh, has secured the stock of Ailsa Craig Onions, which he intends growing for seed.

Ealing Gardeners' Society.—On the 23rd ult., at the Municipal Buildings, Ealing, the chairman, Mr. C. B. Green, gave an informal address entitled, "Some Scottish Notes," which dealt with some recent observations and experiences in the land o' Burns. The Botanical Gardens of Edinburgh and Glasgow were dilated on, and a comparison with Kew instituted. Notes from private gardens likewise held a place, as also much matter concerning the Western Highlands, and the glories of the Heather, the Bracken, and the mountain plants. Some Scotch flower-pots were exhibited and recommended as superior to the ordinary English manufacture, but the meeting would not have them. John Hughes, Esq., F.R.H.S., presided over a fair attendance, and the customary votes of thanks were duly accorded. The weekly exhibits were not numerous owing to the foggy state of the weather. There was, however, one interesting exhibit, which showed a better condition of things elsewhere, and that was a collection of cut flowers from Mr. John Fraser, The Gardens, Ardenlee, Dunoon, N.B. These were gathered the previous day out-of-doors, and consisted of Roses in variety, Violas in variety, Antirrhinums, hybrid Primroses, and Polyanthus, Nasturtiums, summer-flowering Chrysanthemums, Clematis, *Jasminum nudiflorum*, Myrtle, *Euonymus europaeus*, etc., the scarlet fruits of the latter being exceedingly showy.

The Smithfield Show, 1897.—The Berners Gallery is in some respects a sort of home from home for our chief chemical manure manufacturers. It is here that we regularly find our friends from Griffin Mills, Ipswich. Mr. William Colchester's Gold Medal Fertilisers have sustained such a reputation, that, naturally without them, the show at Smithfield would lose something of its familiarity. Here the various grades of phosphate and ammonia in all manner of forms are shown as the constituents which the chemists of to-day make use of in the preparation and manufacture of these manures, which, although not bulky, have such a concentrated value and such emphatic result on nearly every crop and every soil. Be it remembered also that this science of chemical manure manufacturing is not a century old, and what is regarded as extraordinary to-day, may be looked upon to-morrow as a matter of ordinary interest. Messrs. Colchester's big Gold Cup Competition for the best samples of 1898 Barley will probably afford still one more opportunity for our best Barley growers to try their mettle in this respect. The competition is sure to be a popular one, because, so far as we observe from the conditions laid down in the firm's new catalogue, the essentials are so fair and legitimately drawn, that growers cannot fail to appreciate them. We are interested to learn that within the last twelve months, this firm has added to their list of awards no less than four Gold and Silver Medals, in addition to the Grand Diploma of Honour from Orleans.

The Wheat Crop in the Darling Downs district of Australia is estimated at 40 bushels per acre, being quite a record. The area under wheat is double that of last year.

Presentation to Mr. F. Q. Lane, J.P.—At the annual meeting of the Berkhamsted Chrysanthemum Society, of which Mr. F. Q. Lane is the Vice-president, and Earl Brownlow, President, at the King's Arms Hotel, on Saturday, Mr. Lane (of the Nurseries, Berkhamsted), was presented with a silver cigar box, bearing the inscription: "Presented by the Committee of the Berkhamsted Chrysanthemum Society, 1886—1897" on one lid; and on the other: "F. Q. L." Mr. A. Prudames, M.R.C.K.S. made the presentation. Mr. Lane, who was taken by surprise, expressed his thanks for the kindness shown him, and was much pleased.

Marriage of Mr. Archibald Forbes.—This event took place at Marfield, Hawick, the residence of the bride's father, on the 3rd inst. The Rev. Chas. Allan, M.A., East Bank, U.P. Church, Hawick, officiated, assisted by the Rev. Duncan Stewart, M.A., St. Andrew's F. Church, Hawick. The bride was Eleanor Snowdon, eldest daughter of Mark Currie, Esq., of the firm of Currie & Gawn, tweed merchants, Hawick and London. She was married in a brown, travelling dress, with shot bodice, and looked very neat, carrying a shower bouquet composed of Orchids, Roman Hyacinths, and Asparagus. Her bridesmaids were her two sisters, who looked very attractive, being dressed in dark skirts with silk blouses, and carrying Orchid shower bouquets. The bridegroom, Mr. Archibald Forbes, is the only son of Mr. John Forbes, Buccleuch Nurseries, Hawick. The presents, which were considerably over 100, were handsome, varied and costly. They included a handsome aneroid barometer from the employees of the Buccleuch Nurseries, and a beautiful silver salver from the office bearers of the Grand Masonic Lodge No. III, of which the bridegroom is junior warden. The bridegroom's presents to the bridesmaids were lovely gold bangles. The happy pair are off to the north to spend their honeymoon.

Aberdeen Chrysanthemum Society.—It is satisfactory to learn that the show held on the 26th and 27th ult., under the auspices of this society, has been a great success compared with that held last year by a provisional committee. At the opening ceremony, the chairman, Councillor Maitland, said that the entries had risen from 250 last year to 400 on this occasion, a most satisfactory increase indeed, while the quality showed a decided improvement. The main object of the society was to encourage the cultivation of the Chrysanthemum, which, like the robin amongst birds, came to cheer the earth when its fellows had departed. The opening ceremony was performed by the Right Hon. James Bryce, M.P. for the city of Aberdeen, who compared the show with those held in various other great centres of the country. He made a slip, however, when he spoke of the display of Chrysanthemums in the Temple Gardens, seeing that their cultivation has now been abandoned in these historic gardens for some two or three years past. He explained to his audience that although we had more than one native Chrysanthemum, the object of their care was a native of China, and had been cultivated for centuries both there and in Japan before its introduction to this country a little over 100 years ago. In conclusion, he congratulated the society for their admirable show, the prize givers and prize takers, and formally declared the show open. The total amount taken at the gate for the two days was £22, as compared with £14 last year. This is good, but might be largely augmented if the society would cast aside that undue caution which is so characteristic of the Granite City, and create a guarantee fund to cover any loss, as was done at Edinburgh and Dundee with such excellent results. By similar means it would be possible to offer an attractive prize list that could hardly fail to call the existing talent into play, and ensure a splendid show, simply on account of the friendly rivalry and competition which would ensue amongst gardeners far and near. The society would also be in a position to secure the services of a good band or other attraction to draw the presence of the local gentry and townspeople, many of whom could scarcely have heard of the show until it was a thing of the past.

Fruit for Christmas.—With the near approach of the festive season we are reminded that Mr. H. Becker, of Jersey, is according to his custom of former years, sending small hampers of choice fruit to all parts of the United Kingdom. These hampers are eminently suitable for Christmas presents, and the fruit sent is full value for the price charged.

Kays' Annual, 1898.—This annual was started in 1890, and claims to be the oldest established illustrated amateur annual. It contains a number of short stories on various subjects by different authors. Some of them are of a humorous cast, while others include "An Impression of Lisbon," by E. W. Dean; "The Field of Waterloo" by Onclé; "Robbing the Mail," by Nemo; also anecdotes, jokes, &c. There is a full page illustration of the "Flying Scotchman." An interesting fact is that the author, Mr J. A. Kay, is only sixteen years of age. The publishing and editorial offices are at "Riseholme," 14, Goldhurst Terrace, Hampstead, London, N.W.

Woolton Gardeners' Mutual Improvement Society.—A meeting of this society was held on the 3rd inst., with a good attendance of members, Mr. John Glover occupying the chair. The subject under review was "Hardy Fruits: the Culture, Gathering, and Packing, more especially for Market Purposes." The lecturer, Mr. J. Taylor, of Chester, advocated most strongly the extended culture of hardy fruit. With the finest soils in the world, with proper selection and good culture, fruit could be grown to successfully compete with the foreigner. Bushes and cordons were strongly recommended in preference to standards, and with proper protection by woods of Austrian Pine and Hornbeam a crop could generally be assured. Stocks and varieties were an important feature and should be considered as to the kind of soil that they were to be grown in. Manure should be withheld from trees in a young state, as it produces too strong a growth and in some cases canker. Mr. Corlett showed several slides under the microscope of Saxifraga, Bertolonia, Anoectochilus, Jasmine, &c. Votes of thanks to the lecturer and chairman completed an interesting and instructive meeting.

CLUMBER GARDENS WORKSOP.

GREAT improvements are being made in the extensive gardens at Clumber. A great necessity long wanted has lately been added in the shape of a magnificent range of lean-to houses, 175 yds. long, with a noble Palm house in the centre. The houses are erected principally for fruit growing, and are grand examples of horticultural skill. They have been put up by Mr. James Gray, the well-known builder of Chelsea. The valuable addition will prove most useful for the extensive demands that are made for fruit, and in the hands of such a well-known practical gardener as Mr C. Slade are sure to produce what may be expected. At the present time he has a most magnificent and extensive display of the winter king of flowers, the Chrysanthemum. Many hundreds of well-grown plants are beautifully arranged in some of the new houses, forming a most charming picture at this season of the year. Many of the flowers produced would do justice to any exhibition table. They are represented in every class and every style of growth. All-round gardening is extensively carried out at Clumber, and the future prospects here are most encouraging in horticultural prosperity.—*Rusticus.*

CHRYSANTHEMUM NOTES.

Now that the flowers are over again it is time to prepare for a new start. It is time now to propagate nearly all the leading Japs. The best soil in which to insert cuttings is, one part loam, one of leaf soil, one of sharp silver sand, well mixed and passed through a $\frac{1}{2}$ in. sieve. Crock each pot (60-size) placing one small piece over the hole. Insert the cuttings singly in each, and place the same on a bed of cinders in a cold frame, and keep closed till rooted. After this give a little air by degrees, as the roots reach the side of the pots, and shift on to 52-size. This will be about March, when, if required for bush plants, nip out the shoots to form branches; if for exhibition, grow on with a single stem, pinch out the crown bud and grow in three shoots.

About the middle of May shift the plants into the blooming pots, 24 or 16 size. Use two parts

loam, one of horse manure droppings, one of leaf soil, one of sharp sand, one of crushed bones, and sprinkle a handful or so of artificial manure over the whole. Mix well, pot firmly, and place the plants out of doors in a sunny position. Stake as required. Take the buds chiefly on the second crown, and a few on the terminals (mostly incurves and anemones).

When the pots get root bound, about August, feed well with liquid manure. Shift the plants under glass about the middle of September. Air well, and keep the house dry and clean. One of the chief points in growing Chrysanthemums is to keep them growing steadily, by keeping well potted. Attend to watering; and I would recommend amateurs to grow chiefly Japanese, as they are so much better for cut flowers; also the single sorts (which are best as bush plants), as they are very beautiful for Vases, &c.—*A. W. Young, The Nurseries, Stevenage.*

BEGONIA GLOIRE DE LORRAINE.

THIS winter-flowering Begonia, a recent introduction, is a most valuable acquisition, adding to our list of plants suitable either for stove or greenhouse a charming and beautiful subject. Its propagation and culture are of the easiest possible description, and the amazing growth and floriferousness of plants struck in spring renders it invaluable. When better known it will certainly be seen in every garden. From one small plant obtained from the nursery last February (then in flower) I have since obtained a dozen, which are now in full bloom, some measuring a foot in diameter, and suspended from the roof of a warm greenhouse; each plant is a mass of bloom, the pot being entirely hidden. Its slender, wiry growth assumes after a while a pendant or hanging habit, especially when flowers begin to form, and makes it more suitable for baskets or hanging pots. Still, with a few small, neat stakes to support growth, very pretty plants may be had, and these arranged with Maidenhair Ferns have a charming effect. I am sure anyone wanting a good, decorative, winter-flowering Begonia would do well to invest in this new hybrid. No winter-flowering plant that I know so well repays a little outlay, and gives such good results as this with so little trouble.

Two other good winter-flowering Begonias I like very much are *B. corallina* and *B. Gloire de Sceaux*. The former, a very showy and larger flowered one, delights in a high temperature. The latter is remarkable for its handsome foliage.—*A. P.*

IT is seldom you see this most useful variety grown so well as we saw it the other day when visiting the well-kept gardens of Lord Wolverton, Iverne Minster, Blandford. Mr. Toakes, the talented gardener who is making such great improvements here, informs us the great hatch of superbly flowered plants in 6 in. pots consisted wholly of spring-struck cuttings. For decorative purposes at this season of the year we think this plant stands unrivalled. We noticed also a fine lot of *Begonia Gloire de Sceaux*, a variety which will bloom profusely in a short time. Tree Carnation Mrs. Leopold Rothschild appears to be a favourite, as it is grown in large numbers, and in perfect health.—*L.*

THIS fine winter-flowering or fibrous rooted Begonia may be said to mark the highest development in this particular direction. When subjected to good cultivation it is wonderful to see the way in which it responds. Naturally of dwarf and compact habit it flowers with surpassing freedom. The small rosy-pink blooms find a suitable foil to their brightness in the delicate shade of light green, afforded by the obliquely cordate leaves. The group of *B. Gloire de Lorraine* sent to a Drill Hall meeting by Mr. H. B. May, of Dyson's Lane Nurseries, Upper Edmonton, was a magnificent example of the value of the plant. Mr. May's specimens, although only in 48-sized pots, were of extra large size, and vigorous and healthy throughout. We have never seen an exhibit of the same material to equal it.

AFTER the rage of the 'Mums has partly subsided one has time to look round—so to speak—at other things, and should the eye perchance alight on the subject of this note—especially if it be in good condition—it will never cease to charm.

Of all the autumn and winter-flowering forms of this genus of useful and ornamental plants, there is none other which appeals so strongly to my fancy as *Begonia Gloire de Lorraine*. Whether one regards the habit of the plant, the character of the foliage, or the colour of the flowers, it is alike meritorious; but when one sees it as I saw it the other day at Falkland Park, South Norwood Hill, S.E., it is not likely to be forgotten.

Mr. Alex. Wright, the able gardener, has put his grouping ideas to advantage even here, for he has placed several plants together in the middle of a large No. 1 size pan, the whole being surrounded by a broad fringe of *Selaginella Braunii*, a well-known stove species. The colour of this *Selaginella* is a dark bluish-green, which effect is probably heightened by the rich, rosy-carmine colour of the *Begonia* flowers, which are produced in the purest fashion; in fact the plant, or plants, produce such an enormous quantity of these attractive floral organs that the specimen is literally all flowers. This pan is placed on an old tree-stump, which is covered with fungi, and occupies a prominent position in a warm house. The contents measure 3 ft. 6 in. in diameter, and form together one of the most pleasing objects that has ever come within my experience. Mr. Wright's originality is always apparent, whether he is dealing with British Ferns, hardy plants, Orchids, Bertolonias, or Begonias.—*C. B. G., Acton, W.*

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Odontoglossum Rossii majus.—Considering the popularity which *Odontoglossum* enjoy, generally, it is surprising that one of the prettiest, most variable, and easy to grow, should not be placed higher in public estimation. It is essentially a cool Orchid, and when in bloom may be kept for weeks together in the conservatory, or even in the drawing-room, without inconvenience or injury to the plant in any way. It is, however, satisfactory to know that its claims to recognition are being advocated somewhere. Something like 5,000 flower spikes may be seen at present in the nursery of Messrs. W. L. Lewis & Co., Southgate, N. Of this number 1,000 are fully expanded, and show a great amount of variation. Spikes bearing four or five flowers are plentiful, although three is the usual number for the species. One branching spike carries seven flowers, a number we have only once seen surpassed by this species.

Laelia anceps from Ravenswood, Melrose.—A very fine variety of this *Laelia* now in season has reached us from the gardens of Admiral Sir H. Fairfax, Ravenswood, Melrose. It belongs to the same section as *L. a. Dawsoni*, having broad petals and handsome flowers, of good substance. The sepals are darkest at the tips and fade towards the base, being almost white at that point. The petals are very dark, almost crimson at the tips, but fade downwards in the same way as the sepals. The lamina of the lip is of a dark, velvety, maroon-crimson; and this, together with the broad, dark-tipped petals, constitutes the more important and distinctive feature of the variety. The interior of the tube of the lip is handsomely lined with crimson on a yellow ground. Admiral Sir H. Fairfax has had a long acquaintance with Orchids, and is fully alive to the value of a good variety. His gardener, Mr. Wm. Yea, is also an able grower, as we have had ample testimony for many years past.

Cypripedium Gabrieli. *Nov. hybr.*—The seed parent of this hybrid was *C. orphanum*, while the pollen was taken from *C. Dauthieri*, so that both of the parents were themselves hybrids. The ground colour of the dorsal sepal is yellowish, marked with longitudinal brown veins. The midrib is purplish-brown, and towards either margin is a band of the same colour. The petals are yellowish on the lower, and glittering, dark purple-brown on the upper longitudinal half; they are strongly ciliate on both margins. The lip is large, dull purple, and shining. The dark green leaves are slenderly netted. The hybrid was raised in the gardens of Thomas Gabriel, Esq., Elstead, Streatham Hill, and flowered recently for the first time. Mr. Guyatt is the gardener and grower.

CYMBIDIUM TRACEYANUM AT HEATON MERSEY.

WITHIN easy distance of Manchester, and on the side of the valley of the River Mersey, is the fine residence of J. Leemann, Esq., West Bank House, Heaton Mersey, Lancs. The present is scarcely the time to speak of outdoor gardening, but the great banks of choice hybrid Rhododendrons do well here, and being liberally planted make a grand display in spring.

For some time past the glory of the establishment has been a grand batch of sixteen plants of *Cymbidium traceyanum* in full bloom. They are arranged or rather temporarily located in the fine conservatory adjoining the mansion, situated upon a slope, and practically constructed on three terraces one above the other. What Orchids may be in bloom at any particular season are staged upon a table on the upper terrace, where the owner can examine and enjoy them at his leisure; for he is a devout admirer of his Orchids. Moreover, he is not exclusive in the enjoyment of his favourites, for chairs and a comfortable lounge afford the convenience of seating his friends while the Orchids are under consideration.

He has reason to be proud of this grand batch of Cymbidiums, for they afford one of the grandest sights that could be seen in the course of a long day's journey. He must be envied by a large section of the Orchid growing world, by having the finest stock of this *Cymbidium* in cultivation. The flowers are considerably varied in their markings, and in being of various light and dark shades of colour. The fragrance emanating from them is both powerful and delicious, pervading the atmosphere of the conservatory. The condition of the plants is also a credit to the gardener, Mr. Edge. I shall not soon forget this grand display, nor the impression it made upon me.—*F. A.*

PLANTS RECENTLY CERTIFICATED.

Awards according to merit were given to the subjects named hereunder by the Royal Horticultural Society on November 23rd.

Orchid Committee.

MAXILLARIA ELEGANTULA. *Rolfe, Nov. sp.*—The flowers in this case are of medium size, and the individual segments are very stiff and succulent. The bases of the latter are white, and the ground colour also, but heavily suffused with yellow-brown and spotted red-brown; until towards the apices no white is to be discerned. The lip, too, is very heavily spotted with dull deep red. The spathe is green and the leaves very tough and leathery, about 15 in. in length, and 1½ in. in width. Botanical Certificate. Messrs. F. Sander & Co., St. Albans.

CIRRHOPELALUM REFRACTUM.—This is a curious and interesting species. The long strap-shaped petals are much elongated. The flowers are disposed in pseudo-whorls in a pendant spike of about 4 in. in length, the amalgamated petals, which are yellow-green in hue, standing at right angles to the rachis. Botanical Certificate. Mr. H. J. Chapman, gardener to R. I. Measures, Esq., Cambridge Lodge, Camberwell.

CATTLEYA LABIATA WHITE QUEEN. *Nov. var.*—Save for a yellow blotch at the base and a suffusion of pink at the tip of the lip this is what the varietal name indicates, viz., a pure white form of *Cattleya labiata*. The segments are of great width and substance, and the margins are prettily crisped. Award of Merit. Mr. J. Parker, gardener to W. P. Burkinshaw, Esq., West Hill, Hessle, Hull.

LAELIA X OLIVIA. *Nov. hybr.*—This is the result of a cross between *L. crispa* and *L. xanthina*. The flower itself is of medium size, and of great beauty. The sepals are a little more than half an inch in diameter, and from 2½ in. to 2¾ in. in length. The petals are noticeable for their great width as compared with the length, being as long as the sepals but much wider. The colour is a deep yellow with a suspicion of green. The lip is large and exhibits a rich, deep crimson hue, shading lighter at the base where a distinct trace of orange appears. Award of Merit. Messrs. Jas. Veitch & Sons, Ltd., Chelsea.

CATTLEYA EMPRESS FREDERICK VAR. LEONATA. *Nov. hybr.*—*C. dowiana* and *C. Mossiae* are the parents of this interesting hybrid. The sepals and petals exhibit a rich rose hue. The petals are half as broad again as the sepals and of about the same

length. The lip, with the other segments, has a prettily frilled margin and is broad and massive. A large, deep crimson blotch at the tip is a prominent feature. Towards the base of the lip is a number of deep orange stripes running at an angle of 45° to the central vein. Award of Merit. Messrs. Jas. Veitch & Sons, Ltd.

CYPRIPEDIUM BECKMANI. *Nov. hybr.*—This is the outcome of a cross between *C. Boxalli superbum*, and *C. bellatulum*. The dorsal sepal is of great size, boldly erect, and has an unbroken, nearly circular, outline. It is green in hue, and heavily spotted with chocolate-brown. The petals are obovate in shape and chestnut-brown in colour with a few deeper spots near the base. The "slipper" is long and rather narrow, much pointed, and of the same hue as the petals. Award of Merit. Messrs. Lucien Linden & Co., Brussels.

ODONTOGLOSSUM DAYANUM.—In this case the segments of the flower are very narrow, long, and acuminate. The colour is green-white, and spotted with light brown. The lip is small and white, with spots of yellow and brown at the apex. Award of Merit. Mr. Ballantine, gardener to Baron Schroder, The Dell, Egham.

Floral Committee.

CHRYSANTHEMUM MRS. F. A. BEVAN.—For description see p. 166. Award of Merit. Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey.

CHRYSANTHEMUM JULIA SCARAMANGA.—For description see p. 215. Award of Merit. Mr. W. Wells.

CHRYSANTHEMUM GEORGINA PITCHER.—For description see p. 215. Award of Merit. Mr. W. Wells.

CHRYSANTHEMUM MRS. H. FOLKES.—A white Japanese variety of medium size, and with good, stiff, flower stems. It should prove useful as one of the whites. Award of Merit. C. E. Strachan, Esq., Hemel Hempstead.

CHRYSANTHEMUM MISS MARY MOLYNEUX.—For description see p. 166. Award of Merit. Mr. N. Molyneux, gardener to J. C. Garnier, Esq., Rockbury Park, Fareham, Hants.

BEGONIA JULIUS. *Nov. hybr.*—This is the progeny of a cross between *B. socotrana* and a tuberous-rooted variety. The appearance of the plant seems to be intermediate between the two parents. The flowers, which are double, undoubtedly show a marked improvement in size, and the form is also good. The colour is salmon-pink. The leaves are nearly orbicular in shape, deep shining green in hue, and with irregularly dentate margins. The habit is sturdy. Such a race of plants as this would prove a valuable acquisition to our plant houses during the winter months. Award of Merit. Messrs. Jas. Veitch & Sons, Ltd.

Fruit Committee.

GRAPE DIRECTEUR TISSERAND.—This is a new black late Grape of great merit. The berries are oval in shape, and of medium size. The skin is thick, as we may expect in the case of a late variety. The flavour is first-class, being full, rich, and very sweet. Award of Merit. Messrs. T. Rivers & Son, Sawbridgeworth.

APPLE LADY FALMOUTH.—This is a small, rather flattened, dessert Apple of very brilliant colour, bearing a resemblance to Court Pendu Plat.

The whole of the fruit is covered with a rich red, and the flavour is brisk and pleasantly acid. The eye is large and shallow. Award of Merit. Mr. George Chalmers, Beech Farm, Mereworth.

The *Chrysanthemums* mentioned hereunder received a First-class Certificate from the N.C.S. at the Royal Aquarium on November 29th.

MRS. J. R. TRANTER.—A very large Japanese flower, with narrow, drooping florets of medium length. The colour is a charming shade of blush-white, the lower florets having a deeper suffusion of rose, and being striped on occasion with pink. It originated from a packet of seed sent by Pitcher & Manda. Mr. J. R. Tranter, Henley-on-Thames.

VIOLACEA.—This is a huge Japanese bloom of considerable depth, but rather flat on the top. The florets are of medium length, and intertwine to some extent. The colour is light rose, shading to rose-white in the centre. The bloom is rather coarse and ungainly in build. Mr. E. Beckett, Aldenham House Gardens, Elstree.

THE PLANT HOUSES.

Pits and Frames.

WE have now reached a season of the year when severe frost may be expected at any time, and it will be advisable to shift out of the unheated structures any tender plants that might well be injured by a sudden spell of cold weather.

CINERARIAS are one of the first things that should be looked after in this way. Within the next week or ten days they should be shifted out of the cold frames in which they have been accommodated. An ideal house for them is a span-roofed pit with slate shelves or stages covered with ashes, and heated by sufficient piping to keep the frost out. Fire heat should not be employed, however, a moment sooner than is absolutely necessary, for *Cinerarias* have a great dislike to it, and its continued use exercises a very prejudicial effect, especially upon the later plants. In such a house as that referred to the *Cinerarias* will enjoy plenty of light. The large plants that received their final shift into eight inch pots about the middle of November have now got over the slight check they then received, but close attention must be paid to them for watering for another week or two. In addition to plenty of light a fair amount of air must be given, but not in such a way as to cause draughts. A good temperature for the night will be from 40° to 45° Fahr., the latter being for very mild, and the former for very cold weather. The plants will thus be kept gently on the move.

FORCING HOUSES.—Melon pits having brick beds of fair width and depth come in admirably at this time of the year for forcing Lilacs, Azaleas, Deutzias, Spiraeas, Staphyleas, and bulbs of sorts which are to do duty presently in the conservatory. These beds can be filled with leaves or other gentle heating material, and the plants plunged in them. A very little fire heat suffices to keep the temperature well up, while the fermenting matter is fresh. The temperature may range from 55° to 60° by night with a proportionate rise during the day. Such a house as this will suit *Richardias* well where early flowers are wanted. Syringing with tepid water may be conducted each morning between 9 and 10 o'clock, and again in the afternoon between 2 and 3 if the weather allows of it. Should severe frost threaten, however, it will often be advisable to miss the post-meridian syringing. Into these houses for the next few months should pass relays of the various subjects that are to be forced for conservatory work. From ten days to a fortnight should elapse between the introduction to heat of the several batches.

Meanwhile the remainder of the hard wooded plants such as the *Deutzias*, *Staphyleas*, *Lilacs*, and *Spiraea confusa* will take no harm out of doors, as they are perfectly hardy. The pots, on the other hand, are apt to get chipped and cracked if left exposed to the action of the frost. It will be well therefore to plunge the pots deeply in the plunging ground left vacant by the *Chrysanthemums*, placing an inch or two of ashes over the surface of the soil. Water will, of course not be needed, at least in greater quantities than that supplied by the clouds.

BULBS.—By this time all the bulbs of *Hyacinths*, *Tulips*, *Crocuses*, and *Narcissi* that were potted up and covered with ashes in the open ground will have rooted sufficiently to warrant removal. An early opportunity should therefore be taken to remove them to pits or frames, where they can be easily got at, as their turn comes to be brought into heat. Should we be favoured with a very bright sunny day or two immediately after the withdrawal of the plants from their seclusion they should be shaded a little until the tops become gradually inured to the light and the etiolated appearance has given place to the normal green.

COLD FRAMES.—At this advanced date it is advisable to cover all unheated frames regularly each evening, no matter whether the weather promises to be mild or not. A clearing of the sky if it continues for any length of time now means a frost, no matter where the wind is, and the gardener must not be caught unprepared. During the day as much air as possible should be given the occupants, for any subject that is so tender that it cannot stand this has no business in a cold frame at all at this season of the year.—*A.S.G.*

VEGETABLE CALENDAR.

THE season has arrived when we may expect severe frost at any time, and with a view to keeping men profitably employed during such weather, all vacant quarters may be manured at once, spreading it evenly over the ground to prevent the latter from getting frost bound. With a good breath of land secure from frost, digging and trenching can be forwarded at its proper season. In dealing with heavy land, the rougher this is left after the spade, the better it will be at seed time; and the longest manure should be used on ground of this description. For lighter soils thoroughly decomposed manures should be used. Double digging, or bastard trenching, is equally beneficial in both cases, and as much as possible of this should be done at this season.

FRAME CROP.—These will need very close attention now and onwards, as decay spreads very rapidly among young Lettuce, Endive and similar crops. The plants should be frequently looked over and all decaying matter removed. The surface soil should also be stirred occasionally, and a dusting of dry burnt ashes scattered over it will act very beneficially in absorbing moisture and preventing decay. Ventilate freely whenever the glass stands a few degrees above the freezing point, leaving it on night and day during mild weather.

FERMENTING MATERIAL.—With a view to early requirements in the forcing department a large stock of leaves should be collected and stored in a dry position ready for use in a few weeks time. To every three loads of leaves, one of long dung may be added, and the whole frequently turned to render it sweet and in the best condition for use. Where leaves are plentiful a large bed may be formed 6 ft. high, and of any length or width desired. This bed will retain a gentle heat far into the spring, and will be found most useful for raising many early crops by making small sowings under handlights or frames in a few inches of fine soil. About the end of February the whole surface of the bed can be earthed over and planted with early Potatoes, protecting them with bent rods covered with mats or other coverings.

LETTUCE.—The mild autumn has forced the August sowings so forward in growth as to render the plants unfit to stand very severe weather. All that can be placed under cover should be lifted with balls at once. Where no intermediate sowing has been made, a very mild hot bed of leaves should be got together, and a one light frame placed over it. This may be sown now with all the year round Cabbage and Paris Cos.—*J. R.*

The Orchid Grower's Calendar.

THE WEATHER.—During the past week or two the fog fiend has been on the war path with a vengeance; not that it makes such a great difference to us who are fortunate enough to be in the country, as we do not feel the effects to any extent. We are, nevertheless, truly sorry for those that have to grow Orchids in or near the Metropolis. How vexatious it must be to have nearly, if not all, your flower spikes on the Phalaenopsis completely spoilt, and the work of a season lost. It must have been a relief when the wind began to disperse the demon on Saturday. There was no doubt of its intention on Sunday the 28th ult., and all through the night, for it blew a hurricane. The temperature, too, is much colder so that we may expect some frosty nights. It is customary for us at the approach of winter to give a few hints that may be of great use to amateurs. In the first place we would advise that a stock of peat be got in; also a good quantity of sphagnum moss. The autumn having been exceptionally dry the moss will be nice and short, and in capital condition. Left until later it becomes lanky and so much is wasted, for at this season only the live points should be used. Again should frost set in the moss merchant would have a difficulty in supplying you—just when you want it most. There is yet another advantage, the peat can be pulled and the moss picked during bad weather when outside work is at a standstill. A little forethought in this respect saves a lot of time later on.

THE WARM DIVISION in which the heat-loving Cypripediums are growing is always a source of great interest at this season of the year; and if there is one genus of Orchids more than another better

adapted for growing in or near large towns Cypripedium is the one. The various forms rarely, if ever, fail to give satisfaction, if given anything like a fair chance. When grouped together, the varieties of *C. insigne* are very fascinating, as are groups of *C. leeanum* and *C. spicerianum*. Solitary plants, unless they are profusely flowered, do not convey a proper estimate of their beauty.

The Cypripediums are essentially amateurs' Orchids, for given heat and moisture in sufficient quantities, they rarely fail. They may be potted, too, at any time short of their being in full flower.

THE COMPOST for the majority consists of two parts peat and one of moss. The peat should not have the fine material shaken out as for Cattleyas; neither should it be used in too dry a state. Bits of charcoal or small crocks should be worked in with the compost when potting to keep it open.

MASDEVALLIA TOVARENSIS.—If the *M. harryanum* section has gone out of favour, this chaste little gem remains a favourite still. We grow ours in pans using peat and moss in about equal parts. A temperature halfway between that of the cool house and the Cattleya house suits it admirably. We have such a division in which is growing *Oncidium tigrinum* (now in flower), *Odontoglossum hastilabium*, *O. harryanum*, *O. luteo-purpureum*, and *O. triumphans*. *Sophronitis*, too, likes this extra warmth, as does *O. Rossii majus*.

TEMPERATURES.—East India house, 65° at night; Cattleya house, 55°; Cool house, 50° at night; all should have a rise of 10° by day. Should the outside temperature become very cold a few degrees below those stated above would do no harm.—*C.*

Gleanings from the World of Science.

Is the Great Black Woodpecker a native?—

At a meeting of the Linnean Society of London, on November 18th, 1897, Mr. J. E. Harting, F.L.S., exhibited a specimen of the Great Black Woodpecker (*Picus martius*) lately received from Col. W. C. Dawson, of Weston Hall, Otley, Yorkshire, where it had been shot in his presence by a friend on the 8th September last. It was shown that this could not be the bird which had recently been lost from the Zoological Gardens, since the latter did not escape until October 9th. Allusion was made to the numerous records of the occurrence of these species in England, some of which at least seemed worthy of credence, since the recorded specimens had been obtained and were preserved in the possession of trustworthy persons.

Mr. Howard Saunders expressed the opinion that there was no sufficient ground for including *Picus martius* in the list of British birds, as from its partiality for pine forests and its stationary habits, it was not likely to be a voluntary visitor to this country.—The President remarked that the perfect state of plumage of the specimen exhibited was satisfactory evidence of its not having recently escaped from captivity; and that the late Lord Lilford, the year before his death (which occurred on the 17th June, 1896), had two Black Woodpeckers in his aviary in Northamptonshire, and in consequence of their ailing in health, had given them their liberty. It seemed possible that one of these might be the bird lately shot in Yorkshire.

Mr. J. E. Harting also exhibited in the flesh a hybrid Pheasant and Black Grouse, which had been received that day from Shropshire. In appearance it precisely resembled a similar hybrid of which a coloured figure is given in early editions of White's "Selborne."

On behalf of Mr. Leonard Lush, of Stonehouse, Gloucestershire, three white Partridges (*Perdix cinerea*) were exhibited, which had been shot by him on the Berwyn Mountains in Wales, early in October last. It was remarkable that in the covey, which consisted of nine birds, no less than five of them were white, four only being of the normal colour.

The undermentioned subjects were brought before the Scientific Committee of the Royal Horticultural Society on the 23rd ult.

Gall on Jasmine.—With reference to the specimen brought by the Secretary to the last meeting, Mr. MacLachlan reports that it is quite impossible to fix on anything in particular in the way of a cause,

but the puncture of a Phytoptus is the most probable.

Phyllotreta on Cruciferae.—He also observes, with regard to the beetles shown by Mr. Michael as as destructive to Stocks, &c., that "the genus is the one to which the 'Turnip flea' belongs. There are about a dozen species in this country, all being much alike. They all frequent the Cruciferae, and the fact that this one was also found on *Tropaeolum* only intensifies the fact that most things which feed on the former will feed on the latter, as—*e.g.*, the larvae of 'Cabbage Whites,' the interpretation being that both contain the same chemical vegetable products."

Dahlia Hybrid (?)—Flowers were received from Mr. E. J. Lowe, of Shirenewton Hall, Chepstow, supposed to be the result of crossing a Dahlia with the pollen of a Sunflower. The appearance was that of a Dahlia, the disc alone being rather larger. Dr. Masters undertook to examine them more minutely.

Cypripedium, Monstrous.—Mr. Veitch sent a plant of *C. Sityus* bearing a single flower. It had no lip, but two columns. It was referred to Dr. Masters for further investigation.

The Copper Plant.—Dr. Masters exhibited an illustration of *Polycarpaea spirostylis*, F. von Müller. It has the above name, as it is said only to grow where copper is to be found, and that its presence is an indication to miners of the existence of that metal in the neighbourhood. It is found by the mines of Watsonville, &c., N. Queensland.

Chrysanthemum Proliferous.—A specimen bearing three flowers was received from Mr. B. Greaves, of Broome Hall Gardens, Dorking. They were remarkable for consisting of a dense mass of minute heads instead of distinct florets. Some of the Show Dahlias, Dr. Masters observed, consisted of this peculiarity, the separate heads combining to make a single large "flower." The peculiarity is characteristic of the genus *Echinops*, only the individual heads contain but a single flower each.

TRIALS AT CHISWICK.

THE trial of Cottager's and Curled Kales, held at Chiswick this year, has been an interesting one, and the committee met at Chiswick on November 6th to determine the relative merits of the varieties, forty-seven in number, submitted to the test. The award of XXX. was made to the following varieties.

CUTHBERTSON.—A very dwarf, hardy, curled form with dark, sturdy foliage. Mr. M. Cuthbertson, Rothesay, Bute.

BRYDON'S SELECTED.—This is a very strong and vigorous form of medium height. The leaves are very densely curled, in fact, more so than any of the other forty-six varieties sent. Messrs. Kent & Brydon, Darlington.

VARIEGATED.—Here we have an excellent sample of a good garnishing Kale. The leaves are nicely crisped, and white, green, purple, and shades of rose are the predominant colours. Messrs. Jas. Veitch & Sons, Ltd., Chelsea.

DOBBIE'S SELECTED.—This is a splendid curled variety, very vigorous, and hardy, passing through the most severe winters untouched. The foliage is very dark green, and the plants are of medium height. Messrs. Dobbie & Co., Rothesay, Bute, and Orpington, Kent.

CHOU DE MILAN.—A tall, branching variety of great merit, but not curled. Its greatest recommendation is its exceptional hardness. Messrs. Watkins & Simpson, Exeter Street, Strand.

COTTAGER'S KALE.—This is a splendid strain, of tall and branching habit. The foliage is dark, and slightly curled. Messrs. Watkins & Simpson.

CULZEAN CASTLE.—Here we have another excellent stock. The plants are of medium height, very strong, and vigorous. The foliage is of dark hue, and densely curled. Messrs. Hurst & Son, 152, Houndsditch.

LATE HEARTING.—A dwarf and sturdy strain of hearting Kale. The plants produce large and heavy hearts of great delicacy of flavour. The leaves are much curled. Messrs. Hurst & Son.

An award of XX was made to the two under-mentioned varieties.

DWARF PURPLE.—Here the leaves are long and large, dark purple in hue, and well curled. The plants are very dwarf in habit, being only about a foot in height. Messrs. Dobbie & Co.

BARR'S EXQUISITE.—This is practically the same as Dwarf Purple, the habit and style being identical in the two cases. Messrs. Barr & Sons, King Street, Covent Garden.

HINTS FOR AMATEURS.

THE GREENHOUSE.

At this time of the year, and, in fact, right through the winter months, the amateur's greenhouse contains a more than usually heterogeneous collection of plants, which are brought into the glasshouses from all parts of the garden, and various corners of cold frames, where experience has taught they cannot be wintered with safety. Subjects which have done duty in the flower garden during the past summer often bulk largely in the arrangements. These may include specimen zonal and Ivy-leaved Pelargoniums, Heliotropes, and Fuchsias; also such foliage plants as *Aralia Sieboldii*, or such aquatics as the blue African Water Lily, *Agapanthus umbellatus*, which require a little protection to tide over the rigours of our winters.

In addition to these there is often next year's supply of recently struck cuttings of bedding plants to find room for somewhere or somehow. Hard wooded subjects like Azaleas, Camellias, and Acacias also claim a share, and often a good one, of the available space.

Then, of course, there are bulbs of various kinds in pots and in different stages of growth which the owner is depending upon to produce a bit of bloom after the turn of the year. Usually a few Cinerarias, Cyclamen, and Primulas are included, together with a number of waifs, strays, and nondescripts, representing a fairly wide range of plant life, but all of which have some value in the owner's eyes.

To be able to accommodate such a host of unlike material in one house is, indeed, a task, and yet no power on earth will induce the every-day amateur to abate his pretensions or lessen his collection by a single plant, until, perhaps, in sheer desperation that plant solves the difficulty by dying, whilst others linger on in an abject and miserable condition.

By dint of a systematic arrangement of the various elements of the collection, however, a good deal may be done to improve matters. Every greenhouse should be fitted with shelves in addition to the ordinary stages. These shelves may be constructed and fitted in such a way that they may be taken out during the summer or whenever they are not required. At this time of the year they are of the utmost service, and it is not too much to say that a house fitted with them renders double the service to one that is not supplied with this convenience.

Now a word as to the general management of the greenhouse before we go on to deal with the special requirements of the most important subjects. A minimum temperature of 40° Fahr. by night during the winter will be found the most suitable. During mild weather the glass may stand 2° or 3° higher than this without any danger. The day temperature may rise from 5° to 10° higher than the night temperature, but the latter rise will only take place during very bright sunny weather, when there is little or no wind. If we get continuous frosty weather during the next six weeks it is more than probable that there would not be 5° difference between the night and day temperatures. The moral of all this is, therefore, that any figures which can be given cannot be taken as being absolute, but must be taken rather as the basis of treatment.

Ventilation.—Many people run off with the idea that it is only in the warm weather that houses want airing, and they proceed to neglect entirely to ventilate their glasshouses any more than in the casual way of opening and shutting the door upon entry. This a great mistake, for the atmosphere of the house should be changed regularly. Of course, a properly constructed house is not air-tight, and the interstices between the laps of the glass act like a number of little ventilators, but, excepting in very severe weather, more than this is required. The side lights of most houses are movable, but these should be kept closed through the winter. The top or roof lights may be opened occasionally if the day be favourable, but in this case they should only be opened on the sunny side of the house. The bottom ventilators, on the other hand, must be freely used. Here the air they admit passes over the hot-water pipes in its passage into the house, and becomes warmed in its journey, so that there is no danger of injury to the plants from direct contact with cold air.

Watering.—This presents one of the most difficult problems for the amateur to tackle. It must be borne in mind that in the majority of cases the plants are in a comparative state of rest, and less water will be needed as a consequence. Then again, there will be less evaporation of water from the soil, as the air being at a low temperature cannot contain so much moisture as it does when it is warmer. Generally speaking, therefore, all plants may be kept drier during the winter than in the spring and summer. No plant should be watered because it may need water to-morrow. Wait until to-morrow in such a case. All watering should be done in the forenoons, and a bright day should be chosen if possible. Between the hours of 10 a.m. and 12 noon will be found the best time of the day for wielding the watering-can. The moisture will then, to a large extent, have become dissipated by nightfall.

Now as to the disposition of the plants in the house; we will take the shelves first of all. Upon these may be placed any of the smaller plants that require to be brought up close to the glass, but which, at the same time, will not need to be watered very often.

These conditions apply particularly to autumn-struck cuttings of the tender sorts of zonal Pelargoniums which are to be used for bedding next year. Such varieties as Creed's Seedling, Mrs. Pollock, Mrs. Henry Cox, and Crystal Palace Gem like just such a situation as this. Before they are consigned to the shelves, if the cuttings are fairly well rooted, all the old leaves and any flower buds which may be showing themselves should be picked off. Very little water indeed will be required. Old plants which have been cut back may be gone over again with a sharp knife or pair of scissors, and any pieces that have damped off cut out. No water at all will be needed for several weeks to come. No matter if the soil does look dry, it is far better for it to be so than wet.

Lobelia cuttings may also be placed on the shelves. Keep a special lookout for damp among these, although damp will be even a worse enemy amongst the old plants which were lifted and potted up at the end of October to furnish cuttings for stock next spring.

Freesias are just now growing away freely. These will do well on a shelf, for they like plenty of light. The plants have now reached a size when staking will be necessary. For plants which are to be grown in the ordinary way, the quickest and easiest way to afford the necessary support is to insert about four small neat stakes from 6 in. to 8 in. in length around the sides of the pot, and pass a strand of raffia round them. Special plants may have a small stake placed to each of the strongest growths. A little weak guano manure may be given as soon as the flower scapes make their appearance. Keep a smart look-out for greenfly.

Cinerarias—Until quite recently these plants have been accommodated in cold frames, but they should have now been brought into safer quarters. Group these together also, but try and manage so that they are not in close proximity to the hot-water pipes, oilstove, or whatever other heating apparatus is employed. Cinerarias do not like fire-heat, and thus if there is a part of the house cooler than another let them have it. If the plants are strong and healthy a fair amount of water will be needed, and a little weak farmyard manure may be given about once a week to the most forward plants.

Herbaceous Calceolarias.—Of all the greenhouse plants which may be grown by amateurs possessing a little glass there is none more beautiful than the herbaceous Calceolarias. Visitors to the Royal Horticultural Society's show in the Temple Gardens know full well what a lot of splendid Calceolarias are staged there yearly. Such a sight as they present undoubtedly induces many people to make an attempt to grow them, but, unfortunately, there are many failures, and this usually from very simple causes. The most common mistake made is coddling the plants. A sojourn in a dry, warm house will most assuredly spoil the best plants, for they become drawn, etiolated weaklings that never subsequently develop into good plants, no matter how well they may be treated in the spring. The winter months constitute the really critical time. A capital place for the plants now is a shelf near the glass, where they will get plenty of light. If possible place a layer of ashes half an inch or so in depth for the pots to rest on. This holds the moisture better,

and is more kindly than the hare wood. In watering use cold, soft water if obtainable, but no liquid manure of any sort, for the plants are in a state of semi-quiescence, and nothing should be done to unduly disturb them for the time being.—*Rex*.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Rose for Pillar.—Y. wishes to plant a Rose to train up a series of short iron pillars connected with chains which run across the bottom of his garden. We should recommend the variety *Flora* as being the most suitable for the purpose. It is a very profuse flowerer, and resists the smoke remarkably well. Visitors to Kew will remember what splendid effects are produced each year at Kew by this pretty Rose.

Covering Tea Roses.—*Rosa, Richmond, Yorks.* We should certainly advise you to follow the example of your neighbour and cover your Tea Roses at once. The winters in your locality are often severe, and the winds are especially keen and cold. Dry bracken will be found a cheap and efficient covering.

Crested Cyclamen.—*A. Marney* sends blooms of Cyclamen which have a crest upon one of the petals. It is now a not uncommon occurrence to find crested Cyclamen, although they are of comparatively recent introduction. Messrs. Hugh Low & Co., of Bush Hill Park, Enfield, have given a good deal of attention to Cyclamen, and that pretty variety Bush Hill Pioneer is an excellent instance of crested petals. This variety is white, but the Messrs. Low have also pink and red crested forms.

New Chrysanthemum.—*W. Forbes.* Write to any of the leading Chrysanthemum specialists, and send samples of the flowers. If the variety promises to be a good one you would then have no difficulty in disposing of the whole stock at a fair price.

Cheap Chrysanthemums.—*Amateur* wishes to comment upon the very low prices at which cuttings of leading varieties of Chrysanthemums are offered in some quarters, and asks if the material is good, and if the varieties can be depended on as being true to name. We have no knowledge of the tradesmen alluded to, and consequently cannot speak definitely of the kind of stuff they supply, but the prices are certainly too low to expect much, for it is an expensive undertaking to keep up a large collection of varieties true to name, and in sufficient quantities to supply orders.

Acacias for Greenhouse.—Please name three of the best Acacias for greenhouse.—*C., Reading.*

Acacia armata, *A. Drummondii*, and *A. riceana* are three of the handsomest and most serviceable. *A. dealbata* is also well worth growing.

Specimen Plants of Mignonette.—*A. Marney:* In order to obtain good specimens you must, for the present, keep all the flowers pinched out as fast as they show themselves. The growths must be tied neatly out to stakes so as to cover a large area. A night temperature of from 45° to 50° Fahr. will suit the plants admirably.

Chrysanthemum Western King.—*f. O.:* This variety is of American origin, and was sent out by Mr. Nathan Smith, Adrian, Mich., U.S.A. We find that it has obtained a First-class Certificate in this country from the hands of the National Chrysanthemum Society on October 28th, 1896.

The Chinese Sacred, or Jos, Lily is a bulb of exceedingly easy culture, *C. Mearns.* In China and Japan it is grown in bowls filled with pebbles and water, and may be treated in the same way here. Soil, cocoanut fibre refuse, or Jadoo fibre, may be employed if desired. The temperature of a warm greenhouse suits it well. The bulbs each throw several flower scapes, each scape carrying a number of flowers. Occasionally some of the stronger bulbs produce enormous quantities of flowers. The

most prolific bulb we have met with or heard about had nine flower scapes. Of course this "Lily" is not really a Lily at all, but a form of the Polyanthus Narcissus.

Mahonia Aquifolium.—*J. R. G.*: If you want so much of the foliage for decorative work the best thing would be to select some of the most scraggy looking of the plants, and cut them right down to the ground. You will thus obtain all the decorative material that you require without spoiling the best plants. The cut-backs will break away from the bottom in the spring, and by next autumn will have made dwarf bushy specimens. This plan is followed by several of the growers who supply Mahonia foliage.

THE "HURST & SON" C.C.

It may seem late in the season to advocate the claims of cricket; but the feverish rush and hurry of the brief but lively Chrysanthemum season has kept other matters pertaining to gardening in the background for the past month.

MESSRS. DOBBIE & CO., ROTHESAY. ON the 11th of September last we paid a visit to the far-famed establishment of Messrs. Dobbie & Co., Rothesay. Pressure on our space prevented us from recording our notes at the time, and later on the Chrysanthemum in all its varied phases monopolised our pages for weeks. What we noted then, if not in season now, will be even more full of interest presently when preparations are being made, not only at Rothesay, but all over the country, for next year's display in the garden. Florists' flowers, hardy herbaceous plants, and vegetables are the specialities at Rothesay, as most of our readers well know. Messrs. Dobbie & Co. have sixty acres of land at Rothesay, occupied with their various specialities, and a seed farm at Orpington, Kent, of equal extent, for the growing of seeds to meet the demands of their thousands of customers.

SPRINGFIELD NURSERY.

This is situated in Rothesay itself, and is the oldest branch of the establishment, where Mr. James Dobbie carried on business for many years. The area is almost completely occupied with glass-houses, many of which are comparatively new, and con-

including Queen Charlotte, having yellow-edged, scarlet flowers.

The collection of Chrysanthemums here is very extensive and up-to-date, only new varieties being grown. They were in the open at that time, and included 1,800 in pots for exhibition blooms, and 1,000 plants of decorative varieties in pots for big blooms. The former included Lady Hanham, that handsome salmon-pink sport from Vivian Morel, so much in evidence at shows for some weeks past. Lady Isabel is one of the largest incurved varieties in cultivation, if not the largest; its flowers are lilac-pink. Others were Australian Gold and Albert Histout, the latter being a new white sport from Wm. Tricker and full of promise.

Early or summer-flowering Chrysanthemums were represented by 800 plants in pots of the best varieties in cultivation. This was proved at Chiswick during September and October last, when a large number of them received XXX from the Floral Committee, as recorded in our pages at the time, including Mychet White, Bronze Blushing Bride, &c.

All the leading varieties of greenhouse Fuchsias are kept in stock, including a rose sport from



THAKE. MAIN. SWINFEN. JERRY. PORTCH. BLYTH. HUDSON (Umpire).
 DAY. DELACOURT. SAMPSON (Capt.) SQUIRE. LOCKE.
 SPENCER (Scorer).

With regard to cricket or any other wholesome recreation, we do not sympathise with those who would banish amusement of every form from the arena of the legitimate occupation of the hours of leisure, whether of half-holidays or the evenings after the labours of the working-day have been completed. The laws of health are now beginning to receive that recognition which the past has ignored. Gardeners, who are confined all day to hothouses saturated with moisture that is injurious to the human frame, or seedsmen who are tied to their posts in populous and smoky cities and towns require some means of counteracting these devitalising influences. Furthermore, it cannot be denied that healthy and happy men are of more service to their employers than the unhealthy and dissatisfied. In this respect, therefore, wholesome open air recreation is of advantage to employers and employed.

Many of our readers will still remember the cricket matches we recorded during the past summer, including those in which the team of the Hurst & Son Cricket Club played a prominent part. The accompanying photograph represents the men forming the team of this well known cricket club, whose season was a very successful one. The men are all in the employment of Messrs. Hurst & Son, of 152, Houndsditch, London, and we may here state that they won nine matches, drew four, and lost five during the season of 1897.

structed on the most approved modern principles for plant growing.

The first house we entered was the propagating pit for Dahlias in spring, but at the time of our visit was filled with Tomato Frogmore Selected, bearing a heavy crop of large fruits. We witnessed a finer sight in other houses occupied with Tomato Dobbie's Champion, a very deep fruit of medium size, round, smooth, and rich scarlet in colour. The flesh is solid and flavour excellent, as we had ample means of proving. The Tomatos were planted out in the floor of the house and trained up to the roof. The earliest had long been gathered, but later ones were fruited from the ground and bearing enormous bunches all up the stems.

In another house we noted a stock of all the best varieties of zonal Pelargoniums. Cuttings of them in all stages of rooting filled another house. From thence we passed into the Begonia house, where the single tuberous varieties potted up in May were still flowering. They are of erect habit, very floriferous, and of all colours. The rosy-pink flowers of *B. odorata* are pleasantly fragrant. Here also was a collection of the new, large-flowering Cannas of the Crozy strain, represented by all the varieties.

Phenomenal, which is white; the pure white Countess of Aberdeen; and Lady Dorothy Neville, with a spreading blue Corolla, and very handsome. Fuchsia tryphylla and *P. microphylla* are both interesting and ornamental. Show and fancy Pelargoniums are also cared for; and here also is a collection of species of Pelargonium which we did not expect to find in a floral establishment.

Messrs. Dobbie & Co., are also well up-to-date in the matter of Heliotropes, of which many grand varieties are grown, and prove serviceable either for potwork or bedding purposes. President Garfield, Numa, Lady Amherst, Mme. de Burry, Miss Nightingale, A. Delaux, The Queen, and Swanley Giant are some we noted in bloom. A large quantity of frames occupy sloping ground at one end of this nursery, and are all required in spring. Another set of frames was filled with a stock of thousands of Dahlias in small pots, grown for what is known in the trade as pot roots. The potting shed and packing house are very extensive and admirably fitted up for the purpose. During winter and in wet weather, thousands of labels have the names of Dahlias written upon them, and are all classified in pigeon holes ready for use when wanted in spring.

BUSH FARM NURSERY.

HARDY HERBACEOUS PLANTS.—This farm occupies some fertile land on the sloping side of a low hill, overlooking Rothesay Bay, and much of the county of Bute. It is in every way adapted for the cultivation of flowers and vegetables of all kinds. On this occasion we shall merely indicate the general character of the hardy plants grown, particularly those grown in quantity. The Dandelion-leaved *Oenothera taraxacifolia*, and red and white varieties of *Dianthus multiflorus hybridus* were still flowering. Some 20,000 to 30,000 border Carnations are grown, in all the best sorts. All up the hill side on either hand are broad plantations of many herbaceous plants, including *Primula rosea*, Iceland Poppies, *Aquilegia californica*, and hybrid sorts; also *Pyrethrum* and *Phloxes* in quantity, the latter consisting of old plants, as well as cuttings in frames. Those in bloom varied from 2 ft. to 4 ft. high, including all the best large-flowering, richest, and most beautiful colours in one hundred select varieties—surely enough to satisfy the most fastidious.

Violas and *Pansies* constitute one of the leading specialities at Rothesay, as they have done for many years past. At the time of our visit there were 32,000 summer struck cuttings, rooted in July, and ready to be sent out, all good and well established stuff. Six long beds of old plants were still flowering profusely. In another part of the nursery we noted a long edging of *Violetta*, the sweet-scented *Viola*, the parent of all the miniature race. It was one mass of pure white, and formed an edging to a long herbaceous border, where it was planted twenty to twenty-one months ago. Perennial *Asters* or *Michaelmas Daisies* are grown in quantity and variety, including several very fine forms of *A. Novibelgii* and *A. Novae-Angliae*. *Boltonia asteroides* was also fine.

On an upland portion of the farm, we walked through a large plantation of *Marigolds*, including a splendid strain of French *Marigolds*. Some of them had a lemon and others a golden-yellow ground with velvety-maroon edges. *Lemon Queen* and *Prince of Orange* represented the fine strain of African *Marigolds*, for which this firm is also reputed.

There was a plantation of 10,000 red, brownish-orange and crimson *Pansies*, of which over 9,000 were to be dug in, which goes to show the extraordinary pains, and great amount of work undertaken to get a good strain. The colours varied considerably, and some were very handsome indeed.

DAHLIAS.

The visitor to Messrs. Dobbie & Co.'s Bush Farm Nursery, during the time the Dahlias are in bloom, need not be told that they constitute one of the most important features of the establishment. Altogether, there were three acres of Dahlias in full bloom last September. Messrs. Dobbie purchased every variety which was accorded a certificate in 1896, so that their collection is up-to-date, and properly tested on their own grounds.

SHOW AND FANCY VARIETIES.—These formed large and bushy plants, supported by a large central stake and two to four smaller ones to keep the main branches from being broken down. *Countess*, new for 1897, has pink flowers with a purple tip to the florets. *James Martin* (1897) bears scarlet flowers of very fine form. Those of *Joe Chamberlain* are large and dark crimson. *Queen of Autumn* (1897) is large, handsome, and of a fine old-gold colour. *Esmond* is a clear yellow and very showy variety of large size. A very subtle tint may be observed in *Duchess of York*, which may be described as pink, overlying yellow, and very handsome. *Chieftain* is rich purple, and one of the best of its colour. *Crimson Globe* is a magnificent variety and well named, for the flowers are of a glowing crimson-scarlet. The blooms of *Baroness* are soft buff-yellow. *Mrs. Mackintosh* is another grand sort with large, golden-buff flowers. *Norma* is soft buff-yellow, and the form is really grand. A curious and pretty shade is represented by *Octavia*, having light buff-yellow flowers, tipped with purple. *Perfection* is a rich golden-buff. *Virginale* is soft purple, and of large size, with neatly compressed florets. All of the above are show varieties of the very first water, and merely a few picked from the collection while passing through it. *Mabel* (1897) is a fancy sort, of a pink hue, flaked and marbled with carmine.

CACTUS VARIETIES.—Within the last few years this section has attained to remarkable perfection, and acquired equal popularity and notoriety both for

garden decoration, cut flowers, and exhibition purposes. *Austin Cannell* has scarlet flowers, tipped with white, and strikingly distinct. Very pretty is *Aurora*, a miniature Cactus variety with long, orange florets, tipped with blue. *Mrs. Kingsley Foster* (1897) is buff-yellow and very pretty. Very handsome is *Iona* (1867) with long-pointed orange-salmon florets. The maroon-crimson *Harry Stredwick* (1897) is one of the darkest in cultivation. The orange-scarlet, incurved and pointed florets of *Fantasy* render it one of the most striking and handsome of the Cactus race. *Ensign* (1897) is carmine-scarlet tinted with blue. The scarlet and pale-tipped blooms of *Cycle* (1897) are large and very conspicuous. *Starfish* (1897) is a striking orange-scarlet flower. *Princess Ena* is yellow, overlaid with orange-salmon. *Cinderella* (1897) is a fine purple sort. The carmine-scarlet *Ophelia* (1897) is another fine thing. *Miss Webster* (1897) has received fourteen certificates from as many societies, and is the best white Cactus variety in cultivation. Very pretty is *Bridesmaid* (1897), creamy, and tinted with pink on the outer petals. *African* (1897) is maroon-crimson.

The 1896 varieties, in very large plants, were flowering grandly, and the flowers were chiefly used for cutting. The orange-salmon *Mrs. Beck* is very choice.

POMPON VARIETIES.—These also have attained great popularity of late years, being particularly serviceable for cut flowers, and all other decorative purposes. Very pretty is the orange-scarlet *Adrienne* (1897). Other remarkably choice things for 1897 are *Clarissa*, primrose; *Dagmar*, blackish-maroon; *Dr. Jim*, rich carmine, with a purple edge; *Elegant*, yellow, overlaid with pink; *Gannymede*, salmon-pink; *Nancy*, yellow, tinted with buff; *Opal*, yellow, tipped with white; and *Orpheus*, a very small, yellow variety. *Sunny Daybreak* is yellow, overlaid with orange and very handsome.

SINGLE CACTUS DAHLIAS.—During the last few years Messrs. Dobbie & Co. have been developing a new section under the above title. Some of them are beautifully fantastic and graceful, while the colours are now extremely varied. *Demon* is a single variety that is almost black. All other good singles of the ordinary race are kept in stock. Amongst the single Cactus sorts very showy and graceful are *Ivanhoe*, light rose, with a crimson zone; *Talisman*, maroon-crimson; *Crusader*, streaked bronzy-red on an orange ground; *Lady Evaline*, old-gold, overlaid salmon; *Diana Vernon*, large, scarlet, edged purple; *Sir Walter*, a very pretty rose-pink, with deep orange base, strangely and beautifully contrasted and one of the best; and *Alice Lee*, a most beautiful pink sort which carries its flowers well above the foliage.

STOCK PLANTS.—Ninety-six varieties were grown by themselves for stock, being thickly planted on unmanured ground. For instance, there were 150 plants of *Mabel Keith*; 200 of *Gloriosa*; 200 of *Harmony*; 200 of *Mrs. Barnes*; 200 of *Matchless*; and 100 each of many others of the best sorts. Amongst pompons we noted 100 plants of *Little Dorrit*, and so on of others for stock.

In the smaller of two fields was a plantation of 6,000 Dahlias. Taking the two fields together, there were 13,000 plants. To these may be added 3,000 in 5-in pots, and 15,000 pot roots in thumb pots. Seven hands do nothing else but take care of the Dahlias during summer and autumn; but twelve are employed in spring when they are being propagated. These figures and statistics will serve to give an idea of the magnitude of this important department of the business. Those who are specially interested in Dahlias would find much to interest and instruct them at Rothesay during the late summer and autumn months. A 10-acre field of Potatos contained 112 varieties of the noble tuber, all grown for seed.

A Patriarch Elm, which, according to local tradition, has stood in its present position for 200 years is to be removed, much to the grief of the inhabitants of Caerwys, North Wales. The ground on which it stands has been the village playground and fair-ground, as well as the hawkers' rendezvous for many years. Recently two of the large branches fell with a crash, and without giving any warning. This led to an examination, and it was found that the whole of the trunk was rotten, and the safety of the public demands its removal.

CHRYSANTHEMUM SHOWS.

IPSWICH.—November 16th and 17th.

THE Public Hall, Ipswich, was the venue of the Ipswich and East of England Horticultural Society's Show. The efforts that have been made of late by the executive and friends of the society to increase the popularity and usefulness of the fixture have this year been crowned with abundant success, for a record has been established, both for number of entries and attendance of visitors.

The various groups of plants were placed under the balcony, and specimen plants and other groups adorned the stage. The cut blooms were staged on tables that ran down the sides of the hall, the centre table noticeable in former years having been done away with, in order to afford increased facilities for locomotion.

The exhibits of *Chrysanthemum* blooms staged for effect were accommodated in the saloon, in company with the fruit and vegetables.

In the class for a group of *Chrysanthemums* staged for effect, and occupying a space of 10 ft. by 5 ft., Mr. R. C. Notcutt, of Ipswich and Woodbridge, was an easy first. He had some very fine samples of successful culture. Mr. G. Gilbert, of Ipswich, was a creditable second. Mr. H. J. Southgate, also of Ipswich, came in third.

For the group of miscellaneous plants Mr. Gilbert distanced all other competitors, showing some fine specimens of *Poinsettias* and *Richardias*, set up with Palms and stove foliage plants. Mr. Southgate was second, and Mr. R. C. Notcutt third.

Mr. C. Baskett, Rectory Cottage, Stoke, secured the chief award for a group of *Chrysanthemums*, open only to exhibitors residing in the borough, and paying a rent of not exceeding £15.

There was a keen competition in the classes for cut blooms, especially in the class for thirty-six Japanese. Here Mr. W. Messenger, gardener to C. H. Berners, Esq., Wolverstone Park, Ipswich, added to his numerous successes this season by securing the first prize. Such varieties as *Mrs. F. A. Bevan*, and *Western King* were very conspicuous in his exhibit. Mr. R. C. Notcutt was second.

For twenty-four Japanese, Mr. Allan, gardener to Lord Suffield, Gunton Park, was first here, with Mr. H. Rogers, gardener to Lord Rendlesham, Rendlesham Hall, Suffolk, as second. Mr. Skinner, The Chantry, Ipswich, was third.

There was also a capital display in the classes for amateurs. Mr. W. Catchpole had the winning group of *Chrysanthemums* in pots, showing some well grown specimens. Mr. F. Turner, and Dr. Casley, both of Ipswich, were second and third respectively. Mr. H. G. Haggard won for incurves, staging an even lot of well coloured blooms. Miss Gladys Foster-Melliard scored for a basket of cut flowers. Miss Gilbert was an easy first for bouquets.

The exhibits in the fruit classes were scarcely up to the standard of last year, but nevertheless there was some capital material. Mr. Messenger, and Mr. H. Rogers, were adjudged to be equal firsts for a collection of six distinct varieties. Mr. Messenger, Mr. Allan, Mr. J. A. Burness, and the Hon. W. Lowther were the chief winners in the classes for Grapes.

Some high quality produce was observable amongst the vegetables.

WATERFORD.—November.

THE winter show of the Waterford Horticultural Society took place in the City Hall, Waterford. The Council Chamber accommodated the cut blooms, the pot plants occupied the Large Room, and the Committee Room was devoted to the fruit and vegetables.

Mr. F. W. Moore, of the Botanic Gardens, at Glasnevin, judged the plants, flowers, and vegetables, whilst Mr. John Glennie, Curraghmore, pronounced upon the relative merits of the roots and field crops.

The Challenge Cup, presented by J. N. White, Esq., for the cut blooms of *Chrysanthemums*, was won by Lord Ashbrook, Darrow Castle (gardener, Mr. McKeller). The Lady Emily Howard-Bury, Charleville Forest, Tullamore, King's Co. (gardener, Mr. R. McKenna), was second.

J. N. White, Esq. was successful in carrying off the Challenge Cup presented by W. G. D. Goff, Esq., for the best group of *Chrysanthemums*.

W. G. D. Goff, Esq., Glenville (gardener, Mr.

Innes, showed the leading six Chrysanthemums in pots, and J. N. White, Esq. won for a single specimen.

Lord Ashbrook was first for twelve Japanese blooms in not less than six varieties. J. N. White, Esq. was second. Lady Emily Howard-Bury was first for twelve reflexed blooms.

Twelve Anemone blooms, in not less than six varieties, were best shown by Raymond de la Poer, Esq., Kilcronagh (gardener, Mr. John Fernie). The winning stand of six incurves came from W. Gallo-way, Esq.

In the amateurs' classes for cut blooms, Mr. D. Cantwell won for six incurves in not less than three varieties. Mr. W. Goodwin was placed first for twelve Japanese in six varieties, with Mr. D. Cantwell as second. Six Japanese in three varieties were best shown by Mr. J. Moloney.

Fruit was exceedingly well represented, some samples of grand quality being staged.

Lady Emily Howard-Bury led for two bunches of Grapes, with W. G. D. Goff, Esq. as second. Lady Emily Howard-Bury also had the best dessert, and cooking Apples, and the best Pears.

W. G. D. Goff, Esq., Lady Emily Howard-Bury, Lord Ashbrook, the Marquis of Waterford, Curraghmore (gardener, Mr. Thomas Singleton), and Raymond de la Poer, Esq., were some of the most notable winners in the section of the schedule devoted to vegetables.

LONDONDERRY.—November 18th and 19th.

THE winter show of Chrysanthemums, fruit, and vegetables, which was opened on the 18th ult. in the Guildhall of Londonderry, by the Mayoress (Mrs. Johnstone), was by far the largest and best ever held by the society. Mr. T. W. D. Humphreys, J.P., Donoughmore, occupied the chair at the opening ceremony.

The entries this year were almost double those received on any previous occasion. The pot plants and groups were relegated to the centre of the hall, whilst the cut blooms, fruit, and vegetables were shown on tables running parallel with the walls, or placed before the platform or under the gallery.

Around the classes for pot plants a good deal of interest centred, for the competition was sharp and well sustained. Mrs. Bigger, Riverview (gardener, Mr. James McGlenchay), received the first prize for a group of twenty-five Chrysanthemums in pots. Mr. Wm. Tillie, D.L., Duncreggan (gardener, Mr. John Moore), was placed second, also with a good exhibit. T. V. McCready, Esq., Ashbank (gardener, Mr. Joseph Clark), won the third prize.

For a round group of Chrysanthemums arranged for effect, the first award fell to John S. McCay, Esq., Troy; the second to Mrs. Irvine, Coolkeeragh House, (gardener, Mr. William Orr); and the third to T. V. McCready, Esq.

The best specimen plant of a Japanese Chrysanthemum came from Mrs. Bigger, and the best specimen incurve from T. V. McCready, Esq. Wm. Tilley, Esq., received the first prize for a table of stove and greenhouse plants arranged for effect; Mrs. Bigger was second.

In the classes for cut blooms of Chrysanthemums the winning stand of twenty-four Japanese in not less than eighteen varieties came from T. V. McCready, Esq.; Wm. Tilley, Esq., was second; and E. T. Herdman, Esq., Sion House (gardener, Mr. W. Walker), was third.

T. V. McCready, Esq., led for twelve blooms of Japanese, distinct, and E. T. Herdman, Esq., won similar honours for twelve incurves in nine varieties. The smaller class for six incurves resulted in a win for Mrs. Irvine. The best Japanese bloom in the show was contributed by Robert Corscaden, Esq., Boom Hall (gardener, Mr. John Orr), whilst the premier incurve came from Mrs. Irvine. Jas. N. Watson, Esq., Coolnaven (gardener, Mr. Peter Donovan), was first for a lady's spray, and Wm. Tillie, Esq., won for a hand bouquet.

The classes for fruit were well patronised. John S. McCay, Esq., was first for two bunches of Grapes, and James N. Watson, Esq., second. The last-named exhibitor secured a win for six dishes of culinary Apples. Wm. Tilley, Esq., scored for a similar number of dishes of dessert Apples.

In the nurserymen's classes, Messrs. A. Dickson & Sons, Newtownards, Belfast, won first prizes for the bride's bouquet, bridesmaid's bouquet, and lady's spray. In all the three classes, Messrs. McGredy &

Son, were second. Messrs. A. Dickson & Sons, and Messrs. McGredy & Son, were awarded equal firsts for the collection of twelve dishes of fruit.

The exhibits not for competition were particularly good.

Messrs. S. McGredy & Son, the well-known growers, Portadown, had a fine collection of Chrysanthemums, floral designs and bouquets.

The Ichthemic Guano Co., of Ipswich, displayed some choice decorative plants, and visitors to the show were specially attracted to this stand by the sweet and delicate aroma surrounding it, which we found upon enquiry from the courteous representative in charge, was produced by the new perfume entitled, "The Ichthemic Bouquet."

Messrs. Alex. Dickson & Sons, of the Royal Nurseries, Newtownards, Belfast, had a splendid exhibit of Apples, including their celebrated seedling "Milecross," a grand fruit suitable either as a dessert or cooking Apple, equally good in all seasons, and a very heavy cropper. This firm also gained first prize for a magnificent bride's bouquet and spray.

Mr. H. Deverill, the well-known Onion specialist, of Banbury, Oxon, exhibited some fine specimens of Onions grown from his famous seeds.

FRUIT AND CHRYSANTHEMUM SHOW AT WREXHAM.—November 19th.

THE twelfth annual exhibition of the North Wales and Border Counties Pomological Society took place at the Public Hall, Wrexham, on the 19th ult. There was no exhibition held last year, and the disappointment of the local growers on that account caused them to rally round the society more strongly this year, the result being that there was an excellent display. There was a large attendance at the opening, including many people of importance. Lady Cunliffe performed the opening ceremony.

The Chrysanthemums were very fine. The prize winners for the stand of twenty-four cut blooms were Lord Trevor, Sir R. A. Cunliffe, and Sir W. W. Wynn, in the order of mention. Mr. E. Peel led for twelve blooms of Japanese, and Mr. Clark for twelve incurves.

The premier bloom of the show came from Mr. E. Peel.

In the Amateurs' classes Mr. L. Davies staged the premier six blooms.

Fruit was exceedingly well shown, especially Grapes. Mr. John Jones, Grove Lodge, showed the best three bunches of white Grapes. Sir R. A. Cunliffe led for the best single bunch of white, and the best single bunch of black, Grapes, whilst Mr. Job Mason won for two bunches of any sort of Grapes.

Sir Roger Palmer secured the premier awards for six, and three dishes of dessert Pears; Lord Trevor taking a similar place for six dishes of dessert Apples; Sir R. E. Egerton led in the class for three dishes of similar fruit.

Mr. Weaver had the first prize exhibit of six dishes of culinary Apples, showing some beautifully finished samples. Sir Roger Palmer headed the list of competitors for three dishes of culinary Apples.

In the classes devoted to vegetables Lord Trevor scored for a collection of nine distinct kinds, with an excellent exhibit. The other prizes were taken by Mr. Peel, Mr. Roberts, and Mr. Acton, in their respective order.

The first award for the collection of six kinds came from Mr. P. Herd. Mr. T. Jones was adjudged first for a collection of nine varieties of Potatos, Sir R. A. Cunliffe, and Mr. P. Herd taking the second and third places respectively.

The cottagers' and farmers' classes for fruit and vegetables were also well patronised.

The judges were Messrs. Loudon, of the Quinta; and Jameson, of Neston.

COCKERMOUTH.—November 25th.

THE annual fixture of the Cockermonth and North of England Chrysanthemum Society took place at the Drill Hall, Cockermonth, on the 25th ult., and proved highly successful.

In the open class for twenty-four Japanese blooms, in not less than eighteen varieties, there was very keen rivalry between the first and second prize winners. Mr. E. Horne was ultimately acclaimed the winner, the second prize falling to the lot of Mr. J. Potter, Whitehall, Mealsgate, and the third to Mr. Thos. Hunter, gardener to Mrs. Waugh, The Burroughs. In the first-prize stand there were some admirable

flowers of such varieties as Phoebus, Edith Tabor, Mutual Friend, and Australian Gold. Some of Mr. Potter's best flowers were Australie, Niveus, Edith Tabor, Dorothy Seward, and Hairy Wonder.

In the classes open to gardeners, Mr. T. Hunter was placed first for twelve incurves in nine varieties, Mr. Wm. Fry occupying a similar position for six incurves in varieties. Mr. J. Potter had the leading six Japanese, and Mr. J. Brown, gardener to Mrs. Fletcher, Stoneleigh, Workington, the best six reflexed in as many varieties.

Mr. John Douglas, gardener to Mrs. Jos. Harris, Derwent Lodge, Papcastle, secured the premier award for twelve Chrysanthemums in pots, in not less than nine varieties, any variety being admissible. Mr. T. Fixter, gardener to J. Harris, Esq., Greysouthern, was second, and Mr. G. G. Thompson, gardener to A. Helder, Esq., M.P., Corkickle, Whitehaven, third.

Mr. G. H. Thompson was placed first for six plants in six varieties, and Mr. J. Douglas scored for three plants of incurves in three varieties. A similar number of Japanese was well shown by Mr. A. Kydd, gardener to J. Robertson-Walker, Esq., Gulgarron, who received the first award. Mr. Thos. Hunter was second.

Amateurs exhibited well, particularly in plants. Mr. Wm. J. Campbell, Main Street, Cockermonth, headed the list of competitors for six miscellaneous plants. Mr. Campbell also had the best three Japanese Chrysanthemums in pots, the leading three incurves, and the most meritorious three pompons. Mr. Wm. Robinson, Biennerbasset was likewise a heavy winner. A plant of Charles Davis, shown by Mr. W. J. Campbell, was adjudged to be the best plant in the show.

In the classes for fruit and vegetables Mr. J. Potter was credited with the first awards for two bunches of black Grapes and two bunches of white Grapes.

Mr. J. Barker, Lairbeck, Keswick, won for the collection of vegetables.

DUNFERMLINE.—November 27th.

THIS show of the Dunfermline Chrysanthemum Society was held under favourable auspices on the 27th ult.

In the cut flowers section (open) Mr. G. M. Proctor, gardener to Dr. Dow, Dunfermline, was a good first, showing fine blooms of Niveus, Vivian Morel, and Hairy Wonder. Mr. Riddler was also a good second.

In the pot plants class (open), Mr. Foote, gardener to R. W. Stewart, Esq., Abbey Park, was first, showing Vivian Morel and Charles Davies in first-class condition. Mr. Scott, gardener to Mr. McLaren, Comely Park House, was a good second.

In the amateurs' plant section, Mr. G. Marshall won with good plants of Vivian Morel and Charles Davies, Mr. R. Brag being second.

In the amateurs' cut flower section Mr. James Mildrum won first with good blooms of Mrs. Magee and Eva Knowles, Mr. G. Marshall being a good second.

In the sprays, etc., Mr. Peter Fenton was first in the open competition. Mr. Wm. Lumby, Broomhall, was a good first for the collection of vegetables.

Mr. John Riach lent a grandeur to the scene with some excellent Palms from his collection at Luscar. The show was well attended during the day, and the music supplied by the Dunfermline Amateur Orchestra and the Volunteer Band was very much appreciated by the visitors. Mr. William Meldrum, florist, Upper Layo, had a stand of Ichthemic Guano, brightened up with Chrysanthemums, which was much admired.

NATIONAL CHRYSANTHEMUM SOCIETY.

December 7th, 8th, and 9th.

THE early winter exhibition of the above society was held in the Royal Aquarium, Westminster. The exhibits were located in the gallery, as they were last year; but a much greater amount of space was available owing to the clearing away of the seats that used to overlook the stage and the musicians. This gave an additional space of 180 ft. by 15 ft., by which means it was possible to keep the whole show together. A screen of green baize run along the whole front of the gallery. The show was the finest ever seen here in December. The size and quality of blooms, both Japanese and incurved, were remarkable for so late a period of the year. Single

Chrysanthemums, the miscellaneous groups of Chrysanthemums, Cyclamen, Primulas, &c., were also conspicuous and attractive features of the show and well justified the holding of it in December.

OPEN CLASSES.

The leading award for twenty-four Japanese Chrysanthemum blooms, in not less than eighteen varieties, nor more than two flowers of a variety, was taken by Mr. W. Messenger, gardener to C. H. Berners, Esq., Wolverstone Park, Ipswich. Considering the wet, mild character of the autumn, he had grand blooms of Mme. Carnot, Golden Gate, C. W. Richardson, Mrs. Armitstead, Silver King, Miss M. Blenkiron, Simplicity, Etoile de Lyon, G. C. Schwabe, Mdle. M. A. de Galbert, E. D. Smith, Salene, Beauty of Castlewood, &c. Mr. W. Slogrove, gardener to Mrs. Crawford, Gatton Cottage, Reigate, was a good second, his blooms being of even size and quality, though smaller than the leading lot. Mr. Norman Davis, The Vineries, Framfield, Sussex, took the third place with fresh blooms of medium size, and well varied with distinct colours.

Mr. Norman Davis came to the front for twenty-four bunches of Chrysanthemums, any varieties allowed. Yellow, white, orange, crimson, and bronze varieties were well represented by fresh blooms of large flowering varieties cut with long stems.

The premier award for twelve bunches of Japanese Chrysanthemums was taken by Mr. W. Howe, gardener to Henry Tate, Esq., Park Hill, Streatham Common. Robert Owen, Oceana, Etoile de Lyon, Olive Ocle, and Mrs. C. Blick formed his best bunches. Mr. Norman Davis here took the second place with grand bunches of George Seward, Western King, &c.

In the class for six bunches of Japanese varieties Mr. Norman Davis led the way with grand bunches of Mme. J. Bernard, George Seward, Georgina Pitcher, &c. Mr. W. Slogrove took the second place with several fine bunches. Mr. R. Bassil, gardener to D. H. Evans, Esq., Shooter's Hill, Pangbourne, came in third.

Mr. W. Messenger again took the lead for twelve Japanese varieties, showing fine blooms of Mme. Carnot, Niveus, Golden Gate, Miss M. Blenkiron, Mutual Friend, G. C. Schwabe, C. W. Richardson, &c. Mr. R. Kenyon, gardener to A. F. Hills, Esq., Monkams, Woodford, was a very close second, his blooms being mostly in grand form, including a fine bloom of G. J. Warren. Mr. W. Slogrove came in third.

Mr. C. Cox, gardener to J. Trotter, Esq., Brickendon Grange, Hertford, led the way in the class for six Japanese blooms, five of which were excellent. Mr. R. Kenyon was a very good second, and Mr. A. Stuart, gardener to N. L. Cohen, Esq., Round Oak, Englefield Green, was a good third.

For this season of the year the incurved Chrysanthemum blooms were very good indeed. The first award for twelve blooms was taken by Mr. W. Neville, gardener to F. W. Flight, Esq., Cornstiles, Twyford, Winchester, who had magnificent blooms of Ma Perfection, The Egyptian, Mrs. R. C. Kingston, Miss F. W. Flight, Bonnie Dundee, Miss D. Foster, &c. Mr. T. Robinson, gardener to W. Lawrence, Esq., J.P., Elsfeld House, Hollingbourne, Kent, was second, showing two magnificent blooms of Miss Phyllis Fowler. Mr. A. Sturt was third with huge blooms of The Egyptian, &c.

Mr. R. Bassil had the best six incurved blooms, which were very neat indeed, and even in size. Mr. W. Neville came in second with six good blooms, and Mr. T. Robinson was third.

SINGLES.—Mr. G. W. Forbes, gardener to Madame Nicols, Regent House, Surbiton, secured the leading award for twelve bunches of large-flowered singles, in not less than six varieties, three blooms going to a bunch. Admiral Sir T. Symonds, Tuscolo, Rudbeckia, Miss Brown, and Purity, were some of the best samples. Mr. A. Felgate, gardener to Her Grace, Elizabeth, Duchess of Wellington, Burhill, Walton-on-Thames, was second; and Mr. W. C. Pagram, gardener to J. Courtenay, Esq., The Whim, Weybridge, third.

Mr. G. W. Forbes was also credited with the first prize for twelve bunches of three blooms each, in six varieties, of small flowered singles. Mr. F. W. Travers, Nellie Robinson, and Mrs. D. B. Crane, were the most striking varieties; Mr. A. Felgate was second, and Mr. Pagram third, as in the previous class.

In the class for six bunches of large-flowered singles, there was but one entry. Mr. A. Felgate was first. Mr. A. Felgate, Junr., Burhill Road, Walton-on-Thames, was second in a class for a similar number of small-flowered singles.

There were ten entries for a basket of autumn berries and foliage. The first prize went to Mr. A. Newell, gardener to Sir Edwin Saunders, Fairlawn, Wimbledon Common; Miss C. B. Cole, The Vineyard, Feltham, was second; and Mr. W. Taylor, The Gardens, Tewkesbury Lodge, Forest Hill, third.

SINGLE HANDED GARDENERS.—There was only one entry in the class for twelve Japanese distinct, viz., that coming from Mr. F. Bush, gardener to W. T. Lister, Esq., F.R.C.S., Rose Hill, Totteridge, Herts, to whom the first prize was awarded. Madame Carnot was the best bloom here. The prizes in this class were offered by C. W. Richardson, Esq., Fairgreen House, Sawbridgeworth.

AMATEURS' CLASSES.

The first prize for six Japanese distinct went to Mr. W. Perrin, gardener to C. W. Richardson, Esq. Miss R. Debenham, St. Peter's, St. Albans, was second.

Six Japanese blooms, in not less than four varieties, were best shown by Mr. Geo. Heal, Holly House, Compton, Guildford. M. Gruyer, Golden Gate, Mrs. H. Weeks; and M. Chénon de Léché were the varieties shown. Wm. Walters, Esq., Sunnybank, Burton-on-Trent, was second.

Mr. D. B. Crane, 4, Woodview Terrace, Archway Road, Highgate, N., was the only competitor for a large vase of Chrysanthemums. The first prize was accorded him for a handsome and effective exhibit.

MISCELLANEOUS PLANTS.

Around the open classes for miscellaneous plants a great deal of interest centred. The first prize for a collection of Cyclamen was carried off by Mr. Wm. Orpwood, Andover Nursery, Uxbridge, who had a grand array of well-flowered stocky plants, filling a large table measuring 12 ft. by 6 ft.

A fine table measuring 9 ft. by 6 ft. of Primula sinensis was contributed by Mr. J. Gibson, gardener to E. H. Watts, Esq., Devonhurst, Chiswick, who secured the first prize. The plants were sturdy samples of their kind, but had not yet developed to the full their beauty. Cocos weddeliana was used as pot plants at the four corners and in the centre, and Crotons were also employed for the purpose of lightening and giving effect to what was a very pretty group. An edging of Panicum variegatum added a finish to the whole. Mr. Wm. Orpwood received the second prize.

Mr. W. Howe, gardener to Henry Tate, Esq., Park Hill, Streatham, won chief honours for a group of miscellaneous, flowering, berried, and foliage plants, arranged for effect on a table space of 9 ft. by 6 ft. Around a feathery Cocos weddeliana which formed the centrepiece were some grand heads of Poinsettias, and Richardias. Sprays of Calli-carpa purpurea were freely and effectively used. Bouvardias, Begonia Gloire de Lorraine, Primulas, and Hyacinths all added their quota of beauty. The edging was composed of Panicum variegatum.

In the classes from which nurserymen were excluded, Mr. W. Frost, gardener to G. Ashley Todd, Esq., Gadinton, Ashford, Kent, led for twelve Cyclamen.

Mr. W. Mease, gardener to A. Tate, Esq., Downside, Leatherhead, scored for twelve Primulas, showing some splendidly-flowered double white and pink varieties. Mr. J. Gibson was second.

MISCELLANEOUS.

One of the special features of the show as far as decorative excellence is concerned came from Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey. Against a background of art green muslin, tastefully decorated with sprays of Ivy and Smilax, and coloured leaves of Mahonia Aquifolium was a showy array of Chrysanthemums, both cut and on the plants. In the centre of the background was an arch of flowers flanked with a smaller arch on either side, and running at right angles to the support of the larger arch. The rectangular space thus enclosed was occupied with a bed of green moss surrounding an oblong miniature tank and fountain. In the front was a barrier of virgin cork decorated with Ferns. The pot plants flanked the arches on each side, and amongst them were very fine blooms of Julia Scaramanga, G. J. Warren, Bellem, and Oceana. A stand of large cut blooms was also included at either end,

some of the best being Porcelain, Setting Sun, Duchess of Fife and Julian Hillpert. A Silver Gilt Medal was awarded.

The permanent Nitrate Committee had a show stand displaying the virtues of Nitrate of Soda, a well-known and valuable manure.

Mr. J. Hawes, Lea Bridge Road, Clapton, N.E., showed samples of the patent watering pot that is such a favourite amongst gardeners.

The Lawes Chemical Co., Limited, 116, Fenchurch Street, London, S.E., had a large stand displaying their garden manure. The stand was prettily decorated with Ferns.

Mr. H. J. Jones, Ryecroft Nursery, Hither Green, Lewisham, occupied a large table with an extensive group of Chrysanthemums, set up with Palms, Ferns, Crotons, and other foliage plants. Cocos weddeliana and C. flexuosa were stood at intervals along the centre. Between them were vases of Chrysanthemums, and the other cut flowers built up to them in such a way as to form undulating banks. All were cut with long stems with exception of the front rows, which were staged on the usual exhibition boards, except where bunches of singles and decorative varieties were placed between to break the monotony of a flat surface. He had fine exhibition blooms of G. J. Warren (the yellow Mme. Carnot), Mrs. W. Mease (the sulphur Mme. Carnot), Neva Teichman (a grand new crimson Jap.); also George Seward, C. W. Richardson, Mrs. W. H. Lees, Julia Scaramanga, Mrs. R. Jones, Mary Molyneux, Western King, and many others (Small Gold Medal).

The Ichthemic Guano Co., of Ipswich, erected their now famous Octagon stand. This was draped with dark crimson baize, and ornamented with Ferns and Dracaenas. This specific is now celebrated from one end of the country to the other.

A Silver Gilt Medal was awarded to Messrs. H. Cannell & Sons, Swanley, for a superb collection of fifty bunches of cut blooms of zonal Pelargoniums in as many varieties. Niagara, St. Celicia, Geo. Reid, Sir Jas. Kitson, Duchess of York, Magnificent, Lilacina, and Mrs. P. Routh were some of the gems of the collection. The bunches were of pyramidal shape, and were prettily set up with Maidenhair Fern. Cut blooms of late Chrysanthemums and Cannas were also noticeable on this stand.

The Swanley firm also had a grand array of vegetables. Such Onions as Reading Improved, Cranston's Excelsior, and Ailsa Craig were represented by large and fine samples. Cabbage Cannell's Defiance was likewise much in evidence, and is undoubtedly an excellent variety (Silver Gilt Medal).

A Silver Medal was awarded to Mrs. W. Green, Jun., for a very handsome floral table. The centre epergne rose some 5 ft. in height above the table, and the various baskets and bouquets disposed around it were well set up. Chrysanthemums of course were the flower.

Mr. John Pinches, 3, Crown Buildings, Camberwell, showed samples of his patent labels.

Messrs. Fenlon & Son, 8, Tudor Street, Temple, E.C., exhibited hot water apparatus suitable for small houses.

Mr. Robert Owen, Maidenhead, received a small Silver Medal for eight dozen cut blooms of new Chrysanthemums. Some promising novelties were observable here.

Mr. J. Williams, 4a, Oxford Road, Ealing, had a very light and pretty floral table.

A Silver Gilt Medal went to Mr. R. Chard, Stoke Newington, for a very elaborate and imposing table of floral devices, in which the Chrysanthemum figured exclusively, with suitable foliage.

Mr. W. J. Godfrey, Exmouth, Devon, received a Silver Medal for a grand array of blooms of late Chrysanthemums. H. W. Nieman, Yanona, Mrs. H. Robinson, The Egyptian, and Georgina Pitcher were some of the finest blooms.

Mr. W. Neville, gardener to F. W. Flight, Esq., Cornstiles, Twyford, Winchester, sent twenty-four blooms of incurved Chrysanthemums. These were all fresh and well-coloured. Ma Perfection, Mrs. R. C. Kingston, Bonnie Dundee, Miss D. Foster, and John Tulford were especially good (Small Silver Medal).

Mr. T. Robinson, gardener to W. Lawrence, Esq., J.P., Elsfeld House, Hollingbourne, got a vote of thanks for eighteen cut blooms of incurved and Japanese

Chrysanthemums. The incurved Miss Phyllis Fowler was the most noticeable variety here.

A neat collection of vegetables won a small Silver Medal for Mr. R. Bassil, gardener to D. H. Evans, Esq., Shooter's Hill, Pangbourne.

Mr. J. R. Tranter, Henley-on-Thames, was accorded a vote of thanks for twelve blooms of Chrysanthemum Mrs. J. R. Tranter, a new late variety.

Mr. W. Taylor, gardener to C. Bayer, Esq., Tewkesbury Lodge, Forest Hill, staged a superb lot of Grapes, winning thereby a Silver Gilt Medal. Trebbiano, Muscat of Alexandria, Gros Colman, and Lady Downes Seedling were represented by huge bunches in excellent condition.

FLORAL COMMITTEE.

A meeting of the Floral Committee was held at one p.m., when a considerable quantity of material was brought before the committee for consideration. One First-class Certificate only was granted, and three other varieties were commended. For particulars of these see a subsequent issue. Mr. H. J. Jones, of Lewisham; Mr. W. Wells, of Earlswood; Mr. W. J. Godfrey, of Exmouth; all exhibited. It transpired at this meeting that the variety shown at the last meeting (November 29th) by Mr. G. Beckett, of Elstree, and which received a First-class Certificate on that date is exactly the same thing as Denis Smith Rylands, sent out by Mr. H. J. Jones. Owing to the confusion arising from the number attached to the plant when sent to Mr. Beckett it was exhibited in perfect good faith as *Violacea*. A motion was passed whereby Mr. Beckett was permitted to change the name of the variety to Denis Smith Rylands.

HELENSLEA, BROUGHTY FERRY.

TOWARDS the close of a misty and wet November day we paid a visit of inspection to Helenslea, Broughty Ferry, the residence of Mrs. Stephens. It lies high, but is fairly sheltered by trees. At this season of the year Chrysanthemums are the leading feature of the glass houses. The gardener, Mr. A. McDonald, is a great enthusiast amongst this useful race of plants, and is, moreover, a successful grower and exhibitor. He is about to leave this establishment, as we mentioned last week, having obtained an appointment in England, from whence he threatens to return with his boxes of Chrysanthemum blooms to compete for the best prizes in the north, like many another Scot.

While inspecting his collection at Helenslea, we noted fine blooms of Mrs. G. W. Palmer, a bronzy sport from Mrs. C. Harman Payne. Croda is a seedling from E. Molyneux crossed with G. C. Schwabe, of a bronzy-chestnut, with an old gold reverse. Mme. Ad. Chatin succeeds well whether the bud is on hard or soft wood. Louise is of a beautiful and clear pink in this northern latitude. Lord Brooke also assumes a rich bronzy-crimson on the back of the florets. The colour of President Borrel is also grand. Sir E. T. Smith is variable and may be an incurved or reflexed Japanese variety of a rich yellow. William Bolia develops handsome blooms of a rich carmine-crimson. The pure white flowers of Mdle. Thérèse Rey, attain a huge size here, as good as any produced in Scotland. M. Chénon de Léché also attains a fine size and colour from the terminal bud; though when treated in this way it is also very late. Hammond Spenser is a compact, silvery-lilac, Japanese variety.

Charles Davis, in bush form, produces flowers that are almost wholly yellow. By way of contrast to this we may mention E. Molyneux, the blooms of which are of a brilliant crimson and altogether fine. Mr. McDonald says that for this part of Scotland the plants should be pinched on the 7th March, and the second crown bud taken to develop into fine form in November. That is the secret of his success with this difficult variety, and the method has never failed him. Most of the plants grown at Helenslea for big blooms are in 8 in. pots.

One of the Peach houses, like the vineries, is utilised for the housing of Chrysanthemums during the season. For some days previous to the Dundee Show this house was shaded to retard the blooms, for the greater portion of the best blooms were located in it. When the florets of Mutual Friend were spread out, the blooms measured 16 in. across; and in the natural position about 3½ in. to 4 in. in depth. Mrs. C. H. Payne was rather light in colour; but Louise,

Mrs. E. S. Trafford, and Calvat's Boule d'Or, were grand, the latter being fawn and old-gold. The ordinary Boule d'Or strongly resembled a wisp of shavings and was fine of its kind. Grand blooms were also carried by G. C. Schwabe, Souvenir d'Une Petite Amie, M. Georges Biron, Sunflower, Pride of Madford, Emily Silsbury, and Edith Tabor, all of which would have done the grower credit at any show. The pure white Mdle. Marie Hoste was 6 in. deep. The bright glossy yellow of the broad florets of Maggie Blenkiron was also very handsome.

In this house we came across M. Chénon de Léché with huge blooms taken on the second crown bud, after the plants had been pinched on the 7th March. The plants were dwarf, but the blooms were pale and quite yellow in the centre. The terminal blooms already mentioned had the advantage in colour, though not in size. The blooms of Niveus, Mrs. W. H. Lees, Thos. Wilkins, Richard Dean, and Phoebus, were all in first-class condition notwithstanding the mild and moist weather which has prevailed during the past autumn along the valley of the Tay.

By this time the light was rapidly failing us, and we had to pass through the other houses quickly, including the greenhouse and stove. The latter is largely occupied with plants for table decoration, including Palms, Crotons, Dracaenas, etc. At the back of the range is a glass partition, so that a cool compartment facing the north runs along the whole length of the back wall. Ferns and similar subjects are accommodated here, and make wonderful growth during the summer months. The grand specimens of *Adiantum concinnum latum* bear ample testimony to this. The deposit of moisture upon the plants during the winter months, however, discounts the value of this compartment at the dull season for plant growing. The shelter that it affords the glass facing south is in favour of the arrangement, so that advantage and disadvantage are fairly balanced.

In a Peach house where the trees are relatively young, some vigorous plants of the Marechal Niel Rose may be seen. In their season they bloom as freely as they grow. On the staging near the front glass a fine batch of *Cinerarias* in an advanced condition will give a good account of themselves presently. Darkness put a stop to further inspection; but we had seen enough to convince us that Mr. McDonald is an enthusiastic and successful gardener. Hard by the gate the engine was hard at work labouring to acquit itself of the task of lighting the establishment by means of the electric light.

GARDENING MISCELLANY.

SEEDLING CHRYSANTHEMUMS.

A BOX of blooms of single seedling Chrysanthemums was forwarded to us at the beginning of the month by Mr. James Bryson, 173, Princes Street, East Helensburgh, N.B. Only one of the varieties was named, but this was distinctly the best of the batch. Golden Hair, as it is called, is an exceedingly bright form, with two rows of ray florets. The colour is rich golden-yellow, with a suffusion of chestnut-red upon the reverse. The florets are quilled for a great portion of their length, but the tips expand quite fully, and consequently are nearly flat. The foliage is distinct, and the constitution appears to be good, and if this is so, Golden Hair will be a most useful variety. The next in point of Merit was one labelled No. 8. This resembles Mary Anderson in colour, but there are two rows of florets, and the bloom has not so regular an outline. The variety appears to be very floriferous and showy. No. 10 is worth noticing by reason of its colours, which consist of a ground colour of white, striped, and suffused with bright rose. The form, however, is bad, since it is a sort of halfway between a single and a Japanese variety. No. 19 is too much like the well-known Scarlet Gem to be considered distinct. In Nos. 2 and 4 the form is bad, but the colours are good, viz., rich chestnut-orange and bright rose respectively. The air of Helensburgh is evidently well adapted for the high development of colour in Chrysanthemums.

CACTUS DAHLIA CANNEL'S GEM.

NAMES are not always happily chosen, but Mr. Cannell must allow us to congratulate him in hitting upon a most appropriate name for this. It is a de-

parture in some respects from the general run of the section of Dahlias to which it belongs, for it may almost be called a pompon Cactus Dahlia. The habit of the plant is dwarf and bushy. The plant is most floriferous, the flowers are well displayed on stiff footstalks, and it has all the essentials to make it a first-class bedding variety, for which purpose, I think, in the near future it will be extensively used, and make a pleasing change. The colour of the flowers is a shade of scarlet, possibly best described as terra cotta.—*W. B. G.*

EXHIBITING MICHAELMAS DAISIES.

MICHAELMAS Daisies look well no matter how they are placed, but there is no doubt that they do not appear to the best advantage when shown in bunches of cut sprays, since the distinctness of habit is merged in a communal appearance that detracts considerably from the interest that should attach to them. Messrs. Jas. Veitch & Sons, Limited, of Chelsea have evidently recognised this, for the Asters shown by them at the Westminster Drill Hall on the 12th ult., were represented by plants lifted from the open ground, and placed in pots. The results were eminently satisfactory, sufficiently so, we should surmise, to repay the extra trouble and labour. The group too was splendidly set up and reflected great credit upon those in charge.

ONIONS GRANSTON'S EXCELSIOR.

THE propriety of growing the best varieties of all things procurable is well exemplified by growing a breadth of this and some old established kind (Brown Globe for instance) side by side with it under the same cultural conditions. I have recently had more than double the weight of the Excelsior from the same space of ground as off the Brown Globe, the difference being attributable only to the variety.—*W. B. G.*

APONOGETON DISTACHYON.

DESPITE its awful name, the Cape Pond Weed is one of our finest although probably our least known hardy aquatics. For growing in tanks or pieces of ornamental water there is nothing to surpass it. Although it grows freely enough, it never becomes a real weed as do some other aquatics once they have established themselves. The lovely Hawthorn-like perfume of the curiously shaped flowers has earned for the plant the not inapt name of the Hawthorn Lily. When establishing it in ornamental water it should be placed first of all in a pot or basket of sufficient size to contain it comfortably. From 18 in. to 2 ft. of water will be found to suit it admirably. It will do in shallower waters, but then its existence will be endangered during severe winters.

EARWIGS AND CHRYSANTHEMUMS.

LAST season I called attention to our almost entire immunity from the attacks of these pests on our Chrysanthemums, attributable, I think, to the spreading of lawn mowings among the plants. I have the same happy state of things to report again, and where the earwigs exist in plenty I would be glad to know if any of your readers took the hint and acted upon it, and with what result.—*W. B. G.*

OBITUARY.

MR. JAMES BATEMAN.

To the younger generation of gardeners Mr. James Bateman is but a name they occasionally meet with in *Sophrocattleya batemaniana* and less often in *Batemannia Colleyi*, which have been named in honour of the great Orchidist, and have their respective histories. To an older generation he was well known as an enthusiastic horticulturist and botanist, doing yeoman service to both branches of the subject which deals with plant life. He died at Spring Bank, his residence in Victoria Road, Worthing, on the 27th ult.

He graduated at Magdalen College, Oxford, close by the Botanic Gardens there, and probably contracted a taste for plants or had it intensified from what he saw there. In any case the fascinating family of Orchids claimed his attention while yet an undergraduate, causing him on one occasion to be severely reprimanded and otherwise punished for allowing himself to be detained beyond the proper time for presenting himself at College, lingering as he did over his lovely *Renanthera coccinea*.

Our recollections of him date back to the Orchid

Conference, held under the auspices of the Royal Horticultural Society at South Kensington, when he publicly and formally renounced his old hatred of hybrid Orchids upon seeing some of the triumphs of the art tabled by Messrs. James Veitch & Sons. By reason of his frank renunciation of this old stumbling block, it was promised that the first good hybrid which should turn up would be named after him. No more fitting compliment could follow this episode than the dedicating of *Sophrocattleya batemanniana*, a bigeneric hybrid, in honour of the veteran Orchidologist.

Orchids were the ruling passion of Mr. Bateman's life, but they had to share his love in company with other exotics, particularly tropical fruits, of which he was an enthusiastic and successful cultivator. His wide knowledge in this respect he freely imparted to the fellows of the Royal Horticultural Society at the meetings. His garden at Knypersley became famous as a repository for a multitude of uncommon pets of this description. He had the good fortune to marry a lady who was also a plant lover of great enthusiasm; but unlike her husband she espoused the cause of hardy plants, and the famous gardens of Biddulph Grange were the result. Both of these gardens were in the north of Staffordshire, not far from the eastern border of Cheshire. Latterly, he quitted that neighbourhood on account of his wife's health, and settled at South Kensington, though not residing constantly there.

His magnum opus was undoubtedly the *Orchidaceae of Mexico and Guatemala*, a huge work, giving life-size coloured plates of Orchids, and which may be seen in the Herbarium, Kew, as well as in the Lindley Library at 117, Victoria Street. He employed more than one collector, but Mr. G. Ure Skinner rendered him the greatest amount of aid by sending home specimens which appeared later on in the form of magnificent coloured plates in Mr. Bateman's great work, extending over the years from 1837 to 1841. Besides the grand paintings and the purely botanical work here recorded, there are many quaint and fanciful quotations and illustrated conceits, a sample of each of which we here quote:—

"Nature breeds
Perverse, all monstrous, all prodigious things,
Abominable, unutterable, and worse
Than fables yet have feigned, or fear conceived,
Gorgons, and hydras, and chimaeras dire."

Milton.

Under an illustration of a bunch of quaint flowers is the following:—"The hag came forth, broom and all, from the flower of *Cypripedium insigne*, her attendant spirits are composed of *Brassia lanceana*, *Angraecum caudatum*, *Oncidium Papilio*, etc. etc.; two specimens of *Cynoches* sail majestically on the globe below (on the right of which crawls *Megaclinium falcatum*. In the centre stands a desponding *Monacanthus*, on the left a pair of *Masdevallias* are dancing a minuet), while sundry *Epidendra*, not unlike the walking leaves of Australia, complete the group."

QUESTIONS AND ANSWERS

"Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing."

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Spotted Masdevallias.—*Annoyer*: Though essentially cool-house Orchids, they cannot withstand low temperatures and a saturated atmosphere with impunity under glass, even though they may do so in their native wilds, where the conditions are vastly different. At this season of the year the outside atmosphere is saturated almost constantly, so that when a low temperature prevails in your cool-house moisture is deposited upon the leaves, and hangs upon them, it may be for days. This constant moisture is prejudicial to the foliage, and likewise encourages the growth of a fungus, which lives in and destroys the tissue of the leaves forming the too familiar black spots. To counteract this you should give sufficient ventilation during the day to expel the superfluous moisture at least once every twenty-four hours during the moist weather of autumn and early winter. A little heat in the pipes should be given, if necessary, to cause sufficient circulation to carry off the vapour. Care should be taken not to carry this means to an extreme at any time. Next season begin early, according to the state of the outside atmosphere.

Carnation Leaves Spotted.—*T. Carter*: The colourless and yellowish spots are often said to be the effects of an attack from bacteria; but this has scarcely, if at all, been proved to the satisfaction of scientific men. Possibly more than one cause has been at work. During the summer months the plants are liable to attacks from aphides and thrips which secrete themselves about the young leaves and other tender parts of the plants, which they puncture in order to abstract the sap. When such leaves expand they cannot but appear crippled if they have been much infested during their early stages. Many other plants get injured in the same way, whether under glass or out of doors. This does not always imply neglect on the part of the cultivator, for these pests are so numerous in certain dry seasons that no cultivator can successfully cope with them. Sometimes the damage is done before one would suspect the presence of the enemy. Possibly a washing now and again by means of the syringe, and using a solution of soft soap or Gishurst's Compound along with a little tobacco juice in the growing season would act as a preventive. Keep the plants cool, dry and airy in winter to guard against other evils of a fungoid nature.

Coloured Mahonia leaves.—*Admirer*: Nothing, as far as ever we have heard or seen, is done to cause the leaves of the Mahonia to assume their well-known red hue in winter. They naturally assume this colour on the approach of cold weather in autumn and early winter. We do not suppose that the foliage would colour up well if too much sheltered or shaded. As far as we have observed, the leaves colour best when well exposed to light and air. Poor soil might assist the intensity of the red; but under such conditions you would not get that liberal growth which would be developed in fairly good soil. Plant your bushes away from houses, walls and trees.

Propagating Chimonanthus.—*A.T.*: Considerable difficulty attaches to the propagation of this plant; but you might try layering in loam, with a small quantity of peat. Make a cut in the twigs or shoots to be layered, in the same way as is done with Carnations, and make sure that the cut is kept open by means of a hooked peg inserted in the soil just at the point where the cut has been made. Do this now or in spring, and examine in late autumn, after the season's growth has been completed. Seeds constitute a sure method of raising young plants, provided you can procure some.

Names of Plants.—*G. Watts*: 1, *Pteris tremula* Smithii; 2, *Asplenium Bellangeri*; 3, *Asplenium flaccidum*; 4, *Selaginella Martensii*; 5, *Pyrus baccata* (quite usual to hang on the trees, even till spring if the birds do not attack them).—*H. J.* 1, *Maxillaria punctata*; 2, *Laelia anceps*; 3, *Dendrobium Dearei*; 4, *Cypripedium insigne* Chantini.—*A. T.* 1, *Chimonanthus fragrans grandiflora*; 2, *Jasminum nudiflorum*; 3, *Viburnum Tinus*; 4, *Cotoneaster Rhamnoides*; 5, *Magnolia glauca*; 6, *Hippophae rhamnoides*; 7, *Retinospora squarrosa*.—*J. West*. 1, *Ugenia Ugni*; 2, *Peristrophe speciosa*; 3, *Phyllanthus glaucescens*.

Freesias.—Would any of your readers in the North-west of Scotland, where we have a heavy rainfall, give their experience with the cultivation of the Freesia? Can they get the old bulbs to flower year after year? And if so, how do they treat them?—*Flora*.

Method of Preserving Fern Fronds.—*Enquirer*: Messrs. D. & W. Buchanan, Forth Vineyards, Kippen, Stirling, claim that they have discovered a method of preserving Fern Fronds in their natural form without pressing and flattening them in the usual way adopted for the drying of them. We understand, however, that they last only for about fourteen days or less. The firm has patented or protected their discovery, and may not care to disclose it. You could consult with them, if you care to.

Fruits to Name.—*A. E.*: 1, Bess Pool; 2, Court Pendu Plat (this latter is somewhat doubtful, not being altogether characteristic).

Communications Received.—'Mum.—C. B. G.—African Critic.—Omega.—James Clark.—J. Fraser Smith.—G. Wythes.—W. L.—John Ianson.—A. V.—J. Forbes.—A. McDonald.—Sam Lord.—A. O.—S. Regan.—T. N. Ring.—L. E. Faulkner.—Paisley.—Cardross.—D.—H.—C. F.

TRADE CATALOGUE RECEIVED.

C. PLATZ & SON, Erfurt, Germany.—Trade Seed List, containing a choice Collection of Flower, Tree, and Vegetable Seeds.

"Science is Attractive" says an American humorist, "because it gives so large a return of theory for so small an investment of fact." I take it for granted he has tried it and so must know.—*Snags*.

The Crown Oak Forests are gradually getting smaller owing to the fact that the timber is not now required for ship building. The commissioner thinks it desirable to grow other trees for which a market can be found.

A Special Offer to Readers of THE GARDENING WORLD 25/- BOOK for 8/-

NO HOME SHOULD BE WITHOUT ONE.

Ogilvie's Encyclopædia OF USEFUL INFORMATION AND WORLD'S ATLAS.

No Single Book ever before contained such a Wealth of Knowledge.

By Special Arrangement with the Publishers of the "Encyclopædia of Useful Information and Atlas of the World," we are enabled to offer to the Public a Magnificent 25s. Volume for 16 of the coupons, which will appear weekly, together with 6d. each, accepted in Weekly Instalments, or the Coupons may be held until the whole period has elapsed and brought or sent to the Office with 8s., and 6d. towards carriage.

A COMPLETE ILLUSTRATED LIBRARY IN ITSELF.

A universal assistant and treasure-house of information on every conceivable subject, from the household to the manufactory. In short, gives information about everything, is absolutely indispensable to everyone in all walks of life; the contents being so separated, indexed, and arranged that they can be turned to at once. It is

THE BEST { BOOK OF } EVER
 { INFORMATION } ISSUED.
Size of Encyclopædia: 9 by 11½ inches. 656 Pages.

It contains

MANY MAGNIFICENTLY ENGRAVED COLOURED MAPS,

and a description of every country under the sun, besides much other matter relative to the Home, the Farm, the Factory, a Dictionary of Statistics—many Useful Tables, Poetical Selections, Synonyms, Famous Bridges and Ships, How to Calculate, How to Cook, How to Get Rich, How to Cure all Diseases, How to Succeed in Business, Table of Weights and Measures, and

HUNDREDS OF OTHER TOPICS OF GREAT VALUE TO EVERY PERSON

who desires to be up to the times. To see the Book is to want it. To Members of Mutual Improvement Societies it will prove of inestimable value.

The articles are written by men whose lives have been devoted to the subjects treated, are short and concise, but contain full information up to date. It is to be consulted on every subject that arises in everyday life, by old and young alike. It contains a complete Illustrated Atlas of the World.

IN THESE DAYS OF COMPETITION

it is imperative that a Gardener should be a well-informed individual. Here is an Encyclopædia containing an immense amount of knowledge that will be of the greatest service to him.

YOUNG GARDENERS,

do you wish to be successful? Then remember that to possess knowledge is the surest way to achieve success.

It is elegantly bound in Morocco Cloth, with beautifully designed Gilt Side-stamp and Red Edges, making at once the most handsome and durable as well as THE MOST USEFUL BOOK EVER MADE or sold for 25s.

111297.

C O U P O N .

OGILVIE'S ENCYCLOPÆDIA OF
USEFUL INFORMATION,
AND WORLD'S ATLAS,
(Published Price 25s.).
16 COUPONS, AND 6d. WITH EACH.

Name _____

Address _____

Postal Orders or ½d. stamps may be sent.
COUPONS AND CONTRIBUTIONS MAY BE
LEFT at or SENT TO the Office for
THE PUBLISHER OF
THE GARDENING WORLD.
COPIES OF THIS BOOK CANNOT BE
BOUGHT. They can be obtained only by using
these Coupons.

VEITCH'S GENUINE SEEDS.



JAMES VEITCH & SONS, Ltd.

BEG TO ANNOUNCE THAT THEIR

SEED CATALOGUE FOR 1898

Has now been Posted to all their Customers; any one not having received the same, a Duplicate Copy will immediately be forwarded, Post Free, on application.

Royal Exotic Nursery, CHELSEA, LONDON, S.W.

FOR PLEASURE AND PROFIT

FRUIT SEEDS

Nothing so profitable and easy to grow.
80 Acres of Saleable Trees.

ROSES

THE BEST PROCURABLE.
Lists Free.

HUNDREDS of THOUSANDS.
Bushes in variety. Packing and Carriage free for Cash with order.
8/- per doz., 60/- per 100.
All other Nursey Stock carried forward.

ROSES IN POTS From 15/- a doz.

Ornamental Trees, 91 Acres,
A Superb Collection of
Herbaceous Plants,
Four Acres of Glass,
Clematis (80,000) from 15/- doz.
N.B.—Single Plants are sold at slightly increased prices.

GENERAL CATALOGUE
(Over 100 pages) of Nursery Stock, artistically produced containing some hundreds of illustrations and full of valuable information, free on receipt of 3d. for postage. Please mention this Paper.

RICHARD SMITH & CO., WORCESTER.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASEP, F.L.S.

SATURDAY, DECEMBER 18th, 1897.

FORCING STRAWBERRIES AT CORNELL UNIVERSITY.—The professors at the Agricultural Experiment Station, Ithaca, New York, have been trying their hands at the work of the professional, or at least have been superintending and directing operations. With Professor L. H. Bailey, the writer of numerous useful and interesting books, we are familiar; but his colleague in this case (Mr. C. E. Hunn) may be a practical gardener. Some interest attaches to their experiments, if only from the fact that the methods of procedure for the forcing of Strawberries in America are very similar to our own, the chief differences being in climate, the varieties of Strawberries used, and in the hints that the scientific mind has to offer after a maiden trial at forcing Strawberries, the general results of which were highly successful. The first complaint or grumble made was concerning climate, and that trait is fully applicable to our home growers, with a great deal more reason or cause, however. From December 1st to February 1st there was not a full day of clear sunshine. In the neighbourhood of London, sunshine during the same period is often reduced to a minimum, and none whatever can be guaranteed for certain.

Three batches of plants were grown at Cornell University, but with the exception of the time for performing the various operations, the treatment was practically very similar in all cases. Plants were procured of the variety Beder Wood, and planted in rich, mellow ground on the 6th May for the purpose of procuring runners. This was admitted to be late, and the planting was followed by a dry season, thus retarding growth. On the 10th July, 2½ in. pots were plunged under the runners intended for the first batch. After being allowed to root for a space of fourteen days, the plants were removed and shifted into 4 in. pots, and the latter transferred to cold frames. This was effected on the 14th July; the next repotting into 5 in. pots on the 8th September; while the final shift into the fruiting pots (6 in.) was

accomplished on the 26th of that month. Sashes were placed over them on the approach of cold weather, but no other protection was furnished till nearly mid-winter, during which time they were allowed to freeze till the soil was perfectly solid. The freezing was not considered in any way essential; but it was assumed that it induced a perfect cessation of growth and therefore rest, which probably added to the vigour and productiveness of the plants. It was expected also that the freezing would kill red spider and other pests. This might apply to the pests in an active state, but we doubt if any impression would be made upon their eggs.

On the 28th of December, the first batch of plants, numbering 450, was taken into a house with a night temperature of 45°; and all the dead leaves were trimmed off. Leaves began to make their appearance on the 6th January, together with some spots of rust, for which they were thoroughly sprayed with ammoniacal carbonate of copper, which arrested the disease. The house was also vapourised with an extract of tobacco to keep insects at bay. By the 1st February the flowers began to open, and on the 9th of the same month the plants were transferred to a house with a night temperature of 65°. They were staged as close as possible to the glass, the house being rather deep and relatively unsuitable for this kind of work. The berries were well coloured by the 6th of March, picking commenced on the 11th, and was continued for about ten days. On being sold in Ithaca they fetched two dollars (8s. 4d.) per quart.

While the plants were coming into bloom the leaves were small and scanty, giving rise to fears whether the foliage would be sufficient to support a full crop of fruit. There was no failure on this score, however, as practical men in this country well know. The pollen was very scanty, especially during sunless and moist weather, but great care was taken to distribute the pollen by artificial means. A soft brush was used to transfer the scanty pollen from the anthers to the stigmas in the centre of the flower. This plan might with great advantage be adopted by all who force Strawberries in Britain. Although the varieties of Strawberries here are usually far better supplied with pollen than in the case of American varieties, yet the much damper atmosphere and the general lack of sunshine are prevailing conditions of our climate that would make the artificial distribution of pollen a paying operation. To insure well-shaped berries, care should be taken that all of the stigmas should be carefully pollinated. As in the case of all other hot-house plants, pollen is always more easily obtainable while the sun is shining and the atmosphere of the house

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

6s. Nett, Claret Roan Gilt, Illustrated.
A Charming Gift Book. "A brilliant success." *The Times*
"Particularly Good." *The Academy*.
LONDON IN THE TIME OF THE DIAMOND JUBILEE
By Emily Constance Cook and Edward T. Cook, M.A.,
Author of "Studies in Ruskin," etc.
London—SIMPKIN, MARSHALL & Co.
Llangollen—DARLINGTON & Co.

DARLINGTON'S HANDBOOKS

"Sir Henry Ponsonby is commanded by the Queen to thank Mr. Darlington for a copy of his Handbook."
"Nothing better could be wished for."—*British Weekly*.
"Far superior to ordinary guides."—*London Daily Chronicle*.
1s. each. Illustrated. Maps by JOHN BARTHOLOMEW, F.R.G.S.

BOURNEMOUTH AND NEW FOREST.
ABERYSTWICH, BARMOUTH, and CARDIGAN BAY.
THE CHANNEL ISLANDS. THE ISLE OF WIGHT.
THE WYE VALLEY. THE SEVERN VALLEY.
MALVERN, HEREFORD, WORCESTER & GLOUCESTER.
LLANDRINDOD WELLS AND THE SPAS OF MID-WALES.
THE VALE OF LLANGOLLEN.
BRISTOL, BATH, CHEPSTOW, WESTON-SUPER-MARE.
BRECON, ROSS, TINTERN, AND THE LOWER WYE.
LLANDUDNO, RHYL, BETWYS-Y-COED,
AND SNOWDONIA.
BRIGHTON, EASTBOURNE, HASTINGS, AND ST. LEONARDS.

3s. 6d. net. 60 illustrations. 24 maps and plans.

LONDON AND ENVIRONS.

Llangollen: Darlington & Co. London: Simpkin & Co., Ltd.

Railway Bookstalls and all Booksellers.

PHOTOGRAPHS.—Beautiful Photographs of Scenery, Ruins, etc., of Italy, Greece, Turkey, Palestine, and Egypt; also North Wales, 1s., 1s. 6d., and 2s. Complete List Post Free. DARLINGTON & Co., Llangollen.

dry than in dull weather, so that cultivators should act accordingly.

In the case under notice, liquid manure was first applied on the 19th February when the fruits were well set, and twice a week afterwards till the berries were fully developed, that is, full size. The fruit stalks of the variety grown would appear to be uncommonly short, for it was found necessary to do something to keep the berries off the soil to maintain them in a clean condition. The tops of the pots were first covered with sphagnum, but that soon caused damping. Cork dust proved much more satisfactory; but a better plan was hit upon by the use of pieces of fine wire screen which kept the berries clear of the soil and dry at the same time. Forked sticks were sometimes utilised. As a rule the fruit stalks of President, Royal Sovereign, Vicomtesse Hericart de Thury, &c., are long enough to carry the fruits a considerable way over the edges of the pots. The plants of the first batch of Beder Wood carried an average of six uniformly good sized fruits; although the plants set from eight to twelve, about half of them were too small to be of use and were removed. The experimenters think that with larger runners next year and the benefit of last year's experience they could raise the average of large berries to eight on each plant. They also consider it possible to obtain a heavier yield from any given space under glass than in the open air. Eight to twelve pots, occupying two to three square feet of space, would furnish a quart of berries. Even after allowing for walks and other space unavoidably wasted, they reckon that this would furnish fully 400 bushels to the acre. Other points they urge the cultivators to attend are not to allow the plants to become pot-bound till in their fruiting pots; to choose early varieties for early forcing; to devote an entire house to a crop, that is, to one batch; and to grow the plants as close to the glass as possible.

Mr. James Colville, Botanical Gardens, Glasgow, has been appointed head gardener to H. A. Hamilton, Esq., Hampton Hall, Balbriggan, Co. Dublin.—G.

Mr. Peter Matheson, Botanical Gardens, Glasgow, has received the appointment of head gardener to Thomas Reid, Esq., Kilmardenny, near Glasgow. Mr. Matheson is an ardent cultivator of the Chrysanthemum, which he has for many years grown with success.—G.

Mr. W. Elton, Glasgow Botanical Gardens, has been recently appointed as head gardener to Mrs. Reid, Sandyhill House, Settleston. Mr. Elton has been for the last three years the Chrysanthemum grower for the gardens. His skill, enthusiasm, and success in that department is widely known, and requires no praise from us.—G.

Ealing Gardeners' Society.—"How I manage a small Kitchen garden" was the subject that Mr. E. Slade, of Hanwell, an amateur gardener of a vigorous type, set himself to discuss before this society, on the 30th ult. The paper was an excellent compound of theory and practice, of success attained and of difficulties overcome, one of these difficulties—to a busy man—being a want of adequate time to attend to growing crops at the right season. To one who often has to leave home by 7 a.m., and not return till 10 p.m., this drawback it will be admitted, is bad for the garden as well as the gardener. Mr. Slade, however, vigorous though he be, is not devoid of humour, and when he described how all but the very best of garden tools bent or broke before his "push," the meeting realised his ardour and enthusiasm; for "words are women; deeds are men." But much useful and instructive matter was also adduced, which was generously recognised by his professional confederates, who accorded him a very hearty vote of thanks. Mr. C. B. Green presided.

Mr. Leopold Marquard, C.M.G., whose death is reported from the Cape was a prominent figure in the colony where he filled the post of Surveyor General. He spent his life in the Cape Civil Service, but in his spare moments was an enthusiastic collector of Feros. He had grouped together a number of these charming plants in a famous fernery in the garden of his residence, Fern Villa, Orange Street, Cape Town. English visitors were always made specially welcome by Mr. Marquard, who by the way was one of the best chess players in the colony. It is suggested by some of the Cape papers that the collection of Ferns should be acquired by the public.

Death of Mr. James Casey.—We sincerely regret having to announce the death of this well-known and faithful servant of Messrs. Hugh Low & Co., Clapton, with whom he has served for the last thirty-five years. He had been travelling for the firm in the west of England, and caught a severe cold, and being unable to continue his work returned to Upper Clapton, where he died on the 8th inst. His remains were interred on Tuesday last. He was never a strong man, but always stuck manfully to his duty, and his untimely death is regretted by a large circle of friends.

Syndical Chamber of Belgian Horticulturists.—At the ordinary meeting of this society on the 5th inst., Certificates of Merit were awarded to *Oncidium crispum*, and *Cypripedium leeanum giganteum*, both presented by M. le Comte Joseph de Hemptinne; to *Kentia belmoreana*, exhibited by M. Van Wassenhove; and to *Vriesia makoyana*, *Stenorhynchus speciosus maculatus*, *Nepenthes coccinea*, and *Nepenthes atrosanguinea*, all exhibited by M. A. Rigouts. The award to *Vriesia* was given with unanimity; and to the three last-named subjects with acclamation. Certificates for culture and flowering were given to *Ataccia cristata*, shown by M. A. Rigouts; and to *Philica ericoides*, staged by M. E. Bedinghaus, with acclamation. *Cococypselum repens*, shown by M. A. Rigouts, received a Botanical Certificate. A variety of *Cypripedium* shown by M. A. Toeffaert received honourable mention.

Bingley Horticultural Society.—The annual meeting of the members of this society took place in the Excelsior Rooms, Bingley, on the evening of December 1st. The chair was filled by Mr. R. Corner. The balance sheet was presented by the secretary, Mr. F. Bentley, from which it appeared that the receipts for the year totalled £88 11s. 6d., including a balance from last year of £9 13s. 8½d. The expenses were £83 2s. 5½d., thus leaving a balance of £5 9s. 1d. It transpired that there had been a loss on the year's working, but this was due to the fact that the committee had spent more in order to increase the attractions of the show. The balance sheet was passed on the motion of Mr. G. Manfield, seconded by Mr. W. Watts. At the election of officers which ensued, Mr. R. Corner was chosen as chairman, with Mr. W. Watts as vice-chairman, Mr. F. Bentley still continues to discharge the secretarial duties, and Mr. H. Whitaker is the treasurer.

National Chrysanthemum Society.—A meeting of the Floral Committee of this society was held on Monday, December 13th, at the Royal Aquarium. No blooms were submitted. A patent Chrysanthemum pot was submitted by Mr. A. R. Knight, of Ashford, Kent, but it did not find favour with the committee. After a good deal of discussion concerning the fixtures for the meetings of the Floral Committee for next year, it was finally settled that a recommendation should be made to the general committee that the last meetings in December and the last meeting in November should be abandoned. Other recommendations to the general committee were moved and carried: One of the most important of these was one made by Mr. D. B. Crane to the effect "that no variety be certificated as a market variety except a plant be produced to show the habit and freedom of bloom." Mr. W. Mease seconded. Mr. R. Dean proposed, and it was unanimously accepted, "that the Aquarium authorities be asked not to allow the organ to play between 1 and 3 p.m. on committee days." A vote of thanks to Mr. Bevan for presiding, which was moved by Mr. Geo. Gordon, and seconded by Mr. J. H. Witty, brought the gathering to a close.

Trees and the Tides.—A contemporary has discovered a story coming from Italy and reviving an old theory that the sap of living trees ebbs and flows in sympathy with the tides of the ocean. A vine grower in Italy, who is also a chemist, has been experimenting in this direction with his vines, and after fourteen years' experience has come to the conclusion that trees should only be lopped and pruned during the hours of ebb tide. He always acts upon this conclusion, with the result that his fruit trees and Vines have developed splendid foliage and crops, while they are free from the attacks of insects which devastate the trees belonging to other people.

Orchids at the Sale Rooms.—On the 10th inst. a small piece of the true *Lycaste Skinneri alba*, bearing a solitary flower, changed hands for 3½ gs. at the Central Sale Rooms of Messrs. Protheroe & Morris, Cheapside. *Cattleya Schroderae alba* was knocked down at 6½ gs., while *Laelia elegans alba* reached 4 gs. at the fall of the hammer. The two last-named came out of the collection of Mr. P. McArthur, 4, Maida Vale, W. A very handsome variety of *Cattleya Trianaei* was bought for 37s. by Mr. G. E. Day, gardener to H. J. Simonds, Esq., Park Place, Leyton, Essex. It was well worth the money and must form a fine addition to this growing collection. The petals are remarkably broad and crisped at the edges, though pale in colour. The lip has a broad, rounded, much crisped, and rich crimson lamina, constituting the dominating feature of an attractive flower.

Edinburgh Seed Trade.—The assistants held their third annual dinner on the evening of Thursday, 9th inst., in the West End Café, when a company of about one hundred gentlemen sat down, presided over by Mr. W. Mackinnon (Mr. Downie's). After the tables were cleared, an excellent programme was carried through, several professional gentlemen contributing songs in fine style. The employers were strongly represented, and helped in no small measure to make the meeting a great success by taking part in the toast list. The menu and toast list were smartly got up and rather unique in their way, inasmuch as each course to be brought to the table was preceded on the menu card by some appropriate motto. *Sucreries* (sweets) had for their motto "Mysteries of Science," which they generally are. The same plan was followed with the toast list, "The Committee" being described as "A noble band of Martyrs." The curtain to a pleasant evening fell on the singing of "Auld Lang Syne."

Arbroath Chrysanthemum Society.—The annual show of this society was held in the Public Hall, Arbroath on Saturday, the 4th inst. There was a large attendance at the opening ceremony, which was performed with much grace by the Countess of Northesk. Her ladyship was supported on the platform by Mrs. Lindsay Carnegie, Kinblethmont, and Mrs. Grant. The arrangement of the exhibits was on the same lines as in former years, the plants occupied the centre of the hall, and the cut blooms were staged on either side. In the open classes for cut blooms Mr. John Bell, of Forfar asserted his superiority for 24 Japanese. He had amongst a grand lot of flowers exceptionally fine samples of Madame Carnot, Sunflower, Modesto, and Miss Rita Schroeter. Mr. Geo. Black, of Kinblethmont was second. Mr. John Ednie, of Carnoustie House, staged the winning stand of 12 blooms. Mr. J. Ednie was also first for six Japanese. Mr. A. Scott, Roseley, was an easy first for twelve incurves. In the amateurs classes Mr. E. Döhner, Monifieth was very successful. Competition was wonderfully keen in the classes for pot plants. Mr. Geo. Black was awarded premier honours in both sections allotted to plants of Japanese varieties, staging some handsome and well-grown plants. There were some capital collections of fruit staged, the first award going to Mr. A. Scott, with Mr. Geo. Black, and Mr. A. Donaldson as second and third respectively. Amongst the non-competitive exhibits appeared 3 grand stands of cut Chrysanthemums from Mr. Norman Davis, the Vineries, Framfield, Sussex. Messrs. Laird and Sinclair, Nethergate, Dundee had a pretty table of flowering and foliage plants in tasteful array. Messrs. Storrie & Storrie, Castle Street, Dundee, had a large assortment of Palms, Heaths, Ferns, and hardy plants.

"Nord Horticole."—The press of editorial matter and the preparation of the blocks for the December number of our contemporary, *Nord Horticole* have retarded the publication of the number which can now only appear between the 15th and 25th inst.

Death of Mr. Gibson.—We are very sorry to announce the death of Mr. Gibson, an Ayrshire gardener, on Monday morning the 13th inst., at Troon, a little to the north of Ayr, where he was calmly spending the evening of his day after retiring from a long and honourable service. His two sons Mr. James Gibson, of Devonhurst, Chiswick, and Mr. David Gibson of Coombe Cottage, Kingston, arrived on the day of his death just a little too late to see him breathe his last.

Florets of Chrysanthemum Madame Carnot.—The twelve magnificent blooms of this variety shown at the November exhibition of the N. C. S. by Mr. Norman Davis, Framfield, Sussex, created quite a sensation amongst gardeners and all who saw them. Mr. W. Watson, of Kew has been counting the florets in a single head and finds that they reach the astounding number of 1,750. He states that this is eight or nine times the number of florets in a head of the wild type. The bloom with 6 ins. of stalk weighed seven ounces; the longest florets were 7 ins. long. The art of man has truly worked wonders upon the original wilding.

Souvenir of the N.C.S. Autumn Festival.—This is the title of a neat pamphlet of sixteen pages, giving descriptions of all the species and varieties of Conifers and other evergreen subjects utilised in the decoration of the Octagon group of the Ichthemis Guano Co., at the November show of the National Chrysanthemum Society. The plants in question were supplied by Messrs. Laird & Sinclair, Dundee and Monifieth, N.B. Flowering plants, statuary, and electric lighting had to be called in to supplement the general decorations. The leading feature was undoubtedly the Coniferae. A short description of each species and variety employed is given. The frequent use of flowering plants (in the popular sense) in the formation and arrangement of groups comes in time to be somewhat monotonous; while on the other hand, it shows a lack of appreciation of the decorative value of a class of plants that are hardy, easily obtainable, and full of possibilities in the hands of skilful decorators, if such plants are not occasionally utilised. The sight of collections of Conifers first suggested the idea; and the souvenir under notice is simply intended as a reminder of this first attempt to take advantage of their decorative value.

Ealing Gardeners' Society.—Mr. D. Cooper, of Hanger Hill House Gardens, Ealing, was well received by the members of this society on the 7th inst., the subject being some "Notes on Gardening in Paris," which were very interesting and useful as a set-off against our own performances in this country. Mr. Cooper considered the French people were much in advance of us in many respects, which was probably due, in a large measure, to the splendid climate which they enjoyed. Mr. Cooper was fortunately able to visit private as well as public parks and gardens, and the admirable way in which these were managed was not a little gratifying to the visitor. What seemed to impress Mr. Cooper principally was the enormous number of plants, such as Begonias, Cannas, and even stove plants, that are used for effective display in the flower garden. At Baron Alfonse de Rothschild's beautiful Chateau de Ferrieres, for instance, all phases of gardening are carried out with the most brilliant success. The park is one of the finest in Europe, while the gardens and pleasure grounds are so extensive that they require about 200 hands to keep them in order. There are something like sixty glasshouses, and an equally large number of frames. This will give some idea of the size and quality of the estate which Mr. Cooper visited, as well as other matters which we are unable to find room for. On the motion of the Chairman, Mr. C. B. Green, Mr. Cooper received a very hearty vote of thanks. A special exhibition was also held for a "Small group of plants arranged for effect, 5 ft. by 3 ft., to be staged in a semi-circle." The result was very pleasing and artistic, the prizes being awarded to Messrs. C. Long, R. Green, H. Holloway, and G. Woods.

In the Palmhouse at Kew.—Nurse girl: "Look, look, Bobby, don't you see a Rose on that Palm." Bobby (gazing roofwards): "No." Nurse girl: "Can yer smell it then?" Bobby: "No, Jane; my nose aint long enough."

The Scilly Islands.—It is stated that the flower crops from which the Scilly Islanders reap so large a share of their revenue are not so early or promising as they were last year at this time. Last season was a record season, however, and thus any comparison between this year and last is hard upon the present one. Good prices may, perhaps, console the growers for a slight decrease in quantity of productions. Much has been done of late years by the Great Western and North Western Railways to develop the industry. New markets in the north of the kingdom have been opened up by an improved service of fast trains from the shipping ports, and flowers leaving the Scilly Islands in the forenoon of one day are in Aberdeen by the evening of the next day—not at all a bad journey.

The late Mr. David McEwen. — On Wednesday, the 24th ult., there were laid to rest in the family vault at St. Mark's Churchyard, Lakenham, the mortal remains of the late Mr. David McEwen, who for the past twenty-nine years carried on a business as florist and seedsman in Red Lion Street, Norwich. The deceased gentleman first started his business career with the late firm of Mackie & Ewing, and some time afterwards joined Mr. Ewing, seedsman, of Exchange Street, and later on taking over the management. He stayed with that firm for upwards of twenty-two years, gaining the respect of both employer and employed, whilst his qualifications as a business man were shown by the firm's numerous customers. On Mr. McEwen leaving this firm he was the recipient of a handsome testimonial in acknowledgment of the long and honoured services he had rendered. The deceased, who was in his 79th year when he died, was known far and near as an authority on horticultural seeds. His genial countenance as he leaned over his shop counter giving his advice to his numerous customers will be missed, as will also his familiar figure as each morning he indulged in a walk round Chapel-field Gardens. It may be added that letters from all parts of the country are being received from friends and customers, condoling with those who are left behind, and testifying to the esteem in which the departed was held as a citizen and a tradesman.

Fruit-growing at the Cape.—Professor McOwan the government hotanist at the Cape, has written a paper upon this subject, which appears in a recent issue of the *Kew Bulletin*. The *African Critic* comments upon the substance of the essay in most favourable terms, and speaks of it as being couched in vigorous and definite language, and that it amounts to a strong and well-reasoned appeal to English gardeners to go out to the Cape and develop the fruit trade. The Professor indeed pleads earnestly for "some gardening missionary to come over and teach us a gospel of better things," for he is disgusted with the way fruit culture is carried on. The ordinary market is supplied with coarse fruit of very inferior quality, and if you want good fruit it can only be obtained from the farmer as a favour. There are at the present moment, continues Professor McOwan, exceptional openings for enterprise in various branches of culture. The only element required is an increase in the number of intelligent and practised growers. Says he, "We want them from England, from the States, from California, in fact from every place where the skill and experience required has run for years into every day practice. This is the immigration wanted just now at the Cape, to catch at the opportunity of the moment and to turn skilled fruit-growing into gold. There is no question that success awaits the man who knows how to deal with fruit trees, to break his ground up properly, to drain, to prune, to gather, to pack for market up country or for market in Covent Garden, and who has the well-founded contempt for the slovenly style of letting things grow themselves, and taking as a crop what chance sends and insect plagues leave." If all intending settlers in the Colony carefully study and follow Professor McOwan's advice as to preventable scourges, and thoroughly spy out the country before settling down, there is nothing, humanly speaking, to prevent them revolutionising the Cape fruit trade.

The Orange is said to possess three distinct odours, one given off by the flowers, another by the leaves, and the third by the rind.

Mr. J. M. Wood, Durban.—The *African Critic* says that "Durban is the only town in South Africa possessing Botanic Gardens of any size, and to the curator (Mr. J. M. Wood, A.L.S.), Kew Gardens are indebted for many valuable collections. In the latest volume of "Flora Capensis" a cordial reference to this fact is made. Mr. Wood's investigations into the flora of Natal are being prosecuted with much skill and success.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Cypripedium Mrs. Plimmer, *Hyb. Nov.*—The seed parent of this hybrid was *C. nitens*, itself a hybrid, and *C. villosum* Boxallii. As far as we have been able to ascertain this cross has not hitherto been effected. The nearest to it was the crossing of *C. nitens* Sallieri with *C. villosum* aureum. The dorsal sepal of *C. Mrs. Plimmer* is oblong, and apple-green, blotched with violet-black, except at the apex, which is white and marked with a cluster of violet blotches. The upper longitudinal half of the petals is of a shining brown, while the corresponding lower half is pale and finely spotted, showing the influence of *C. villosum* Boxallii, all the rest being due to the potency of *C. nitens*. The light brown lip is like that of the latter very nearly. The hybrid was raised by Mr. P. McArthur, 4, Maida Vale, London, W., and is named in compliment to Mrs. Plimmer, of the Woodlands.

FASHIONABLE FLOWERS IN THE NORTH.

By reason of the increased demand by most proprietors of gardens for cut flowers, cultivators are often driven to expedients as how to supply the demand. The species which have increased most are to be found among Carnations, Roses, and herbaceous plants generally. Many years ago these figured largely in the then prevailing fashion, but the hedding mania ruthlessly thrust them aside.

It would be difficult now to find a garden in Scotland of any pretensions where the species indicated are not well represented. Long borders and gardens specially formed may be seen filled with hundreds and thousands of them. While visiting some of these gardens not long ago, I noted excellent displays of flowers for use, while the adornment of patterns was not neglected. At Balhirmie, Fifeshire, some borders of Carnations were dazzling, and though so many were cut during each week they were scarcely missed. From June to November the display continues, and the great breadth of herbaceous plants gives a continuous supply of choice flowers from spring to winter.

The lines of pits at this attractive place filled with tree Carnations give indication of the demand, which Mr. Henderson, the able gardener, meets with great success. It may be noted that indoor flowers are largely grown. Stove plants, Orchids, and Camellias indicate that skill and good taste are much in evidence. The last-named are planted out, and the healthy growth with abundance of flower-buds, show that these old favourites are not underrated at Balhirmie. To succeed the Chrysanthemums they are still much valued. A grower, for sale, lately told me that Camellias in winter were the most profitable branch of his extensive establishment.

The Carnation mania has spread well throughout Fifeshire, and is still on the increase in the North. In old nurseries they are extensively cultivated, and new ones are rising up in nearly every district. For example, at Redbraes, Messrs. Grieve & Sons are increasing their stock of Carnations at a rapid pace. I recently visited their grounds, and noted the large breadth of Carnations and Pansies, which are specialities.

Many choice varieties have recently been raised from seed. Among the choicest of them are Nellie Cooper, white and pink; Mary A. Grieve, deep salmon; Aurora, scarlet; Nellie, a rose-edged Picotee; Gertie Smith, creamy and white; Miss Leslie, deep pink; Napoleon, bright scarlet; The

Clown, scarlet bizarre; Ceres, cerise; Laurie Wood, apricot; Luciter, bright scarlet; Nero, Maroon; Princess Olga, fine pink; and Malcolm, silvery-pink. But though these are of much excellence, the large stock of older sorts cannot be set at naught. It would almost appear that these beautiful flowers have nearly approached their highest stage of perfection.

The new forms of Pansies at Redbraes are strongly in evidence. For early and late decorative purposes they can hardly be surpassed.—*M. T., Carron, N.B.*

FREESIAS.

THE beautiful and delicately-scented Freesias have been greatly in evidence in the leading gardens in Scotland for some years, and the popularity of them seems to be on the increase, ranking with such favourites as Roman Hyacinths, Lily of the Valley, and Cyclamens. In reply to "Flora," p. 238, I may say that many fail to obtain the best results by unduly forcing the bulbs in their early stages, withholding air, and often keeping them too far from the light. Under these conditions they grow up weakly and the flowers are worthless.

It is better to pot the bulbs early (say in August), when they are expected to flower at Christmas, and little forcing may be necessary. Our plants now (Dec. 11th) are throwing up their flowers. They were potted about the middle of August, placed in a pit near to the glass, kept close till growth commenced, and then air was freely admitted. Watering with care from the first has much to do with successful flowering. Little water is given till the roots are active, and then an abundance is supplied. Stagnant moisture is bad for roots and foliage. When the flowers are forming, liquid manure is given occasionally, but not strong. We drain the pots moderately, placing a little moss over the crocks, over which is sprinkled a pinch of soot. This prevents worms from injuring the drainage, and the roots run freely in it. Turfy loam, leaf mould, a sprinkling of sand, and some bone-meal suit Freesias admirably. A 5 in pot, with six or seven bulbs planted regularly over the surface, with the crowns just above the soil, is the general method of planting. Some place each bulb in a little sand. If the soil is heavy and close, this is an advantage.

Three successions, for flowering from January till spring, are necessary, and planting for the latest may be done in October. I have never had bulbs which I have saved by ripening them do so well as those which have been imported.—*M. T., Carron, N.B.*

PEOPLE WE HAVE MET.

MR. J. FRASER SMITH.

THE subject of the accompanying portrait is a native of Aberdeenshire, having been brought up on Deeside. Mr. J. Fraser Smith commenced his gardening career in 1864 at Crathes Castle, the seat of Sir Thomas Burnett, Bart, under the then gardener, Mr. Littlejohn, who succeeded the father of Mr. A. F. Barron, of Chiswick. Mr. Barron's father, it may be remarked, did much to establish the renown of this famous old place, where many a notable gardener commenced his career, including Mr. A. F. Barron himself, Mr. J. Smith, of Mentmore and Mr. J. Fraser Smith.

After serving his apprenticeship at Crathes Castle, the subject of this sketch went to Oxenford Castle, Midlothian, the seat of the Earl of Stair, under the late Mr. Anderson, who was an excellent gardener to instil a knowledge of the profession into the minds of his pupils, and a first-class hardy fruit grower to boot. Here Mr. Fraser Smith stayed for a couple of years, after which he went to that veteran in horticulture, Mr. Lunt, of Ardgowan, Renfrewshire, on the Firth of Clyde, where, in the inside fruit department, he had a grand opportunity of seeing fruit well done under glass.

Having a desire to get further south he got a recommendation to Messrs. J. Veitch & Sons, Chelsea, from whence, after a short time, he was sent as plant foreman to Abernant, South Wales, in the palmy days of that establishment. Returning to Messrs. J. Veitch & Sons, he was next sent as foreman to Shoreham Place, Kent, which at that time was famed for its collection of Orchids. Ever since then Mr. Fraser Smith has always had a great fancy for that class of plants.

His next move was to the Alexandra Park, Muswell Hill, London, at a time when the Palace was being rebuilt after the great fire, and the park laid out by Mr. McKenzie. Here he had every scope for seeing a great variety of landscape work carried out; while at the same time he had even greater facilities for adding to his knowledge in the



MR. J. FRASER SMITH.

glass department. He had charge of the conservatory at the place while the large Palms were being planted. From the Alexandra Palace he journeyed to the far north to lay out and remodel the grounds of Colonel Lumsden, Pitcaple Castle, Aberdeenshire, just where the waters of the classic Gady Burn and the Ury unite before running on to the River Don. He stayed at Pitcaple Castle for three years, at the end of which time he was offered an appointment as head gardener to the Earl of Crawford and Balcarres, Dunecht, Aberdeenshire, from whence the sound of the time gun used to travel for many miles in every direction, informing us and many another gardener of the correct Greenwich time.

While at Dunecht, Mr. Fraser Smith had the privilege of exhibiting, and was a familiar figure at the shows of the Royal Horticultural Society of Aberdeen, where he was much respected and esteemed by a wide circle of friends, who enjoyed his fellowship and courtesy. Here we first made his acquaintance in the Jubilee year, breaking the ice of acquaintanceship over some well-grown and flowered specimens of his favourite Orchids. He presided over the welfare of the gardens at Dunecht for a period of eleven years, until the heart of the place was broken, so to speak, over that scandalous affair, the miserable "Dunecht Mystery."

Since then, however, he has been fortunate in obtaining the appointment as gardener to the Countess Dowager of Seafield, Cullen House, Cullen, N.B., which position he has now held for nine years, to the great satisfaction of all concerned. The Countess Dowager of Seafield is a kind-hearted and most considerate employer; and has a great love for her gardens and plants, especially Orchids. In her gardener she has a man who fully understands every detail of culture in this northern latitude, and she is perfectly cognisant of the fact.

Cullen House is almost on the verge of the northern coast of Banffshire, and within the genial influence of the Moray Firth, so that plants and fruits in the gardens do remarkably well. Peaches, and even Figs ripen on the open walls.

We had the pleasure of again meeting Mr. J. Fraser Smith at the Chrysanthemum show of the Scottish Horticultural Association, Edinburgh; where he acted in the capacity of judge. The same thing occurred at Dundee and Aberdeen during the succeeding week, where similar attractions made the rendezvous identical. Although no longer an exhibitor, the subject of the most recent addition to our portrait gallery continues to assist horticultural

societies in various ways, his services and genial presence being much in request.

PLANTS RECENTLY CERTIFICATED.

At the meeting of the Floral Committee of the N.C.S. at the Aquarium on the 7th inst., the following awards were made.

MISS PHYLLIS FOWLER.—A fine, new, yellow incurved form of great size with large and massive flowers. In build and style it resembles C. H. Curtis, F.C.C. Mr. T. Robinson, gardener to Watkins Laurence, Esq., Elmsfield House, Hollingbourne.

MRS. M. SIMPSON.—A large white Japanese variety which is not unlike Niveus in general appearance, but with narrower florets, and later. Commended, Mr. N. Molyneux, gardener to J. C. Garnier, Esq., Rooksbury Park, Fareham, Hants.

RED L. CANNING.—This is not as the name would suggest, a sport from the well known late white Japanese, L. Canning, but is a seedling. It was commended on this occasion as a market variety. The plant is apparently very floriferous and about 3 ft. in height. The flowers exhibit a bright shade of chestnut-red, and should prove useful for late cutting. Mr. A. Felgate, the Gardens, Burhill, Walton-on-Thames.

SUTTON'S AMATEUR'S GUIDE FOR 1898.

IN the celebration of Her Majesty's Diamond Jubilee horticulture was prominently represented, and of this we are reminded by a remarkable picture which appears in Sutton's Amateur's Guide for the coming season. The magnificent Temple Show held by the Royal Horticultural Society in May last was visited by several members of the Royal Family. The picture of this event by a well-known artist, has been secured by Messrs. Sutton, and a splendid reproduction is now issued with their Annual for 1898.

At the special show and conference arranged by the Royal Horticultural Society at the Crystal Palace in honour of Her Majesty's Reign, Mr. Arthur W. Sutton delivered a lecture on the "Progress of Vegetable Cultivation during the Victorian Era." We are glad to observe that the great Reading firm offer to place a copy of that lecture at the disposal of their customers who may express a wish to receive it.

The improvements achieved in two most important departments of horticulture have been continuously illustrated in successive annual issues of Sutton's Amateur's Guide. The types of vegetables originated and distributed by the Sutton's are not only distinguished by the primary requisite of high utility as food for man, but they also possess in a marked degree the qualities which ensure success on the exhibition stage.

Equally striking has been the development in flowers raised from seeds, and of this fact abundant evidence will be found in the singularly beautiful illustrations which adorn the pages of the new edition of Sutton's Guide in Horticulture. As usual, the work is full of information adapted to meet the requirements of amateurs and to serve as reminders to those who are masters in the profession of gardening.

The illustrations have chiefly been prepared from photographs, and not only maintain their high character of former years for clearly defined outline and life-like representation, but far surpass those that took us by surprise a few years ago, when the result of an accident forced the Messrs. Sutton to adopt them as a makeshift for the coloured plates of previous years. The power of photography to illustrate the products of the garden came suddenly as an eye-opener. The days of the chromolith for the representation of either flowers or vegetables are to all intents numbered both in this country and in America. In the present instance we scarcely know whether most to admire the photographic reproductions of flowers or vegetables, both classes of garden products being most excellently represented and true to nature.

Numerous varieties of Sutton's garden Peas are shown, including novelties for 1898. The same may be said of Potatoes, amongst which we note a full-page illustration of Sutton's Ideal, the promis-

ing and handsome looking Potato we recorded at the November show of the National Chrysanthemum Society. Such lumpy and solid things as Carrots, Beet, Cauliflower, Onions, even a field of Onions, Cabbages, Lettuce, Tomatos, &c., come out with a clearness of light and shade that speaks volumes for the progress of the art of photography within the last decade.

Excepting in the matter of colour, the double tuberous-rooted Begonia represented on p. 105, is as natural as life. No less excellent are Sutton's Calceolarias, Cinerarias, Cyclamen, Hollyhocks, Primulas, and various other popular and useful flowers.

CHRYSANTHEMUM SHOWS.

SEEING the shows are over and the excitement is on the wane for another year, we might well ask ourselves what are the lessons we have learned from them.

About the first is how much better large blooms of the Chrysanthemum look, exhibited in vases than on boards. With nine or a dozen blooms in a large vase as exhibited by some of our large trade growers, there is no comparison between it (for effect) and a dozen arranged on a board in the orthodox fashion.

Three in a vase (the number often asked for in the schedules for competition) have a meagre appearance, and the vases usually supplied are too small, giving the exhibits in this section a painfully top-heavy appearance. To increase, however, the size of the vase would accentuate the meagre appearance of the three blooms; but if nine or a dozen were asked for, larger vases could be used and the effect would be much better. The exhibitors should only be asked to fill one or two vases, so that they would not have to provide more blooms than formerly; and that each vase should contain only one variety as at present. This, of itself, is a great advance on the plum-pudding appearance of the boards with their dots of colour here and there. If this form of competition was adopted competitors would not require to grow so many varieties, which would help to reduce the far too numerous varieties that are in cultivation—particularly those with weak peduncles, which are of little use for decorative work.

Another lesson which is rapidly being learned by growers within the smoke radius of large cities is that their flowers have neither the brilliancy of colour, nor the size, of those grown in the pure air and bright sunshine of the country. This is most marked when the plants are grown to produce the largest flowers possible; but grown in an ordinary way for conservatory decoration, or cut flowers, it is not so marked; in fact grown in this way it makes a good city plant, and no other could take its place.

Seeing that the production of large blooms is not so easy in the city as in the country, growers in the city would meet their opponents from the country on a fairer field if they would confine their attention to the growing of plants as specimens, or for artistic grouping, or cut flowers (not disbudded). Another fact the most casual observer must have noticed, that size is the main consideration in judging Chrysanthemum blooms. It might be urged that they must be true to type in form and colour, but that does not, and cannot receive much attention in the Japanese section. It contains so many varieties, each differing more or less from its neighbour in form or colour, or both, that it is impossible for one man to carry them all in his mind, and have them ready at a moment's notice when he is called upon to give a decision at a public exhibition. So he falls back on the easy and popular rule of giving the prize to the largest blooms; and growers knowing this try to put as much cloth into them as possible.

For example, take the well known variety G. C. Schwabe, which is just at its prettiest before the florets begin to reflex; but because the reflexing of the florets makes it look a little bigger, if Nature has not done it herself, it is done for her artificially. Mr. Davis in his splendid exhibit at Dundee, showed G. C. Schwabe with all the petals incurved, and it looked ever so much better than with one-half incurved and the other half reflexed. This is an instance of the destruction of beauty for the sake of size, and beauty is sacrificed in every case if size is to be obtained.

Another fact worthy of note is that the public takes more interest in artistic groups of plants or

cut flowers than in the big leafless bruisers on the green boards. This is not to be wondered at, as flowers half the size are usually prettier, and the public cannot be expected to take the same interest in the race for size that goes on amongst those smitten with the 'Mum fever.—'Mum.

LEAVES FROM MY NOTE BOOK.

MONTBRETIAS.

THIS really charming and most desirable class of hardy plants is being much sought after, both for hardy flower competitions and more especially for decorative purposes, for which they have few equals, lasting as they do a long time both in a growing and cut state. Many fine varieties are now finding their way into gardens, where for many years old M. Pottsii and M. crocosmiaeflora long held the sway. The following are of recent introduction, and are all good:—Aurea Imperialis, orange-scarlet, grand spikes; Eciantant, fiery-scarlet, with yellow throat; Etincelant, clear scarlet, with sulphur throat; Etoile d'Or, yellow self; Lustre, orange-yellow throat, slightly maculated; Morgenlicht, golden-yellow, very large; Transcendent, orange-vermillion, with large yellow throat; and Turban, golden-yellow, with maculated throat. The latter is the largest of all I have yet seen. I measured a bloom and found it three inches across; it is also of good form and robust.

Vulcan is yellow maculated purple, and is also a very fine variety. Crocosmiaeflora fl. pl. and Pottsii fl. pl. are the only double sorts I know; in fact, I think they are the only two doubles yet in commerce. Both are well worthy of a place in every garden, and no collection of Montbretia can be considered complete without them.—Coilla.

A REMARKABLE WEEPING ASH TREE.

STROLLING with a friend on the night of the 20th October through the rural hamlet of Aberford, a few miles north of Leeds, I was buttonholed by my companion remarking "There is a tree"—pointing over the way—"I wish you could see it before you take leave of us to-morrow. Probably there is not another like it in Yorkshire." The opportunity was too good to be missed. I decided, if possible, on the morrow to see it.

Fortunately the trap where I was staying was going to Garforth, and I was dropped *en route* at Bridge House, the residence of George Whitehouse, Esq., in whose limited grounds the tree is. I must say that in no way has my friend's report been exaggerated; for it is an object well worth the trouble of seeing by any arboriculturist and admirer of peculiar and artificial productions. I am not aware of any similar tree, nor have read of any one describing it. If so, let us have them please, in THE GARDENING WORLD. We often see the branches of weepers propped up and trained outwards, consequently covering a large area of ground Banyan-fashion.

Immediately the visitor arrives in front of the house, two archways of greenery, 8 ft. in height, at a distance of several yards apart, confront him. Entering the one on the left, a 4 ft. path winds its sweeping way, under the covered canopy for upward of thirty yards, leading into the grounds and a small greenhouse beyond.

Retracing our steps under crossarchways we came into the other principal walk, which is about twenty-eight yards, and returns us to the front again.

The tree, I was informed, is about sixty years old, and is in vigorous health; but latterly appears to have been neglected, or the sylvan shades might have been considerably extended.

Standing midway in an oblong plot, the trunk is over 6 ft. in girth, and about 8 ft. high up to the union with the graft. Its four branches average over 3 ft. each in girth, and are trained on the apex of the arches, two each diverging in opposite directions, north and south. All spaces are kept clear between the arches so as to give plenty of light and air. The side laterals from the main branches, as a matter of course, fall clear and gracefully to the ground, and are both regular and dense throughout. Thus has it been in the power of the proprietor and cultivator to modify the tree to their own liking, and the process has been both interesting and a decided success.—*B. Lockwood, Lindley, October 28th.*

FRUIT UNDER GLASS.

THIS is a busy time of the year in the fruit houses for there is the pruning, clearing up, and cleaning of the trees preparatory to another season's growth. Not infrequently, too, the work is much hindered by the houses being choked up with plants of various kinds, these having to be shifted about from one house to another as the work of cleaning goes on.

VINES—The fine October worked wonders with the wood, for in most cases well ripened growths are the rule, and badly ripened ones the exception. There is nothing to gain by waiting, and, therefore, the pruning should be at once seen to. In most establishments where mealy bug is a big pest it is the custom to remove a good deal of the loose bark from the canes with a view to getting rid of the bug at the same time. If carefully done so as not to expose the delicate inner bark, this stripping does not hurt the Vines to any appreciable degree, although there is no doubt that it can be overdone. The houses will need to be well washed, after which the eyes in the iron supports through which the wires pass, and other nooks and crannies in the house should be brushed over with neat petroleum, so as to effect the complete dislodgement of the bug. The canes themselves should be washed twice or thrice with a fairly strong solution of Gishurst Compound, than which nothing is more effective as a cleanser. To complete the work the canes may be painted with a mixture composed of clay, dried and ground to a fine powder, and Gishurst Compound, mixed with warm water until it is of the consistency of thick paint. The canes when dry may then be loosely looped up to the wires for the present. It will be of no use to tie them up properly, as when forcing commences they will have to be bent down to insure equable breaking all along the cane.

After this, the borders must receive attention. The top layer of loose soil may be carefully scraped off, taking care, meanwhile, not to injure any of the roots that may be near the surface. A dressing some 2 in. or 3 in. deep of good loam may then be introduced and spread evenly over. Keep the house as cool as possible until the time has arrived to start it into growth.

RENEWING OLD VINES.—Where the canes have become old and well-nigh worn out, so that the size of the berries and general quality of the fruit has reached a low point, the problem presents itself of how to turn these old vines into young vigorous ones. Of course, the direct method is to root the old ones out, remake the border, if it appear to be necessary, and plant again. In some cases, however, a half-way course may be adopted with excellent results. This is to head the old canes back, and allow them to break away and make fresh canes. The old canes should be cut off to within 3 ft. of the ground, and a strong shoot taken up from, say a foot or 18 in. below this point. Having the advantage of being attached to an extensive root system, the young shoots make great headway, and almost invariably develop into strong, stout canes that may be fruited the second year.

OUTSIDE BORDERS FOR VINES.—In cases where houses that are to be started early, have outside borders, it will be advisable to protect them from deluges of cold rain or heavy downfalls of snow. A good covering of stable litter may be given, and some boards, sheets of galvanised iron, or other material calculated to throw off the rain laid over. The earliest houses should, if possible, have the borders under cover.

FIGS.—See to the pruning and cleaning of these as soon as possible, for nothing is to be gained by keeping Figs back for too long. In pruning, remove the weakest and most ill-ripened shoots, leaving those that have plump and well-matured points. Spread these evenly over the area covered by the tree, so that next season the whole of the wall may be evenly covered with foliage. The cleaning of Fig trees is sometimes a lengthy job, owing to the tenacity with which scale sticks. A good washing with Gishurst Compound, and a painting with the same composition employed for the Vines will, however, soon put matters right. In tying, see that the ties are not made too tight, for the younger branches will swell considerably next year, and if plenty of room is not allowed for this, they are apt to be strangled.—*A. S. G.*

HINTS FOR AMATEURS.

THE GREENHOUSE.

Malmalson Carnations.—Where the young layers were lifted and potted off singly into sixty-size pots about the middle of September they will not need to be disturbed again through the winter. For the present, therefore, they should be kept quiet. No great amount of growth will be made, but an endeavour should be made to keep the colour in the foliage that they already possess. Young plants of this kind will stand a good deal more than older ones which have been enfeebled by flowering, and are feeling the after effects of the heavy feeding given to make them produce good flowers. Stand the plants all together—they may be placed nearly pot thick—and look after them very carefully for water. Very little water will be required, but watch should always be kept to see that none is allowed to fall and remain in the axils of the leaves, which are like so many little cups for retaining moisture. If moss grows on the surface of the soil in the pots it should be picked off, and the surface soil loosened slightly at the same time. This is well worth doing if only for the look of the thing, but it has a greater advantage in that it helps to prevent stagnation of the soil in the pots, and thus keeps the roots in a sweeter, and more healthy condition.

Ericas.—While they are not exactly difficult to grow, the pretty Cape Heaths will not stand a great deal of knocking about. The beauty of such forms *E. hyemalis*, *E. h. alba*, *E. Cavendishii*, *E. gracilis*, and *E. wilmoreana*, is however, a very strong inducement to the amateur to make an attempt at growing them. The chief point in dealing with Heaths is to know when to give water. Once let such fine rooted plants as they are get dry, and they might almost as well be thrown away at once, for they very seldom recover from the shock. Even through the winter months therefore they must never be allowed to get dry. The common practice of tapping the pots, so extensively used to find out whether in the case of other plants they need water or not, will not answer for Ericas, for by the time that the pots emit a hollow sound under the rapping the balls of the plants are dust dry. The only reliable plan is to "weigh" the pots in the hands, when a little practice will soon enable the operator to tell whether water is required or not.

Ericas are very susceptible to the ill effects of cold draughts, which cause mildew. They should, therefore not be placed close to the door or any ventilator that is constantly being opened.

Epacris are charming plants for the amateur. They are fairly easy to grow, and invariably give an excellent return in bloom for the labour expended on them. A warm greenhouse is the best place for them, but if they are properly looked after they will do very well in a house containing such a mixed lot of plants as we are considering.

Basket Plants.—Not only is it a great set off to a house to have a few plants suspended in baskets from various parts of the roof, but the room on the stages thus set at liberty is of great importance. The heaviest plants should be suspended from the centre of the house, or from the strongest supports only, whilst the lighter rafters will be large enough to support the smaller plants. Of the heavy plants we may mention such subjects as *Asplenium bulbiferum*, and its varieties, and *A. fabianum*, which do exceedingly well when treated in this way, provided they are supplied with enough moisture, and moreover, look exceedingly graceful.

Sibthorpia europaea variegata.—This pretty little plant is a great favourite with many, but we usually find it looking rather miserable between the beginning of November, and the beginning of March. The points of the shoots damp off, and the mischief does not end here, for the damp finds its way among the foliage, and the result is that by spring the plants present a very sorry and forlorn appearance. All this may to a great extent be avoided, and the appearance of the house improved at the same time by suspending the pots from the roof. They then escape the damp, and look as fresh and trim at the end of the winter as at the beginning.

Hyacinths.—By this time all the Hyacinths which were potted up during the autumn, and were plunged out-of-doors in the usual way have made a fair

amount of roots, and should now be removed under shelter. A little freezing would not hurt the bulbs themselves, otherwise those planted in the open ground would come badly off, but the bulbs in the pots have reached a more advanced stage than their relatives outside. It will be well, therefore, to put them in a place where they can be easily got at when required. If no other place offers they may be dotted about among the other plants in the greenhouse—there is generally room for a row of them between the back row of large plants, and the side lights of the house. Any vacant shelf space that there may be may also be filled with them, but this should only be when other more delicate things have been properly attended to.

Under the Stage.—This forms a snug retreat for all sorts of plants that are in a state of more or less complete rest, and is in fact a storehouse in itself. We have been amused more than once by a peep at this part of an amateur's greenhouse. The collection of occupants is usually very extensive, for in addition to the various subjects that may legitimately find a place there, many people seem to consider it as a most suitable place for stowing away dead or dying plants which the trump of spring will never wake into life again. Gloxinias and tuberous Begonias may be placed here with perfect safety. Lay the pots on their sides in such a fashion that the water running from the plants on the stage overhead may not wet the soil.

Cannas.—Besides those plants which are grown in pots the Canna has come to be recognised as a legitimate and useful subject wherewith to adorn the flower garden during summer. The rootstocks require to be lifted from the open and stored away for the winter, and here again the usefulness of the understage space in the greenhouse is further manifested. Lay the rootstocks in shallow boxes, with a label bearing the name firmly attached to each—that is if the plants have names—and cover them over lightly with sand or cocoanut fibre refuse, the latter being preferable. The boxes should be covered with a few boards or slates to keep the water out, otherwise the rootstocks will be liable to rot.

Chinese Primulas.—If there is a warm corner of the house these should have it, but they must also receive plenty of light. We often see the plants distributed in rows down each side of the house. The plants do not then get a proper chance, and, besides, the effect they produce is somewhat stiff and formal. It is a far better plan to make a group of the plants in a corner of the house, for the effect is better, and proper attention may then more easily be given them.

Winter-Flowering Zonal Pelargoniums are at this season surpassingly useful. Good plants which were looked after well for disbudding and stopping in the summer and early part of the autumn are now full of flower where the buds were allowed to come on from about the beginning of October. There is consequently a good deal of strain upon the plants, and they must be treated liberally with stimulants to keep them going. We have found Clay's Fertiliser a most useful and safe manure, but prefer dissolving it in the water rather than to apply it in the powder form. Notes should be made as to the varieties that do best in the special locality. Generally speaking, the single-flowered sorts are rather safer investments than the doubles for winter work since the flowers do not damp off so readily, but there some exceptions to this rule, and experience is the only way to find them out. As soon as decaying petals are observed they should be picked out, for the beauty of the flower may often be thus preserved for sometime.

Cyclamen.—In a house of a temperature such as we have been discussing a warm corner should be given to the Cyclamen. Even then the heat will not be sufficient to develop the beauty of the plants to the full, since to do that they require a temperature of from 5° to 10° higher. However, if the plants have been seen to properly during the summer they will do fairly well in a mixed greenhouse. Shield them carefully from draughts, which, above all, have a tendency to stunt and spoil the flowers. As with the Cinerarias and Primulas, it will be wise to group the plants together. If the stage is a trellis of woodwork it will be well to cover it with slates, thin boards, or something of the kind, to enable a layer of ashes to be put on. This simple precaution is often of immense service, and neglect of it, not infrequently,

the cause of comparative failure, for Cyclamens do not like to be stood on a bare, dry, wooden rack.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Chrysanthemums.—I have some Chrysanthemums which have been nipped with the frost. Would it injure them at all to cut them down and repot the roots, as I want to make room for other plants in the greenhouse?—*H. B.*

Cut your plants down at once, and pot up the roots if necessary, it will not harm them in the slightest. If the plants are already in pots, however, no repotting will be wanted.

Old Chrysanthemums.—*J. H.*: If you want the pots that the Chrysanthemums are now in, you may turn the plants out of them at once. This may be done without disturbing the balls. Place the latter close together and lay a little old soil round them just enough to cover the roots. You will then get cuttings in plenty, for the plants will throw up the young shoots just as freely as if they had been left in the pots.

Pruning a Passiflora.—*C. F.* has a large plant of *Passiflora caerulea* in a cool house, and wants to know what pruning it will require.

If the plant is a young one, the stoutest and best branches should be left to increase the spread, but all the small side growths should be spurred back. Next year, young growths will break away from the bases of these spurs, and will soon cover the wall thickly. The young branches may, for the present, be left at about two-thirds their length, cutting off the small and more unripe portions. These simple rules should be followed without difficulty.

Peach-tree Gumming.—*C. Chartres*: From the description you give of the tree it is in a hopeless condition. You might cut out the affected branches, but you would not then be able to get a decently shaped tree, even supposing the knife got rid of the gumming. You will do better to root the old tree out; remake the border if necessary, and plant another tree.

Figs.—Figs can be grown out of doors successfully in the southern counties, *F. E. Faulkner*, and the fruit ripens fairly well in favourable summers. Now and again a very severe winter will kill a lot of the wood. This was the case in the winter of 1890-91, but such winters are happily few and far between with us. Even when most of the branches are killed with frost, fresh growths are thrown up from the roots during the succeeding summer.

Pteris cretica nobilis is the name of the Fern you send, *Cardross*. It will do well in a warm greenhouse.

Making a Rose Border.—*S. Langholt*: Please consult the answer to *Reader* on p. 200 of the issue of THE GARDENING WORLD for November 27th. You will there obtain the information you require.

Clerodendron fallax.—*Y.*: The reason of the flowers and leaves dropping from the plants is that the temperature of your house is too low. The fruits will ripen if you remove the plants at once to a warm house or pit. Meanwhile, keep the plants a good deal drier at the root than you have been doing.

Berried Plants for Christmas.—*Noel*: There is quite a number of berried plants available for Christmas. In addition to the hardy Holly we may mention such subjects as *Pernettya mucronata* and its various varieties, and *Skimmia japonica*. Pot plants of the Evergreen Thorn, *Crataegus Pyracantha*, are also very useful for decorative purposes. The berried Solanums, *S. Capsicastrum*, and *S. Pseudo-Capsicum* are likewise very handsome. The stove plants *Ardisia crenulata* and *A. c. alba* are other effective, berried subjects, and in a group, such as you propose erecting, would be very useful. They should not be subjected to frost, however. There should be no danger of this

in a ball room, as the heat will remain in the room a long time after the proceedings have terminated.

Gloriosa superba is a stove plant, *J. Deene*, and your house would be far too cool for it. Try something else.

have been put upon the market, including a strain with flowers of enormous size, produced on plants of strong and rampant growth. We think that size is overdone, inasmuch as the number of flowers is reduced in proportion to the size of them. *Petunia hybrida* Snowball (see illustration) is altogether

ground strain has now been put into commerce, and it is claimed for them that 70 per cent. come true to colour from seed.

A large flowered, true Forget-me-not is that named *Myosotis palustris grandiflora* Nixenaugé. A translation of the latter name would be rather cumbersome as it means Water-nymph's-eye. The flowers are as large as those of *M. dissitiflora* Perfection, but more continuously produced all through the summer.

Pansy President Carnot is a large variety of the Olier type, having a large blotch on each of the five petals. In this case the blotches are dark violet, and cover the petals with the exception of a broad pure white border.

A coloured illustration of *Salpiglossis variabilis* superbissima, *Myosotis alpestris stricta* coelestina, Pansy Fairy Queen, and other varieties accompanied the list of novelties, all of which have been raised by Mr. F. C. Heinemann.



PETUNIA HYBRIDA SNOWBALL.



MYOSOTIS ALPESTRIS STRICTA COELESTINA.

different in character, being of dwarf and compact habit, producing a profusion of satiny-white flowers of moderate size. Mr. Heinemann assures us that it comes true from seed, and may be used for bedding purposes or pot culture. Like all other garden Petunias it is well adapted for resisting drought, and, therefore, likely to prove valuable in this country during droughty seasons.

French Marigolds are liable to produce coarse, rampant growth during wet seasons, and in northern districts where the climate is always cooler and moister than in the southern counties of Britain. Dry seasons keep them more within due bounds. There are, however, several dwarf varieties that never get rampant even in wet summers. Legion of Honour is one of them, and already well known and appreciated in this country, being about a foot high, and coming very true from seed, as we have frequently noted in the parks and gardens of this country. *Tagetes patula nana* Gold Ring (see figure) also belongs to the same species as the French Marigold in its various forms, and is described as possessing the same dwarf habit and free-flowering character as Legion of Honour, to which, therefore, it should prove a suitable companion. Like the last-named, it is single, and possesses broad, overlapping ray florets of a rich velvety-brown, edged or laced with a golden line or ring round the margin. It is as constant from seed as Legion of Honour.

The garden race of *Salpiglossis* has attained well merited repute amongst gardeners and lovers of flowers generally during the last few years, on account of their profuse and continuous flowering character, their great variety of gorgeous colours and their faculty for resisting drought. Mr. Heinemann offers a new type producing a bouquet of very large flowers on the top of a solitary and very stout stem. The flowers have a short tube; and widely expanded lamina, veined with reddish-gold on a yellow ground.

Viola tricolor maxima Fairy Queen, belongs to the same race as that type known in this country by the name of Peacock. The flowers of Fairy Queen (*Feenkönigin* in German) are of large size, nearly uniform sky-blue shaded with violet and margined with a pure white band round every petal.

Annual Viscarias in various colours have been inmates of our gardens for many years past. A new variety is announced having flowers of a blood-brown colour, and named *Viscaria oculata* brunea.

Marguerite Carnations still meet with a great amount of favour on account of their continuous flowering habit and beautiful colours. A yellow



TAGETES PATULA NANA GOLD RING.

EUPHORBIA POINSETTIA.

POINSETTIA PULCHERRIMA.

THOSE of us who live within the radius of the fog demon—whose oft recurring visitations leave behind most disastrous results amongst flowering plants—doubly appreciate anything capable of withstanding this autumn and winter scourge. Amongst decorative plants able to resist the ill effects of the fogs prominently stands the *Poinsettia pulcherrima*. Those who saw the splendid group of plants exhibited by Messrs. Cripps & Son, showing evidence of highest culture, being dwarf plants, well furnished with foliage, and terminating in handsome, well-developed bracts, intense in colour, and all in small pots, could not fail to admire such a serviceable and creditable exhibit.

It is evident there are several varieties of this *Poinsettia* in cultivation as they differ considerably in character. Amongst a batch I have grown this year are several with bracts of a distinctly pink or rose vermillion colour, and have several of the bracts green or nearly so, intermixed with the rest. My attention was called in summer time to the difference in the foliage, which, in the scarlet-vermillion variety is broader and of a lighter green than the other. Williams in his "Stove and Greenhouse Plants," mentions six varieties. *P. ignescens* and *P. mirabilis*, he says, are garden hybrids; the latter, he says, has an exquisite soft rose shade. *P. pulcherrima*, *P. pulcherrima alba*, *P. pulcherrima plenissima*, and *P. variabilis* make up the six. I was informed by one, well known as a cultivator and exhibitor, that the variety exhibited by Messrs. Cripps & Son, was an early flowering variety, and was sent out some years ago by Mr. Bull, of King's Road, who raised several seedlings.

MR. HEINEMANN'S NOVELTIES.

WELL-KNOWN flowers of good quality will always find a place in the garden, no matter what their age may be. The reason for this is simply that they can be relied upon to produce any desired effect. On the contrary there will always be a desire for novelties amongst flowers, on account of the interest and charm to the grower and all concerned when a really fresh acquaintance turns up to greet the eye of the beholder. The more unusual forms, and the least expected, coupled with real beauty, will always command the greatest number of admirers.

From a considerable number of novelties raised, and being put into commerce by Mr. F. C. Heinemann, Erfurt, Germany, we select several of the more striking for comment. The accompanying illustrations of three of them have been placed at our disposal by Mr. Heinemann. As far as habit is concerned we give the palm to *Myosotis alpestris stricta* coelestina (see figure) for decided novelty. The compact and columnar form of the plant, like an Irish or Swedish Juniper in habit, is very singular. All the branches are upright, so that the top of the plant is scarcely wider than the base. For this reason it should prove a useful subject in pots for market purposes, being strikingly distinct from any form of *Lobelia* we have ever seen. The flowers are blue and freely produced, over the greater portion of the exposed surface of the plant. It should also prove a distinct novelty for flower-beds of certain patterns, or for edgings to others. The flowers are also bright blue as in the typical form of the species, although, strange to say, a pink variety (*M. a. stricta* rosea) was the first to appear, being put into commerce last year.

Of late years a great number of varieties of *Petunia*

I have before me a coloured illustration of this Poinsettia in the Floricultural Magazine, Vol. 1, March, 1837, taken from a plant (one of the first to flower in this country) grown in the gardens of Wentworth House, noted at that time for its collection of new and rare plants. The plant in question it is stated was five feet high, and judging by the illustration this plant has been much improved by cultivation. It was introduced by Mr. J. McNab, in 1834, from Philadelphia, to which place it was sent from Mexico, where it was discovered by Mr. Poinsette in 1828.—A. P.

N.C.S. AND THE ROYAL AQUARIUM.

Audi alteram partem.

In all walks of life the grumbler plays an important part, and the world of horticulture is by no means exempt from the ventilation of his grievances; in fact they regularly recur in an acute stage at certain seasons of the year.

We are just now passing through one of these periods, and it is distinctly amusing, if not actually edifying, to observe with what eagerness a particular "bone" is being picked in certain quarters.

"We have no suitable place in London to hold a show in" is an old growl that comes up every November as fresh as paint. "The Crystal Palace is impossible," say the critics—want of centrality we suppose; the Royal Aquarium is, of course, everything that is had; want of space is the cry for another place; and thus the eligible centres are disposed of one by one, until the plaint is proved—in the eyes of those who make it.

The Royal Aquarium has been again the scene of the shows of the N.C.S., just as it has been for twenty years past. During that time the Aquarium authorities have certainly done all that has lain in their power to meet the requirements and wishes of the N.C.S., with the result that the society has prospered, and is now a very vital and important item amongst our big horticultural institutions. "The Aquarium people have grown rich over the connection," say the grumblers. Surely that is not apart from the fitness of things—some advantage should accrue to both sides of the compact. The donations of the Aquarium directors to the prize fund have been conducted on fairly liberal lines, and in return they have only had to depend upon the takings at the doors, which, to say the least of them, must be variable and uncertain.

No one would contend that the Aquarium is an ideal place for a show, but if we take all things into consideration we must admit that it has great advantages. First of all there is plenty of space for the exhibits, and, scarcely less important, there is an abundance of auxiliary space for the housing of the numerous and bulky adjuncts to such a show. Its centrality is scarcely less observable, and its suitability in this respect has really never been gainsaid.

The light has not been always what it should be, and in one of the galleries during the November show it was undoubtedly had. This, however, was not due to the fact that the building is normally insufficiently lighted, for the very reverse of this is the case. By an unfortunate coincidence the electric light apparatus went wrong on the date in question, as such apparatuses have a knack of doing, and the Chrysanthemums were the sufferers. Unfortunate! of course, but still an accident. Anyway, the light in the darkest part of the Aquarium was not so bad as the light, or rather the lack of it, at the National Rose Society's Show at the Crystal Palace in July last.

The surroundings! ah! now we come to the crucial point; the surroundings are unsuitable, we are told. But, *Chacun a son goût*, and it may be that the side shows, including the music, provided at the Royal Aquarium, are not so universally detested as some would have us believe. If we look at any of the great shows held throughout the kingdom we shall find that it has been found by experience that music must be provided to assist in drawing the public, else why does the Scottish Horticultural Association pay such a stiff price for a band. Even the Royal Horticultural Society must have a hand at the Temple Show. But that is different, we are told; it may be, certainly, but it is a difference in degree and not in kind. Other societies find even the music insufficient, and in addition provide for sports,

balloon ascents, and dancing. Surely the difference, if any, is fast vanishing when we come to this.

From a financial point of view it is very questionable if horticultural shows in London could be made to pay consistently if no side shows were provided. In the provinces we have only to look at Newcastle and Chester to see examples of balances appearing on the wrong side of the sheet, even when side shows have been provided. In the case of the N.C.S. the society relies upon the Aquarium to furnish them, and thus has the benefit of their "drawing" powers upon the people, but not the disadvantage of feeling their "drawing" powers on the funds of the society. The general concourse of people is as orderly at the Aquarium as in any public hall, and one need not see evil unless one goes out of the way to see it, under which circumstances a "Peeping Tom" may generally be obliged in any part of the world.

Some exception has been taken to the way in which the various exhibits were cut up and scattered all over the hall and galleries at the November show; indeed, this particular string has been played on for all it is worth, and a good deal more beside. When the critics have recourse to such an objection as this it only goes to show how weak their case really is. Those who remember the crowded state of the building during that show, and the difficulty of locomotion, will admit the necessity of giving people room to move, and how could this be done except by cutting up the exhibits, and distributing them over the available area? Certainly, had they been closer together it would have been absolutely impossible to move about.

All who have the welfare of horticulture at heart would be glad to see a special hall for shows built in a suitable locality, but in the meantime, and before such a desirable consummation of our hopes appears, we must admit that the N.C.S. is not after all so badly herthed at the Royal Aquarium.—A. S. Galt.

LIVERPOOL HORTICULTURAL ASSOCIATION.

A highly interesting gathering of this society was held on Saturday evening last, in the Free Library, Liverpool, Mr. Thomas White presiding over a good attendance of members, when Mr. P. Weathers curator of the Botanical Gardens, Manchester, gave a highly interesting review of "The progress and popularity of Orchid growing." Many of the oldest and best-known kinds, that are at present found in most collections, were first considered; and where special needs of culture were required these were briefly given. This was followed by some interesting details of the early organised importation, the R. H. S. receiving some commendation for their initial work, then followed the names and work of private and trade importers who have made themselves famous in the Orchid world by their forethought and enterprise. In connection with this detail many of the latter day gems were recognised, and honour done to those who at great risk had placed them before the public of Europe. This matter led up to the excitement and fascination that gained the attention of the amateur and professional, and was followed by mention of the popular prices at which they can be obtained, as well as the fabulous prices that the unique kinds command.

Hybridising was a subject that was treated at considerable length by the lecturer. Some interesting details of the early work were given, by the names of raisers well-known in the Orchid world, and of the many beautiful varieties that had been obtained, and now that seedlings from hybrids could be raised we have no need to fear that the introduction of new varieties would stop, as they could be obtained from seed. The review of Orchid literature was somewhat startling, for as Mr. Weathers remarked we had sufficient to form a good library.

In addition to an excellent paper, Mr. Weathers had a large assortment of excellent illustrations that were of considerable interest, especially those that had been more recently introduced. A very interesting discussion followed, which consisted more of cultural details in which several of the most noted of Liverpool growers took part.

A cordial vote of thanks was accorded to Mr. Weathers for his interesting and excellent paper. Mr. T. Carling showed a small-leaved seedling Elder, prettily marked with pea-green blotches on a white ground, which was much admired.

NATIONAL ROSE SOCIETY.

THE annual general meeting of this society was held at the Hotel Windsor, on Thursday, December 9th. C. E. Shea, Esq., presided.

After the notices convening the meeting, and the minutes of the last general meeting had been read and passed, and Mr. Geo. Gordon and Mr. W. J. Jefferies appointed as scrutineers of the ballot for the ensuing nomination of officers and committee, the report and balance sheet for the year 1897 were presented by Mr. Mawley, one of the hon. secretaries.

The report dealt with the effect produced by the Diamond Jubilee upon the National Rose Society, in common with other institutions from a financial point of view. It also caused the date of the Portsmouth show to be altered to June 18th, the earliest date on which a provincial show has ever been held by the society. The northern show took place at Norwich, where the arrangements were, on the whole, excellent.

The arrangements for 1898 provide for a show to be held at Bath, on June 23rd, for the southern part of the country, whilst the northern exhibition is to go to Halifax, under the auspices of the Salterhebble and District Rose Society, on July 14th. The Metropolitan show will be held at the Crystal Palace, on July 2nd. A Rose conference will take place at each of the exhibitions, some subject of interest being discussed at each.

The report further dealt with the privileges enjoyed by members of the society, and in conclusion expressed the thanks of the executive to secretaries of local societies, especially holding to praise Mr. H. P. Landon; also to the donors of special prizes.

The balance sheet showed a totality of receipts amounting to £804 12s. 2d., with an expenditure of £764 13s. 7d., thus leaving a sum of £39 18s. 7d.

After he had finished the reading of the balance sheet, Mr. Mawley explained that in reality the balance amounted to £64 18s. 7d., owing to the fact that £10 had been paid in for special prizes during November, and that there was a difference of £15 in the printing expenses that could be accounted for.

The formal adoption of the report and balance sheet was moved by the chairman, who delivered a very practical and pertinent address. After alluding to the fact that another milestone in the history of the society had been passed, he said that Mr. Mawley's explanation of the apparently unfavourable balance remaining in hand was very satisfactory, and had removed many of their fears. The past year had been rather a chequered one, for while the show at Portsmouth was a had one; that at the Crystal Palace had been the most successful that the society had ever had. Looking around upon the number of lovers and cultivators of the Rose that he saw there he had no fears for the future of the flower. Mr. G. Bunyard seconded, and the motion was duly carried.

A note of thanks to the officers of the society was then brought forward. It was seconded by Mr. A. Munt, and carried unanimously. The Rev. H. Honeywood D'Omhain replied.

The Rev. H. A. Berners proposed, and Mr. O. G. Orpen seconded that Bye-law 5 be altered to read: "A special general meeting," instead of "the special general meeting." This was carried without opposition.

The Rev. A. Foster-Meliar proposed, and Mr. C. Cant seconded that Bye-law 7 be altered to read: "The functions of that sub-committee shall endure until the next Annual general meeting," the word *annual* having previously been left out. There was no dissent to this alteration.

Mr. H. P. Landon proposed that Regulation 8 should read: All Roses must be exhibited as cut from the plants. Artificial aid of any kind is strictly prohibited with the exception of wires or other supports which are only to be used to keep the blooms erect. *A bloom left tied will not receive any point from the judges*, dressing Roses so as to alter their character is prohibited, *a bloom so dressed will not receive a point from the judges*. The insertion of any additional foliage *will disqualify the stand*. The italics denote the alterations and additions.

There was a good deal of discussion over this regulation, but it was seconded by Mr. Orpen and finally adopted. A new regulation to read: "Exhibition stands should be of the regulation size, viz., 4 in. high in front and 18 in. wide, and to be set out with moss or other suitable material. They should

also be of uniform length, viz., for twenty-four blooms not less than 3 ft. or more than 3 ft. 6 in.; for twelve blooms not less than 1 ft. 6 in., or more than 2 ft.; and for six or nine blooms not less than 1 ft., and not more than 1 ft. 6 in." was proposed by Mr. George Paul, and seconded by Dr. Shackleton. It was finally adopted after a great deal of discussion in which many prominent members took part.

Mr. Geo. Gordon then reported that the list of the officers and committee men for the ensuing year had been accepted unanimously.

The list is as follows:—President, the Very Rev. the Dean of Rochester, D.D.; Vice-presidents—Messrs. R. N. G. Baker, Geo. Gordon, C. J. Grahame, T. B. Haywood, E. B. Lindsell, H. V. Machin, J. D. Pawle, C. E. Shea, M. T. Masters, M.D., The Mayor of Halifax, Rev. J. H. Pemberton, Rev. A. Foster-Melliard, Rev. W. Wilks, and others. Committee—Messrs. H. Appleby, J. Bateman, W. Boyes, G. Bunyard, J. Burrell, C. E. Cant, F. Cant, W. Cocker, G. W. Cook, W. F. Cooling, F. Dennison, A. Dickson, A. C. Gifford, T. W. Girdlestone, W. J. Grant, R. Harkness, W. J. Jefferies, Conway Jones, J. H. Laing, H. P. Landon, Rivers H. Langton, J. R. Mallock, G. Mount, A. Munt, O. G. Orpen, A. W. Paul, G. Paul, A. E. Prince, W. D. Prior, T. F. Rivers, E. Sanford, A. Slaughter, J. T. Strange, A. Turner, R. E. West, H. Shackleton, M.D., Col. J. H. Pitt, Captain J. Ramsay, and the Rev. H. A. Berners.

In considering the fixtures for 1899 Mr. J. Bateman proposed and Rev. A. Foster-Melliard seconded that the Southern Provincial Show be held at Colchester, which motion was carried after a great deal of discussion.

Mr. W. J. Grant stated that he was authorised to invite the society to Helensburgh, N.B., in 1899, and assured them a warm welcome, and compliance with their rules and regulations. The Rev. J. H. Pemberton spoke strongly in favour of going to Helensburgh, and it was ultimately decided to leave the decision in the hands of the committee. The Rev. D'Ombraïn and Mr. Mawley spoke of having had some communications with Mr. P. Weathers with regard to the show being held at Manchester, but they had heard nothing more of it for the last two months.

A vote of thanks to the chairman for presiding, made on a motion by the Rev. A. Foster-Melliard brought the meeting to a close.

BUCCLEUCH NURSERIES, HAWICK.

THE visitor to the establishment of Mr. John Forbes, Buccleuch Nurseries, Hawick, N.B., during the summer or autumn months can see at a glance that florists' flowers, in the widest sense, that is, popular flowers generally, are the leading feature of the outdoor department. Hawick, to the visitor for the first time, is most romantically situated in a valley, or almost a ravine amongst the green, grass clad mountains of Roxburghshire, where the River Teviot is joined by the Slitrig, the latter, indeed, flowing through the nursery. The grounds extend up one side of the valley, but are yet below the level of the railway which serves the town. The soil is very fertile, or has been made so, in the bottom of the valley; but even on the steep and stony slopes Carnations, Pansies, and Violas flower profusely till very late in the season. Some months ago we gave a general survey of the place, and we now give a few details concerning the popular flowers we were at that time obliged to omit.

PENTSTEMONS.

A large area was planted with Pentstemons, which were in prime condition in the first week of September, and so conspicuous as to draw our attention at the first glance into the nursery. The plants varied from 18 in. to 30 in. high, according to the nature of the variety, and carried branching, massive spikes of flowers that would have been a credit to any garden or soil. The collection is rich in named varieties, and a large breadth of seedlings was also in perfection, many of the varieties being selected for naming. Size and distinctness of colour were the feature of the named varieties, whether old or new; but we can only give a brief selection of those we saw in flower.

Amongst the newly named varieties, Mrs. Norman had large and open rosy-pink flowers. Those of Mrs. Melville were rosy-scarlet with a white throat,

making a beautiful contrast. Strikingly distinct was the violet-purple of Mrs. Hope. The large flowers of Loredan Larchey were of a beautiful dark rose. Other grand flowers were—Donald McBean, purple-crimson; Crafty, rosy-scarlet, with a dark throat; Countess of Ravensworth, very dark purple; Atlantis, purple-crimson, with a white tube; and James Robertson, pure white, tinted with rose at the edges, making a large, open and chaste flower. Twenty-eight new varieties are offered for the present year.

The general collection includes a large number of handsome sorts, many of them being the sorts offered for 1896. The best Continental varieties are also included. The huge flowers of Emile Deschanel are carmine, painted with blood-red and rose. Charles Robin has carmine-rose flowers, distinguished by a transverse, white band. Renommée is a striking variety of a dark crimson, contrasting with a white throat, and of magnificent proportions. There has been a great demand for Jean Mace, on account of the size and beauty of the bright scarlet flowers. Those of William Totty are also of pronounced size, and scarlet, pencilled with dark lines on a white throat; J. W. Moorman is rose-purple, and heavily blotched in the throat; J. Fraser (1896) is rosy-scarlet and finely blotched; and William Browne is bright scarlet, large and open.

PHLOXES.

The collection of these showy and hardy subjects is very extensive, and in the open ground vary from 1½ to 3½ ft. in height, according to the vigour of the sorts. Several pure white varieties are dwarf, branching and most floriferous.

A collection of new and old varieties was being tested in pots to determine their value. Le Mahdi is dark violet-blue, suffused with purple. Albatre is pure white, with compact panicles of large flowers; Etoile, rosy-lilac and white, with a starry eye; Lord Raleigh, dark violet; Embarrasment, salmon-scarlet, with a purple eye and very choice; Wm. Robinson, rosy-salmon, with a violet centre; Beranger, rosy-white, suffused with gray and very choice; Liberté, rosy-salmon, with a carmine eye; and Cyrano, carmine, suffused with blue. Eugene Danzanvillier was honoured with an Award of Merit from the R.H.S. last summer, and has rosy-lilac flowers, with a white eye. Torpilleur is of a beautiful bright magenta, and of large size. Evénement, a bright salmon-scarlet, has also been honoured with an Award of Merit. Other choice and beautiful sorts are Cameron, pure white, with the exception of a deep mauve centre; Huxley, white, and girt with a bright lilac edge; Aurore, salmon, with a violet eye; Wm. Ramsay, of a beautiful violet; and Argon, rose, very faintly suffused with scarlet, being a new shade of colour. No good garden can afford to neglect this beautiful class of flowers, so infinitely varied in colour, size, and habit; while many of the varieties are deliciously fragrant, especially during the cool hours of the evening.

CARNATIONS.

These are mostly grown in the open air, but the tree varieties were under glass, including the well-known Yuletide, a scarlet sort of free flowering character and great value, to which nine certificates have been awarded by as many societies. A soft rose-sport has originated from it. A large batch of plants was layered in pots on the occasion of our visit, and the pots plunged in a frame from which the sashes were removed. A batch in 60, 48, and 32-size pots occupied another house, while being grown on for flowering. Buccleuch Clove is a deliciously fragrant border variety, heavily pencilled with rosy-scarlet on a white ground. The plants were in pots, but others were planted in the open along with the general collection.

Named varieties and seedlings in great quantity were flowering most profusely on the steep hill sides, where they were planted in long beds across the slope. We can only mention a few of the choicer things then flowering and furnishing any quantity of cut bloom. Queen Anne is a rich rose variety; Queen of Bedders, red, and extremely floriferous; Adonis, scarlet and deep buff, and of dwarf habit; Primrose League, a yellow fancy, heavily pencilled; Old Coin, salmon and red on an old-gold ground; and Lady Sankey, deep yellow, with a heavy crimson edge, rich and particularly free flowering. Raby Castle flowers as well in the open as it does further south. Dark varieties are well represented by the maroon Carl Moor.

Picotees are not neglected at Hawick, so long as they are vigorous and can produce plenty of flowers. A very pretty rose-edged variety was that named Mrs. Forbes, ranging from 18 in. to 24 in. in height. Pretty also is the new variety Boiard, with a bright pink or rose edge. Maggie Forbes, a canary-yellow Picotee, edged with crimson, robust and handsome, is also new for 1897. Brocklin is a beautiful yellow, with a heavy purple edge. Edelweiss is a large white, purple-edged variety of great merit. Stambuloff is a striking variety, the yellow ground being nearly covered with fiery-crimson lines. Beautiful and strange is the mixture of colours represented by Mrs. J. M. Troup, the yellow ground being flaked with red and heliotrope. Mr. Nigel is another yellow ground, edged with crimson.

Buckleuch Clove in the open ground surpassed our expectations for freedom of flowering. Its fragrance also remained the same, although it had been raining all day and practically very cold. We could not but admire the beauty of Countess Cowper, with rosy-carmine flowers, edged with a white band. As a border flower we thought it charming. Very delicate and chaste is the flesh coloured Waterwitch. James Ewart is pencilled with bright scarlet on a pure white ground. Miss Wilmott is rich carmine, and very floriferous. All of the above are free-flowering, producing also an abundance of shoots for layering. The seedlings were carrying armfuls of flowers, showing a great range of beautiful colours.

PANSIES AND VIOLAS.

Show and fancy Pansies and bedding Violas are all grown in considerable quantity. All had flowered splendidly on the steep slopes of the upper part of the nursery. Being at home on the mountains and hillsides in a state of nature, their modern garden representatives were equally happy, though the slopes must assuredly be dry in a droughty summer, which was far from being the case during the past season in the north of England and the south of Scotland. They are planted in brakes across the slopes, allowed to flower the first year and to produce seed the second. After this they are removed, the annual plantations being made on fresh ground.

Amongst the Violas were many fine seedlings a few of which will be grown again. All the best named varieties are grown, including such well known and choice things as Duchess of Fife, Bullion Goldfinch, Ardwell Gem, Ariel, Violetta, The Mearns and Border Maid, yellow with heavy blue margins, all of which were flowering profusely at the time of which we speak. Others were Mrs. Nisbet, coppery brown; Eynsford Gem, yellow; Jackanapes, a yellow sort, with the upper petals of a mahogany colour. Mary Gilbert is larger and darker than Ardwell Gem. Vestal is pure white; and A. J. Rowberry, golden yellow. The newer rayless varieties are also well represented.

HERBACEOUS PLANTS.

This being another feature of the nursery, considerable attention is given to the hardy border flowers now rapidly rising in popularity everywhere. Many of them were still in bloom in September, which in more southern latitudes were past their best or out of season. We can only indicate the general run of things. The collection of varieties of Montbretia is very full and most serviceable for cut flower purposes, being both showy and graceful. Other things in full bloom were Achillea Ptarmica The Pearl, Chrysanthemum maximum, C. m. E. Johnstone, C. latifolium, Linaria purpurea, Monarda didyma, Pentstemon barbatus, Veronica virginica, V. v. japonica, Bocconia cordata, Sidalcea malvaeflora, Papaver alpinum and the well-known Iceland Poppies. Geranium Wallichii is a most interesting trailer for rockwork, with handsome flowers and spotted leaves. Stachys coccinea has large spikes of soft orange-scarlet flowers. Tradescantia is represented by T. virginica violescens fl. pl., T. v. rubra, and T. v. fl. pl., the latter having blue flowers. Amongst Verbascums we noted V. phoeniceum, V. phlomoides, and V. nigrum. Veronica incana and many others well represented their class.

Rockery plants are grown in great variety, including collections of Saxifrage, Thymus, Sedum, Dianthus and various others too numerous to mention here. The cool moist atmosphere of this alpine valley is peculiarly suited for the cultivation of hardy border plants and florists' flowers in endless variety. Amongst the latter, East Lothian Stocks, Pentstemons, Phloxes, Pansies, Violas, Chinese Paeonies, Montbretias, and Hollyhocks deserve special mention.

SMITHFIELD CLUB.

THE fame of this club's big annual show at the Agricultural Hall is certainly not on the wane. Some 27,000 visitors accompanied our reporter on Thursday last in paying it a visit, and the grand displays of huge Sweeds, Mangolds, and other roots were well worth the crushing attendant upon even a cursory inspection.

Messrs. Carter's, Sutton's, Webb's, Harrison's, King's, Jarman's, and Dickson's stands were as usual in good evidence, with specimen Swedes, Onions, Carrots, &c.; whilst Mr. A. Findlay and Messrs. Fidler & Sons exhibited fine Potatos; and Messrs. B. Wells, W. Horne, J. Watkins, and Gaymer had Apples.

Various firms known to our readers had stands for chemical manures. Messrs. Hill & Smith showed samples of their well-known "Porcupine" tree guards and continuous fencing, though they omitted to bring along the man who for so many years has been painting them.

Lawn Mowers were shown by the famous Ipswich firm, Messrs. Ransomes, Sims, and Jefferies, Ltd.

The Surrey Seed Co., and Mr. A. Blatchford, also exhibited roots.

The one novelty noticed was a mildew-resisting Swede called "The Universal," which appears to be an absolutely distinct variety. It has pale green foliage, bright bronzy-purple top, and handsome round roots. The raisers, Messrs W. & J. Brown, claim that it is particularly adapted for early work, and is suitable for sowing in hot and light land that is subject to mildew. We understand that Messrs. Hurst & Son, 152, Houndsditch, will have the wholesale distribution of this Swede.

"MUMMERS" AT DINNER.

THE occasion of the mid-winter exhibition of the National Chrysanthemum Society at Westminster last week, afforded an opportunity for some of our enthusiasts North and West to come along, and see what could be done even in drear December in the way of the golden flower. Nor were they disappointed with their reception. Several distinguished visitors had travelled long distances in order to be present, and the opportunity was made use of as a fitting occasion upon which some reciprocal hospitality might be suitably manifested, in token of the unquestionably cordial reception with which many of our Southern members met at Edinburgh and Dublin in November.

Naturally enough an Englishman's most potent notion of celebrating an event of this sort, particularly when the function is to characterise his own native reputation for hospitality, is to entertain his guests at dinner. And dinner it was accordingly. A small private committee, acting on behalf of those who had participated in Scotch and Irish shows, was formed and all the arrangements were entrusted to Messrs. Spiers & Pond, whose manager, Mr. Cheesman, assiduously excelled himself in putting on the tables a most *recherche* repast.

Punctually at 5.30 on Tuesday night Mr. T. W. Sanders, F.R.H.S., Chairman of the National Executive, took the chair, having on his immediate right and left Mr. G. M. Ross, Secretary of the R.H.S. of Ireland; Mr. Robert Laird, Secretary of the Scottish Horticultural Association; Mr. Gardner, of the Brisbane Chrysanthemum Society; and there were also present Mr. R. Dean, V.M.H., and Mr. R. Ballantine, vice-chairmen; Mr. H. J. Jones, H.F.N.C.S.; Mr. E. Molyneux, V.M.H.; Mr. Percy Waterer, Mr. A. E. Stubbs, Mr. J. H. Witty, Mr. W. Mease, Mr. J. Wilkinson, Mr. W. Holmes, Mr. H. Myers, and others. The function was necessarily restricted to one of a semi-private character, but after the tables had been cleared the chairman submitted one or two toasts of an appropriate character.

Following the customary loyal sentiments, Mr. Sanders proposed "Kindred Societies," eulogising the undoubtedly splendid efforts that had been put forth by the societies in the sister cities of Edinburgh, Dublin, and Belfast, in the cause of the Chrysanthemum in 1897. He was personally able to testify to the extremely courteous and hospitable way in which they from the South had been received on their recent visit to Scotland and Ireland—meetings such as these could not fail to encourage the mutual interests of the parent society and those bodies who were acting in a similar capacity outside the metropolis. (Applause.) He welcomed the opportunity

of meeting Mr. Ross and Mr. Laird, and more, he was particularly pleased also, to know they had amongst them Mr. Gardiner, of Brisbane, and in asking each of these three gentlemen to respond to the toast he wished them in the names of his friends and himself a pleasant and profitable visit to London.

The toast was drunk with enthusiasm, and Mr. G. M. Ross, of the Royal Horticultural Society of Ireland, made a happy speech in response, promising that they in Dublin intended to make the best use of the good examples and precepts which were afforded by the National Chrysanthemum Society. He admired their impetus, their energy, and above all their good fellowship. Mr. Ross strongly urged the feasibility of the N.C.S. holding a provincial show each year something on the lines of the National Rose Society; he thought that to allocate some of their prestige and patronage to the larger provincial shows alternately in order of importance could not fail to be productive of lasting good. (Applause)

Mr. Robert Laird, Secretary of the famous Scottish Horticultural Association, rose to return thanks, and was received with enthusiasm. So also was his announcement of the probable surplus which he anticipated his society would this year be able to devote exclusively to charity. They had, he said, as a society, been fortunate in securing for some years past the services of Mr. Molyneux as judge, and they had been able to adopt many of his ideas and much of his advice. He was most pleased indeed to be with them that night, and expressed a wish that they might all meet again in Edinburgh.

Mr. Gardiner, Brisbane, made a most interesting speech, characterising Queensland as a beautiful climate for 'Mum cultivation. He told us, too, of the enthusiasm with which even the children took an interest in their flowers, and from the lowliest to the highest the same interest manifested itself. Their shows and fêtes were well-supported, and he expressed the conviction that the cultivation of these beautiful flowers, in common with the Mother Country, was, he considered, yet one more strand in the bond and tie to dear old England. (Applause, and three cheers for the Colonia's).

Other toasts were "The National Chrysanthemum Society," by Mr. J. Wilkinson, to which Mr. Dean and Mr. Ballantine ably responded; "The Royal Aquarium Company" by the Chair; "The Press," proposed by Mr. Molyneux and replied to by Mr. A. E. Stubbs; and a cordial toast to the genial Chairman brought an enjoyable evening to a close.

GARDENING MISCELLANY.**CORK LITERARY AND SCIENTIFIC SOCIETY.**

A LARGE audience assembled in the hall of the School of Art, Cork, on the 2nd inst., to hear Miss Harriet A. Martin lecture on "Fairy Visions in a Prosaic World." Mr. W. Lane, B.A., presided. In the course of the lecture Miss Martin stated that tree life, like human thought, was ever ebbing and flowing—at one time sinking into the dull monotony of gaunt stem and bared branches; then ever and anon breaking forth into luxuriant growth. The ceaseless tide of life bursts into new foliage under the influence of a summer sun, actively maturing, and rapidly passing into decay—rising and falling in its seasonal course, and singing in its own fashion the story of creation, preservation, and destruction common to all things in nature. In the springtime, continued Miss Martin, the people of Cork know well how the Celandines of Silverspring Lane gleam in golden lines by the dull cold walls; how the Anemones of Fota Woods rise like a foam-tipped sea over the autumn dead leaves; how the Primroses of Hollymount crowd the sunny banks and slopes; while deepening summer skies lure into dazzling shimmering loveliness the Hyacinth sheets of Castle Bernard, and the goldfields of Ardcairn outrival the wealth of Klondike. The formation and protection of the young bud, the shape of the leaves, and their functions provide topics of absorbing interest. Unusual leaf forms, such as may be met with in Nepenthes, Sarracenia, Darlingtonia and Cephalotus, as well as the more local Sundews and Pinguiculas of Irish bog lands also add interest to the many-sided activities bound closely with all studies of tree life. A very hearty vote of thanks to the lecturer terminated the proceedings.

CHRYSANTHEMUM HARLEQUIN.

SPORTS from good and well-recognised varieties of Chrysanthemums or other flowers are generally highly valued as variations upon the original. We do not know how that under notice will be received by the general public, but it is a strange and singular thing, ignoring all rules and precedents which we have hitherto noted amongst Chrysanthemums. Its parent stock is Stressa, a beautiful yellow Japanese variety. The sport is sometimes half yellow, while the other half is bright crimson. At other times only a segment of the head is crimson, sometimes only a few florets, so that it is as fickle and inconstant as it is strange, and well named Harlequin. Sports of this kind frequently appear amongst Dahlias, but not Chrysanthemums. The present one occurred in the collection of Mr. Norman Davls, Framfield, Sussex, who had several blooms of it in his grand group at the Dundee show.

SUNFLOWER GROWING.

ON former occasions we have alluded to the Sunflower as a possibly remunerative crop for British farmers. A contemporary in giving a note upon the culture and uses of this plant says:—that the Sunflower is universally cultivated in fields in southwestern Russia, between the Baltic and the Black Sea. Each part of the plant is turned to some account. Thus a hundred pounds of seeds yield forty pounds of oil. After the expression of the oil the residue is formed into oil cake for cattle. The leaves and green stocks are used as fodder. The fresh flower when it is just expanding is boiled, and eaten as a vegetable, and in this state resembles the Artichoke in flavour. The flowers themselves are much visited by bees for the sake of the honey. Referring again to the seeds, they constitute a valuable poultry food. Ground into flower and formed into pastry and cakes they form food for Plato's "two-legged animal without feathers." Even this does not exhaust the value of the seeds, for when boiled in alum and water they are said to yield a blue colouring matter. The leaves carefully dried make a substitute for Tobacco. The seed cases are made into blotting paper, and the inner part of the stalk into writing paper. The woody portion of the stalk is utilised as fuel, and from the resulting ash potash is obtained. Large plantations of Sunflowers grown in swampy localities are believed to be a protection against fever and ague. Without a doubt, in Russia at least, the Sunflower is a plant of many parts, whatever it may be in this country.

SOCIETIES.**ROYAL HORTICULTURAL.—December 14th.**

THE features of the meeting on Tuesday last were Orchids, Chrysanthemums, Pelargoniums, Cyclamens, Begonia Gloire de Sceaux, Poinsettias, Chinese Primulas, and hardy fruit, chiefly Apples. Considering the period of the year, the display was a very good one indeed.

Messrs. J. Veitch & Sons, Limited, Chelsea, exhibited a collection of Orchids, all of which were hybrids. Very fine were *Laeliocattleya Pallas*, *Cattleya leucoglossa*, *C. Mantinii*, *C. Miranda*, *Cypripedium Adrastus*, *C. Actaeus*, *C. Sallieri*, *C. Niobe*, and others. They were set up with Palms and Maidenhair Ferns.

A magnificent group of *Calanthes* was exhibited by Sir Trevor Lawrence, Bart., (grower, Mr. W. H. White) Burford Lodge, Dorking. The rich carmine-crimson *C. burfordiense*, was shown in quantity, as were also *C. Victoria Regina*, and *C. Veitchi splendens*, all of which bore long and gracefully arching spikes, which were the delight of everybody. He also had plants of *C. Veitchi lactea*, *C. Versicolor*, *C. Bella*, *C. Sanguinaria* (dark blood-red), *C. revertens*, *C. Wylamiana*, *C. Bryan*, *C. Labrosior*, *C. Amabilis*, *C. Porphyrea*, and several others of hybrid origin. The group occupied a considerable amount of table space and well deserved the Silver Gilt Flora Medal awarded it. A cultural commendation was accorded a large piece of the singular looking *Cirrhopetalum Medusae*, and another for a fine pan of *Dendrobium cymbidioides*. *Miltonia Endresii* is a pretty and uncommon species.

Messrs. F. Sander & Co., St. Albans, exhibited a group of *Calanthes* and *Dracaena godseffiana*. Amongst the former were fine pans of *C. Bryan*, *C. Bella*, *C. Florence*, *C. Victoria Regina*, &c. The

Dracaenas were in very fine form, and attracted much attention.

Messrs. Paul & Son, Cheshunt, exhibited ten baskets filled with *Cypripedium*s, including *C. insigne grandiflorum*, *C. harrisianum*, *C. insigne sylhetense*, *C. i. albo-marginatum*, &c., all well flowered.

Messrs. B. S. Williams & Son, Upper Holloway, staged a mixed collection of Orchids, including good specimens of *Calanthe Veitchi alba*, *Lycaste Skinneri*, *Cypripedium Sedeni*, *C. insigne Maulei*, *Oncidium tigrinum*, *O. varicosum*, and various others. They were set up with Palms and Maidenhair Ferns.

Messrs. Hugh Low & Co., Clapton, staged an interesting group of Orchids, including the beautiful *Cypripedium Mino magnificum*, *C. Calypso*, *C. insigne Laura Kimball*, *Cymbidium winnianum*, and various others. The last named is a beautiful hybrid. Very choice was *Lycaste Skinneri armeniaca*, with an apricot lip and petals, and white sepals. A rare and pretty terrestrial species is *Cynorchis Lowii* (Silver Banksian Medal).

Walter C. Walker, Esq. (gardener, Mr. Geo. Cragg), Percy Lodge, Winchmore Hill, exhibited *Laelia albida*, Walker's var., *L. peduncularis*, &c. A grand thing was *Cypripedium insigne*, Wigan's var., exhibited by Sir Frederick Wigan (grower, Mr. W. H. Young), Clare Lawn, East Sheen. He also had *Trichopilia brevis* and *Maxillaria grandiflora*. A very fine variety of *Laelia anceps* was shown by Admiral Sir Henry Fairfax (gardener, Mr. Wm. Yea), Ravenswood, Melrose, N.B. Two fine pieces of *Oncidium Forbesii* were shown by M. S. Cock, Esq. (gardener, Mr. W. Brickell), Tankerville, Kingston Hill. R. W. Richards, Esq., The Priory, Usk, Mon., showed a fine piece of *Laelia pumila praestans*.

Calanthe Harrisii was shown by J. T. Bennett Poë, Esq. (gardener, Mr. Downes), Holmwood, Cheshunt. Walter Cobb, Esq. (gardener, Mr. Howes), Dulcote, Tunbridge Wells, showed *Cypripedium Calypso dulcotense* and *C. J. Howes*, a very handsome variety. Thos. McMeekin, Esq. (gardener, Mr. A. Wright), Falkland Park, South Norwood Hill, exhibited *C. insigne Falkland Park* var., and *C. Mrs. Geo. Botterill*, both very pretty sorts. De Barri Crawshay, Esq. (gardener, Mr. S. Cooke), Rosefield, Sevenoaks, exhibited dark *Laelia anceps*, Mrs. De B. Crawshay, and a richly coloured variety of *L. autumnalis*. The pretty *Laelia Briseis* was tabled by Mr. Jas. Douglas, Edenside, Great Bookham, Surrey. H. Druce, Esq. (gardener, Mr. G. Walker), The Beeches, 43, Circus Road, St. John's Wood, exhibited a fine *Oncidium*, bearing two panicles of bloom.

Near the doorway a semi-circular group of late *Chrysanthemums* in pots were set up by Mr. T. Cubberley, gardener to J. W. Temple, Esq., Leyswood, Tunbridge Wells. *Janette Sheban* and *Princess Blanche* were the varieties shown. The flowers were fresh and of good colour (Silver Flora Medal).

A Silver Banksian Medal went to A. Pears, Esq. (gardener, Mr. Farr, Spring Grove, Isleworth), for a group of handsome plants, *Begonia Gloire de Sceaux* and *Poinsettias*. The latter were put up by themselves in a semi-circular group, with Palms and Bamboos. The *Poinsettias* were an even lot of plants, and carried medium-sized, very bright heads.

Messrs. Wm. Cutbush and Son, Highgate, N., sent a meritorious batch of double Chinese *Primulas*. The rose variety, *Marchioness of Exeter*, and the white *Princess*, were the two varieties on view. In both cases the flowers were large and fine (Silver Banksian Medal).

A Silver Flora Medal went to Mr. H. J. Jones, Ryecroft Nursery, Lewisham, S.E., for a group of cut *Chrysanthemums*. The blooms were fresh and good considering the advanced season. *Simplicity*, Mrs. H. Weeks, *Georgina Pitcher*, Mme. Carnot, and *Golden Gate* were some of the most noticeable varieties.

Messrs. Hugh Low & Co., Bush Hill Park, Enfield, sent a batch of finely-flowered *Cyclamen*. The flowers were large, and of capital substance. A batch of *Carnation Winter Cheer* also came from the firm (Bronze Banksian Medal).

A very showy exhibit of cut blooms of *Zonal Pelargoniums* came from Messrs. H. Cannell & Sons, Swanley, Kent. Upwards of three dozen bunches in as many varieties were displayed in an attractive fashion with a groundwork of *Adiantum*. Mr. P. Routh, Duchess of Marlborough, Herrick, Enid,

Niagara, Crabbe, and Lady Tennyson were some of the finer varieties. A Silver Banksian Medal was awarded.

Messrs. Jas. Veitch & Sons, Ltd., Chelsea, showed samples of the new winter-flowering *Begonias*, *Ensign* and *Winter Cheer*. Mr. J. R. Tranter, Henley-on-Thames, sent three blooms of the new *Chrysanthemum Mrs. J. R. Tranter*, a fine late variety. Mr. James Bryson, Helensburgh, N.B., had blooms of seedling single *Chrysanthemums*.

At a meeting of the Fruit and Vegetable Committee Mr. S. Mortimer, Rowledge, Farnham, Hants, was awarded a Silver Banksian Medal for a dozen boxes of fine Tomatos. The variety was a selected form of *Conqueror*.

Mr. Owen Thomas, The Royal Gardens, Frogmore, sent a box of *Cucumber Frogmore All the Year Round*.

Fifty-six dishes of excellent Apples were sent by Mr. H. Berwick, Sidmouth, Devon. *Sandringham*, *Lady Henniker*, *Perkins*, *Tyler's Kernel*, *Warner's King*, *Annie Elizabeth*, *Newton Wonder*, and *Golden Noble* were some of the most noteworthy varieties (Silver Knightian Medal).

A Silver Banksian Medal went to Mr. J. Day, gardener to the Earl of Galloway, Galloway House, Garliestown, for twenty dishes of Apples. Mr. Day also showed half-a-dozen heavy bulbs of *Ailsa Craig Onion*.

Nineteen dishes of Apples were forthcoming in competition for the Veitch flavour prizes. Mr. Herrin, The Gardens, Dropmore, Maidenhead, was first with *Adam's Pearmain*. Mr. C. Ross, Wellford Castle Gardens, Newbury, was second with *Cockle's Pippin*.

Twelve dishes of Pears were shown. Mr. W. Allan, gardener to Lord Suffield, Gunton Park, Norwich, was first with *President Barabe*. Mr. Geo. Wythes, gardener to Earl Percy, Syon House, Brentford, received the second prize for a dish of *Winter Nelis*.

A collection of different varieties of *Celery* and *Celeriac* supplied by various cultivators excited a good deal of interest. Mr. Bain, gardener to Sir Trevor Lawrence, Burford Lodge, Dorking, had capital samples of *Celeriac Geant de Prague*, and *C. à feuille panachée*. He also obtained a cultural commendation for a fine head of *Couve Tronchuda*. Messrs. Sutton & Sons, Reading, showed samples of their *Solid White Celery*, and Mr. T. Cross, Bury St. Edmunds, sent *Celery Victoria Pink*. Mr. Alfred Outram, 7, Moore Park Road, Fulham, sent *Celery Jubilee Red Plume*. Miss Breton (gardener, Mr. R. Handley), Sandhurst, Berks, showed *Cardoons*.

QUESTIONS AND ANSWERS

* * * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as *Carnations*, *Pelargoniums*, *Chrysanthemums*, *Roses*, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Fungus on Chrysanthemums.—W. Evans: The *Chrysanthemum* leaves you sent us are attacked with a species of *Puccinia*, possibly *P. tanacetii*. At present it is only in the *Uredo* stage, and by the older botanists would have been named *Uredo*. Now some varieties of *Chrysanthemums* are more liable to be attacked than others, and we should have been pleased if you had given us the name or names of the variety or varieties affected in this way. No doubt you are more concerned about the cure, but the disease is incurable, for the reason that the early growth of the fungus is all inside the leaves, and the spots of dark chestnut-brown, mostly on the under side of the leaves, but sometimes above, are really myriads of oval dark brown spores that have broken through the skin of the leaf ready to be carried hither and thither by the slightest breath of air, and scattered over the leaves of previously healthy plants, to repeat the evil there. It is the first time we have seen this particular form of fungus on *Chrysanthemums*, and we thank you for sending the leaves. In ordinary language this disease is termed rust. Your first proceeding should be to carefully gather all affected leaves and burn them. The affected plants should be kept in a house or pit by themselves, and carefully watched for any further outbreak. If the plants are very bad it might be worth your while destroying them, and getting healthy cuttings from some other source. The necessity for the extreme measure largely depends upon the rapidity with which the fungus spreads. We note that you have been using sulphur. This is good enough for the

ordinary mildew, but it has no effect upon *Puccinia*, because the growth of the fungus is inside the leaves. Spraying with the Bordeaux mixture might be tried at intervals during summer by way of preventing attack, but this means a deal of labour. The mixture to be tried would consist of 3 lbs. of sulphate of copper, 2½ lbs. of lime, and 30 gallons of water, or something similar to those proportions. The sulphate should be dissolved in a portion of the water, and the lime in another. When mixing the two solutions stir all the time, and add sufficient water to make up the regulation quantity.

Angle of Frame.—*Omega*: With the dimensions of the frame you furnish us, the angle of elevation at the highest part of the back would be 10°, and just barely sufficient to throw off rain under fairly favourable conditions.

Distance to plant Apples and Pears apart.—*Omega*: If the Apples are on the *Paradise* and the Pears on the *Quince*, we should presume that they are in pyramid or bush form but you do not state. Now this is all important for a direct answer. If they are as above stated, plant them at 6 ft. apart each way. This will be sufficient for a number of years without wasting the ground, which you can crop for a time with a few rows of *Strawberries* or vegetables. When the trees get too thick, lift every alternate row, and every alternate tree in the rows left. This will leave them all at 12 ft. apart, and the lifted trees may be planted elsewhere. If you desire to plant permanently at once, give the trees 12 ft. each way, and crop the ground with something between the rows.

Angle of elevation for a Fruit House.—*Omega*: The best all round angle of elevation for the roofs of fruit houses, in your part of the country at least, would be 45°. The rays of the sun would strike such a roof perpendicularly twice a year, say on April 6th and September 4th. For some days before and after these dates the divergence of the sun's rays from the perpendicular on your glass would only be very slight. The two dates given would also encompass the greater portion of your growing season, so that you would get the greatest amount of benefit from the sun during that period. For a forcing house you would get greater advantage from a higher angle so as to catch a maximum of the sun's rays in spring, but you speak of the best all-round angle.

Analysis of Soils.—W. J. R.: This would have to be done by a competent analyst. In the more important or populous districts of the country there is generally a qualified analyst in the neighbourhood. If there is one in your district the local chemist would be a very likely man to whom to apply for the desired information. What you want to know is the chemical composition of your soil, and what percentage of the ingredients are soluble or readily soluble.

Freesias.—*Flova*: For a reply to last week's question, see p. 246.

Names of Fruits.—N. Campany: 1, *Golden Reinette*; 2, *Hanwell Souring*.

Names of Plants.—W. C. Marsland: 1, *Croton Laingii*; 2, *Croton variegatum*; 3, *Croton pictum*; 4, *Croton*, not recognised; 5, *Astrantia major*; 6, *Ruscus aculeatus*, or *Butcher's Broom*.—J. M.: 1, *Begonia Rex* var.; 2, *Tropaeolum Ball of Fire*; 3, *Eupatorium riparium*; 4, *Eupatorium odoratum*; 5, *Erica gracilis*; 6, *Adiantum caudatum*.—G. Hyde: 1, *Ilex Aquifolium ferox argentea*; 2, *Prunus lusitanica*; 3, *Choisya ternata*; 4, *Oplismenus Burmanni variegatum*, generally called *Panicum variegatum*.—T. H.: 1, *Laelia autumnalis*; 2, *Oncidium praetextum*; 3, *Odontoglossum Pescatorei*.

Communications Received.—James Shennan.—A. Hope.—H. Cannell.—L. H. Bailey.—A. E. S.—G. Wythes.—A. W.—E. H.—J. D.—H. C.—A. L. D.—S. M.—A. M.—Geo. Saunders.—S. T. B.—Y.—L. Menzies.—Rose.—Dahlia.—P. P.

TRADE CATALOGUES RECEIVED.

SUTTON & SONS, Reading.—Sutton's Amateur's Guide in Horticulture for 1898.

A. W. YOUNG & Co., Stevenage, Herts.—Special List of Hardy Herbaceous, and other Roots for Autumn and Spring Planting.

JOHN PEED & SONS, Roupell Park Nurseries, West Norwood, London, S.E.—Peed's Seed Catalogue for 1898.

HENRY ECKFORD, Wem, Shropshire.—Catalogue of Giant Sweet Peas, Culinary Peas, Vegetable Seeds, Flower Seeds, &c.

JAMES CARTER & Co., 237, 238, and 97, High Holborn, London.—Carter's Tested Garden Seeds. 1898.

THOMSON'S VINE & PLANT MANURE.

SPLENDID FOR ALL PURPOSES.

Largely used both at Home and Abroad.

SOLD BY ALL SEEDSMEN.

Agent for London:—J. GEORGE, 14, Redgrave Road Putney, S.W. Agent for Channel Islands:—J. H. PARSONS, Market Place, Guernsey.

SOLE MAKERS:—

WM. THOMSON & SONS, LTD., TWEED VINEYARD, CLOVENFORDS, N.B.

Price Lists and Testimonials on application.

ANALYSIS SENT WITH ORDERS OF 1/2 CWT. AND UPWARDS.

INDEX TO ADVERTISEMENTS.

Table listing various categories such as Bulbs, Catalogues, Chrysanthemums, Ferns, Florists' Flowers, Flower Pots, Fruit Trees, Garden Sundries, Heating Apparatus, Horticultural Builders, Insecticides, Manures, Miscellaneous, Orchids, Publications, Roses, Seeds, Strawberries.

GARDENING BOOKS.

MANURES and THEIR APPLICATION, A Lecture by W. DYKE. Post free, 6d. each, or 3 copies for 1s. 3d

THE NATIONAL CHRYSANTHEMUM SOCIETY'S OFFICIAL CATALOGUE. Jubilee Edition. Gives alphabetical lists of new and old varieties, with a bibliography of the flower. By Mr. C. Harman Payne. Price 1s.; post free, 1s. 2d.

HARDY ORNAMENTAL FLOWERING TREES AND SHRUBS, by A. D. WEBSTER. A valuable guide to planters of beautiful trees and shrubs for the adornment of parks and gardens. Second and cheap edition now ready. Price, 2s.; post free, 2s. 3d.

VINES & VINE CULTURE.—The best book on Grapes. By Archibald F. Barron, late Superintendent of the Royal Horticultural Society's Garden, Chiswick, and Secretary of the Fruit Committee.—A New and Cheaper Edition, Revised and Enlarged. Demy 8vo, Handsomely Bound in Cloth. Price, 5s.; post free, 5s. 3d.

THE CABINATION: ITS HISTORY, PROPERTIES, AND MANAGEMENT; with a descriptive list of the best varieties in cultivation. By E. S. Dodwell, Third edition, with supplementary chapter on the yellow ground. Price, 1s. 6d.; post free, 1s. 7d.

FERNS & FERN CULTURE. By J. Birkenhead, F.R.H.S.—How to grow Ferns, with selections for stove, warm, cool and cold greenhouses; for baskets, walls, warden cases, dwelling houses, &c. Price, 1s.; by post, 1s. 3d.

THE AMATEUR ORCHID GROWER'S GUIDE BOOK. By H. A. Burberry (Orchid Grower to the Rt. Hon. J. Chamberlain, M.P.). Second Edition, with coloured plates. Containing sound, practical information and advice for Amateurs, giving a List with Cultural Descriptions of those most suitable for Cool-house, Intermediate-house, and Warm-house Culture, together with a Calendar of Operations and Treatment for each Month of the Year. In Cloth. Price 5s.; post free, 5s. 3d.

Postal and money orders should be made payable at the East Strand Post Office to F. A. COBBOLD

"GARDENING WORLD" Office, 1, Clement's Inn, Strand, London, W.C.

The Gardening World.

ESTABLISHED 1884.

Price One Penny; Post Free, Three-halfpence

Subscription (including postage): 3 months, 1s. 8d. 6 months, 3s. 3d.; 12 months, 6s. 6d., prepaid.

Foreign Subscriptions to all countries in the Postal Union, 8s. 8d. per annum, prepaid.

Published every Thursday morning, and can be obtained through all Newsagents and Booksellers, and from all Railway Bookstalls.

Handsomely bound Volumes, I to XIII., 6s. 6d. each. Covers for binding, 2s. 6d. each.

SUBSCRIPTION FORM.

Please send me "THE GARDENING WORLD,"

for _____ months, commencing on _____

for which I enclose _____

Name _____

Address _____

** Advertisements for the current week, and also "Stop Orders," must reach the office not later than the first post on Wednesday Morning.

SCALE OF CHARGES FOR ADVERTISEMENTS

Small Advertisements, solid type, 6d. per line of about nine words. Displayed Advertisements, per Inch, 6s.; per column (12 Ins. long), £3 5s.; per halfpage, £5; per page, £9. Special quotations given for a series. Gardeners and others Wanting Situations thirty words for 1s. 6d., prepaid.

Telegraphic Address: "BAMBUSA, LONDON."

1, CLEMENT'S INN STRAND, LONDON, W.C.

A Special Offer to Readers of THE GARDENING WORLD 25/- BOOK for 8/-

NO HOME SHOULD BE WITHOUT ONE.

Ogilvie's Encyclopædia

OF USEFUL INFORMATION AND WORLD'S ATLAS.

No Single Book ever before contained such a Wealth of Knowledge.

By Special Arrangement with the Publishers of the "Encyclopædia of Useful Information and Atlas of the World," we are enabled to offer to the Public a Magnificent 25s. Volume for 16 of the coupons, which will appear weekly, together with 6d. each, accepted in Weekly Instalments, or the Coupons may be held until the whole period has elapsed and brought or sent to the Office with 8s., and 6d. towards carriage.

A COMPLETE ILLUSTRATED LIBRARY IN ITSELF.

A universal assistant and treasure-house of information on every conceivable subject, from the household to the manufactory. In short, gives information about everything, is absolutely indispensable to everyone in all walks of life; the contents being so separated, indexed, and arranged that they can be turned to at once. It is

THE BEST { BOOK OF INFORMATION } EVER ISSUED. Size of Encyclopædia: 9 by 11 1/2 inches. 656 Pages.

It contains

MANY MAGNIFICENTLY ENGRAVED COLOURED MAPS,

and a description of every country under the sun, besides much other matter relative to the Home, the Farm, the Factory, a Dictionary of Statistics—many Useful Tables, Poetical Selections, Synonyms, Famous Bridges and Ships, How to Calculate, How to Cook, How to Get Rich, How to Cure all Diseases, How to Succeed in Business, Table of Weights and Measures, and

HUNDREDS OF OTHER TOPICS OF GREAT VALUE TO EVERY PERSON

who desires to be up to the times. To see the Book is to want it. To Members of Mutual Improvement Societies it will prove of inestimable value.

The articles are written by men whose lives have been devoted to the subjects treated, are short and concise, but contain full information up to date. It is to be consulted on every subject that arises in everyday life, by old and young alike. It contains a complete Illustrated Atlas of the World.

IN THESE DAYS OF COMPETITION

it is imperative that a Gardener should be a well-informed individual. Here is an Encyclopædia containing an immense amount of knowledge that will be of the greatest service to him.

YOUNG GARDENERS,

do you wish to be successful? Then remember that to possess knowledge is the surest way to achieve success.

It is elegantly bound in Morocco Cloth, with beautifully designed Gilt Side-stamp and Red Edges, making at once the most handsome and durable as well as THE MOST USEFUL BOOK EVER MADE or sold for 25s.

181297. COUPON.

OGILVIE'S ENCYCLOPÆDIA OF USEFUL INFORMATION, AND WORLD'S ATLAS, (Published Price 25s.) 16 COUPONS, AND 6d. WITH EACH.

Name _____

Address _____

Postal Orders or 1d. stamps may be sent. COUPONS AND CONTRIBUTIONS MAY BE LEFT at or SENT TO the Office for

THE PUBLISHER OF

THE GARDENING WORLD.

COPIES OF THIS BOOK CANNOT BE BOUGHT. They can be obtained only by using these Coupons.

COVENT GARDEN MARKET.

December 15th, 1897.

FRUIT.—AVERAGE WHOLESALE PRICES.

Table with columns s, d, s, d. Items: Apples, Cobbs, Grapes, Pine-apples, St. Michael's.

VEGETABLES.—AVERAGE WHOLESALE PRICES

Table with columns s, d, s, d. Items: Artichokes, Asparagus, Beans, Beet, Brussel Sprouts, Cabbages, Carrots, Cauliflowers, Celery, Cucumbers, Endive, Herbs, Horse Radish, Lettices, Mushrooms, Onions, Parsley, Radishes, Seakale, Small salad, Spinach, Tomatoes, Turnips.

CUT FLOWERS.—AVERAGE WHOLESALE PRICES

Table with columns s, d, s, d. Items: Atom Lilies, Asparagus Fern, Bouvardias, Carnations, Chrysanthemums, Daffodils, Eucharis, Gardenias, Geranium, Lillim longiflorum, Lily of the Valley, Lilac, Marguerites, Malenhalf Fern.

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

Table with columns s, d, s, d. Items: Arbor Vitae, Aspidistra, Chrysanthemums, Cyclamens, Draoena, Dracaena, Eranthis, Erica, Erica, Ferns, Ficus, Follage Plants, Lillium, Lycopodiums, Marguerite Daisy, Myrtles, Palms, Pelargoniums, Scarlet, Tulips.

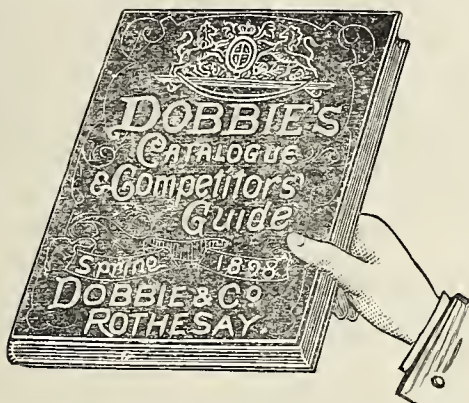
"Hardy Ornamental Flowering Trees and Shrubs"

By **A. D. WEBSTER.**

SECOND AND CHEAP EDITION

This book is a valuable guide to planters of beautiful trees and shrubs for the adornment of parks and gardens. **Price 2s.; post free, 2s. 3d.**

"GARDENING WORLD OFFICE," 1, Clement's Inn, STRAND, LONDON.



The 31st Edition is Now Ready.

200 PAGES. 150 ILLUSTRATIONS.

PRICE SIXPENCE, POST FREE.

(by Parcel Post—it is so large).

CONTENTS—The Best Seeds and Potatos for Garden and Farm; also Descriptive Lists of Carnations, Chrysanthemums, Dahlias, Fuchsias, Gladioli, Herbaceous Plants, Pansies, Pelargoniums, Pentstemons, Phloxes, Pinkes, Pyrethrums, Roses, and Violets; with full Cultural Directions for each.

PRESS & OTHER OPINIONS OF THE BOOK.

WEST HUMBERSTONE.—"Your Catalogue and Guide safe to hand. I am very pleased with it, and I am sure every Amateur, in particular, should have one in his possession, as they are worth 100 times their cost."—T.H.

Leeds Mercury.—"For a useful selection of vegetable and flowers, and a trustworthy guide in the culture of these, it is vastly ahead of ordinary catalogues."

ABROATH.—"Very many thanks for your valuable Catalogue and Guide. As an Amateur, I find cultural instructions of immense value."—D.A.

Bell's Weekly Messenger.—"Contains elaborate and complete articles on cultivation for exhibition as well as ordinary purposes. It is thus far more than a mere catalogue—quite an encyclopædia of farm and garden plans."

YARM.—"Thanks very much for your Catalogue of 1897. In looking through it, I find it is even better than last year's, which I thought could not be surpassed."—W.C., Gardener to Sir T. Richardson, M.P.

Apply early, and please mention this paper.

DOBBIE & Co.,

SEED GROWERS AND FLORISTS TO THE QUEEN, ROTHESAY.

6s. Nett, Claret Roan Gilt, Illustrated. A Charming Gift Book. "A brilliant success." *The Times* "Particularly Good." *The Academy*. **LONDON IN THE TIME OF THE DIAMOND JUBILEE** By Emily Constance Cook and Edward T. Cook, M.A., Author of "Studies in Ruskin," etc London—SIMPKIN, MARSHALL & Co. Llangollen—DARLINGTON & Co.

DARLINGTON'S HANDBOOKS

"Sir Henry Ponsonby is commanded by the Queen to thank Mr. Darlington for a copy of his Handbook."

"Nothing better could be wished for."—*British Weekly*. "Far superior to ordinary guides."—*London Daily Chronicle*. 1s. each. Illustrated. Maps by JOHN BARTHOLOMEW, F.R.G.S.

BOURNEMOUTH AND NEW FOREST.
ABERYSTWYTH, BARMOUTH, and CARDIGAN BAY.
THE CHANNEL ISLANDS. THE ISLE OF WIGHT.
THE WYE VALLEY. THE SEVERN VALLEY.
MALVERN, HEREFORD, WORCESTER & GLOUCESTER.
LLANDRINDOD WELLS AND THE SPAS OF MID-WALES.
THE VALE OF LLANGOLLEN.
BRISTOL, BATH, CHEPSTOW, WESTON-SUPER-MARE.
BRECON, ROSS, TINTERN, AND THE LOWER WYE.
LLANDUDNO, RHYL, BETTWS-Y-COED, AND SNOWDONIA.
BRIGHTON, EASTBOURNE, HASTINGS, AND ST. LEONARDS.

3s. 6d. net. 60 illustrations. 24 maps and plans.

LONDON AND ENVIRONS.

Llangollen: Darlington & Co. London: Simpkin & Co., Ltd.

Railway Bookstalls and all Booksellers.

PHOTOGRAPHS.—Beautiful Photographs of Scenery, Ruins, etc., of Italy, Greece, Turkey, Palestine, and Egypt; also North Wales, 1s., 6d., and 2s. Complete List Post Free DARLINGTON & Co., Llangollen.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—Bacon.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, DECEMBER 25th, 1897.

BUDS AND STIPULES.—In continuation of this subject, which the Right Hon. Sir John Lubbock, Bart, M.P., F.R.S. &c., has been studying for some years past, he again read papers on the 18th March, and 17th June last, at meetings of the Linnean Society. The papers now appear in the *Linnean Society's Journal*—Botany, Vol. XXXIII., pp. 202 to 268.

These stipules when present serve for various purposes in the economy of the plants to which they belong. The most usual purpose is to protect the young and tender leaves while yet in the bud stage. They may protect the leaf to which they belong, but more often they cover the next younger leaf or leaves; for in winter they are as large and often several times as large as the leaf to which they belong, while in summer the reverse is the case, even if the stipules survive the expansion of the bud. In the case of the Oak and Beech it may be taken for granted that the only purpose they serve is to protect the leaves during the inclemency of the winter and spring months, seeing that they die and fall in the course of a few days after the expansion of the leaves. The buds, therefore, have to be examined in order to discover a use for the stipules. Though these British trees are so closely allied, the winter buds are remarkably different in size and form. Those of the Beech are long, pointed and relatively narrow, while the buds of the Oak are short and blunt. Yet the leaves in summer assume the reverse of these proportions. The reasons for these differences are not always obvious; but the growth of the Oak buds is arrested at an earlier stage of their development in summer, when the season's growth has been completed. About twelve pairs of stipules covering the buds of the Beech have no leaves accompanying them; whereas the Oak buds have 20 pairs, that is 40 stipules as a rule, before a leaf presents itself in association with them. These facts should demonstrate the utility of stipules for the particular purpose mentioned. Both leaf and flower buds are similarly protected. Whether it would be useless or not to speculate on the differences between the buds of these trees, the fact remains that the young leaves of the Beech and Oak often get destroyed or greatly injured by late frosts in spring after a period

of mild and genial weather induces them to leave their winter covering of stipules. This applies to trees in the north of Scotland as well as in the south of England, but more often, probably, in the latter case on account of the earlier spring and the earlier development of the foliage. It might be argued that the leaves of the Oak are more tender than those of the Beech, and that they require this extra protection in winter; and this is probably the case for they more often get injured.

The poets of by gone times have described the winter buds as the "cradle" of the young leaves, and the scales as the "swaddling clothes," that to them being a sufficiently close description. The poet more nearly touches the gardener's interest when he says that "in one season's chariot rides the glory of the next," the allusion to the leaves and flowers for the following season being wrapped up in the buds of the current year being perfectly correct in all those cases where the trees and shrubs bloom in spring and early summer. This applies to most, if not all, of our fruit trees and bushes. A knowledge of the details of the winter buds of various trees should prove serviceable to gardeners, if it merely quickens their powers of observation in determining which is a flower and which is a leaf bud. That is important whether fruit or ornamental flowering trees are being pruned. A study of the winter buds and their relative safety from any degree of cold we might experience in this country, might also lead to experimenting with valuable fruit trees in spring with the object of retarding the development and unfolding of the winter buds in order to save the blossom from the destructive effects of late spring frosts.

To return to the text of Sir John Lubbock, we find that the allies of our hardy fruit trees, such as Apples, Pears, Plums, and Peaches, all belonging to the Rose family are well provided with stipules, which in conjunction with some portion of the leaves themselves constitute the scales of the winter buds. This is so in the case of the White Beam Tree (*Pyrus Aria*). It is also interesting to note that the scales are firmly glued together in winter and early spring with a viscid gum, calculated to exclude rain from the interior of the buds in which the tender leaves are situated. Incidentally we may mention that leaves and flowers are much less liable to injury from frost provided they are perfectly dry during the occurrence of the latter. Gardeners themselves are well aware of that fact. It may be asked how it happens that stipules, when they serve the purposes of protection, should be hardier than the leaves they cover. The reply is that the outer ones if not actually dead, are very much modified in being thicker, more leathery, less watery, and therefore less liable to injury, all of which is brought about gradually by exposure during late summer, autumn and winter while the temperature is sinking. Very often the outer ones are quite dead before spring; but that is of no consequence so long as the leaves within are safe.

Sometimes the stipules are so modified as to perform the function of leaves, the latter being absent or represented by a short tendril, as in the case of *Lathyrus Aphaca*. The Pea itself has very large stipules which perform the function of leaves to a degree proportionate with their size; while at the same time they serve to protect leaves and flowers in the terminal buds so long as the stem continues to elongate. Some stipules or their representatives develop into tendrils which enable the plant to climb; and others harden into spines of a more or less formidable character, and must thereby assist in preventing the plant or its foliage from

being entirely destroyed by browsing animals. The various forms and modifications of the stipules if only of scientific value are certainly highly interesting, and open a wide field of study for those seeking for information and edification, and for those in quest of a hobby and can command the time to pursue it. Even our native trees, shrubs and herbs have a wide range of facts to disclose, and pleasure to offer the student of Nature. Plants which do not possess stipules have their leaves more or less modified to serve the purpose of protection in our northern climate. The coloured illustrations of unfolding buds and leaves at the end of the text of Sir John's papers show how ornamental many of our trees are in spring and early summer.

Lady Aberdeen has just named a Rose "Lady Dorothea" in memory of a little deceased daughter of her's. It is a sport from Sunset.

Mr. James Wilson has been appointed and has entered upon his duties as head gardener and steward to Sir J. T. Brunner, Bart., M.P., Druids' Cross, Wavertree, Liverpool.

R.H.S. Victoria Medal.—At a meeting of council held on December 14th, it was decided to issue a Diploma to all the recipients of the Victoria Medal of Honour. It was also unanimously resolved:—"That in the event of any recipient violating the conditions on which the Victoria Medal of Honour was bestowed, by using it for advertising or for the promotion of trade interests in any other way, the name of such offender shall be struck off the list."

Mr. H. G. Smyth, horticultural sundriesman by special appointment to Her Majesty the Queen, has now been able to take possession of his new premises, which have been in the course of re-building for many weeks past owing to extensive alterations and the re-construction of a large block of buildings along one side of the street. His new address is Clark's Mews, High Street, Bloomsbury, London, W.C., the new premises being a decided improvement upon the old.

Chrysanthemum Pennsylvania.—The Editor of the *Weekly Florists' Review* considers this variety as one of the two "stars" of the past Chrysanthemum season in America, the other being the white Frank Hardy. Both scored high with the Chrysanthemum Society of America. Other writers have a different opinion, but they may be wrong seeing that they describe it as identical with Philadelphia, whereas the specimens we have seen and described at p. 212 of THE GARDENING WORLD are of a much darker yellow, though the form is the same.

Deplorable gun accident to Mr. Greenway.—We are grieved and pained to hear of a sad accident which has befallen Mr. William R. Greenway, gardener to Sir Lionel Darrel, Bart., Fretherne Court, Stonehouse, Gloucester. Sir Lionel was out with a shooting party on the estate on Friday, the 17th inst., Mr. Greenway being requisitioned to assist, as is frequently the case on private estates in country districts, when a gun carried by one of the party exploded prematurely while the breech was being closed, and the charge lodged in Mr. Greenway's left leg. Happily the local doctor formed one of the party, otherwise the victim of the accident would have bled to death under the circumstances. He was driven to the Gloucester Infirmary, a distance of ten miles, in Sir Lionel's carriage, in company with his grief-stricken wife, the doctor, and the gentleman whose gun exploded. Sad to say it was found necessary to amputate Mr. Greenway's leg above the knee. He is an old Kewite who left Kew Gardens on the 22nd of August, 1885, to take up the position he has since held to the perfect satisfaction of his employer. He has a family of eight young children dependent upon him for their daily bread, and while we sympathise with him and his family, we know for certain that all of our readers who, like us, were contemporaries with him at Kew, will sincerely regret this distressing misfortune to him, for Mr. Greenway was a great favourite with and respected by everybody.

Flowers in Winter.—A correspondent from Ulverston, Lancs., announces that Primroses, Violets, Wallflowers, Lupines, and Polyanthuses are blooming in his garden.

Affirmative or Negative?—The Chester County Carnation Society in America is to discuss the pertinent question at its next meeting: "Is the American Carnation Society of any use under the sun?"

Mr. Rhodes and his Orange Trees.—The *Cape Argus* says that Mr. Rhodes got out a consignment of Orange trees to Bulawayo and gave them away to settlers, because his own farm was not ready to receive them. There were many applicants for the trees offered, and Mr. Rhodes gave them each a number on the condition that they would give one-tenth of the produce to the Memorial Hospital. On being asked whether he could trust the people, he replied "Certainly; I can trust a large percentage of them, and the custom will develop into a habit which will have greater force than any law."

Coiled Wire Stakes.—There appears to be more than one modification of these in use. Some samples were exhibited at the Drill Hall, on the occasion of the last meeting of the Royal Horticultural Society, on the 14th inst., by Mr. A. Outram, 7, Moore Park Road, Fulham, London, S.W. They consisted of moderately stout, galvanised wire, having three complete coils on the top of the part which is intended for being pushed into the ground. These coils vary in width, three different samples being shown, which may be employed for different purposes by those who utilise them for the purpose of saving time in tying. All are intended, however, for light staking. The stems requiring to be supported are twisted into the interior of the coil and the operation is complete.

Renfrewshire Gardeners' Mutual Improvement Society.—The usual fortnightly meeting of this society was held in Yields' Hall, Paisley, on the 8th inst., Mr. Robert Gallacher, Craighends, in the chair. There were two subjects for this evening, the first being a paper on "Draining, Road making, and Levelling," by Mr. James Walker, Hawkhead. Mr. Walker is an acknowledged authority in the district on such matters, and fully upheld his reputation by the able manner in which he handled the subject. The second was a paper by Mr. McKinnon, Kilnside, on "How Plants obtain their Food." He explained his subject clearly in a concise and able manner. Both papers were very much appreciated by those present, several of the members taking part in the discussion which followed. Votes of thanks to those gentlemen and the chairman terminated a most instructive meeting.

Woolton Gardeners' Mutual Improvement Society.—The usual gathering of members of this society took place on the 16th inst. at the Mechanics' Institute, Mr. T. D. Smith presiding over a large audience. The subject was an attractive one for Liverpool gardeners, being on the Chrysanthemum, by Mr. G. Burden, of Claughton, the winner of the Liverpool Horticultural Society's Challenge Vase. The subject was considered solely from an exhibition point of view, commencing with the cuttings, those from the soil being preferred; and in all cases clean pots were essential. Various modes of striking the cuttings were submitted, but the one recommended was to place in a cool house and plunge the pots in leaves. The final potting should be at the end of May or early in June, the compost most suitable being three parts good loam, one of cow manure, one of leaf mould, and a sprinkling of wood ashes and soot. It was advised to pot firmly. The chief points laid down were stopping for the purpose of timing the bud, in some cases from the 6th to the 18th of July being the best. The Queen family, if late, may have the top removed about July 20th. Buds should be secured between August 15th and September 15th. Feeding was important, a change of diet being recommended; and in all cases cleanliness must be strictly adhered to. Greenfly and mildew must be closely watched and dealt with. An interesting discussion followed, chiefly on damping, for which the lecturer recommended ventilation and, if necessary, a little fire heat to dispel the moisture and give an interchange of air. A cordial vote of thanks was tendered the chairman and lecturer for their valuable services.

Dutch Horticultural and Botanical Society.—At a meeting of the Floral Committee of this society on the 27th November, first-class certificates were awarded to Messrs A. P. Bowman & Sons, of Arnhem, for Chrysanthemums Belle de Gordes and Mdle. Lécadie Gentils; and to Mr. W. Van Veen, of Leiden, for Chrysanthemums Lady Esther Smith, Mrs. J. Lewis, and Mme. Gustave Henry. Certificates of Merit were accorded to Mr. J. Van Houten, of Hilversum, for a white sport from Chrysanthemum C. Harman Payne, and to Mr. A. G. M. Richard, of Naarden for *Yucca filamentosa bicolor*. This latter was shown at the meeting of October 9th, 1897.

International Congress on the Protection of Birds.—A congress on this subject was inaugurated at Aix-en-Provence on the 9th of November last, under the auspices of the Ligue Ornithophile Française, and was concluded on the 27th of that month, according to M. L. Lemon, Esq., in a note to the editors of "Knowledge." The sittings were conducted under the presidency of M. Louis Adrien Levat; and the burden of the matter discussed related to the protection of insectivorous birds useful to agriculture. French and Italian agricultural and horticultural societies were represented, as well as the Society for the Protection of Birds and the Selborne Society in Britain. French societies similar to the two last named also sent delegates. The resolutions formulated at the meetings were to be forwarded to the various Governments of Europe through the medium of the French Minister for Foreign Affairs.

Ealing Gardeners' Society.—There was a large attendance of members of this society on the 14th inst., to hear a paper on "The Present-Day Gardener," by Mr. Arthur Pentney, Worton Hall Gardens, Isleworth. Mr. Pentney dealt with his subject in a broad and liberal spirit, giving the modern gardener credit for a good deal of work and influence. A comparison between the past and present gardener was, of course, a necessity in this Jubilee year of grace; the former, however, also came in for a share of praise, not only by the reader, but by several of those who took part in the discussion. Considering the primitive nature of the appliances of the early century gardener, he accomplished some wonderful things. The present-day worker, however, was required to do many more things, and to cope with a larger number and variety of plants than his ancient predecessor. Mr. Pentney received a cordial vote of thanks. He exhibited a very pretty specimen *Begonia Gloire de Lorraine*, which was much admired. Mr. C. B. Green presided.

Royal Horticultural Society of Ireland.—The annual general meeting of this society was held at the Central Hall, 12, Westmoreland Street, Dublin, on the 8th inst., Capt. Lewis Riall, D.L., presiding. The secretary, Mr. G. M. Ross, read the report of the council for the past year, when it transpired that the receipts from the various shows had risen from £373 16s. 6d. to £562 17s. 0d. This prosperous state of matters was largely due to the visit of their Royal Highnesses the Duke and Duchess of York to the autumn show, when a large concourse of visitors attended. There was, however, an increase of the receipts from other shows. Two of the Society's Challenge Cups had been won outright during the year, but they had been replaced, the Rose Cup by Messrs. Alex. Dickson & Sons, Newtownards; and the Chrysanthemum Cup by Lord Ardilaun, the president. The total receipts for the year were £1,023 11s. 5d., and after paying all expenses there was a balance in hand of £99 7s. 8d. The chairman, in moving the adoption of the report, stated that the entries had steadily increased during the last three years, and the receipts were also rising. Mr. F. W. Moore, curator of the Royal Botanic Gardens, Glasnevin, proposed an alteration of the rules, whereby three practical gardeners would be able to serve on the council each year, and this motion was carried. The members of council for 1898 are Lieutenant-Colonel Jervis-White, J.P.; Rev. F. C. Hayes, M.A.; F. W. Moore, Esq., M.R.I.A.; H. Smallman, Esq.; Maziere J. Bady, Esq.; Captain Lewis Riall, D.L.; Shapland M. Tandy, Esq.; and Mr. W. J. Mitchison for the first time; Mr. R. Russell, who was also a candidate, being again defeated.

Compliment to Mr. Hugh Dickson, Belmont.—On Thursday evening, the 16th, Mr. Hugh Dickson, the owner of the well-known Belmont nurseries, was entertained to dinner by a large circle of his friends, and was made the recipient of a beautifully-illuminated address in album form, which set forth the guest's efforts for a long period of years in the promotion of horticulture in Belfast and the North of Ireland. The function took place in Messrs. Thompson & Sons' Restaurant, Donegall Place, Belfast, and was in every respect a great success. Mr. Thomas Shaw, J.P., presided, and a numerous company joined in the well-deserved tribute to the popular guest. Mr. M'Intosh, in responding to the toast of Mr. Dickson's old friends, said that having known Mr. Dickson when living in Newtownards he, in common with the entire community there, regretted when he left the town. He was a most upright, sterling, energetic man, and they had followed his career with the greatest interest, and taken deep pride in all his achievements. During the evening an excellent programme of song was rendered, and the enjoyable proceedings terminated with the singing of "Auld Lang Syne."—*W. F. C.*

with vases of Chrysanthemums, Roses, etc. In the centre of the room a large circular table, on which were placed Grapes and other fruits to regale the company, was most beautifully decorated. A magnificent and elegantly arranged vase of Chrysanthemums occupied the centre, while smaller vases of Tea Roses, Cattleyas, Orchids, etc., with two very elegant baskets of growing Lily of the Valley and Ferns, rendered this table a feast of beauty.

The guests were received by the president and his amiable wife, whose geniality and courtesy to all present added greatly to the success of the gathering. The immediate object of the meeting was to publicly announce the allocation of the surplus funds from the recent Chrysanthemum show which, as our readers are already aware were to be devoted to charitable objects. The success of the exhibition all our readers know from our reports at the time was of a

On the invitation of the president, the treasurer of the Association (Mr. McKenzie) then presented the Lord Provost with a cheque for £100 for the Infirmary Pavilion Scheme; and also handed a cheque for £50 to Mr. Cook, C.A., Treasurer of the Sick Children's Hospital.

The Lord Provost, before referring to the objects of the meeting, congratulated the proprietor of the Hotel on the completion of building, and on the beauty of the rooms. In the recent eminently successful show they had, he said, done three good things; they had stimulated an interest in the cultivation of these beautiful flowers; they had given a vast deal of pleasure to the citizens of Edinburgh; and by handing over these cheques they had placed the city under a debt of gratitude to the society.

On behalf of the Royal Infirmary he thanked them most heartily for that handsome cheque, and

A SOUVENIR OF EDINBURGH SHOW.

THE accompanying group of portraits depicts on the left the president of the Scottish Horticultural Association, whose year of office, now closing, has been endowed with so signal a success beyond all previous records. The handsome sums which the association last week allocated to charitable purposes, owe much of their existence to the personal devotion and assiduity of Mr. Todd, as president, who, by the bye, gives an "At Home" this week at the Society's Official House at which the formal presentation of these sums will be made to the charities selected.

To the right of Mr. Todd in the photo is Mr. A. Williams, the gifted musical director of the Grenadier Guards Band, whose performances at Edinburgh were undoubtedly an important factor in the attendances. Mr. Williams had the gratification of knowing that his efforts have succeeded in fully maintaining the high reputation of the Band, and he is sure of a hearty welcome again at Edinburgh.

To the left of the group is the well-known figure of Mr. H. J. Jones, of Ryecroft fame, who stands in the proud position of being the only winner in the miscellaneous section of the association's Diamond Jubilee Gold Medal—a coveted honour which does him infinite credit.

To the right is Mr. A. E. Stubbs, of the Ichthemic Guano Company, whose tasteful exhibits are invariably a welcome adjunct at all our leading shows.

SCOTTISH HORTICULTURAL ASSOCIATION.

PRESIDENT'S AT HOME.

A HIGHLY successful gathering of this spirited and popular association took place in the Royal British Hotel, Edinburgh, on the evening of Tuesday the 21st inst. The meeting was organised and carried through by Mr. M. Todd, the energetic and popular president of the association, ably assisted by Mr. R. Laird and Mr. J. H. Murray, the hon. and assistant secretaries, and was attended by about 150 ladies and gentlemen. Amongst those who accepted invitations were the Lord Provost of Edinburgh; Bailies Kinloch, Anderson, Hay, Mackenzie, and Sloan, Councillor Cranston, Mr. D. P. Laird, Mr. John Methven, Mr. David Mitchell, Mr. Dunn, Dalkeith Park; Mr. Smith Hopetoun, Mr. R. W. E. Murray, Mr. A. Milne, Mr. A. Mackenzie, Warriston; Mr. D. T. Fish, Mr. Harrow, Botanic Gardens; Mr. Peter Loney, Mr. Macintyre, The Glen; and a large number of horticulturists and their lady friends. The meeting took place in the magnificent new dining saloon of the hotel (one of the most spacious and elegant rooms in Edinburgh), which was most beautifully decorated for the occasion by the president.

Specimen Palms in beautiful pots, on handsome pedestals, were arranged throughout the room, and the mantles, sideboard, etc., were elegantly decorated



HORSBURGH & SON

MR. H. J. JONES.
MR. M. TODD.

Edinburgh and London.

MR. A. E. STUBBS.
MR. A. WILLIAMS.

phenomenal description, whether looked at from the extent of the show, the high quality of the exhibits, or its financial results.

The president intimated that after all the expenses had been paid, the committee have a sum at their disposal for charitable purposes of £250, and it had been resolved to allocate it as follows:—A sum of £100 to the Edinburgh Royal Infirmary; £50 to the Royal Hospital for Sick Children; £50 to the Royal Gardeners' Orphan Fund; and £50 to the Gardeners' Royal Benevolent Institution. In announcing these donations, the president, in a neat and eloquent speech, expressed the great pleasure it gave the committee to be able to dispose of these handsome sums for charitable objects, and they hoped that continued success of these popular exhibitions would result in further sums being available for such beneficent purposes.

he was sure his colleagues would be very gratified when he reported it to them. (Applause.)

Mr. Cook also acknowledged the donation towards the Sick Children's Hospital.

During the evening tea and coffee with other light refreshments with fruit, were liberally served, while a musical programme of great excellence was carried through with much spirit and ability by various talented ladies and gentlemen to whom a hearty vote of thanks was accorded towards the close of the meeting. On the motion of Bailie Hay a most enthusiastic expression of thanks was made to the president and his wife for the manner in which they conceived and carried out the meeting to a successful issue. The whole function was as enjoyable as rare in horticultural annals, and we hope the example set by our Edinburgh friends will be productive of an annual recurrence of such enjoyable meetings.

LEAVES FROM MY NOTE BOOK.

PHLOXES.

AMONGST the newer late Phloxes I noted the under-mentioned varieties as being exceptionally grand, both in size and form. Argon is rather dwarf, with good spikes of delicate rosy-scarlet flowers, quite a distinct colour. Bacchante is a fine dark rosy-crimson, with purple eye, and large Derliche is a dark lilac flower, with a purple centre, large and distinct. Esperance is pale mauve with light centre, and very attractive. Girondin, rosy-carmine, rather lighter in the centre, is a lovely flower of faultless form. Huxley, white, deepening to lilac at the edge, has very large flowers and spikes. Laniboire, rosy-scarlet, with violet centre, is a lovely variety. Lord Raleigh is the nearest approach to a blue I have yet seen; when shaded it is almost so. The flowers individually are of the finest form, and the spikes are tall and branching. Le Mahdi is another dark shade, being violet-blue, slightly tinged bronze. Madame M. Carvilio is a first-rate white dwarf habit. In Pencheur d'Islande we have a salmon-carmine shade with a white eye; it is a distinct and pleasing variety. Tourhillon is a very distinct shade of dark scarlet, with white centre, and has tall handsome spikes. Torpilleur has bright magenta, large and faultlessly formed flowers. William Ramsay, is a dark violet variety, of good form, and is quite distinct.

The above are all varieties of recent introduction, and are worthy of being added to the lists of good sorts, which I have noted from time to time in these columns. No better flower than the Phlox can be grown for an autumn display in our gardens. This is being more and more recognised every year, evidence of which we have around us in all directions. The range of colouring now to be had, and the dwarf habit of many of the varieties for bedding purposes, tend to still further increase the popularity of this handsome autumn flower.—Coila.

THE NATIONAL CHRYSANTHEMUM SOCIETY.

ALL the controversy respecting the N.C.S. and the Royal Aquarium is tending to show what an ill-adapted and unpleasant place it is in which to hold horticultural exhibitions and the disappointing amount of money the directors offer the society compared with what is actually received at the turnstiles. This has been forcibly debated in the *Journal of Horticulture* recently, and is in my opinion most desirable, for the reason that there is at present no other suitable central place; and it seems to me the only remedy for future success is to set about finding a site, and erecting a building, temporary or otherwise, so that the most ardent in horticulture may have full control according to their likes and means.

The scheme for a horticultural hall, which I suggested several years ago, and similar to what is in existence in many cities in America and on the Continent, was most favourably received by the president, council, and also the committee of the Royal Horticultural Society. Thousands of pounds were promised, and this I sincerely hope still stands good. If I am not mistaken one gentleman offered to give £5,000 if a similar sum was subscribed by a certain time; but unfortunately just at that time financial matters in the world were unfavourable, and great depression in business existed. It seems to me that the present should prove to be a most opportune moment for the revival and carrying out of that or a similar scheme.

If a powerful and influential committee were selected from the National Chrysanthemum Society, and if our highly esteemed president, Sir E. Saunders, could be induced to act as spokesman, offering our cordial support to the president and council of the Royal Horticultural Society, the whole matter could be discussed, and the feeling of kindred societies and the public generally be ascertained.

The Rose, Carnation and Picotee, Auricula, Narcissus, and Cacti societies continue to hold their shows at the Drill Hall, and I feel sure the National Chrysanthemum Society would be received with open arms, and without that chartered body wishing in any way to exercise any control over its internal arrangements whatever. I am both willing and anxious to co-operate in assisting to bring something of the kind prominently before the public. Unity is strength, and it seems to me that the united strength

of all the kindred societies now existing in London could be secured, and would pay their proportion towards the interest on borrowed capital, if such a course was deemed necessary. There is no reason why we should not have a home of our own, and not lodgings for ever.

I think we might reasonably count on something like the following income, each society, of course, taking its own gate money:—

| | | |
|---|--------|-----------|
| Royal Horticultural Society .. | £400 | per annum |
| National Chrysanthemum Society | £200 | |
| .. Rose | £100 | |
| .. Dahlia | £100 | |
| Carnation and Picotee | £50 | |
| Auricula | £25 | |
| Cacti | £10 | |
| Letting the hall for horticultural business committee meetings .. | £100 | |
| Letting for other approved purposes | £1,000 | |
| Total | £1,985 | |

This at 4 per cent. gives a borrowing power of nearly £50,000.

If the council would favourably reconsider the suggestion, and all kindred societies would cordially support such or a similar scheme it seems to me we can well picture Phoenix rising boldly out of its own ashes, and British horticulture going on in rapid harmonious strides. It certainly is an undisputed reproach that horticulturists do not possess in the city of London, a building large enough to hold even an ordinary flower show; and in my opinion it is now quite time we did. I ask one and all if the time has not arrived when this hall should be begun.—H. Cannell.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

A yellow *Odontoglossum crispum*. *Nov. var.*—A yellow ground variety of the most popular *Odontoglossum* in cultivation has long been a desideratum, and the wish has at last been gratified by a cheerful and bright variety, the body colour of which forcibly recalls the hybrid *O. excellens*. The segments, as far as form is concerned, and particularly the lip, are those of *O. crispum*. The lanceolate sepals and elliptic petals are of a clear and pleasing yellow, the sepals being ornamented with a group of four to five bright chestnut-red spots. The petals are spotless. The lip is of the same colour precisely as the rest of the flower, sharply waved or crisped, and marked with three to five large chestnut-red spots, as well as some smaller specks. The colour is more or less blotched with brown on the back, and tinted with the same hue on the face. The plant is yet only a small piece, but it will be greatly increased in size by the time Mr. J. McBean, of Cooksbridge, Lewes, Sussex, has given it another year's growth. The variety is exceedingly pretty, and now flowering in his collection. Mr. McBean is a noted grower of *Odontoglossums*, fully understanding their cultural treatment.

VEGETABLE CALENDAR.

SEAKALE.—A regular supply of this vegetable will be expected in most establishments after this date, and to meet the demand a good proportion of the roots may be lifted and stored at the base of a wall, covering lightly with leaves or other light material to protect them from drying. All the strongest thong-like roots should be saved for cuttings, and these can be made any time during inclement weather. Any position having the three requisites, warmth, darkness, and moisture, will suit Seakale. A cheap and good method is to dig out a bed 6 ft. wide and a foot in depth, and in this place 2 ft. of fermenting material, covering this with 8 in. of light soil. In this the roots can be planted, and the whole bed covered with a light framework over which a few thicknesses of mats or straw must be placed to exclude the light and retain the warmth. Seakale grown in this way is generally succulent and more satisfactory than when grown in sheds or under stages.

PEAS.—For growing in pots or frames or orchard houses a sowing of some approved dwarf Pea such as Chelsea Gem may now be made in pots or on turves. Small 60-size pots are handy for moving about, and also for transplanting from. Sufficient of these should be filled with a loamy soil, and half a dozen Peas placed in each. A gentle heat may be applied to forward germination, but when once that has taken place a cool position close to the glass must be given to keep them dwarf and stocky, and when well-rooted these may be transferred to larger pots or borders as desired.

FRENCH BEANS.—To have the fullest success with these at this season of the year top and bottom heat is necessary. At the present time we are preparing a bed 100 ft. long by 6 ft. wide down the centre of a low span-roofed house for this crop. A bed of fermenting material, 5 ft. deep, will be formed, and on this 1 foot of light rich soil will be placed for planting in. The Beans, Canadian Wonder and Magnum Bonum, have been sown singly in small 60-pots in a warm house, and out of these pots they will be transferred to the new bed without receiving any check. After planting a temperature of 60° to 65° will be maintained, with a rise of 10° during bright weather. Sowings of Ne Plus Ultra may also be made for growing on in pots in warm positions, to give a few dishes before the beds come into bearing.

SALADING.—This is never more appreciated than during the dull winter season, and the aim should be to keep up a regular supply from this time onwards. To do this, periodical sowings of Mustard and Cress must be made in boxes in intermediate houses. Roots of Chichory, according to the demand, should be placed in warmth and darkness at short intervals, to have it fresh and crisp. Large plants of Endive placed in a little extra warmth during blanching, are much improved, as a quick tender growth is induced. Lettuces growing in frames will require close watching and abundance of ventilation on all favourable occasions. A few roots of Tarragon should also be introduced into gentle heat for supplying a few sprigs when required. A supply of fresh Mint should also receive attention. Boxes filled with roots lifted in September and placed in heat a fortnight ago are now showing abundance of young growth, and will keep up a supply for a long period.—J. R.

The Orchid Grower's Calendar.

LAELIA AUTUMNALIS.—For winter work this is a most beautiful and showy Orchid, producing flowers 4 in. to 5 in. across on scapes 18 in. to 2 ft. in height. The flowers are of a pleasing amethyst colour, and strongly scented.

Its culture is very easy and as they take up but little room it should commend itself to amateurs with limited space. We grow ours in pans and baskets which are suspended from the roof of the Cattleya house. Very little compost is placed about them, as the roots appear to resent being covered up too much. Peat and moss in small quantities is therefore used. The plants are made secure by means of wire, which should be of copper.

LAELIA GOULDIANA.—Without possessing the qualities that nowadays are required in an Orchid to make it go, viz. size, this is nevertheless a very charming plant. By some it is considered a natural hybrid between *L. autumnalis* and *L. albida*, and by others as a species. I am inclined to the former view, as there is a lot in it that reminds us of the smaller forms of *L. autumnalis*.

Then we have the beautiful *L. crawshayana*, which is the only *Laelia* that has any likeness to it; and I am not surprised at specialists having mistaken one for the other, without proper materials at hand for comparison. The pseudobulbs and scapes are quite distinct, taking, as they do, more after *L. albida*. The labellum, too, is blunt or rounded, whilst in *L. gouldiana* it is acuminate. The colour of the two, however, is very similar and it may be that they are reverse crosses of the same parents, *L. autumnalis* and *L. albida*.

ONCIDIUM SPLENDIDUM.—This fine Orchid is just pushing up its stiff erect spikes and as they are very succulent they should be protected from slugs by having a piece of cotton-wool put round them. Should there be any that are refractory and refuse to push the spikes place them in the warmest end

and keep them moderately dry, this will generally have the desired effect. When they have started give them water to help them to develop. Some grow this variety or species very well in the Cattleya house, but I think, where possible, it should have a few more degrees of heat when growing freely.

Suspended in pans in the warmest division it seems to produce the best results. The usual compost, peat and moss, grows it well.

WORK IN THE HOUSES.—Pay particular attention to the giving of air, regulating the temperatures, damping down, &c. Always remember that an excess of either is most harmful; at the same time avoid low temperatures. Anything below the figures given in a previous calendar would be dangerous.—C.

THE FLOWER GARDEN.

DECEMBER has greeted us in rather stormy fashion, and work out of doors has, as a consequence, been very greatly hindered, for with the soil wet and sodden it is impossible to move about upon it much. Leaves and portions of branches, dead or otherwise, strew the ground in all directions, and the broom will have to be plied busily if the lawns and terraces are to be kept in order.

The work of collecting and removing the fallen leaves from outlying portions of the grounds should be prosecuted vigorously, for it is of very little use sweeping and cleaning in the more highly kept portions of the grounds, while the remoter parts are covered with leaves, which every rough wind will carry over the whole place.

ROSES.—On very wet and cold soils it will be advisable to defer any further planting until spring, for the soil will not only work better then, but it will be safer for the plants themselves. Meanwhile, all necessary precautions should be taken to insure the safety of the plants that have been put in already. A good mulching of short, well-decayed stable litter is the first consideration. This may be given to all the Roses with advantage, as well as to the newly planted ones. Standards will need to be properly staked and secured if they are to pass safely through the ordeal of rough winds. A small, neatly twisted band of hay should be so placed as to come between the stake and the stem of the plant, in order to prevent abrasion of the latter.

COVERING TEA ROSES.—Although we have not as yet had enough of winter to do harm to the Teas, it will be necessary in the midland and northern counties to give them protection against cold, and this should be seen to as soon as occasion offers. Dry bracken, and heather are both very suitable covering materials, and as one or the other can be obtained by many gardeners for the trouble of cutting and carrying, the cost is very low.

HELLEBORUS NIGER.—In order to prevent the flowers from becoming splashed by mud during heavy rainfalls, it will be well to cover the Christmas Roses with large bell-glasses or handlights. The square Cauliflower lights come in very handy for this purpose, and if they are not otherwise engaged, may well be thus utilised. Where the plants are growing in the wild gardeo, beneath the partial shade of trees, they may generally be left to take care of themselves, for the fallen leaves protect them from the washing up of the soil.

THE HERBACEOUS BORDER should now be finally put to rights for the winter. All remains of last summer's growth should be cleared away and burned, stakes removed, tied up in bundles and placed in safety, and labels properly inserted opposite their respective plants. After all rubbish is cleared, the border should be forked neatly over.

MOUTAN PAEONIES.—The Tree or Moutan Paeonies when grown in beds by themselves in sheltered parts of the garden are very effective. They require some protection during the winter, and this may be best given in the form of a heavy mulching. Dead snags or portions of branches may be cut off at the same time.

Christmas is now upon us, and quantities of evergreens of all sorts are required for decorating. A look round the shrubberies should be given so as to determine from whence the required material may best be taken. In many cases shrubberies may be improved by a little thinning out or regulation of growth. Where nicely coloured sprays and foliage of Mahonia Aquifolium is in request, it will be as well to take a few plants and cut them close to the ground, for they will throw up again from the stools next year.

BORDER CARNATIONS, which were transferred to their flowering quarters about the middle of October, should be closely watched. Rabbits and sparrows will often mutilate the foliage and practically cripple the plants. Where the plants are in a part of the garden open to the encroachments of rabbits, it may be worth while to enclose the beds with inch mesh wire, whilst an occasional shot will tend to keep off the sparrows. After periods of frost, the plants should be looked over, and any that have been partially lifted out of the ground, pressed back again. A changeful winter, with variations of frost, snow, rain, fog, and cold winds is exceedingly perilous experience for border Carnations.—A. S. G.

Gleanings from the World of Science.

Cyclamen with leafy flower stems.—Some flowers picked from a batch of Cyclamens were sent us by Mr. A. Pentney, The gardens, Worton Hall, Isleworth. The scapes were rather stouter than usual, and surmounted by a solitary bud or open flower, below which two or three leaves seemed to be given off at short intervals from the scape. Examination of the same showed that the petioles of the leaves were amalgamated with the flower scapes. This state of matters had arisen at a very early stage of growth, the leaves and scapes, owing apparently to vigour of growth, being unable to separate in the usual way at the point of origin on the crown of the corm. Whether a strain of plants having this characteristic would possess any decorative value would depend upon the size and quality of the flowers, as well as their numbers on a plant. Seemingly, the flower scapes would be stronger, but it must be remembered that they have the additional weight of the leaves to support, though the latter are considerably smaller than the radical ones.

PLANTS RECENTLY CERTIFICATED.

THE awards mentioned below were made by the Royal Horticultural Society on the 14th inst.

Orchid Committee.

CALANTHE HARRISII.—The flowers of this hybrid are of great size and substance. At a short distance off they appear pure white, but there is a pink tint on the back of the segments. The plant shown by J. T. Bennett Pöe, Esq. (gardener, Mr. Downes), Holme-wood, Cheshunt, was of small size and flowering for the first time, so that when more fully developed it will produce large spikes of magnificent flowers. First-class Certificate.

CYPRIPEDIUM AESON GIGANTEUM. *Nov. hyb. var.*—The upper sepal of this splendid variety is of great size, orbicular, apple-green on the lower portion and richly blotched with brown, while the upper area is pure white. The petals are light brown, and the lip, which has a wide open mouth, is dark brown. The parents of this striking hybrid were *C. insigne* and *C. Drurii*, the latter being the pollen bearer. It is half as big again as *C. Aeson*, if not more. Award of Merit. Messrs. J. Veitch & Sons, Ltd., Chelsea.

LAELIA ANCEPS MRS. DE B. CRAWSHAY. *Nov. var.*—The sepals and petals of this beautiful variety are rich purple with deeper tips. The lip and the side lobes are rich crimson, while the throat is lined with crimson. Award of Merit. De B. Crawshay, Esq. (gardener, Mr. S. Cooke), Rosefield, Sevenoaks.

LAELIA BRISEIS. *Nov. hyb.*—This choice and heartily distinct thing was obtained from *L. cinnaharina* harpophylla crossed with *L. purpurata*. The lanceolate sepals and petals are of a deep apricot, fading almost white with age along the centre. The lip is similar in size and form to that of *L. harpophylla*, but is nearly white, with two or three purple splashes on the lamina. Award of Merit. Mr. James Douglas, Edenside, Great Bockham, Surrey.

TRICHOPILIA BREVIS.—The sepals and petals of this distinct species are revolute at the edges, and deep

chestnut, with yellow tips and fainter bars across them. The lip is suddenly very much expanded above the short tube, and is white with a lemon tube, Award of Merit. Sir. F. Wigan (grower, Mr. W. H. Young), Clare Lawn, East Sheen.

LAELIA PUMILA PRAESTANS.—The sepals and broad, elliptic petals of this variety are lilac-rose. The tube is nearly white externally and yellow internally. The lamina and the side lobes are of an intense crimson-purple. Award of Merit. R. W. Richards, Esq., The Priory, Usk.

LAELIA RUBESCENS.—This dainty little species has suborbicular and compressed pseudo-bulbs from which the flower scapes rise to a height of 1 ft. bearing six or eight lilac flowers, having a crimson blotch in the throat of the lip. The species is also known as *L. peduncularis*, both names being given by Dr. Lindley. Award of Merit. Walter C. Walker, Esq. (gardener, Mr. Geo. Cragg), Percy Lodge, Winchmore Hill; and Sir Trevor Lawrence, Bart. (grower Mr. W. H. White), Burford Lodge, Dorking.

CALANTHE SANGUINARIA.—The flowers of this fine hybrid are blood red, with paler tips to the sepals, and a darker crimson blotch in the throat. Award of Merit. Sir Trevor Lawrence, Bart.

CALANTHE BURFORDIENSE.—In this case the sepals are of an intense rose, while the petals are carmine. The lip possesses a mixture of both these colours, intensified at the base. Award of Merit. Sir Trevor Lawrence, Bart.

C. VEITCHI SPLENDENS.—A large batch of this variety was shown by Sir Trevor Lawrence, Bart., bearing long, arching spikes of rich carmine-rose flowers. Award of Merit.

LAELIA LINDLEYANO ELEGANS. *Nov. hyb.*—The parentage of the hybrid is rather complicated, and might be described as having originated from *Brassiolaelia lindleyana*, crossed with the pollen of *Laeliocattleya elegans*. The sepals and lanceolate petals are acuminate and creamy-white. The tube of the lip is flush, with a lemon blotch on the side lobes; while the lamina is crimson-purple. The broad claw of the lip is unfolded at the sides and recalls the influence of *Brassia*. The clavate stems are 3 in. to 8 in. in length. Award of Merit. Sir Trevor Lawrence, Bart.

MASDEVALLIA CORNICULATA.—The flowers of this species have a tube similar in style to *M. Reichenbachii*, and are orange-red externally, but more inclined to yellow internally. The tails are yellow. Botanical Certificate. Sir Trevor Lawrence, Bart.

CIRRHOPETALUM MEDUSAE.—The flowers of this singular looking Orchid are small individually, but they are produced in dense clusters or heads. They are white, marked with purple spots and furnished with tails about $3\frac{1}{2}$ in. in length. A Botanical Certificate and a Cultural Commendation were awarded to a piece carrying twelve heads, and shown by Sir Trevor Lawrence, Bart.

Floral Committee.

BEGONIA WINTER CHEER.—This is one of the new winter-flowering race of Begonias, and a very fine thing it is with large and often semi-double flowers. It was raised from a tuberous variety crossed with the pollen of *B. socotrana*, between which it is perfectly intermediate. The leaves are cordate-orbicular, with overlapping auricles, but three or more times as large as those of *B. socotrana*. The plant has the habit of the well-known *Adonis*, and bears rosy-carmine flowers in large cymes at the top of the stems which are only about 12 in. high. They often have a rosette of small petals in the centre, and are both showy and durable. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

Fruit and Vegetable Committee.

CELERY SOLID WHITE.—This has been on trial at Chiswick, and was brought up to the Drill Hall for inspection. The leaf stalks are white and of good flavour. The crown of the rootstock, that is, the only real portion of stem is much more largely developed than in ordinary varieties of Celery and being white, solid, of nutty and excellent flavour, it makes good eating; hence the name above given. Award of Merit. Messrs. Sutton & Sons, Reading.

PEAR PRESIDENT BARABE.—The flesh of this late keeping variety is white, very tender, juicy, melting, and of excellent flavour; for it took the first prize for flavour in the usual competition. The fruit is pyriform, and the skin russetty-yellow. It may be classed, therefore, as a good variety for December and Christmas. Award of Merit. Lord Suffield (gardener, Mr. W. Allan), Gunton Park, Norwich.

HINTS FOR AMATEURS.

Christmas Decorations—By the time these notes are in the hands of our readers the joyous revelry of Christmas will already have begun. To all Celtic nations the Yuletide still maintains its importance; and old as well as young look forward to its bewitching influence. Throughout the busy hours that precede Christmas day, as well as on the day itself, many willing nimble fingers are employed in decorating the home with whatever material comes to hand. Nor is this material scanty in either quantity or variety; indeed, given a fair amount of individual taste, and some originality, the Christmas dinner-table may be made to look fully as attractive from a decorative point of view, as a table dressed with mid-summer's choicest flowers, although it may be in a totally different way. Dwelling rooms and corridors, too, in their garb of festal green, with here and there a sparkle of berry or flower, or a flutter of plummy grasses and Palm fronds, may bid defiance to the reign of winter outside, and transfer the thoughts of the occupants from the cold and weariness of the world, as it is to the world of perennial summer where neither cold, nor wet, nor dullness enter.

It is marvellous, indeed, what deft hands, and a little greenery can do to a cheerless room—the effect in such cases is often more happy by reason of its being unstudied. The more elaborate arrangements, of course, call for the exercise of care, and skill, and judgment in determining the relative quantities and positions of the subjects that are employed. There is such a wealth of material available, that there is plenty of room for original conceptions, while those who do not care to plan or construct a scheme for themselves, may follow other ideas with advantage.

The "Mistletoe Bough" must perforce be present somewhere, else it would not be Christmas, but this plant does not lend itself very readily to ordinary decorative purposes. Fashion has decreed that a huge bough of it shall be strung up either in the hall or corridor, and here the young people and the giddy elder ones make merry round it.

It may be of interest to note a few of the available subjects that are most useful at such a season.

Grasses.—There is such a vast difference in the character and general appearance of the grasses that we can only mention a few of the most popular. The palm must be given to the so-called Pampas Grass, *Gynerium argenteum*, and *G. saccharatum*. These can be bought in the market at a comparatively cheap rate, and as they last for a very long time in condition, they are well worth buying, if the amateur is not fortunate enough to possess a good plant from which to cull his own material. Of the smaller grasses *Agrostis nebulosa* appears to be a great favourite. It is light and feathery, and makes up very prettily in small baskets of flowers, foliage, or both combined. Some would-be improvers upon Nature have taken upon themselves to dye this grass in shades of impossible red and purple, and it is to be feared that this perverted taste is not a restricted one. The quaking grasses *Briza minor* and *B. maxima* are pretty and useful.

Clematis Vitalba.—In localities where this charming British plant is to be found in quantity, it is a capital plan to cut long sprays of it when closed with the bunches of feathery stigmas which have given the plant its popular name of "Old Man's Beard." The leaves, of course, die, and may be removed; but the plumes still remain attached. These sprays come in very useful for decorative purposes, and will last in condition until they have become so blackened by the smoke of the city as to render their removal desirable.

Berried Plants.—Naturally enough, the berried plant for Christmas is the Holly, but it often happens that there is a scarcity of well berried Holly, and then something else must be impressed into service. The hops of the wild Rose form a capital substitute, and we have even seen very passable results obtained by fixing a few of the smaller hops to Holly branches, the deception not being apparent when the doctored branches are placed fairly high up.

Crataegus Pyracantha, commonly known as the Evergreen Thorn, and the variety *C. P. Lelandi* are exceedingly useful. The plants berry freely when the Holly refuses to, and sprays thus furnished form no bad substitute for Holly. The ripened and opened

fruits, showing the orange-coloured seeds of *Iris foetidissima* are also highly decorative.

General greenery.—In this direction there is a vast field from which to select what meets the particular needs of the operator. Branches of Conifers of various kinds, Laurels, Bays, Box, and variegated Hollies of various sorts may all be made use of. Long trailing sprays of Ivy taken from exposed situations where the rich colouring of the leaves has been fully developed, form some of the most elegant and effective decorations that can possibly be employed. The same may be said of long strings of *Myrsiphyllum asparagoides*, popularly known as *Smilax*, which is cultivated in such tremendous quantities for the market. The price, too, is reasonable enough, and well within the reach of those possessing only a fairly lined purse. The hothouse *Asparaguses*, *A. plumosus*, and *A. tenuissimus* are comparatively tender plants, but their fronds when cut last for a surprisingly long time, and are far superior to Maidenhair Fern. Other subjects will suggest themselves, those quoted being only a few of the most useful and easily obtained.

Honesty.—This is an old-fashioned garden favourite which is well worthy of any space it may occupy. When the outside portion of the seed pods is peeled off, displaying to view the silvery septum that separates the pods into halves, we have a first-class decorative subject. Cut with long stems *Honesty* comes in well for the filling of large vases, either by itself or in conjunction with other things, whilst smaller pieces may be disposed of with equal advantage in smaller vases, or in baskets, filled with winter foliage and berries.

Berried Plants.—In addition to cut sprays of the various plants mentioned, berried plants in pots tastefully disposed will add much to the general effect. *Skimmia japonica*, *S. oblata*, *Pernettya mucronata* in variety, *Solanum Capsicastrum*, *S. Pseudo-capsicum*, and *Ardisia crenulata* are a few of the most common plants of this description. For a landing on a staircase, or a nook in any of the dwelling rooms it will be easy, given a few plants of any of the above, and some of the Palms that take most kindly to indoor life, to set up a very pretty group that will stand through the Christmas week without the plants taking any harm. The great point is to see that the plants are not subjected to draughts. Plenty of light is also essential, whilst the water supply must be carefully regulated. If these precautions are taken, the plants will stand unhurt. Some of the Palms best adapted for the service are *Kentia belmoreana*, *K. fosteriana*, *K. australis*, *Phoenix canariensis*, and *P. rupicola*. *Areca lutescens* will stand fairly well but must not be tried too far. *Cocos weddelliana* is not at all a success; and if the plants are valued should not be subjected to the ordeal.

The Dinner Table.—In case any of our readers propose to have a table in keeping with the season we may suggest the following arrangement. For a fairly large table two candlesticks may be permitted. These, of course, should be placed in the line of centre. Between them, and lying flat upon the table, also in the line of centre, should be a mirror measuring about 3 ft. in length by 18 in. in width. In the centre of this may stand an epergne filled with foliage of various kinds and berries, with little sprays of *Honesty* inserted here and there, together with pieces of *Iris foetidissima*. Clusters of the black fruits of the Privet (*Ligustrum*) wired to give them the requisite stiffness, also look well. The epergne should be at least a foot higher than the candlesticks, and should have a fairly heavy base. The candlesticks themselves may be wreathed round with long bands of Ivy, while their bases may be encircled with small pieces of Holly. Select a number of small pieces of well-berried Holly, and lay them all round the edge of the central mirror to form a border. Ten small baskets of foliage and berries should be placed round the table, four to be on each side, one at the head, and one at the foot. These, if neatly made, will not take up much room, but will add to the finish of the whole.

Scarlet or red berries should be employed throughout, and these colours with green will be the most conspicuous ones, giving a very pretty and seasonable combination.—*Rex*.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Gooseberry Cuttings—*V.*: Select fairly stout well-ripened tips of shoots from 10 in. to a foot in length. With the point of a sharp knife pick out all the buds for about 6 in. above the base of the cutting. The easiest way of putting in the cuttings is to cut a trench and put them in, allowing from 3 in. to 4 in. between each cutting. Return the soil to the trench, and tread it down firmly. The cuttings may remain in this position until they are rooted. Frost will not harm them, and hence it is not necessary to cover them.

Variegated Kale.—*S. Regan*: The chief use to which variegated Kale is put by the cooks is that of garnishing various dishes, for which the elegant curled leaves are highly suitable. We have never heard that the flavour, when cooked, was inferior to that of the ordinary green curled varieties, although the fact remains that the strain is intended rather as an ornament to various dishes than as a direct adjunct to them.

Fly on Crocuses—I have some Crocuses which I potted up about a couple of months ago, during which time they have been in a cupboard not far from the fire. On taking them out the other day I found that the young growths were smothered with green fly. I was puzzled to account for this, and am so still, for I cannot imagine how the fly got there.—*D.*

Our correspondent's note goes to prove how widely spread are the insect pests that attack our plants. No corner, however remote, seems free from them; and their appearance, as in this case, savours apparently of the marvellous. We should advise *D.* to get rid of the fly as quickly as possible before it infests his establishment still farther. The heat of the cupboard is evidently suitable for the breeding of aphides.

Spiraea confusa—*T. N. Ring*: This plant will force early enough, but do not subject it to too strong heat, or many of the buds will fall, and the flowers that open will be very short lived.

Chrysanthemum Mme. Edmond Roger.—*Sceptic*: We think you are too sceptical. The flower is undoubtedly a green one, although those opening earlier in the season exhibit a paler hue than the later ones. We have seen the variety in a good many places, and under various conditions this season, but in no case would it have been possible to suggest that the blooms had been treated with arsenic to colour them. Arsenic might possibly deepen the colour. Why not try the experiment, and advise us of your results. There would be no lack of interest attaching to such an experience.

Hyacinths Rotting.—*Inquirer*: The outer tunic of the Hyacinth is undoubtedly rotting in the sample you sent us; but the mischief has not penetrated farther, nor will it be likely to until you have flowered the bulb. The evil effects will thus be practically nil. All varieties of Hyacinths are not suited for cultivation in glasses filled with water, and the outer tunics of bulbs of unsuitable varieties will often rot whether they touch the water or no.

Edging for Garden.—*E. N.*: Boards are cheap and nasty; try plain edging tiles in preference. The first cost may be greater, but you will feel more pleased with the results.

Hardy Perennials for Market.—Will you give the names of twelve good hardy perennials for supplying cut flowers for market?—*R. se.*

Anemone japonica alba, *Aquilegias* of sorts, *Coreopsis grandiflora* or *C. lanceolata*, *Campanula persicaefolia alba*, *Gypsophila paniculata*, *Helianthus Miss Mellish*, *Helleborus niger*, *Heuchera sanguinea*, *Iris* of sorts, *Lavandula vera*, *Phlox paniculata*, and double *Pyrethrums* will all be found exceedingly useful. You will observe that we have made no mention of the Michaelmas Daisies, a number of which are very suitable for cutting. The above list may be

almost indefinitely extended. The subjects mentioned are very easy to grow, with, perhaps, the possible exception of *Heuchera sanguinea*.

Apples on the Paradise Stock.—*L. Menzies*: There can be no doubt that in your case Apple trees on the Paradise Stock would be the best. Such trees fruit much earlier than others worked upon the Crab stock; indeed, very small trees often carry heavy crops of fruit. If the soil is shallow the Paradise stock will be better than the Crab on that account. Then again, if your garden is a small one you don't want trees that will reach a large size before they begin to yield any return.

CORONA, BROUGHTY FERRY.

THIS conspicuous suburban residence is beautifully situated on the crown of the ridge overlooking the

dominant feature as far as flowers were concerned. Niveus had assumed the form of an incurve Japanese variety, a feature of its development we also noted elsewhere under certain conditions. Thos. Wilkins takes on a fine golden-yellow. Vivian Morel, Louise, and Stanstead White are also grown to large size here.

This house led us through the Orchids where a fine piece of *Catasetum macrocarpum* was preparing to bloom. A pretty and uncommon plant was *Lycopodium Phlegmaria* with long, drooping stems and lanceolate, leathery leaves covering the pendant shoots on all sides. Next came a fine span-roofed structure well adapted for growing plants. It is kept cool, and at the time of our visit was filled with Chrysanthemums and Carnations in pots. Mr. Machar intends devoting the house to tree Carnations for winter flowering, the house being well adapted for the purpose. The Chrysanthemums in it are

de Lyon always does well in this neighbourhood, developing heavy, well coloured blooms on stout, erect stems. The outer florets of *Simplicity* hang down almost in the same way as *Mme. Carnot*. The bush plants are largely grown for the sake of cut flowers.

Trained to the rafters of the house are large branching plants of *Acacia riceana*, *A. longifolia*, *A. lophantha*, and *Eucalyptus globulus*, the first two of which will presently flower profusely. A large, branching *Opuntia* also finds a place here.

The Banana house contains a number of fine plants which will flower some time in spring. A plant which bloomed in August now carries a large bunch of fruit. *Cypripediums* are also grown in this house, including a grand piece of *Cypripedium insigne*.

There are five acres of garden and pleasure grounds around this suburban mansion. Small



A SNOWY MORN AT CORONA, BROUGHTY FERRY.

valley of the Tay and the bold escarpment of the river on the opposite or Fifeshire side. It belongs to Robert Mudie, Esq., whose garden is under the care of Mr. John Machar, well known about Dundee, owing to his identification with the affairs of the Chrysanthemum Society of that city.

The very prominence or exposed condition of the garden lays it open to the full force of the cold winds which often sweep the valley of the Tay with great violence, and do more damage than all the frost and snow experienced here. The past autumn, however, has been very mild and damp, making it difficult to preserve large blooms of Chrysanthemums in a fresh condition. *Tropaeolum majus*, best known as Nasturtiums, kept flowering freely in the open till the third week in November, after which a frosty night settled them.

In passing through the houses about the end of last month, we noted that Chrysanthemums were the

grown in bush form and include *Source d'Or*, *Elsie*, *Mrs. Geo. Rundle* and others of that class.

The conservatory is a roomy structure attached to the mansion, and at present is chiefly occupied with decorative Chrysanthemums grown in the free or bush form. *Nellie Rainford* has golden flowers; and *Bouquet des Dames*, grown in the same way, has flat and gracefully poised flowers. *Louise*, even in large form, comes pink in this part of the country. *Peter the Great* carries its flowers erect without support. *Source d'Or* is very highly coloured here, and, strange to say, the yellow *Source d'Or* comes of a beautiful soft orange. *Ryecroft Glory*, *Margot*, and *Soeur Melaine* flower very profusely in the bush form. *Red Dragon* is also a most useful decorative subject, with fiery red flowers of moderate size. A few varieties grown to exhibition size had also been located in this house to furnish variety. The blooms of *Pride of Madford* get very much incurved. *Etoile*

fruiting varieties of Apples trees are grown upon the lawn for the sake of their handsome flowers in spring. Cherries are grown for the same purpose. A branching specimen of *Aralia mandschurica*, 10 ft. high, is a singular looking object at the present time, but very interesting. One meets with large beds of hybrid *Rhododendrons* of the best varieties everywhere. They suffered much during the blizzard which occurred two or three years ago; but those that survived have completely recovered, and are well set with buds. Deciduous Azaleas are also favourites, including *A. pontica*. *Ledums* and various other shrubs are also well cared for; and the place must be beautiful in spring and summer, independently of the fine prospect it commands.

In passing through a portion of the kitchen garden we noted that Strawberries are planted, sometimes in August, and sometimes in spring, with the object of getting some portion to escape late frosts and

hurricanes of wind in spring. The wind often makes protection a very difficult matter. Royal Sovereign and Garibaldi are the favourite varieties grown, but particularly the latter.

The electric light is laid on all over the establishment, the electricity being produced by a powerful engine placed under the charge of Mr. Machar.

The accompanying illustration (p. 265), paradoxical as it may seem, represents an ideal Christmas scene, yet in reality an occasional phenomenon of spring at this northern residence. It is in fact a view of the approach to Corona on a snowy and frosty April morning when evergreen trees and bushes were well coated with newly fallen snow and the deciduous ones had a rimy appearance. The gardener who has to put up with this sort of thing would be perfectly happy did it occur at Christmas, but the photograph was taken on the 16th April, when gardeners are to be excused if they seem in a fidget about their fruit trees, bedding plants, and things in general. We ourselves have experienced 4 in. to 6 in. of snow on the 21st of April, but much farther north than Broughty Ferry.

TRINITY ROAD NURSERIES, WANDSWORTH.

FROM the beginning of November until March is usually a busy time with gardeners in establishments where the love for hardy trees is indulged in, for not only is there a good deal to do in the way of regulating the arrangement of shrubberies, but there are also gaps to be filled up, and various improvements and additions to be made. To tell the honest truth we are too much inclined to plant too many of one or two favourite things, regardless of the fact that there are other not less beautiful subjects which have a claim to consideration. It behoves us, therefore, at this time of the year, when we are practically in the middle of the planting season, to consider best how we may add to the variety of the effects produced by our numerous hardy trees and shrubs. There is nothing more likely to interest and instruct a gardener than a peep round one of the nurseries from whence the country draws its annual supplies of ornamental and useful material.

We recently paid a visit to the Trinity Road Nurseries, Wandsworth, where Mr. Robert Neal has for many years carried on with advantage to himself, as well as to the beautifying alike of the stately country mansion, and the villas, streets, and squares of our large towns, a large and flourishing business.

As the metropolis year by year spreads its gigantic shade over what was once the outlying country, and the smoke screen becomes thereby proportionately enlarged, an increasing difficulty is experienced in getting many of the more susceptible plants to flourish as they used to do. This is particularly the case with many of the more tender Coniferae, such as *Cryptomeria elegans*, and *C. japonica*.

To Londoners, then, Mr. Neal's extensive nurseries are like a vast trial ground wherein the smoke-resisting qualities of the various subjects are demonstrated.

CONIFERS.—In all winter effects in the garden Conifers play a very important part, so much so indeed that in some cases they are overdone. Lawson's Cypress (*Cupressus lawsoniana*) is one of the most popular of all evergreens, by reason of its beauty and hardiness, in either town or country. The Cedars are among the handsomest of our trees, although they prefer country air. We were delighted with a grand break of *Cedrus atlantica*. The plants were six or seven years old, and varied in height from five to seven feet. *C. Deodara*, the most graceful of all the Cedars, was also represented by plenty of stock.

The Irish Yew (*Taxus baccata fastigiata*) is a great favourite by reason of its distinct columnar or pyramidal habit, so different from that of the ordinary Yew. Small plants of it are very suitable for window-boxes, or for pot plants in flower beds or ornamental vases during the winter months, and in such positions are characterised by great elegance and beauty.

Whilst speaking of plants suitable for winter decoration of villa gardens we must not forget to mention the Monterey Cypress (*Cupressus macrocarpa*). When the plants are young they are exceedingly graceful in habit, and the red stems show up to great advantage against the bright green of the

foliage. Of course, in its later stages, the plant assumes the proportion of a large tree, and it is of fairly rapid growth. *Cupressus goveniana*, oftentimes met with under the names of *C. californica* and *C. Hartwegii*, is another exceedingly useful subject for winter decoration. In the small state the foliage presents two shades a deeper green than does *C. macrocarpa*.

The Retinosporas, although they cannot be described as good town plants, are wondrously pretty. *R. plumosa* is well named, for it has a feathery habit that is at once distinct and pleasing. The golden variety *R. p. aurea* is another handsome plant in which the young shoots and foliage are of a bright golden hue, becoming green as they pass into the mature stages. It is a great pity that the Retinosporas are not better town plants. With Mr. Neal they do very well during the summer, but the sulphurous fogs of November and December cause them to assume a brown, burnt appearance, which, apart from its unsightliness, well nigh cripples the plants.

MISCELLANEOUS EVERGREENS.—We noticed very many useful and beautiful subjects in this section, which admirably supplements the Conifers for winter effects in the garden. The Handsworth Box, *Buxus handsworthiana*, is one of the handsomest and most useful of all the plain green Boxes, and is sold in its thousands every year.

The genus *Ligustrum*, again, is a heavy contributor. *L. ovalifolium* is well-known as a good hedge plant for town planting, whilst *L. sinense* is almost as great a favourite. We observed a fine break of vigorous, beautiful leaved plants of the latter species. They have been raised from seed by Mr. Neal, and are in capital condition for planting. There is also a moderate demand for *L. lucidum*.

Euonymus japonicus latifolius aureus is in great request; indeed, our guide informed us that they could never get enough of it, and this, despite the fact that from 12,000 to 14,000 cuttings were put in each year, most of which rooted and made plants. *E. radicans*, and its varieties *E. r. sempervirens*, and *E. r. variegata* are handsome plants for rockwork, where their long trailing branches can be seen to advantage. As an edging to carriage drives or other walks in partial shade they also do well, and indeed succeed in places where more tender stuff would not grow.

Aucuba japonica is propagated in its thousands both from seed and layers, and we observed some exceedingly healthy fine plants obtained from last year's layers. After another year has been allowed them to form plenty of roots as well as "tops" they will constitute magnificent material.

We must not forget to mention a fine batch of the Strawberry Tree, *Arbutus Unedo*, which was accommodated in frames. Although hardy in its older stages this plant is found to be rather tender at Wandsworth in the earlier part of its life. Certainly the plants which we saw could not possibly have looked better under any circumstances. As they were all growing in six-inch pots, they were quite ready at any time for removal to any part of the kingdom.

Choisya ternata is a pretty flowering shrub that, while not exactly hardy, will yet succeed very well in the southern counties if given the protection of a wall to which, if desired, it may be trained.

Escallonia floribunda and *E. macrantha* are two other plants that will succeed with a similar amount of shelter. They resist the effects of the smoke very well and are distinct and handsome.

DECIDUOUS TREES AND SHRUBS.—Our walk round the nursery revealed to us magnificent stocks of a wealth of deciduous material. The value of and demand for the London Plane for town planting is still as great as ever. We were informed that upwards of 15,000 cuttings are put in at Wandsworth each year, representing nearly as many plants. These take about ten years before they are of a sufficient size for planting in the streets or squares of the metropolis and its suburbs. Mr. Neal does a great deal in this direction, several of the largest London squares being permanently under his care.

Nothing could be more promising than the various breaks of sturdy Planes in all stages from the cutting up to the fine young tree 10 or 12 ft. in height, bearing a symmetrical and well-balanced head upon a stout and clean stem. Horse Chestnuts, Elms, Maples, and Oaks in variety, including the Scarlet Oak, together with many members of the genera

Prunus, *Crataegus*, and the handsome *Ailantus glandulosa* were represented in great profusion and in first-class condition, all giving evidence of the kind of stuff grown and supplied by Mr. Neal to his numerous customers.

CLIMBERS.—Here, too, there was plenty of variety and all that is wanted to furnish and ornament our walls or other bare places is a judicious selection of the material offered. Roses are grown in quantity, all the best climbing varieties receiving special attention. The same may be said of Clematises, of which no fewer than fifty-six of the finest named forms are catalogued. *C. Jackmannii* would seem to be the general favourite.

Kerria japonica, although not exactly a climber by nature may yet be turned to good account as a wall subject. *Crataegus Pyracantha*, too, must not be lost sight of. *C. P. Lelandi* is distinct from the type by reason of the differently coloured fruits, and by reason that the young plants fruit sooner than do those of the species. Both are valuable plants.

Ampelopsis hederacea, and *A. Veitchii* are both too well known as climbing plants to need further praise. *A. sempervirens*, so called, is a comparative stranger, however, but withal a pretty and useful plant with small green persistent leaves. It will probably be known to some of our readers under its correct name *Vitis striata*.

Ivies are largely grown at the Trinity Road Nurseries, the collection comprising over forty distinct species and varieties. A fine batch of the pretty *Hedera madeiriensis* in pots arrested our attention, for we have never seen this handsome variety in better condition. *H. caenwoodiana*, *H. Helix argentea*, *H. H. donrailensis*, and *H. H. Silver Queen* are some of the finest of the other forms.

FRUIT TREES.—In addition to ornamental trees and shrubs of all kinds, Mr. Neal does a big trade in fruit trees of all descriptions. We were most favourably impressed with the general appearance of these. Large breadths of Apples on the Paradise stock were showing well for fruit even when barely a couple of feet high. Peaches, Nectarines, and Apricots we have never seen in better fettle, the wood being clean and healthy, and the heads having well balanced foundations that only need careful pruning and training for a year or two to develop into splendid trees.

THE QUALIFICATIONS AND DUTIES OF A GARDENER.*

HIS QUALIFICATIONS.

WHAT are these necessary qualifications? That they are numerous all of you will admit, and I shall endeavour to place before you what my views are respecting them. In the first place, I do not think I can do better than take our elementary schools as an example. The little boy when he first goes to school is placed in the lowest class or standard, whichever it may be, and is here taught the first rudiments of education. Unless he should prove a very dull scholar he is, after a year or so, removed into a higher class, and this promotion continues year after year until he has passed the number of standards required by the education department. And so it should be with gardening.

I have always understood gardening to be a profession and to take rank not far behind that of surgeons; for while they are doctors of men, are not we doctors of plants? Yes; and we labour at a disadvantage compared with a physician, as none of our patients have the power of speech, and, therefore, cannot say what ails them.

I say, again, when a youth starts to learn gardening, he should begin at the bottom; and my idea is that this should be in the kitchen garden. I have various applications made to me (and for certain some of you head gardeners have also), by youths wishing to learn our profession; but the majority of them want to start under glass—a very erroneous idea. If they do this, what are the consequences? It is this. They do not care to go back and work in the kitchen garden after being in the houses a year or two, so they know next to nothing about this very important branch.

The youth should make a beginning at weeding and he should have the weeds pointed out to him,

*A paper read by Mr. J. Mayne, gardener to the Hon. Mark Rolle, Bicton, at a meeting of the Devon and Exeter Gardeners' Association, on the 13th October.

especially if he hails from a town; he should also be allowed to assist in the preparation of the ground for planting and the sowing of seeds of the different kinds of vegetables at their various dates. He should also assist with the watering-can, when necessary, and be able to use all the tools requisite for this department as time goes on. He should assist in gathering the fruit when it is ripe, and be shown when it is fit, and how to gather the various kinds. He should carefully watch (even if he is not put to help) the proceedings anent the summer pruning of fruit trees and bushes, as well as that of the winter routine.

I consider he ought to serve at least two years in the kitchen garden, and, if possible, be moved into the flower garden for another twelve or eighteen months, especially if the latter is away from the kitchen garden any distance, and where a regular staff of men is kept for each department. After this insight into kitchen garden work, he will be at home with the spade, fork, hoe, rake, and such like tools. He must be taught how to use the scythe and shears. He will get an insight as to bedding arrangements in early summer, and again in the autumn, as well as the general routine practised in a well-kept garden, where neatness should always be noted.

His next move should be under glass, and his first duty there, for a few months at any rate, should be to work with the foreman or a good journeyman to get an insight as to airing, shading, and watering. As you all know, the last named is of the utmost importance in gardening. A man with no knowledge as to the requirements of a plant in a pot could very soon do a large amount of damage. He should spend one year at least with the plants, and another year or more in the fruit department, when, if he has done between three or four years outside as advocated, I consider he ought to make a change, and if possible get into another county, as we do not know in what part of the country we may get placed in after life, if we are fortunate enough to get a charge. I consider this migrating, if I may so term it, from one county to another, is essential in gardening, as the climatic conditions vary so much that we should be placed at a great disadvantage. If, for comparison's sake, we say that a man has spent all his time in Devonshire, but eventually meets with an appointment somewhere in the north of England, in such a case he must rely upon outsiders to a great extent as to what may be termed hardy, and about what date it may be safe to put out tender hedding plants, etc. Hence the necessity of making our experience as wide as possible in this respect.

I think two years is quite sufficient for a young man to remain in one place after his first post. What he requires is to gain new ideas and fresh experience, because each of us gardeners has our own *modus operandi* as it were, and in after life he will be able to use his own discretion as to which method or practice he should think the most successful.

And here, I may say, that I am not an advocate for apprentices. I think this used to be more customary years ago than now, and the average time, I believe, was from three up to seven years. Now this is a long time to be compelled to keep a youth, especially if after a year or so he should get sick and tired of gardening, as I have known several to be. It is equally as hard for the youth to have to stay. We must have a love for gardening, and be heart and soul in our work before we can hope to be successful. Here, let me give you an instance of how a love for gardening placed a friend of mine, after only seven years' practice, in a responsible position as head-gardener with eight or nine men under him. Up to the time he was twenty-five years of age he worked as a journeyman blacksmith. He got his appointment (there were over one hundred applicants for the post) about nine years ago, and to his credit still holds it. When he was at his trade, if ever I met him, he very soon began to talk about gardening. He was always asking, which did I think was the best Cucumber or the most prolific Pea to grow, and so on. Such a persevering man merited success, I consider.

Well, to return to my subject; while we are probationers we ought in all our spare hours to endeavour to educate ourselves by reading, studying, etc. Happily things are better now than they were, say from twenty to thirty years ago. Night or continuation schools are provided now in most villages, and all young gardeners should avail themselves of

this opportunity whenever it offers, to improve their education in the matter of writing, arithmetic, geometry, and such like. They should also make it a practice to keep a diary by them so as to be able to enter, each day, what work has been done under glass as well as outside, which they may in the future find of great service to them as a book of reference. It not only tends to improve their handwriting, it also instils as it were, practical work into their memory.

We must still follow up this youth from his first place. His next move should be as an improver, and after a year or so as journeyman, then eventually as foreman or second gardener. When he reaches this latter post he should be capable of managing the men and keeping things in general in working order, any day the gardener may be away from home. He should also endeavour to gain as much knowledge as he possibly can about the cultivation of all kinds of plants, flowering and foliage alike, as well as that of fruit, also the propagation of those that may be required in each department. He must carefully notice the various temperatures each house is kept at through the night, as well as that during the day, especially in the case of fruit culture, because the temperature is increased as the crops and season advance. He should be a keen observer and see how Peach, Vine, and Fig trees, and similar fruits are pruned, tied, disbudded, pinched, and, eventually, the crops thinned, where necessary. All these details he should carefully watch, and, as I have said before, chronicle in his diary.

The potting of different species of plants, too, must claim attention as well as the composition of the soils to be used; the staking and tying of plants so as to learn to use no more stakes than are really necessary to keep the plant symmetrical; for too many of them not only injure a plant, when driven down among the tender roots, but they are an eye-sore as well. And if there should be any new glass houses being erected, new boilers or piping put in, all young gardeners should if possible keep an eye on the work. I do not mean that this should be in their employer's time, but in their own dinner hours or after their day's duty is done. This insight may probably, in fact will be sure to, prove of immense service to him in after life.

I have lightly touched upon the subject of watering, but just a few words more, as I consider it of vital importance in gardening. No plant should have water given it unless it is really necessary; and when this is given see that the plant operated on is well soaked. Especially is this the case where much peat may be the staple compost. Take Ericas, for instance. These are most impatient of being sodden, but when water is required they should be gone over and watered twice at least, so as to get the hard ball of soil thoroughly moistened.

Again, when manure water has to be given, or a fertiliser put on plants that may have their pots filled with roots and require assistance, see that it is not used too strong; far better to give it weak, and renew the dose in a day or two than have it too strong and your plant, perhaps, collapse, as indeed I have seen Strawberry plants in pots do when swelling off their fruit, solely on account of the stimulant being too strong. It is a much better plan to err on the side of safety.

Airing or ventilating is another point in gardening that requires careful judgment. It should be put on at intervals, and increased as the sun gains power, not left until a house registers, say, ninety degrees, when with a moderate amount of air it should not have registered more than seventy-five or eighty. To rush in and open top and bottom ventilators at once and so create a draught is most injurious to tender growth, be it plants or fruit. The reducing of the ventilation calls for special mention. Often we get an hour or so of bright sunshine, and then the horizon becomes overcast. Especially is this the case in the early spring months, a most trying time for gardeners, as most of you well know. When this change takes place the amount of air or ventilation should be immediately reduced, or taken off altogether as the case may require, so that the house is not allowed to fall below its usual temperature had there been no sunshine. In fact, the man in charge must ever be on the alert as it were, when the sun keeps popping in and out, as only half-an-hour's neglect in this respect may wreck a whole house of valuable plants or fruit.

Shading, too, requires judgment, and to be put on at the proper time, if it is a movable one, which it

should be wherever practicable, so that the grower may reap the benefit of all the light possible when the day proves cloudy. An hour's sun, about mid-day, say in April or May, would cripple, if not entirely destroy such plants as Calceolarias, Cinerarias, certain stove plants, Orchids, and a host of others that require a certain amount of shade for their well-being. There are no more trying months than March and April for us gardeners, so great care is necessary in this department.

Young gardeners, too, should assist in the embellishment of the mansion with plants and cut flowers, and the decoration of the dinner table. This last-named experience is a very necessary adjunct to the qualifications just given, as most employers consider this an acquisition nowadays, and it is better for us all to be moving with the times, or up-to-date if I may so term it, with this feature of gardening. In some large establishments, a man is kept entirely for this work, and is termed a "decorator"; but I believe these are few and far between.

I had intended to have lightly touched upon hotany, but I find a paper is being prepared for your next meeting on that subject, so will leave it to a better authority. These young gardeners or assistants should be of good address, quick, obliging, and not be above being told or corrected by their chiefs, while ever attentive to their many duties. In fact, they should keep this old injunction ever before them: "Whatsoever thy hand findeth to do, do it with thy might."

These details (and there are many more, no doubt, in my opinion) all assist in laying the foundation, as it were, of a young man wishing to attain to the all-important and responsible position of a gardener, be it head over others or where only one man may be employed. Who is there amongst us that has the love of gardening at heart and has not this ambition? Let me quote one of our great writers—Bacon:—"Gardening is the purest of human pleasures and the greatest refreshment to the spirit of man."

(To be continued.)

MESSRS. HURST & SON AT THE HOLBORN RESTAURANT.

ON Saturday evening last (18th inst.) a dinner was given at the Holborn Restaurant, London, by N. N. Sherwood, Esq., to the staff of Messrs. Hurst and Son, 152, Houndsditch, London. This was the third of the series, the first being given on the 21st December, 1895, to celebrate the majority of Mr. William Sherwood, the eldest son of the host. Last year the function was to celebrate the introduction of his two sons, Mr. William and Mr. Edward Sherwood, to the firm of Messrs. Hurst & Son. Last Saturday there were 119 present at the dinner, 99 of whom were members of the staff, and 20 visitors. The chair was taken by Mr. Sherwood himself, the vice-chair by Mr. H. Aiton, and at four other tables Mr. T. N. Cox, Mr. J. Hodgson, Mr. T. Bray, and Mr. Locke acted as croupiers.

The following list includes the members of the staff present who have been thirteen years and upwards in the service of the firm, the numbers after the names indicating the years they have been with Messrs. Hurst & Son:—Messrs. J. Hodgson 33, T. N. Cox 29, S. Dixon 29, W. W. Polden 28, T. Swift 28, C. Papworth 26, E. Smith 25, R. C. Tucker 24, John Kay 23, N. Lukins 23, Sheldrick 23, Mills 23, Hugh Aiton 22, Riden 22, T. Bray 22, Newby 21, A. B. Crichton 21, W. Cox 21, T. Thake 21, S. N. Sampson 19, A. W. Elphick 17, F. Clarke 17, D. Shearer 16, D. Fairley 16, T. N. Cox, Sen. 16, W. Parker 16, G. T. Bargery 16, J. Meldrum 15, F. Wheeler, Jun. 15, H. Bray 14, V. Cummings 13, A. Laker 13, and T. A. Baldwin 13.

The following visitors were present:—Messrs. R. Gofton Salmond, Geo. J. Ingram (of the Gardeners' Royal Benevolent Institution), D. Pell Smith, W. G. Innes, B. Wynne, James Herbert Veitch, F.L.S. (of Messrs. Veitch & Sons), Fred. Wood, W. Loudon, G. Fagg, John Curran, *City Press*, J. Wright, V.M.H., of the *Journal of Horticulture*, J. Fraser, F.L.S., of the *GARDENING WORLD*, Thos. Mackenzie, M.H.R. of New Zealand, E. Prentis, Geo. Townsend, T. L. Smith, Chas. Carter Page, N. Van Lessen, and A. Dandridge.

A lengthy and excellent toast list and programme was got up, the artistes for the most part being members of the staff of Messrs. Hurst & Son, as on former occasions. After the tables were cleared the

chairman right loyally gave in due succession the toasts of "The Queen" and "The Prince and Princess of Wales and the rest of the Royal Family."

The toast of the evening, "Success to the Firm of Hurst & Son," was proposed by Mr. T. Mackenzie, Member of the House of Representatives of New Zealand, that being equivalent to the House of Commons in Britain. He is the member for Clutha, and only here on a short visit, being on business for an association of co-operative farmers and two other important bodies in New Zealand. He said that though they might not see the name of "Hurst & Son" at every railway station and every other coign of vantage by the way sides and in the fields, yet the people of New Zealand could depend upon the seeds supplied by the firm. They might spend any amount in buying and tilling land, but if seeds were bad their labour would be worse than wasted. Happily they could rely upon this great firm, whose seeds gave complete satisfaction. In all its dealings with the New Zealanders, the firm was courteous, upright and obliging, and Mr. Mackenzie with great vigour and emphasis declared that courtesies to individuals did more to bind the colonies and the mother country together than overtures with greater demonstrations made between public and national bodies.

"The Visitors" was proposed by Mr. T. N. Cox in suitable and courteous terms. Mr. R. Gofton Salmond, secretary to the Worshipful Company of Gardeners, Mr. G. W. Innes and Mr. E. Prentiss, each in turn replied to the toast, speaking in highly complimentary terms of the courtesy they had met with from every member of the staff of the firm with whom they came in contact.

"The Press" was proposed by Mr. A. B. Crichton, who spoke at some length on the excellent services rendered by various periodicals, the Gardening Press in particular. Mr. J. Wright, V.M.H., and Mr. J. Fraser, F.L.S., responded in suitable terms.

The health of "The Chairman" was proposed by Mr. Hugh Aiton, in a suitably worded speech, at once full of great earnestness, and interspersed with bits of genial humour, which was much applauded. Mr. N. N. Sherwood, in replying, said that these annual meetings were very pleasant, but upon reflection he remembered that the time would come when he would no longer be able to meet them, and that was disconcerting. That night, however, he was a proud man. It is now 35 years since he joined the firm, and during that time he had been very successful. He was delighted to have the co-operation and goodwill of the staff, and if they continued to work in the same excellent spirit as they had done in the past, the success of the firm would be greater than ever. He then read over the list of old servants mentioned above, of whom nineteen have been in the service of the house for 21 years and upwards.

Before resuming his seat he proposed "The Representatives, Heads of Departments and General Staff," which was responded to by Messrs. J. Hodgson, W. W. Polden, C. Papworth and R. C. Tucker. Some few members of the staff were absent through illness. "The Cricket Club" was proposed by the Chairman, and responded to by Mr. Stanley N. Sampson, the captain of the club. "The Instrumental and Vocal Entertainers" was proposed by the Chairman and responded to by Mr. Edward Sherwood, who conducted the orchestra. The whole of the music was rendered by members of the staff, with the exception of Mr. John Curran, who played the accompaniments, and Mr. Dandridge, who sang two humorous songs.

JAPANESE MUSHROOMS.

Mr. Robert P. Porter, who has been conducting investigations into the industries of Japan, states that one of the most interesting studies in that country is the growing of Mushrooms in the Shikoku Island, where most of the camphor is produced. This is an important article of export, mostly to China, and during the year 1895, the last year for which the returns are available, the quantity of mushrooms exported from Japan to all countries amounted to 1,780,597 lbs. Of the numerous species of edible Mushrooms, the one called Shitake is the most important, being abundantly exported abroad

and also used for many culinary purposes at home. Logs which are used for cultivating this Mushroom are various species of Oak. The principal districts where this Mushroom is produced are the provinces forming Shikoku, Kiushiu, Wakayama, and Shiozuka prefectures.

Oak trees 25 to 33 years old are felled in the autumn, and incisions made with axes at intervals of 3 or 4 inches, the incisions generally reaching the woody layer. The trees are then cut into logs of 4 to 5 feet in length and left in dark secluded parts of the forest. After the third year, Mushrooms make their appearance in the incised portions. When the growth lessens they are replaced by new logs. The Mushroom grows at each season of the year, winter, spring, summer, and autumn, but the growth in winter and spring is the result of artificial stimulus. The logs are steeped in water for a number of hours, according to the dryness of locality, and then struck with pommels or axes to prepare the beds for facilitating the growth of the Mushrooms. The autumn crop is the most abundant. After being collected, Mushrooms are dried either by the sun or by artificial heat.—*Journal of the Society of Arts.*

HAFTON, HUNTER'S QUAY, N.B.

HUNTER'S QUAY is one of those pleasant spots that strike the visitor as, *par excellence*, the place to live and—die in. That is, of course, assuming the visitor possesses a predisposition to settle down at all, or otherwise feels an interest in the pursuit of studies more or less—but especially more—natural. If the animal world be the source of any satisfaction then he can pass the pleasant time away with rod and line, for Holy Loch—"the charmed loch"—will surely yield its piscatorial fry to those who know the secret of success. If, on the other hand, the cryptogamic forms of life be sought for, then this pastime also should result in gain if *names* mean anything. But names, like fancies, are subject to the vicissitudes of time; and so in this case, for the ancient *Cammesreinach* meant the "bay of Ferns." The Ferns, however, especially the Osmundas, linger only in the minds of the oldest inhabitants. The beautiful shores of Holy Loch, as also of Loch Eck, once the paradise of Filices, have been almost denuded of their cryptogamic charms, by a too progressive British public, or a too business-like tendency on the part of peripatetic Scotch merchants, who will make "siller" if they can.

Opposite Hunter's Quay—which takes its name from the Hunters of Hafton—across the water, the mountains rise to a considerable elevation, and are partly covered with plantations of Spruce and Pine. The views are consequently extremely fine; and this fact alone lends a glory to the stately mansion of Hafton with which few are favoured. The mansion is in the modern Gothic style, and constitutes a fine building; it is surrounded by a good garden and garden and park-like land of an undulating character of about 600 acres.

The culinary department is about 2 acres in extent, and enclosed with high walls, whereon are grown a large assortment of fruit trees, which are in various stages of growth and maturity. These walls also give a habitat to a great quantity of *Asplenium Trichomanes*, besides *Asp. Ruta-muraria* and *Cystopteris fragilis*, which fact alone will afford ample evidence as to the state of things as regards moisture. In the garden, on a rockery, *Polypodium vulgare* var. *cambricum* seems quite at home, while in the park *Hymenophyllum tunbridgense* and *H. Wilsoni* do luxuriate. *Begonias*, *Pelargoniums*, *Adiantums*, *Tomatos*, &c, &c, occupy several ranges, the outside beds and borders being well stocked with green stuff and herbaceous plants.

It is, however, hardly a satisfactory proceeding to be obliged to visit even the best of gardens under the shadow of a waterproof. Nevertheless, it was a labour of love; and the magnificent trees and shrubs which Mr. McLeod, the courteous gardener, pointed out for my benefit, would not, perhaps, have looked so fresh and verdant had conditions been otherwise than humid.

Conifers particularly seem to be in a state of content in this mountainous district, for two fine specimens of the Chili Pine (*Araucaria imbricata*) measured 58 in. and 67 in. respectively in circumference at about 3 ft. from the ground. One of these possesses a spread of branches about 90 ft. in cir-

cumference, while the other covers a circle of about 80 ft. Both were well furnished and fairly symmetrical, hence they were objects of beauty as well as subjects for comment.

Cupressus macrocarpa, *C. lawsoniana*, and *Cedrus Deodara* may be mentioned in particular as ornamental trees of high-class character that thrive here admirably, besides a host of other Conifers. *Azalea indica* also does well, while the Portugal Laurel attains a height of 20 ft. Blue Gums survive most winters, which shows that they are fitted for the west of Scotland as well as the south of England.

The climax of culture and development, however, I think is reached in *Rhododendron ponticum*, which attains not only height and healthy foliage, but enormous dimensions. Two huge clumps—or what appear to be clumps—occupy prominent positions on an undulating lawn, one of which curiosity led me to pace, and as a result I calculate that the circumference of this individual shrub is at least 230 ft. Truly a noble specimen! I could not gather the age of the plant, but Mr. McLeod informed me that the planter was still living in the neighbourhood. Of the planter, then, it can be said that he left that lawn better than he found it, for the man who can do something to benefit his fellow man deserves to have his work recorded.

There are many other notable things in this large and interesting garden which cannot now be noticed, but which it is sufficient to remark exact a good deal of forethought and attention from the gardener who presides over them.—*C. B. G., Acton, W.*

NATIONAL AMATEUR GARDENERS' ASSOCIATION.

THE members of this association and their friends to the number of 180 sat down to their seventh annual dinner in the Venetian Room of the Holtorn Restaurant, London, on the 16 inst. under the presidency of Mr. T. W. Sanders, F.R.H.S. Many brought their wives or daughters, so that ladies were present in large numbers. The menu card was embellished with the photos of Mr. T. W. Sanders (the president), Mr. D. B. Crane (deputy chairman), Mr. Leonard Brown (the energetic hon. sec.), and Mr. H. A. Needs (hon. treasurer). All those gentlemen were present, as well as Mr. Geo. Gordon, Miss Gordon, Mrs. T. W. Sanders, Mrs. Brown, Mr. H. J. Jones (Ryecroft Nursery), Mr. John H. Laing (Laing & Sons), Mrs. J. H. Laing, Mr. Norman Davis (Framfield, Sussex), Mr. Richard Dean (National Chrysanthemum Society), Mr. R. Fife (Dobbie & Co.), Mr. E. T. Cook, Mr. H. W. Percy, Mrs. Percy, Mr. H. T. Wooderson, Mr. A. E. Stubbs (Scottish Horticultural Association), Mr. W. Logan (Barr & Sons), Mr. Charles C. Page (Carter, Page & Co.), Mr. Vasey, Mr. Frank Cant (Colchester), Mr. T. Swales, Mr. J. Fraser, F.L.S., Mr. A. J. Rowberry, Mr. J. S. McDougall, Mr. McDougall, Dr. H. Shackleton (the well-known Rose enthusiast), also Messrs. G. Brown, W. Bradley, G. Gingell, Alder, Jehning, Neal, Lewis, Geo. W. Canford, Foster, Elliott Terry, J. N. Hooker, Stevenson, A. Taylor, J. Bateman, Dolby, J. R. Jackson, E. G. Neisigh, Seelby, G. R. Smith, E. F. Wicks, and many others.

After the usual loyal toasts, the president proposed the "National Amateur Gardeners' Association," and in a well-chosen and thoughtful speech, referred to the remarkable strides the association had made. For instance, three years ago the attractions were much less, but they now had wonderfully diversified trophies and other valuable prizes offered annually, and now they were plainly moving in the right direction. The quarterly journal has added lustre to their laurels, and was a marked addition to their usefulness. Their society was distinguished from all others in the kingdom in offering unique advantages to the amateur gardener. Granted a continuance of the energy and perseverance of the members, of which the present splendid gathering was the outcome, he had no fear of their future. The toast was received with the enthusiasm to which all felt it was justly entitled.

Owing to lack of time the chairman dispensed with the usually perfunctory operation of presenting the awards other than the trophies, the following being a list of the presentations, each recipient being greeted with warm applause:—

Cheal Trophy (£5 5s.), to Mr. J. Bateman, with

109 points for twenty-four dishes of Apples and Pears; the Pye Trophy (£5 5s.), for twelve sprays of Violets to Mr. R. T. Dougall; Barr Trophy (£7 7s.), for Daffodils, to Mr. J. W. Jones, Woking, who also takes the Club Trophy and two Silver Medals; Carter Page Trophy for Chinese Chrysanthemums, to Mr. F. M. Vokes, Southampton. Mr. A. J. Foster, Mrs. Harman, and Mr. A. Lewis received certificates; and Mrs. Norris won the leading aggregate prize for the highest number of points (142) scored during the period from March to December. The Sutton Trophy (£21), the Cannell Trophy, the Fidler Trophy, together with the special prizes offered by Mr. H. J. Jones and Messrs. Carter, Page & Co., all found worthy recipients.

All these prizes were announced by Mr. L. Brown, the hon. secretary, who then delivered an entertaining and humorous speech, proposing the toast of "The Trade and Donors of Trophies and other Prizes," coupling with it the names of Mr. Robert Fife and Mr. Frank Cant, of Colchester. Mr. R. Fife responded with thanks on behalf of his colleagues for the reception with which they had been greeted, and said that the gratification of the receivers of the prizes was equally shared by the givers, and they looked forward to many years of successful working by the N.A.G.A. Mr. F. Cant said that the absence of a Rose Trophy hitherto in the society's schedule would be repaired next year, the announcement being received with great enthusiasm.

Mr. C. T. Green proposed "The Ladies" in an appreciative and humorous manner, and was well received, it being generally realised that a very great éclat had been lent to the proceedings by the presence of so many of the fair sex. Mr. F. G. Swales (assist. hon. gen. secretary) in responding, expressed a sentiment which was unanimously endorsed. "The Press" was proposed by Mr. D. B. Crane (deputy chairman), and responded to by Mr. Geo. Gordon and Mr. A. E. Stubbs. The former proposed "The Chairman" which was received with musical honours. Mr. T. W. Sanders responded assuring them of his earnest and continued interest in the affairs of the association, and thanked them for their support and attendance that night. The plants used in the decoration of the hall were supplied by Messrs. J. Laing & Sons, and the cut flowers by Mr. Norman Davis, and on the motion of the chairman, Mr. J. H. Laing and Mr. Davis addressed the meeting. The speeches generally were short, and a long programme of music rendered the evening highly enjoyable.

CATTLE, FRUIT, AND FLOWERS AT IPSWICH.

THE annual show of the Suffolk Fat Cattle Club and Fruit and Flower Exhibition was held at the Drill Hall, Ipswich, on Monday and Tuesday, December 13th and 14th. The weather being very unfavourable, there were not quite so many visitors as usual.

The Hall or ladies' compartment containing the flowers, fruit, &c., which concerns us most, had undergone a complete transformation, being artistically arranged to represent "Ye Olde Gyppec wicke." In the centre was a representation of the Old Market Cross, which was used as a band-stand upon which the band of the Hon. Artillery Company, under the able conductorship of Mr. E. Walker, bandmaster, performed. A little further down was a solid-looking and imposing structure representing the Old West Gate, guarded on either side by four men in steel armour with drawn swords. At the end of the hall was a representation of "Ye Olde Town Hall." This was utilised for the display of butter, bread, and poultry.

The groups of foliage plants, and flowers were a great attraction, as also were the table decorations. Miss A. Orpen, West Bergholt, secured the first prize, and Miss A. Dudley, The Hermitage, Melton, took second; while Miss Steward, Grayham House, Ipswich, came third. For baskets of flowers, Miss Orpen of West Bergholt came first; and Miss Elliston, Stoke Hall, Ipswich, took second. Mr. C. Clover, Westgate Street, Ipswich, was the winner of the first prize for groups of foliage plants and flowers; Mr. R. C. Notcutt, Ipswich, second; and Mr. H. T. Southgate, Spring Road, Ipswich, took the third. There was quite a display of shoulder bouquets and buttonholes. Miss Orford, Castle Hill, Ipswich,

obtained first prize; Miss Orpen came second; and Miss Elliston third.

Fruit was not strongly represented, much of it being shown not for competition. Mr. F. Cresswell, Stoke Gardens, Ipswich, secured first with six dishes of desert Apples; and Mr. W. L. Fox, Werstal Road, Ipswich, was a good second. In Pears, Mr. F. Cresswell was again to the front.

In the vegetable department there was a strong competition, especially in the collections of six varieties. Mr. F. Prythe, Bromford, took first; and Mr. A. Wagstaff, Werstal Road, Ipswich, secured second. There was a large quantity of Potatoes, Mr. A. Lillstone, of Stowmarket, taking several prizes.

SYON HOUSE.

YEAR by year the indefatigable energy of Mr. Wythes is adding to the beauty and efficiency of the fine old gardens at Syon House. A huge establishment, such as this, has many demands upon its resources, but in addition to the work the supply of these entails, time is found for projecting and executing various improvements.

We found a noticeable instance of this during a recent visit, in the subject of the large conservatory which is such a feature of the place, and in the internal arrangements of which some alterations that cannot fail to be also improvements were being made. As most, if not all, of our readers are fully aware, this huge conservatory describes a crescent with its horns pointing due south. The central block is a rectangular building of great height surmounted by a dome. This is filled with Palms and other plants requiring a stove temperature.

From this centre there runs out at either end a comparatively narrow compartment which is kept cooler and is devoted to greenhouse plants. Until quite recently the wings were fitted with a single path down the centre and stages on each side of it, on which pot plants were stood. Naturally enough, a considerable amount of work was needed to keep these compartments well and suitably furnished at all seasons of the year.

This arrangement has now been done away with, for beds, in which the various subjects may be permanently planted, are in process of construction. Instead of the single central walk, there is a path right round, a roomy bed of soil occupying part of the site formerly taken up by the old path. Narrower beds have been formed next to the perimeter of the house. These will accommodate the climbers with which the roof is to be covered. When completed, this house will present a very much improved appearance, and its value as a winter garden will be much increased.

In the smaller plant houses we found a good deal to interest us. In one was a fine collection of Nepenthes in robust health. The plants were well furnished with pitchers and suspended as they were from the roof, exhibited their distinctive features to the greatest advantage. *N. mixta*, *N. hookeriana*, *N. rafflesiana*, *N. americana*, *N. Curtisii*, *N. C. superba*, *N. Morganiae*, and *N. dicksoniana* helped to make up a representative collection. On the stage beneath the Nepenthes was standing a general collection of warm Orchids. At the end of the house stood a row of fine healthy plants of *Vanda teres*. These were accommodated in 48-sized pots, and we were informed that they had bloomed freely this season.

In a cool house a splendid batch of some sixty well-flowered plants of *Cypripedium insigne* was a great attraction. Here, too, we saw some neat specimens of the pretty *Pinguicula caudata*, the plants carrying a number of the bright rosy flowers.

In other warm houses *Vanilla planifolia* is cultivated largely, and with considerable success by Mr. Wythes. The plants are trained up wires supported by the back wall. They are growing in a box running the whole length of the house, and measuring a foot in depth by 15 in. in width. This is filled with peat and broken crocks, with a few nodules of charcoal here and there. The fruit houses held much that was interesting. The early Peach house containing healthy trees of such varieties as Amsden June, Alexandra, and Hales Early was started on the 25th November, and will yield ripe fruit by about the third week in April. A very noticeable feature about these trees was the careful and wonderfully neat

fashion in which they had been trained, every shoot being in its proper place; indeed, it would be difficult to imagine more perfectly fan-trained specimens than these. We see so much slovenliness with regard to the tying in of fruit trees, that a striking example such as this is all the more noteworthy.

In the large vinery the Grapes were still hanging, such varieties as Lady Downes' Seedling, Trebbiano, Alicante, Gros Maroc, and Barbarossa being represented by some well finished bunches.

The earliest Grapes will be gathered from two-year-old Vines of Mr. Wythes' own raising; in fact, we may say here that all the canes necessary are raised at Syon House from eyes, and are not bought in. This earliest house was started on the 15th of October, Black Hambro' and Foster's Seedling being the varieties.

A good deal of difficulty is experienced in dealing with winter Cucumbers, the fogs proving exceptionally troublesome. Nevertheless, success is attained, and we were much pleased with the appearance of a batch of plants in 12-in. pots that were just beginning to get a hold of the wires. Very little stopping or pinching is done, as it is found that the plants must be encouraged to grow as freely as possible if they are to do well.

The forcing of Strawberries is one of the most important cultures in the establishment, for the demand for forced fruit is very great, and once the supply is started it has to be kept going until the outdoor plants come to the rescue of the forced ones. Upwards of 5,000 Strawberry plants pass through the forcing houses in one season—a gigantic task. Royal Sovereign is now the variety chiefly depended on. Keens' Seedling, and Auguste Nicaise, which have up to the present been forced in quantity, have been discarded this season.

GARDENING MISCELLANY.

ROMAN HYACINTHS.

I do not know if it is the general experience of cultivators of Roman Hyacinths to have them flower freely early in November without subjecting them in some form to forcing? We potted, at three different times, bulbs to keep up a supply of cut flowers till spring, but I notice that those potted about the end of September, and grown in an unheated pit, are throwing up their flowers strongly and abundantly. Those which have been flowering freely are assisted with liquid manure, and will likely throw up a second batch of flowers as a late supply. We never took less pains to get early flowers of these favourites, and never were better supplied. These are grown very extensively in many Scottish gardens. Some pot or pan them by the thousand. Sandy loam, in which a third of the compost is well decayed manure, is very suitable for Roman Hyacinths. To get fine spikes for cutting it is not judicious to plant the bulbs too thickly. They should be kept as near to the glass as possible when they are taken from the covering of ashes or whatever material they are started under.—*M. T., Ca von, N.B.*

ACACIA CELASTRIFOLIA.

THE above name was given to a form of Acacia from Australia by the late Mr. G. Benthams; but the plant has since been considered as a variety only of *A. myrtifolia*, so that it should now read as *A. myrtifolia celastrifolia*. It was introduced from the Swan River in 1842, but at present is not at all common in collections. The leaves are not unlike those of a Myrtle in shape, but in their deep sea-green hue they recall *A. cultriformis*, which is better known in private collections. A coloured figure of it is given in the *Bullettino della R. Società Toscana di Orticultura*, for November, 1897. It has flowered with Sig. Pasquale Motta, of Florence, who recommends it for the precocity, abundant and prolonged flowering of the plant, and its hardness in Italy. In Britain, of course, it would require a greenhouse temperature. The glaucous leaves are ovate, and the small flowers are crowded in small globular heads, which again are arranged in long racemes drooping from the axils of the leaves. They are of a beautiful yellow and pleasantly scented.

OBITUARY.

MR. WILLIAM GREY.

IN this country, Mr. William Grey was best known by his reputation as an Orchid grower on the Corning Farm, Albany, New York. He died at his residence there on the 25th November last.

He was a Scotchman by birth, being born at Greenlaw, Berwickshire, on the 18th February, 1828. He went to the United States in 1851, getting employment for a time with Mr. James Wilson, Lydias Street, Albany. Subsequently he became gardener to Mr. Joel Rathbone, Kenwood; but wishing to try his fortune as a nurseryman in the west country, he moved to Western Iowa, where he found the winters too severe to his liking. Returning to the east, he was appointed gardener to John T. Norton, Esq., Farmington, Connecticut, and stayed there for four years. He afterwards took charge of the collections of Gen. J. F. Rathbone, until his appointment as superintendent of Corning Farm for the late Hon. Erastus Corning.

Here he soon showed that he was in the midst of his real life work. The reputation of the Corning collection of Orchids rapidly rose to great distinction under his management. He raised a large number of very fine hybrids, which have since been finding their way into various collections, both in the Old and New World. Mr. Grey was also a noted entomologist, having a collection of something like 30,000 specimens from various parts of the world. His collection was rich in melanitic and dimorphic forms of insects. He leaves a widow, three sons in the profession, and two daughters to mourn his loss.

QUESTIONS AND ANSWERS

•• Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Beetles and Plants—*James Thomson*: The so-called beetles you send in four different stages are not beetles at all but cockroaches (*Blatta orientalis*) although the term black beetles is often applied to them. The winged form is the adult male of the insect. The smaller specimens are simply larvae, which are active all through life and never assume either a grub or a pupa stage like true beetles. They keep eating and growing from the earliest to the adult stage of active life, and are one and all more or less destructive. We are surprised, however, that this species should prove destructive to Pinks. Possibly you will find brown specimens in your houses; and if so, they would belong to the American cockroach (*Blatta or Periplaneta americana*), which prove destructive to all kinds of plant life that will afford them nutritive food, which they are able to gnaw. The grub you sent is probably that of a beetle, but it was crushed beyond recognition by the small box rolling about within the larger, together with large loose nails. You do well to destroy both kinds by digging up the soil near the hot water pipes. To destroy the cockroaches get some "phosphorus paste," from your chemist, telling him what the poison is intended for. Put small pieces of this paste on pieces of crock or slate, and lay these about the house in places frequented by the cockroaches, just when leaving off work for the night. Lift the crocks in the morning and place them in a cupboard or other safe place out of harm's way, for the paste is highly poisonous. You need not clear away any dead cockroaches for a day or two, as the live ones eat the dead and share the same fate. You will soon be able to effect a clearance of the pest by continuing the process for a time.

Lectures in Horticulture—*H. H.*: There should be no difficulty in sitting for the examination in your district, provided you can get any one to superintend the examination in your district. You should ascertain in your own neighbourhood whether any schoolmaster, clergyman, or other responsible person would be willing to superintend for two and a half hours or thereabouts in a room while you write out the answers to the questions on the examination papers. Having found some responsible person to do this you should write to the Secretary, Royal Horticultural Society, 117, Victoria Street, Westminster, London, S.W., informing him of your intention, and asking for instructions. You ask whether you would be allowed to prepare for any examination through the post, but we cannot see how this could be done, if that is really what you mean. By pursuing the instructions above given you will get on the right track. You can assist yourself, however, or get any one to help you in extending your knowledge

previous to the examination in May. Your experience will go a long way to assist you in answering the practical questions; and for the theoretical or scientific part you should study "Elementary Botany," by J. W. Oliver, sold by Blackie & Son, Glasgow, for 2s., or "Botany," by H. Edmonds, published by Longmans, Green & Co., London, for something like 2s. 6d. Either of these would enable you to study the morphology and physiology of plant life. They are illustrated.

Strange and lively Earthworms—*Jas. Thomson*: The two specimens you sent us were very much damaged in transit through the post by being packed in a small quantity of dry, loose earth. They were, in fact, dried up and dead. However, judging by their size and shape, as well as the description you give us of their lively movements, we believe they belong to the species *Lumbricus rubescens*, of Friend, first discovered between Idle and Eccleshill, near Bradford, Yorks., in 1895, but since found at several places between Paisley and Sussex. It is usually 3 in. to 4 in. in length, exceedingly active, and usually found along with the Red Worm (*L. rubellus*, Hoffm.). The Rev. Hilderic Friend, M.A., F.L.S., read a paper on the subject at a meeting of the Linnean Society, 5th May, 1892, when he described it as a new species.

Ivy Failing—*Thos. Portnell*: We have carefully examined the specimens you sent us, but fail to find any fungus that would be likely to cause the death of the Ivy. In the old and dried up thick portions we found some traces of a kind of mould, which would be following rather than causing the decay. In some portions of both young and old stems we found bacterial organisms in abundance, but they are likewise the products of decay we imagine. The wood was well formed, and in the younger portions well filled with starch, and the bark with chlorophyll. It is our opinion that the cause of the young shoots and leaves dying is owing to their being dried up through the failure of the thick stems, and their preventing the rise of sap. The cause may have been originally the result of an accident, such as the cutting or injury of the stem in some way. On the other hand it may be that the roots are being starved in a very dry soil, which would have to be investigated on the spot. In any case, the decayed portions may be cut clean out and burnt on the rubbish heap, although we think there is no danger of infection. If you have a young plant or two in pots or otherwise, we should advise you to spread them over the bare place of the wall till they take fresh hold by new growth. Before this, however, you should ascertain the nature of the soil to see if that is at fault, and give some fresh loam. Be sure the soil is not waterlogged, as that would cause the death of the roots, and should be remedied by drainage.

Grub in Stem of Apple Tree—*Milson*: The large and spotted grub in the stem is the caterpillar of the Wood Leopard Moth (*Zeuzera Aesculi*) which occasionally makes its appearance amongst fruit trees both in Surrey and Middlesex. The Goat Moth (*Cossus ligniperda*) is a very much larger creature in the caterpillar stage, different in colour, and usually selects a much thicker branch of the tree, or more often the main stem. Both may be destroyed in the same way by getting a stout piece of copper wire or some other sort that will readily bend in the hole, so as to reach and crush the caterpillars. Another way is to pour or squirt a few drops of chloroform into the hole and close up the entrance by means of clay, so as to keep in the fumes till they have done their work. They have now laid up for the winter; but in future you should keep an eye upon your fruit trees during summer, when frass or gnawed chips of wood are being cast out of the hole in which either of the above moths may be at work. By finding them early you will prevent much mischief, and be better able to get at them with a wire.

Names of Plants—*T. W.*: 1, *Chlorophytum elatum variegatum*; 2, *Agapanthus umbellatus variegatus*; 3, *Selaginella Braunii*; 4, *Selaginella emiliana*.—*Henry Hunt*: 1, *Anthurium warocqueanum*; 2, *Bouvardia Vreelandii*; 3, *Daphne odora*, usually known as *D. indica*, in gardens; 4, *Adiantum hispidulum*; 5, *Metrosideros floribunda*; 6, *Sparmania africana*.—*G. W.*: 1, *Oncidium varicosum*; 2, *Odontoglossum constrictum*; 3, *Laelia anceps*, a fairly dark variety.

Communications received—*W. D.*—*C.*—*A. D.* Webster.—*Chas. Tacon*.—*A. A. C.*—*J. L.*—*J. H.*—*O. F. Hudson*.—*J. Mayne*.—*W. F. C.*—*H. Cannell*.—*R. M.*—*H. C.*—*A. W.*—*D. B. S.*—*A. L.*—*J. R.*—*C. P.*—*S. Wood*.—*F. R.*—*M.*, Reading.—*O. E.*—*Aloe*.

TRADE CATALOGUES RECEIVED.

JAMES VEITCH & SONS, LTD., Royal Exotic Nursery, Chelsea.—Catalogue of Seeds, &c., 1898.

FISHER, SON & SIBRAY, Ltd., Royal Nurseries, Handsworth, near Sheffield.—Catalogue of Vegetable and Flower Seeds and Horticultural Requisites.

DICKSON, BROWN & TAIT, 43 and 45, Corporation Street, Manchester.—Catalogue of Vegetable and Flower Seeds and Garden Requisites.

LITTLE & BALLANTYNE, Carlisle.—Garden Seeds.

A Special Offer to Readers of
THE GARDENING WORLD
25/- BOOK for 8/-

NO HOME SHOULD BE WITHOUT ONE.

Ogilvie's Encyclopædia
OF
USEFUL INFORMATION
AND WORLD'S ATLAS.

No Single Book ever before contained such a Wealth of Knowledge.

By Special Arrangement with the Publishers of the "Encyclopædia of Useful Information and Atlas of the World," we are enabled to offer to the Public a Magnificent 25s. Volume for 16 of the coupons, which will appear weekly, together with 6d. each, accepted in Weekly Instalments, or the Coupons may be held until the whole period has elapsed and brought or sent to the Office with 8s., and 6d. towards carriage.

A COMPLETE ILLUSTRATED LIBRARY IN ITSELF.

A universal assistant and treasure-house of information on every conceivable subject, from the household to the manufactory. In short, gives information about everything, is absolutely indispensable to everyone in all walks of life; the contents being so separated, indexed, and arranged that they can be turned to at once. It is

THE BEST { BOOK OF } EVER
 { INFORMATION } ISSUED.
Size of Encyclopædia: 9 by 11½ inches. 656 Pages.

It contains

MANY MAGNIFICENTLY ENGRAVED
COLOURED MAPS,

and a description of every country under the sun, besides much other matter relative to the Home, the Farm, the Factory, a Dictionary of Statistics—many Useful Tables, Poetical Selections, Synonyms, Famous Bridges and Ships, How to Calculate, How to Cook, How to Get Rich, How to Cure all Diseases, How to Succeed in Business, Table of Weights and Measures, and

HUNDREDS OF OTHER TOPICS OF
GREAT VALUE TO EVERY PERSON

who desires to be up to the times. To see the Book is to want it. To Members of Mutual Improvement Societies it will prove of inestimable value.

The articles are written by men whose lives have been devoted to the subjects treated, are short and concise, but contain full information up to date. It is to be consulted on every subject that arises in everyday life, by old and young alike. It contains a complete Illustrated Atlas of the World.

IN THESE DAYS OF COMPETITION

it is imperative that a Gardener should be a well-informed individual. Here is an Encyclopædia containing an immense amount of knowledge that will be of the greatest service to him.

YOUNG GARDENERS,

do you wish to be successful? Then remember that to possess knowledge is the surest way to achieve success.

It is elegantly bound in Morocco Cloth, with beautifully designed Gilt Side-stamp and Red Edges, making at once the most handsome and durable as well as THE MOST USEFUL BOOK EVER MADE or sold for 25s.

251297.

COUPON.

OGILVIE'S ENCYCLOPÆDIA OF
USEFUL INFORMATION,
AND WORLD'S ATLAS,
(Published PRICE 25s.).
16 COUPONS, AND 6d. WITH EACH.

Name _____

Address _____

Postal Orders or ½d. stamps may be sent.
COUPONS AND CONTRIBUTIONS MAY BE
LEFT at or SENT TO the Office for

THE PUBLISHER OF

THE GARDENING WORLD.

COPIES OF THIS BOOK CANNOT BE
BOUGHT. They can be obtained only by using
these Coupons.



The 31st Edition is Now Ready.

200 PAGES. 150 ILLUSTRATIONS.

PRICE SIXPENCE, POST FREE.

(by Parcel Post—it is so large).

CONTENTS—The Best Seeds and Potatos for Gardsn and Farm; also Descriptive Lists of Carnations, Chrysanthemums, Dahlias, Fuchias, Gladioli, Herbaceous Plants, Pansies, Peiargon ums, Pentstemons, Phioxss, Pinks, Pyrstrhums, Roses, and V olas; with full Cultural Directions for each.

PRESS & OTHER OPINIONS OF THE BOOK.

WEST HUMBERSTONE.—“Your Catalogue and Guide safe to hand. I am very pleased with it, and I am sure every Amateur, in particular, should have one in his possession, as they are worth 100 times their cost.”—T.H.

Leeds Mercury.—“For a useful selection of vegetable and flowers, and a trustworthy guide in the culture of these, it is vastly ahead of ordinary catalogues.”

ABROATH.—“Very many thanks for your valuable Catalogue and Guide. As an Amateur, I find cultural instructions of immense value.”—D.A.

Bell's Weekly Messenger.—“Contains elaborate and complete articles on cultivation for exhibition as well as ordinary purposes. It is thus far more than a mere catalogue—quite an encyclopædia of farm and garden plants.”

YARM.—“Thanks very much for your Catalogue of 1897. In looking through it, I find it is even better than last year's, which I thought could not be surpassed.”—W.C., Gardener to Sir T. Richardson, M.P.

Apply early, and please mention this paper.

DOBBIE & Co.,

SEED GROWERS AND FLORISTS TO THE QUEEN
ROTHESAY.

BEGONIAS A SPECIALITY.

Seed saved from prize plants. Choicest mixed, single or double varieties, 1s., 2s. 6d., and 5s. per packet; collections (seed) single, 12 named varieties, separate, 9s. 6d.; 6 ditto, 3s. Tubers, named singles, from 18s. to 50s. per doz.; choicest seedlings, 3s. to 30s. per doz.; bedding, choicest, 3s. to 9s. per doz.; choicest named doubles, from 18s. per doz.; choicest seedlings, 6s. to 30s. per doz.; choicest mixed, for bedding, 9s. to 18s. per doz. Catalogues gratis.

JOHN LAING AND SONS,

Begonia Growers, &c.,

FOREST HILL, LONDON, S.E.

CHRYSANTHEMUMS.

“Which are the BEST Varieties?”
A Question Asked by Everyone.

FOR ANSWER SEE MY CATALOGUE
(POST FREE.)

GODFREY, EXMOUTH, DEVON.

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

THE ROYAL GARDENERS' ORPHAN FUND.

THE TENTH ELECTION of CHILDREN to the Benefits of this Fund, consisting of an allowance of 5s. per week (subject to the conditions stated in Rule X111), will take place on FRIDAY, February 18th next, at “Anderson's Hotel,” Fleet Street, London. All applications must be made on a properly printed form, copies of which may be had gratis of the Secretary, or any of the Local Secretaries. Such form must be correctly filled up, duly signed, and returned to this office not later than Tuesday, December 21st, 1897.

A. F. BARRON, Secretary.

Royal Gardeners' Orphan Fund, Chiswick London.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. MCARTHUR, The London Nurseries, 4, Malda Vale, London W.

**VEITCH'S
GENUINE SEEDS**



**NEW TOMATO
VEITCH'S GOLDEN JUBILEE.**

First Class Certificate, Royal Horticultural Society
May, 26th, 1897.

PER PACKET, 2/6.

**NEW MELON
SYON PERFECTION.**

Award of Merit, Royal Horticultural Society, July 13th,
1897.

PER PACKET, 2/6.

**NEW MELON
FROGMORE SCARLET.**

Award of Merit, Royal Horticultural Society, August 25th,
1897.

PER PACKET, 2/6.

Seed Catalogue for 1898 has now been posted to all their Customers. Anyone not having received the same, a duplicate copy will be forwarded post free on application.

James Veitch & Sons, Ltd.,

ROYAL EXOTIC NURSERY

CHELSEA, LONDON, S.W.



“Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man.”—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JANUARY 1st, 1898.

OUR APPLE SUPPLIES.—There is no topic that is more popular at the meetings of societies and mutual improvement associations all over the country than that of fruit culture, but particularly Apples. The agitation which has been going on for several years past has not yet given results that in any way effect the market supplies of fruit, though there ought by this time to be some visible evidence of the produce from the many acres of fruit trees that have been planted since the movement commenced. The operation at best is a slow one, but it is questionable if the proper method of proceeding was adopted when the subject of fruit growing for a home supply was taken up. There can be little doubt that many farmers and other equally inexperienced people turned to fruit growing as a speculation when the agricultural industry generally was in a very depressed condition, with the result that they gave fruit growing a bad name and relinquished it in disgust. The keynote of the whole subject was no doubt struck at a meeting of the Chiswick

Gardeners' Mutual Improvement Association when a paper was read by Mr. Miller on “Profitable Fruit Culture.” In the course of the discussion, Mr. S. T. Wright, the President, remarked that he had been asked whether he knew of and could recommend a good man to undertake the growing of hardy fruit. Notwithstanding his wide experience he was unable to lay his hand on a properly qualified man. Here, then, we have the question in a nutshell. We have plenty of young gardeners who have given lively attention to the cultivation of fruit under glass, though hardy fruit has been neglected by them. Glasshouses have for many years offered great attractions for young men to the neglect of outdoor gardening, including the kitchen garden and hardy fruit; but the latter has suffered by far the greatest amount of neglect. How then can we expect the cultivation of hardy fruit to pay when so few understand the principles of the subject? Here, then, is a hint to the enterprising young men of the period, the future generation of gardeners. From this point of view we have been making a great mistake in urging the increased cultivation of fruit trees with the object of meeting the demand with home supplies, when we should have been encouraging the young men to get a thorough knowledge of fruit culture and to get abreast of the modern requirements to enable him to succeed. A proper selection of varieties to grow for market, the grading and packing of the fruit, and being in touch with good centres for the disposal of the fruit, are things that must constitute part of the experience of a successful fruit grower. Then he must have a good man under him in two or more of the principal departments of the business.

A point in the discussion at the above meeting was that a plantation of fruit would give a profitable return in the course of six years. The president stated that Apple trees on the Paradise stock, and under suitable conditions as to cultivation and proper selection, would give a profitable return in two years. This is certainly very assuring to aspiring cultivators; but few gardeners have had a better or even a similar experience to the author of the statement. The plague to the British cultivator hitherto has been the growing of too many sorts, many of them bad or indifferent, for market, instead of confining his attention to a few, say half a dozen, reliable and good-keeping sorts, with which a continuous supply might be kept up for as long a period as possible, so that the buying public could get acquainted with the quality of the particular varieties in season. Once they can be induced to rely upon the regular and even quality of what they are buying, they are likely to come again for a further supply. By such means a reputation and a business could be built up that would insure a successful future for British-grown fruit.

At present the bulk, if not the whole, of the supplies in the market are of foreign produce, so that the grading which gives the fruits their even and tempting appearance has been due to the skill of the people that sent them here. British grown fruit so long as the supply lasted was in fair form in some cases, while other samples were in the same old mixed order, and anything but tempting in appearance. King of the Pippins Apple grown in Middlesex was being retailed in the shops last November at 4d. a pound, while alongside of them were baskets of the same variety from Worcester at 3d. the pound. The fruits in both cases were of good average size, those from Middlesex being yellow and apparently more thoroughly ripened. On

the other hand the Worcester samples were greener, but heavily flushed with red on the exposed side, and altogether more tempting in appearance. The plea for the difference in price was that the Middlesex Apples were the better in quality. When the skin was pared off the fine looking fruits from Worcester, the flesh was seen to be covered with bruises on all sides, thus discounting any expectations which the skin might have held out. Newtown Pippin Apples from America enjoy a high reputation for quality, so much so that samples of moderate size and disfigured all over with ornamental clusters of the spores of a fungoid disease were selling at 4d. a pound.

At the meeting above mentioned some very fine examples of Apple culture in Ireland were shown by Mr. Gingell, the superintendent of Ravenscourt Park, Hammersmith, London. All the fruits were of large size, and their colour was very striking indeed, particularly in the case of Lane's Prince Albert, Emperor Alexander, The Queen, Bismarck, Peasgood's Nonsuch, and other varieties. The trees had been planted very shallowly on the surface of heavy clay land on account of its inclination to be wet, and the results justified the methods adopted. If fruit such as that could be produced in quantity, not only in various parts of Britain, but also in Ireland, there ought to be no fear for foreign competition. Our home growers, and young gardeners in particular, should be up and doing, and put the situation fully to the test.

The experiment made by the Laurier administration of Canada last season in transmitting Grapes, Peaches, Plums, and Tomatos, by the cold storage system, has been making the United States sit up, so to speak, to see a new and bold competitor against them in our markets. The first shipment of fruit, says *American Gardening*, left the government warehouse at Grimsby, Ontario, on September 7th, in refrigerator cars, on their way to Montreal. From thence they were forwarded in cold storage to Bristol in the steamer "Merrimac." On arrival there the fruit was sent on in refrigerator cars to London. The fruit was found to be a little more matured than was desired, with the exception of some Apples and Pears. This was comparatively a small matter, inasmuch as the Canadians must gain experience at the cost of experiment just as other colonies and peoples have to do. That they did profit by the results of later shipments has been admitted. Amongst other things, however, they discovered that Canadian Tomatos were too large for the British markets. That can easily be remedied, even if they send here for the first stock of seeds. In matters of packing they also had something to learn. Our contemporary on the other side of the Atlantic urges United States growers to maintain uniform grading and honest packing, if they are to hold their own in the markets of the world, for there can be no doubt that the Canadians intend to develop and extend the fruit-growing industry.

Royal Botanic Society and the Public.—At the meeting of the Marylebone Vestry on the 16th ult., a heated discussion took place regarding the new lease to the Royal Botanic Society. The following resolution was proposed, seconded, and carried by a large majority:—"That H. M. Commissioners of Woods and Forests be informed that in the opinion of the vestry increased facilities should be afforded to the public for admission to the Botanic Gardens upon payment for such admission, and that such provision should be a condition precedent to the granting of the new lease to the Royal Botanic Society.

Gladioli with double Flowers.—At a meeting of the National Horticultural Society of France in July last, MM. Dupauloup & Cie exhibited a collection of Gladioli with double flowers, which the *Bulletin d'Arboriculture, de Floriculture, &c.*, thinks will give rise to a new race that cannot fail to interest lovers of this class of flowers.

Notts Chrysanthemum Society.—The annual dinner was spread at the Adjutant White Hotel, Nottingham, on the 17th ult. The chair was ably filled by Mr. D. Whittingham, the president of the society. After the usual loyal toasts had been honoured, Mr. Goodacre proposed "The Society." He spoke of the lead taken by Nottingham in the question of allotments, and was quite sure that the artisans of that town could hold their own against the professional gardeners of many other places. He coupled with the toast the names of the chairman and vice-chairman. After a number of other toasts had been given the secretary laid the balance sheet before the meeting. This showed a balance in hand of £36 14s. 10d., and called forth a remark from the chairman that the society was now in a better condition than it had been at any previous time in its history. At the election of officers, which followed, Mr. E. Hermmel was chosen as secretary, and Mr. T. Hugh as treasurer. The election of president was left in the hands of the committee. It was resolved that the show next year should be held on the second Friday in November, and the general meeting on the first Friday after December 11th.

Reading and District Gardeners' Mutual Improvement Association.—The last fortnightly meeting for the season 1897 of the above association was held on Monday evening in the Abbey Hall (by kind permission of Messrs. Sutton & Sons) and was presided over by the president, Mr. C. B. Stevens. A very large number of members attended to hear a paper entitled "A chat about Chrysanthemums," by Mr. H. J. Jones, of Lewisham, the well-known exhibitor and grower. The paper was given in a very interesting and "racy" manner, and was full of practical hints and illustrations, and was greatly appreciated. The paper was divided into several headings, such as propagation, composts, potting, manuring, watering, insects, housing, exhibiting, &c., and without doubt many were benefited by the wrinkles given. A splendid exhibit of flowers, &c., by the members greatly added to the interest of the meeting. Messrs. Sutton & Sons sent some beautiful specimens of Cyclamen, including Sutton's Salmon Queen, Vulcan, White Butterfly, &c. Mr. Townsend, Sandhurst Lodge Gardens, staged some grand plants of *Primula obconica*; Mr. Bright sent dwarf plants of *W. H. Lincoln Chrysanthemums*, showing the decorative value of plants grown in 3-in. pots; and Mr. Bradley, Tilehurst Nurseries, exhibited cut blooms of Chrysanthemums and a basket of Mushrooms. Mr. Woolford, The Gardens, East Thorpe, also exhibited a splendid specimen of *Begonia Gloire de Lorraine*.

Taunton Horticultural and Floricultural Society.—The annual general meeting of this society was held in the Guild Hall at Taunton on the 14th December. The Mayor (Alderman W. Potter), presided. After the minutes of the last general meeting had been read and confirmed, the secretary presented the report and balance sheet for the year. Like many of the balance sheets of similar societies during the trying Diamond Jubilee year the finances have suffered to some extent. The gate receipts were £50 less, and the expenditure was £27 17s. greater than for the previous year. They commenced the year 1897, after depositing £50 with a balance of £30 19s. 4d., and ended with £13 0s. 5d. The Mayor, in proposing the adoption of the report, reminded those present that they were comparing the accounts with those of a record year. Mr. A. Hammett seconded, and the report was duly adopted. The next show was fixed for August 11th, when Somerset meet Kent on the cricket field at Taunton. The High Sheriff-elect of Somerset, the Hon. E. W. B. Portman, was elected as president. Mr. J. S. Winsor was re-appointed secretary, and Mr. A. Clements was chosen to be treasurer. Mr. T. Penny, of Parklands, and Mr. A. W. Turner, Staplegrove, were added to the list of patrons. Mr. G. Norman and Mr. Albert Goodman were requested to serve on the committee. Votes of thanks were passed to the donors of special prizes, and to those who had assisted the society in other ways.

Mr. Charles Nicholson, formerly of The Lawn Gardens, Warwick, and for the past four years foreman at Rokeby Park Gardens, Barnard Castle, Co. Durham, under Mr. Bowlzer, has been engaged as gardener to Major Chichester Constable, Wycliffe Hall, Winston, Darlington. We heartily wish him every success in his new situation. He entered his duties on the 31st ult., to start with the new year.

The Florists' Club of Philadelphia, U.S.A.—A review of the Chrysanthemums disseminated in the States during 1897 occupied the attention of the Philadelphia florists at a recent meeting. Mr. Robert Thift was appointed to open the discussion, and the officers of the Chrysanthemum Society of America was invited to give an opinion. Mr. Elijah A. Wood, president of this society, read a carefully prepared report, in which he detailed the behaviour of most of the more important introductions. Such varieties as Sunstone, Mrs. Martin, A. Ryerson, and Western King are well known on this side of the Atlantic. Mr. John N. May also gave a similar report of varieties that had done well with him.

Devon and Exeter Gardeners.—Mr. Norman Gill, of Penryn, Cornwall, read an instructive paper on "Insectivorous Plants" before the members of the Devon and Exeter Gardeners' Association on the 22nd ult. The chair was filled by Mr. G. C. Crabbe. The essayist said that it was tolerably well known more than a hundred years ago that some kinds of plants captured and digested insects, yet it was only in recent years, and as a result of the investigations of men like Charles Darwin and Sir J. D. Hooker that the why and the therefore of such movements were apparent. Great Britain, continued Mr. Gill, was comparatively poor in insectivorous plants, twelve species and two sub-species being all that we could muster. These comprised three Sundews, with two sub-species, five Bladderworts, and four Butterworts—all very small bog plants. The Sundew had leaves tipped with crimson hairs, each of which exuded a drop of gummy fluid. The insect became stuck in this fluid, and was digested at leisure by the plant. The movements of other insectivorous plants were next detailed. Almost all of them had but the merest shadow of roots, whilst others had no roots at all. In consequence of their inadequate root capacity the plants had recourse to novel methods for obtaining the necessary nitrogen. Some plants that had once been insect devouring, had outgrown this stage as in the case of *Parnassia palustris*.

The Royal Oxfordshire Horticultural Society held its annual general meeting on the 14th ult. in the Town Hall, Oxford, under the presidency of Mr. George Herbert Morrell, M.P. The report for the year lately passed showed that the committee in presenting the sixty-eighth annual statement regretted a gradually diminishing revenue from subscriptions and other sources, traceable to the removals from the district by death, or otherwise, of supporters, and also the falling off in the visitors' attendance. The shortening of the University term, and the Diamond Jubilee celebrations had also contributed largely to the loss of £43 sustained upon the year's working. The show held at the Worcester College Gardens in June last, fully sustained the reputation of the society's shows, and the same might be said of the second summer show which took place at Headington Hill Hall on the fourth Tuesday in August. The chairman in commenting upon the report and statement of accounts, reminded them that unsuccessful as the year had been from a purely financial point of view, they had yet a balance of £60 or £70 upon which to fall back. The gate-money this year had totalled £68, the lowest figure that had ever been reached, whilst the maximum amount of gate receipts at any time during the last ten or twelve years was £198, and the average £170. He announced that he should be pleased to contribute £10 towards the deficiency. Mr. Wooten formally moved the adoption of the report, in which he was seconded by Mr. Filsell. The motion was duly carried. Owing to Mr. Morrell's retirement from the post of president, it was decided to ask Mr. Aubrey Harcourt, of Nuneham Park, to succeed him. The hon. secretaries, Messrs. John Thomson, and M. Wooten were re-elected on the proposal of Mr. C. Bates, whilst Mr. Greenway was returned as acting secretary.

Source of Mistleto.—The supply of this evergreen, which from a commercial point of view might be described as an annual, has been obtained from the Channel Islands, but more largely from Brittany, St. Malo, Cherbourg, and other parts of France. It was somewhat dearer than usual this season.

Clevedon Chrysanthemum Society.—The committee of this society dined together at Sweet's Restaurant on Saturday evening, December 18th. Mr. H. S. Newnham presided. After an excellent repast, Mr. Wm Jones proposed "Success to the Clevedon Chrysanthemum Society," and coupled with the toast the names of the chairman (Mr. F. Spangle), and the hon. secretary (Mr. J. H. Hart), both of whom responded. Mr. S. Dyer gave the exhibitors, and Messrs. W. Jones and W. Austin replied. Other toasts followed, interspersed with songs, and in this way a very pleasant evening was spent.

Social meeting of Messrs. Dobbie & Co's Employees.—The annual social gathering of Messrs. Dobbie & Co., Rothesay, took place in the New Public Hall of that town on the 23rd ult. The platform was decorated with plants and flowers, while appropriate mottoes adorned the walls. About 200 sat down to table under the presidency of Mr. William Cuthbertson, the senior partner of the firm, who was supported by Mrs. Cuthbertson, Mr. James Dobbie (the founder), Mrs. Dobbie, Mr. Robert Fife, Mr. A. M. Burnie, Mrs. and Miss Burnie, Mr. Andrew Mitchell, Mrs. Mitchell, Rev. Frank Matthews, Ex-Bailie and Mrs. Burness, and Mr. A. G. Christie. The chairman read a telegram from the employees at Orpington wishing success to the social gathering. Being an evening for enjoyment and not for speeches he would not detain them long. The firm with which so many of the audience were connected still enjoyed good health, and he took the opportunity of expressing the gratitude of the firm to those who took such a conscientious interest in their work, the members who did so being neither few nor small. The firm did not as yet see any limit to the development of their business. Quite recently Lord Inverclyde had urged him to develop an American business where there was a large field, as floriculture was not so forward as in Britain. At present they had enough to do with their own country, though they had a satisfactory clientele on the Continent, in America and Australia. He was sure they would be glad to see their hale and hearty friend, Mr. Dobbie, with them. Mr. Fife had also come from Orpington, a distance of 450 miles to be with them again. Of Mr. Mitchell and Mr. Burnie (the other members of the firm) he would say nothing, as they were always with them. On behalf of the staff, Mr. R. Free-land, said that the workers desired to be honourably represented on the programme, and that the continued success of the firm was a source of great gratification to them. Some of his fellow workers had died and others had left for new spheres for their activity. An Agricultural Seeds Section had been added to the business, and this being the first time that Mr. Mitchell, the manager of that department, had come amongst them as a partner of the firm, the employees would offer him a hearty welcome and their warmest congratulations. The business had been founded in 1865 by Mr. Dobbie on half an acre of ground, and looking at the extent of their land now and the number of employees, one could not help being struck with the rapidity of growth of the firm. Mr. Robert Fife said he could hardly realise that it was four years since he had been amongst them, but hoped they were doing their best to guard the reputation of the firm. He had recently been at a banquet in London, where one of the toasts bore strongly upon the firm, and the way in which it was received showed that the firm was well known and appreciated. In describing what they were doing at Orpington he indicated his experiences as to extremes of climate with which their seed growing had to contend. They had been able to maintain the quality of their strains of seed, and that was something. During the evening many popular songs were rendered by ladies and gentlemen. A male voice choir, as well as a choir of young girls and boys, also contributed to the evening's enjoyment. After an amusing dramatic sketch, dancing to the music of Mr. Maitland's band was engaged in till an early hour.

Birmingham Gardeners' Association.—At the fortnightly meeting of this society, which took place at the Athletic Institute, John Bright Street, Birmingham, on December 20th, a paper contributed by Mr. H. Dunkin, late gardener at Warwick Castle, on "The Cultivation of the Strawberry," was read by Mr. J. Hughes. Some interesting statistics of the enormous quantities of Strawberries produced by the Kent fields were given. An instructive discussion followed, in which Messrs. W. Spinks (Solihull), Snead, J. Hughes, W. Jones, and C. R. Bick took part.

Income-Tax Grievances.—The year now drawing to a close has been remarkable for the great increase in the agitation throughout the United Kingdom against the methods adopted by those whose business it is to administer the Income-Tax Acts. While there is no doubt ground for complaint in many districts, we are bound to say that, with very few exceptions, we have at no time had any cause of complaint against the Inland Revenue Officials. The reason why so many fail to obtain relief is that they either will not take the trouble to prepare proper accounts or else they have neglected to keep any accounts of their business transactions. If proper accounts be kept, or even if a proper cash account be presented (which is very simple by using the "Taxpayers' Cash Book"), there is but little difficulty in establishing a claim. Apart altogether from the Income-Tax question, it is most necessary that all persons engaged in business should keep a proper record of the business done. Many persons have drifted into bankruptcy through ignorance of their financial condition, who would have been able to have retrieved their position, had they been aware of it in time. As most of your readers who are engaged in business are now ascertaining the amount of their profits for the past year, will you allow us to remind them that, if such profits show a diminution they may be entitled to the repayment of a considerable portion of the Income-Tax paid in respect of the same, and to point out the importance of making the claim forthwith. Thousands of people pay tax for which they are not liable, more particularly those whose incomes are derived from property and investments where tax is deducted before being paid to the recipients, even when dividends are paid "free of Income-Tax." Claims can in many cases now be made for four years, and the sum repayable might in the case of private incomes alone exceed £42 up to the end of the current financial year, to say nothing of tax allowed in respect of Life Insurance premiums even when the income exceeds £500. We shall be glad to advise any of your readers gratuitously whether they can make a claim, if they send us full particulars of their incomes and a stamped addressed envelope.—*The Income-Tax Adjustment Agency, 12 & 13, Poultry, London, E.C., December 28th, 1897.*

A PIED OR SPRECKLED BLACKBIRD.

It is nearly twenty-five years ago since I observed a similar freak of nature in this bird. I made a note of it at that time in the columns of *The Gardeners' Magazine*, adding by way of a foot-note to Mr. Hibberd, "Be cautious with what cognomen you head the note, for fear of Punch."

I knew not then how to explain the thing, and am still about in the same embarrassing position. Yet the question at issue is typical of the two gentlemen when passing unripe Blackberries, one remarking how ridiculous it was to call them blackberries when they were red. Of course, the other was equal to the occasion by retorting that Blackberries were always red when they were green.

In asking one of the men the other morning whether he had also noticed the speckled blackbird, he blushed red, and, I presume, wondered if the questioner was green too. He has since qualified the statement, having seen it, and is busy prospecting the whereabouts of its roosting place, with a view to its death and transference to the taxidermist. I hope any such chance may be foiled, having a great abhorrence for the extermination of any rare birds.—*B. L.*

P.S.—Since writing the above I notice a white blackbird has also been seen in Kensington Gardens recently. I enclose the cutting:—"On Tuesday, a white blackbird, presumably a male, judging from its size, was seen in Kensington Gardens. It had all the characteristics of an albino, being perfectly white,

with the exception of the eyes, which were of the typical pink hue. Such an oddity is said to be very rare in England, although it is averred to be comparatively common in Northern Europe, especially in the Black Forest."

SELECT LIST OF CACTUS DAHLIAS.

THE undermentioned varieties of Cactus Dahlias have been selected by the National Dahlia Society as being the best and most select for the year 1898. Many have been omitted which find favour with a large section of growers, but those given supply infinite variety in the matter of form and colour. The number of varieties of this section alone in commerce is an indication of the great popularity which Cactus Dahlias have acquired within the last decade:—

| | |
|---------------------|----------------------|
| Alfred Vasey | Juarezii |
| Annie Jones | Keyne's White |
| Annie Turner | Lady Penzance |
| Arachne | Mary Hillier |
| Beatrice | Mary Service |
| Bertha Mawley | Matchless |
| Britannia | May Pictor |
| Capstan | Miss A. Nightingale |
| Chas. Woodbridge | Mrs. A. Beck |
| Cinderella | Mrs. A. Peart |
| Countess of Gosford | Mrs. Barnes |
| Cycle | Mrs. Gordon Sloane |
| Daffodil | Mrs. H. Cannell |
| Delicata | Mrs. John Goddard |
| Earl of Pembroke | Mrs. Leopold Seymour |
| E. J. Deal | Mrs. Montefiore |
| Fantasy | Mrs. Wilson Noble |
| Fusilier | Night |
| Gloriosa | Regulus |
| Harmony | Robert Cannell |
| Harry Stredwick | Starfish |
| Iona | Tillie |
| Island Queen | Violet Morgan |
| J. E. Frewer | |

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Laelia anceps Whiffeni and *L. a. crawshayana*.—On a former occasion we compared these two fine varieties together (*GARDENING WORLD*, Vol. XII. p. 674) when we had not flowers of each to note their peculiar and distinctive characteristics. Now we have seen flowers of both and find them distinct in colour and form, the latter being very decisive under the best of cultural treatment. *L. anceps Whiffeni* has lanceolate, acuminate petals, of a rose colour and darker towards the tips. The lip is intense purple with a very small white disc at the base of the lamina. On the contrary, the petals are ovate, very broad and similar in type to that of *L. a. Dawsoni*. Both they and the sepals are lilac-rose. The side lobes and the lamina of the lip are crimson, with a pale, nearly white disc of considerable size at the base of the crimson. The tube is paler, but lined with rich crimson internally. Both flowers are large, but those of *L. a. crawshayana* are heavy and rounded, with broad blunt petals. We are indebted to De B. Crawshay, Esq., Rosefield, Sevenoaks, for an opportunity of comparing the two varieties above mentioned.

Cypripedium Calypso Falkland Park var.—The parents of this variety were *C. spicerianum* and *C. villosum* Boxalli, the former being the seed bearer. The dorsal sepal is broadly elliptic, but so strongly revolute at the side as to appear obovate, this character being derived from *C. villosum* Boxalli. The basal portion is apple-green, thickly spotted with crimson, the rest being white and finely spotted or mottled with rose, except at the apex and sides; the midrib is claret-purple. The lateral sepals are free, partly reflexed, diverging and whitish-green, with a few spots at the base. The petals are heavily spotted with rich brown on the lower half, and more suffused with that hue on the apical portion. The lip is bright brown, with a yellow margin. The whole flower is of great size, with a glossy lustre as if polished, and very handsome. A large plant in the collection of Thos. McMeekin, Esq., Falkland Park, South Norwood Hill, bearing a number of flowers, has the lateral sepals free almost to the base. Mr. A. Wright, the gardener, is confident that this character will prove permanent. The interior of the lip is more highly and more brightly coloured than the exterior.

PEOPLE WE HAVE MET.

MR. F. W. ASHTON.

THE accompanying portrait of Mr. Francis Widdous Ashton will recall a face that is now familiar to many of our readers, for he is frequently moving about in various parts of the country, and in atten-



MR. F. W. ASHTON.

dance at most of the leading shows where Orchids constitute an important feature.

Mr. Ashton was born at Barnage, near Manchester, in 1860, and was educated at Withington. His school career must have been brief, however, for we find that he commenced to earn his own livelihood at the early age of eleven, this being due to a series of disasters which overtook the family. The gardening profession offered the best inducement to the school lad, and he engaged as an apprentice in the establishment of W. Young, Esq., Highfield, Heaton Mersey. Upon the completion of his apprenticeship he obtained the position of first journeyman at West Bank House, in the same neighbourhood, and now the property of J. Leemann, Esq., of Orchid fame.

After a time Mr. Ashton was transferred in a similar capacity to the establishment of W. R. Leake, Esq., of The Dales, Whitefield, which he shortly left, however, feeling a strong desire to learn the forcing of the better classes of fruit and flowers for market. With this object in view he entered the employment of Mr. Duncalf, of Macclesfield, about the time when Cucumbers in winter were being sold at a guinea apiece, and Strawberries at figures running as high as twenty-eight shillings per pound.

By this time, however, Mr. Ashton had contracted a strong love for Orchids, which has never since forsaken him. The Cucumbers and Strawberries ceased to interest him, and in due course he relinquished his connection with them. Having applied for and obtained an appointment as a student in the Royal Gardens, Kew, he came south and entered upon his new duties in 1880. After serving a year and eight months in the propagating department, he was appointed sub-foreman in the Orchid department.

Here he continued his labours with unabated ardour till May, 1885, when he thought it time to be moving again to fresh fields and pastures new, as behoves all earnest and energetic young men. Long before this, however, he had attended all the courses of lectures given to students in Kew Gardens, and secured all the certificates obtainable for the same. When about to leave, Mr. Ashton was appointed to a foreign post, but before the time for his departure had arrived he resigned, at the same time securing the position of Orchid grower of the trade collection of J. R. Wood, Esq., of Barvins Park, near Potters Bar, Herts. While here, Mr. Ashton met the young lady who now shares his sorrows and joys; and

since he married her he has always considered it one of the most fortunate steps he took.

After a sojourn of three years at Barvins Park, he was appointed foreman in the Orchid department of the Liverpool Horticultural Company, at Garston, which position he held for about three years—until, in fact, he was offered the post of foreman and occasional traveller to Messrs. Charlesworth, Shuttleworth & Co., of Bradford, with whom he stayed several years. At length, however, he found it necessary to leave this northern district on account of his wife's health, which had never been good during his residence there; and he accepted the position of traveller for Messrs. W. L. Lewis & Co., Southgate, N., later on being promoted to the managership of the establishment. In 1893 he was admitted into partnership. Shortly after this period he had the serious misfortune to lose the use of his left eye, owing to a severe attack of influenza, from which he has never fully recovered.

Altogether the subject of this sketch has had a wide and varied experience, but is yet a young man with many years of useful life before him as far as human eyes can discern; and we wish him many years of enjoyment amongst his favourite flowers. He still carries the same unassuming demeanour, and possesses the same genial and courteous disposition as when we first met him in 1880 at Kew. He himself entertains lively and grateful recollections of Kew; for in all his wanderings he has never met with more consideration from anyone than from Mr. W. Watson, of Kew, to whom he has great pleasure in acknowledging that he owes a very large amount of the knowledge that he now possesses. Furthermore, he considers that the advantages of a course at Kew are invaluable as he has proved not only from the education acquired, but by reason of the class of men one meets there. Certainly the more important positions in horticulture throughout the world are mostly held by ex-Kewites.

In the Kew days of which we speak the wages obtainable by the young men were on a much lower scale than at present and many a one found it insufficient to make ends meet. Notwithstanding this, when it got rumoured that Mr. Ashton was about to leave the establishment, the young men took counsel together and organised a subscription list amongst themselves, and collected sufficient with which to procure and present Mr. Ashton with six volumes of useful books, including the "Treasury of Botany," "Treasury of History," "Treasury of Geography," &c., which he has since found very useful. Under the circumstances, this will serve to indicate the estimation in which he was held by his contemporaries.

PRIMULA SINENSIS ALBA PLENA.

THIS is an old but really a most useful plant to cultivate for flowering in the warm greenhouse from early in November to the end of March, and I think it a great pity that it is not more often met with in private establishments, especially where white flowers are in great demand. A well flowered plant in a five or six inch pot well repays the little extra attention that it may be necessary to give it through the summer months. I find it most useful, either as a pot plant for indoor decoration of the mansion, or to cut from for small glasses, as well as for button holes, and, to adopt the old saying, one can cut and come again, if only a dozen plants are grown. What a boon to us gardeners if only a scarlet one could be given, and prove almost continuously in flower, as the one above mentioned. Some gardeners condemn it because the individual flowers are so small compared with the newer, named varieties, but are these varieties so free flowering as the old double white? I trow not. The last named varies a good deal as regard size of flower; some come much larger than others, and the additional name grandiflora is given it by some growers who consider it an improvement on the type; but this is not my opinion. I maintain it is only a matter of culture and find as a rule that those plants having one crown give the finest flowers.

I have a good batch of over one hundred, as I consider it is one of the most useful plants that can be grown by those who can command a temperature not below fifty degrees during the night, with a corresponding rise in the day. If the Editor can find space in his valuable paper, and thinks it would

be instructive, I will give my mode of culture in a future issue. [Please do so, Ed.]—J. Mayne, *Bict n, Devon.*

STRANGE FREAK OF A BLACKBIRD.

ALTHOUGH there are two blackbirds concerned in my story (a cock and a hen), only one of them (the hen) was of much interest. This bird came into my greenhouse in the spring of 1896, and although I was in the house at the time, she seemed to have made up her mind that I had no intention of doing her harm; for she set about examining the interior quite regardless of my presence. One of the Camellia bushes seemed to please her very much as she returned again and again to a particular branch, turning herself and giving a satisfied tuck, tuck, all the time.

About a fortnight after her first visit she laid the foundation stone, or stick, of her nest on the Camellia hush in my presence. The frame-work of the nest was soon finished with strong, dry material of different kinds; she then began to line it with wet muddy, half decayed leaves and fibre of different kinds, sitting well down and turning herself round, beating the inside of the nest with her wings. I happened to be washing flower-pots in the house at this time, and she seemed to be very much interested in what I was doing, coming close up to me and picking up any wet material from amongst the water on the floor. I tried her with a bit of my wet cloth, which she picked up and carried to her nest, coming back for more, till she had the hulk of the washing cloth beaten into her nest.

After she had the nest perfectly formed with wet material she lined it with dry soft grass. After a few days rest four eggs were laid (one per day). Hatching then commenced, and in due time four young blackbirds made their appearance. She was not afraid when visitors came in to see her while she was sitting. The cock did not assist her in any way up to this time, but he started to carry food after the birds were hatched. He was very timid.

The food consisted of the larvae of the Noctuidae family of moths, the larger larvae of the family Tipulidae, the perfect insects and their larvae of the order Coleoptera, the earthworm (*Lumbricus*), the Julidae, Scolopendrae, &c. In fact every creeping thing was picked up except very small animal life and slugs. If gardeners only knew what a quantity of garden pests the blackbird destroys, particularly at nesting time, they would not kill them when caught in their Strawberry nets. The loss of a Strawberry or two is nothing compared to the good they do.

The hen continued to feed the young birds for a few days after they were fledged, then started to build again. The cock continued feeding much longer—till they were full sized. Two nests of birds were brought out in 1896, the first inside the greenhouse, the second outside, the same thing being repeated in 1897.

As soon as the young birds of the last nest were able to look after themselves the mother left them and roosted in the greenhouse alone. She came readily to my call, being always rewarded with some of her tit-bits that I came to know about.

When snow covered the ground and the frost held everything in an icy grip she remained mostly inside the greenhouse. I fed her every day, and she got water from the tank inside the greenhouse, on the side of which she often perched herself, when the water was running into it, accompanying the murmur of the water with a soft low song (for the hen sings). The song sounded like a far away echo of the full bold notes of her mate. No more, however, will I hear her song of gratitude, for an ominous patch of feathers lay near her haunts, and I have not seen her since.—W. K.

THE PLANT HOUSES.

The Stove.

As we are now in the dead of winter and the plants for the most part in a state of comparative rest, nothing should be done to unduly excite them. The night temperature should stand at about 60° Fahr., with a substantial rise during the day, that is if the weather is fine. If we experience very frosty or cold windy weather there will not be very much difference

between night and day temperatures. With the cessation of syringing overhead there will be the more need to attend closely to the damping down of the paths and plant shelves, especially with increased fire heat. There will be very little need to open the top lights for a while yet, as the sun has very little power even when the day is bright, but the bottom ventilators should be opened on all possible occasions. Fresh air will thus be admitted without a cold draught, since the air entering through the bottom ventilators becomes warmed in its passage over the pipes.

Advantage should be taken of the present quiet season to give the house a thorough cleaning out with a view to getting rid of insect pests as far as is humanly possible. All the woodwork, wires, and glass should be washed, the climbers on the roof pruned, cleaned, and returned to their places, and the foliage plants sponged carefully to remove both dirt and insects. The year will thus be started with a clean bill of health, and a moderate amount of labour only will be required to keep things straight afterwards.

BOUGAINVILLEAS.—Throughout the winter months the Bougainvilleas, whether grown in pots or planted out should be kept quite dry at the roots. Plants of *B. glabra*, which is the favourite species in most gardens, may be pruned forthwith. In the case of young plants a few of the strongest growths should be selected as a foundation for the future tree, and the remainder spurred in closely. Weak, or straggling shoots should be cut clean out as they will only be in the way presently. In the case of the larger plants pruning will simply consist in spurring back the last year's growths, just in the same way as Vines. As Bougainvilleas are very subject to mealy bug, the present opportunity for getting rid of the pest should not be lost. The rough bark of the stem and larger branches afford a convenient harbourage for the bug. It will be advisable therefore to give these repeated washings with a fairly strong solution of Gishurst Compound. After this the branches may be painted over with the Glay and Gishurst mixture employed for the Vines.

PLANTING BOUGAINVILLEAS.—Where it is desired to plant Bougainvilleas as cover for the roof the present is a favourable time. It is a somewhat curious fact that pot plants need a warm house to enable them to flower properly, whilst those that are planted out in borders will bloom freely enough in an intermediate house. This should not be lost sight of when making arrangements. When preparing a bed or border for Bougainvilleas the principal point to be borne in mind is that there must be an efficient drainage. During the spring, summer, and early autumn months plenty of water is required, and yet the plants detest anything like stagnant moisture hanging round their roots. On the other hand we have already noted that the plants must be kept dry during the winter. The bed itself should be of a gross depth of about 2 ft. Of this from 6 to 9 ins. at least should be drainage, which should communicate directly with the drain. Over the drainage place a layer of turves, with the grass side downwards. The soil may then follow. This should consist in staple of good loam—say about three parts of it to one of leaf soil, with plenty of coarse river sand.

ALLAMANDAS.—Among the most easily grown and most handsome pillar or roof plants for the stove are the Allamandas. They invariably succeed if properly looked after, whether grown in pots or planted out. Perhaps their most noticeable good quality is that they are not liable to be attacked by any of the insect pests that prey upon our stove plants. Just now the plants are in the middle of their resting period, although a few leaves may remain upon them. No water need therefore be given them yet. An early opportunity of pruning them should be taken. In the majority of instances the plants are kept closely pruned back each year, and the young growths as far as possible strictly trained to wires. Under such circumstances the plants, with their naturally stiff growth, do not appear to the best advantage. A little more freedom may well be allowed, a fine effect being produced by permitting some of the branches to droop at their full length over the plants at the lower levels. The flowers, which are produced at the tips of the growths, are then brought more conspicuously in evidence instead of being crushed up against the glass, as they too

often are. In pruning, after leaving some of the shoots at about two-thirds their length to extend the spread of the plant, cut the other growths hard back into the old wood.

TOP DRESSING THE BORDERS.—Owing to the naturally vigorous growth of Allamandas the size and depth of the borders have to be limited, otherwise the plants would grow too strongly and flower but shyly.

A top dressing of good loam, with which may be mixed a few nodules of charcoal, may be given just before it is desired to start the plants into growth, but no manure of any kind should be given, for the reason stated above.

POT ALLAMANDAS.—Trained plants in pots are highly thought of in some establishments, and they are effective enough when well-grown and bloomed. Like the plants in beds these will have been kept nearly dry at the root for some weeks past. Some time before the middle of the month the plants may be pruned and potted. Use a compost of three parts of fibrous loam to one part of cow manure. Mix with this a few pieces of charcoal, and plenty of coarse river sand. This is a fairly rich soil, but in the comparatively restricted root run in the pots the plants do not get a chance to grow too freely. In potting the soil must be made quite firm by means of the rammer.

CUTTINGS OF ALLAMANDAS will root very freely if given a brisk bottom heat of 70° or 80° Fahr. Select from the prunings the tops of the shoots retaining two or three nodes to each. Put these singly in small pots filled with peat and sand, press the soil very firmly round the base of the cutting, and plunge in a propagating frame, having a bottom heat, such as that mentioned above. The cuttings will have made roots in from three to four weeks time, and will also have pushed out leaves at the apex. In another three or six weeks from the insertion of the cutting, if all has gone well, the small pots will be filled with roots, and a shift onwards will be necessary.

TREE FERNS.—Although in their native habitats the Tree Ferns have a certain resting period, the conditions of life are so altered under glass that it would not be wise to follow nature too slavishly. The plants may require less water at the root than in the summer, but they must not be allowed to get dry. The roots, which are emitted from the stems, must likewise not be starved, otherwise they will perish, and a corresponding check will be sustained by the plant. A certain amount of rest, on the other hand, may be afforded by withholding all manurial stimulants. See that the fire-heat does not render that part of the house where the Ferns are situated too arid. The stages and walks must be damped thoroughly at least three times a day.

NYMPHAEAS.—With these life is in the quiescent stage, and nothing should be done to excite them too soon. The water may now be drawn nearly off, and in another week or ten days may be removed altogether, so as to give an opportunity for the cleaning out of the tank and the repotting of the Lilies. An annual clear out is advisable, not only for the sake of cleanliness, but in order to give new soil to the plants, and to admit of fresh arrangements being made.

Pits and Frames.

CHRYSANTHEMUMS.—One of the most absorbing operations just now is the getting up of stock of Chrysanthemums for the next season. Upon the proper performance of this duty depends in a great measure the amount of success which is to be obtained presently.

With the annual multiplication of varieties, between some of which, it is to be feared, there is very little difference, the task of selection and rejection becomes more than ever important. The lists of varieties are even now almost interminable, and it would indeed be a large establishment that could afford the space for half of them. The particular varieties that are to be grown for another year must depend entirely upon the needs of each several and individual establishment. The object for which the plants are destined is an important factor in the decision, and colour, too, has often to be seriously considered. Anyway, it is well to remember that a bad, or what amounts to the same thing, an unsuitable variety takes up just as much space and attention as a good or suitable one.

SELECTING CUTTINGS.—Too much care cannot be exercised in this part of the business. The best

cuttings are furnished from those cuttings thrown up directly from the root. These should have a clean stem of about 3 ins. in length. The shorter ones, which have to be grubbed up from the ground, are not so good, although far preferable to stem cuttings. Even the latter make good plants occasionally, such as in the case of Stanstead White and Mme. C. Audiguier, but generally speaking they are to be avoided, as they are apt to throw flower buds at an early stage of their life.

STRIKING THE CUTTINGS.—Experience has proved beyond question that the cuttings struck in a cool temperature, that is between 40° and 45° Fahr., make better and more reliable plants than cuttings which are coddled at the outset of their career. The cuttings should be inserted singly in long thumb pots, which have had one crock placed over the bottom hole and have been filled with a compost of equal parts of loam, and leaf soil, with sand. A capital place for the cuttings may be furnished by placing on the stage of a cool greenhouse, and close to the glass, a number of handlights. Into these should be placed enough fine ashes to enable the pots to be plunged to the rims. Shade carefully from the sun, and keep the frame close for the greater part of the time till the cuttings are rooted. Air must be given cautiously at first, and if the cuttings show any signs of flagging the lights must be replaced at once. Water carefully, and keep a close look out for damp. Under such conditions almost every cutting may be relied upon to root.—*A. S. G.*

Gleanings from the World of Science.

THE undermentioned subjects were brought before the Scientific Committee of the Royal Horticultural Society on December 14th.

CYPRIPEDIUM, MONSTROUS.—With reference to the specimen sent to the last meeting by Mr. Veitch, Dr. Masters reports that the lip was wanting, but the dorsal and ventral sepals as well as the lateral petals were normal; both stamens were present, but only two carpels, standing in an antero-posterior position.

TUBEROUS GROWTHS ON VINES.—Mr. S. T. Wright sent some gall-like structures taken from Vines in the large vinery at Chiswick. He observes that "many of the old and young rods are similarly malformed at their base. It does not appear to affect the health and vigour of the rods. In all the malformations grubs or maggots are present; but neither moths nor weevils have been seen in the house." Mr. Michael pronounced the grubs to be coleopterous, but they were not likely to have been the cause. Prof. Church undertook to examine them chemically. There was no apparent structure in them beyond a mass of cellular tissue with a corky exterior surface.

HELLEBORES DISEASED.—Some badly diseased plants were received from Mr. F. W. Burbidge, Botanic Gardens, Dublin. They were submitted to Kew for examination. The report was as follows:—" *Phoma effusa*, Desm., is the name of the fungus attacking the Hellebores. The diseased portions should be removed and burned, as at this season the fungus is producing myriads of spores, which live as saprophytes on humus in the soil for some time before they are capable of acting as parasites. The Hellebore shoots of next year will be infected by these spores. The above alternation from a parasitic to a saprophytic mode of life enables the fungus possessing one form of fruit only, as in the present instance, to tide over the period during which its host plant is not actively growing. Spraying with a solution of potassium sulphide (1 oz. to 3 gallons of water) when the leaves first appear next season would to some extent prevent the chances of inoculation from floating spores."

HOLLY WITH RED AND YELLOW BERRIES.—Mr. Cb. Turner, Slough, sent some sprays, on which he remarks, "They are cut from a large tree which retains its berries for two years. The berries are yellow in the first year, but change to red in the second year." As no seasonal break was distinguishable between the group of yellow and that of the red berries below it on the same stem, some doubt was expressed, and some further information desired. This Mr. Turner has kindly promised to furnish.

HINTS FOR AMATEURS.

THE MISTLETO BOUGH.

"The Mistletoe hung in the castle hall,
The Holly branch shone on the old oak wall."

These words are upon the tongue of every one at the season of Yule, and the sweetly pathetic air to which they are attuned almost haunts the mind, so subtle is its sound, and so sublime the influence of both ballad and tune. But though the tragic death of the baron's daughter at the season when the "Mistletoe hung," and the "Holly branch shone" would be sufficient in itself to form the foundation of many a romance, the historic bough had achieved notoriety ages before the fair and unfortunate lady lived.

Amongst all the numerous chapters on plant lore that have been penned by various writers, none is more interesting than that of the Mistleto. From the earliest record we have it has been wrapped in "mysterie and diablerie," and this has continued even down to our own practical nineteenth century, although in a considerably modified form. The potent spell of the Mistleto at Yule shows no signs of decadence, and neither will it so long as *oscula dulcia* are exchanged by brave lads and fair maidens 'neath the shelter and sanction of its shade.

The mystery attached to the plant probably originated from ignorance as to its origin and life history, and in the human mind ignorance and fear of a subject are very closely allied. It was supposed not to grow from seeds as ordinary plants do, and this in itself was uncanny enough.

Virgil tells its story thus in the Aeneid, lib. VI. line 205:—

"*Quale solet sylvis brumali frigore viscum
Fronde verere nova quod non sua seminat arboris.
Et croceo fetu teretes circumdare truncos.*"

In this way Virgil draws a veil over his ignorance, but we find that in the 18th century in the Delphic classics a commentator who did not lack courage boldly avows the story to be true, saying:—
Non nascitur e semine proprio arboris, at neque ex insiden'um volucrum fimo, ut putavere veteres, sed ex ipso arborum vitali excremento."

Lord Bacon ridiculed the idea that the Mistleto was propagated by the action of birds, and says that the sap which produces the plant is such as "the tree doth exerce, and cannot assimilate," and "Browne," in "Vulgar Errors" endorsed this opinion.

Geralde boldly wrote that "this excrescence hath not any root, neither doth increase himself of his seed, as some have supposed, but it rather cometh of a certain moisture gathered together upon the boughs and joints of the trees through the bark, whereof this vaporious moisture proceeding bringeth forth the "Missletoe."

The belief in the agency of birds in the propagation of the Mistletoe was shared by most of the writers of Shakespeare's day, as the following verse will show:—

"Upon the oake, the plumb tree and the holm,
The stock dove and the blackbird should not come,
Whose mooting on the trees does make to grow,
Rots curing hyphear and the Mistletoe."

Browne.

Of course, we now know that the Mistleto propagates itself by seed in the ordinary way, and also that birds are active agents in the distribution of these seeds.

Whatever the reason or reasons may have been, it is certain that the Mistleto has figured conspicuously in many a curious legend. One of the best known of these is the story of the way in which Baldur the Mighty met his death. Baldur had a very loving and attentive mother, Friga, who put herself to a great deal of trouble to assure for her son immunity from peril. Fire, earth, wind, and water were severally adjured by the mother not to harm her son, but the Mistleto was forgotten. The evil spirit Lok took advantage of this to fashion an arrow out of the forgotten plant. This arrow was handed over to Hoder, the blind deity, who with it slew Baldur. The gods, however, decided to resuscitate Baldur, and as a sort of reparation for the injury done to him dedicated the Mistleto to Friga, who had made such strenuous efforts to preserve him from harm. A condition was attached to this concession, and this

was that the Mistleto must never touch the earth, which was regarded as the empire of Lok. The legend goes on to say that this is the reason why the Mistleto is always suspended from the ceilings of houses when employed in festal decorations.

Apart from this legendary reason, however, it seems very probable that the custom of suspending the Mistleto in our dwellings is a remnant of the ancient Druidical custom of dancing round the tree on which the plant was growing, the habit of seeing it aloft being so strong as to cause those who placed it in their houses after it was cut to suspend it on high.

The mystic bough entered very largely into the religious rites of the Druids, who regarded it as specially sacred when found growing upon the Oak. On such an occasion the Arch Druid cut the plant from its host tree with a golden sickle, taking care to receive it as it fell in the lap of his white robe. A solemn ceremonial and sacrifices were the prelude to the cutting of the Mistleto.

In Holstein the peasants speak of the Mistleto as the "spectre's wand," the holder of a spray being able to discover ghosts, to call them to him, and if he so desires to speak with them.

Numbers of trees are pointed to by legends as having furnished the wood for the cross upon which Christ was crucified, and the Mistleto has been cited as one of them, and that its punishment was that of being reduced from a stately forest tree to a parasite. Culpepper speaks of it as being occasionally called *lignum sanctae crucis*, and that it was held to be efficacious in cases of palsy, consumption, and apoplexy, the cure being effected by hanging it against the body next the skin, and also by taking it internally.

In Sweden Mistleto coming from the Oak is hung in the house all the year round as an insurance against fire and other injuries, and in parts of this country, notably East Anglia, there is a great disinclination to take down the Christmas Mistleto until it is quite dead, for fear of subsequent sickness. Other superstitions connected with the medicinal value of the plant might also be cited did space permit.

One other instance of its occult influence is given in the "Garden of Eden," wherein the legend stated by the author was that "By sitting on a hill late in a evening near a wood in a few nights a fire drake will appear, mark where it lighteth, and there you shall find an Oak with Mistleto, there at the roote whereof is a Mistle-child, whereof many strange things are conceived. *Beati qui non crediderunt.*"

If our ancestors believed half the powers credited to the mystic branch it is no wonder that they regarded it with suspicion and refused to allow it to be used in the decoration of their churches and temples. Even now we vigorously shut it out from our places of worship, although Box, Laurel, and Ivy are admitted freely enough.

Gray, in the lines quoted under made a technical mistake when he said:

"Now with bright Holly all the temples strow,
With Laurel green, and sacred Mistleto."

Mistleto is only once alluded to in Shakespeare's works, and this solitary mention is in "Titus Andronicus," Act II., sc. III.

"The trees, though summer yet, forelorn and lean,
O'ercome with moss, and baleful Mistleto."

We thus see that Shakespeare had no good opinion of the influence of Mistleto upon the trees on which it grew. If he regarded it as a parasite he was justified in calling it "baleful," but perhaps people in those days credited it with other evil qualities.

In the palmy days of Cranborne Chase, where fine herds of deer were kept, the magic plant was employed in a curious way. The season for killing dry does began at Martin's tide (November 2nd), and ended at Candlemas (February 2nd). The keepers tried to procure abortion in the does by placing in the feeding grounds branches of Mistleto. The desired effect was obtained, but the venison suffered in flavour. It is stated that Mistleto will produce the same effect upon dogs, although the practice, if genuine, was probably a piece of woodcraft not generally known.

Among the ancients Pliny considered that the plant was baleful both to the trees on which it grew, and to those people who ate of the berries. The Druids, according to Pliny, called the Mistleto "*suo vocabulo omnia sanitatem*," i.e., *uchel-wydd*, meaning all-heal. The name all-heal in modern English

is not applied to the Mistleto, but to the herb Basil. The equivalent in German is *kraft-wurzel*, and in that language also has no reference to Mistleto.

Anyone who wishes for further information as to Pliny's views of the plant under discussion can obtain it in his Natural History, books, 10, 16, 17, 20, 22, 23, 24, 27, 28, and 32.

With regard to the etymology of the word Mistleto there has been a good deal of discussion at various times, and various views are held by philologists. Dr. Bosworth writes it *Mistel-ta*, and refers it to German, Danish, and Swedish without further explanation. Richardson derives it from Anglo-Saxon, *Mist*, dung, and *ta* or *toe*, i.e., that part of the foot by which the bird is caught by the viscus or bird-lime. The Anglo-Saxon form appears to be *Mistelta* or *Mistiltan*, and the Old Norse equivalent, *Mistiltein*, which literally means dung plant.

Prior, in "Popular Names of British Plants," derives it from Anglo-Saxon *Mistletan*—*Mistl*, meaning unlike, and *tan*, a twig, the whole word signifying that the plant is unlike the tree on which it grows.

Junius spells it *Missel-den*, and Colgrave gives the three forms, *Missell*, *Misseltoe*, and *Misseldine*. In Old German it is *Mistil*, and in Modern High German, Danish, and Swedish it is *Mistel*. The Dutch equivalent is *Mistelboom*.

A bird-lime was formerly made from the glutinous berries, and this fact gave rise to the proverb, "*turdus malum sibi cacat quia ex bacca visci fit gluten quo turdi capiuntur*" The Latin name *Viscum* applied to the genus is another allusion to the glutinous property of the berries.

Wachter, curiously enough has taken the Anglo-Saxon corruption *Mistel-ta* to mean the bird-lime instead of the plant, and says, "*altera digitum pedis significat eam scilicet partem, qua avis tenetur a visco.*" This has given rise to a good deal of discussion, into which it would not be profitable now to plunge.

Meanwhile, shorn from all its erstwhile dread powers, and emancipated from the thrall of superstition, may the Mistleto bough still continue to bring each Yuletide a message of joy and peace to all my readers.—A. S. Galt.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Berried Solanum leaves falling—P. P.: From what you say we are inclined to think that too much water is the cause of the plant's ailment. Keep it a good deal drier, and give no stimulants.

Pruning Wall Roses.—Geo. Saunders: You may, if you wish, prune the Roses now, but we should advise you to wait until spring in the case of the majority of the plants if you can do so without inconveniencing yourself. The plant that has been blown from its fastenings may be pruned, as it would be a waste of time to nail up a lot of shoots that may have to be cut away.

Apricots.—Y.: Branches will often die in large trees without any apparent cause, and it is difficult in such cases to assign a reason. The dead branch should be cut clean out, and the others on either side shifted a little so as to fill up the gap as far as possible.

Brier Cuttings.—Rose: To prepare cuttings of the Brier or Dog Rose take plump, well ripened shoots of the current year's growth. Cut these into pieces about 9 in. long. Leave three buds at the top of the cutting, and pick out the rest with a sharp knife. Insert the cutting 6 in. or 8 in. deep, and make the soil firm around it. Next autumn lift the cuttings, which will then be rooted, and re-plant them in rows about 18 in. apart each way. They must stay in their new quarters until the following July, when they will be ready for budding. It thus takes a year and ten months from the insertion of the cutting to the putting in of the bud. Stocks raised in this way are very suitable for dwarf Roses. For standards and half-standards it will be much better to raise the stocks you want from seed. Collect the hips or fruits from the hedges as soon as possible, and sow the seed in drills. Next year the seedlings must be

transplanted, and the following July they will be fit for budding. It will be seen that the seedlings take about the same time as cuttings to develop into plants, and they produce much better standard or half-standard stocks.

Yellow Madame Carnot.—*Geo. Saunders:* G. J. Warren and the so-called Yellow Madame Carnot are identical. The primrose-yellow or sulphur coloured sport is quite distinct from G. J. Warren. It is named Mrs. W. Mease.

Pruning an Apple Tree.—*S. T. B.:* From the information you give with regard to your Apple tree we should consider it best to shorten the leading shoots to half their present length. Next year two or more shoots may be taken from each, and trained out to form a proper fan shape. You will thus get a good foundation for a shapely tree, and fruitfulness will follow.

Reducing Black Currants.—*S. T. B.:* If the bushes are too large you can easily reduce them by chopping off the outlying portions with a sharp

CHRYSANTHEMUMS AT BLACKBURN CEMETERY.

ABOUT the third week of November a very fine and interesting collection of Chrysanthemums was open to public view at the Blackburn Cemetery. The many charming varieties there displayed reflected very great credit on the head gardener, Mr. Joseph Batty.

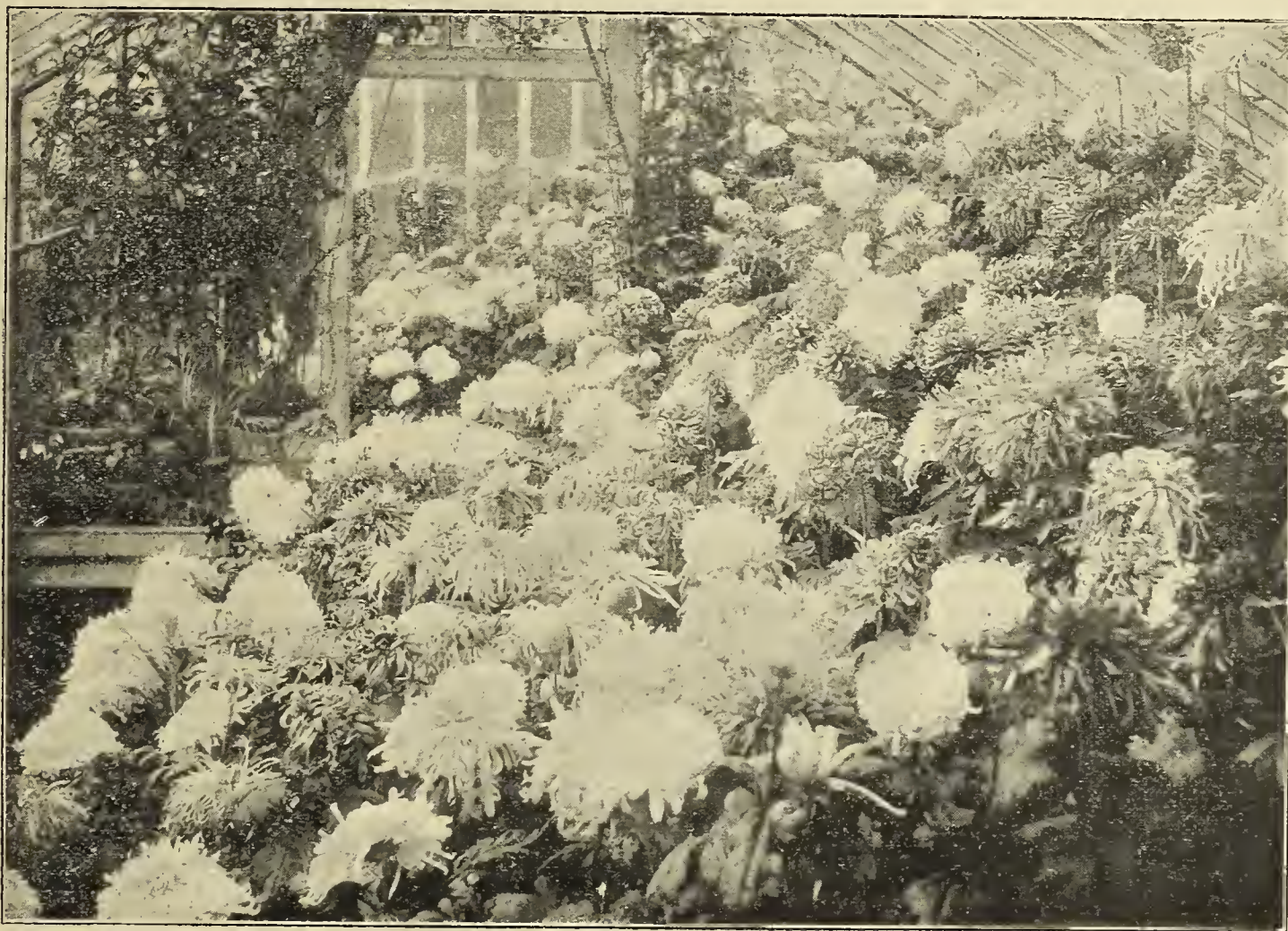
Amongst the leading white varieties, were Niveus, Madame Carnot, Miss Elsie Teichmann, Souvenir d'une Petite Amie, and Madame A. de Galbert. Beautiful incurved varieties were Duchess of Fife, and J. Agate. Yellows were supplied by Sunflower, Miss Maggie Blenkiron, the rich yellow incurved Major Bonnaffon, Edith Tabor, the new variety, C. W. Richardson, and Chas. Curtis, also incurved.

Mrs. W. H. Lees was a grand white sort. Amongst the pinks may be mentioned; William Tricker, the incurved Mrs. Clibran, and Rena Dula. We must not forget the primrose-coloured Lady E. Saunders, the bronze coloured Thomas Wilkins and Colonel W. B. Smith, the lovely lilac-coloured Australie, the canary-yellow Australian Gold, also

from the type in seedlings. The modern race of Chrysanthemums has arisen from two species only—*C. indicum*, a small yellow flower that was cultivated in the Physick Gardens at Chelsea in the middle of the last century, but was lost sight of owing to its insignificant appearance; and *C. morifolium* (Mulberry leaved), now known more commonly as *C. sinense*, which was commonly believed to have rose coloured flowers. *C. indicum* is particularly the parent of all the pompon varieties.

Yellow is generally believed to have been the earliest colour after green, and it was seen first in the stamens and pollen of the Conifers, which form a connecting link between the Ferns and the flowering plants. After yellow, come the pinks, the reds, purples, and the attendant shades, and finally blue. The last named colour has not yet been reached in the Chrysanthemum.

Chrysanthemums have from an early date been prone to change the colours of their flowers. An illustration is afforded by the variety known as Changeable Buff, which was introduced to this country in 1824. The normal colour of its flowers was buff, but occasionally it would change to rose,



GROUP OF CHRYSANTHEMUMS AT BLACKBURN.

spade. These divisions may themselves be planted, for if they have a fair amount of roots attached they soon develop into decent bushes.

Young Hollies Dying.—I have a Holly hedge in my garden which, as it has gone rather thin at the bottom, I attempted to repair last spring by planting at the base some young Hollies. These have all died during the course of the year. Is this due to the time of the year at which they were planted? And would it be advisable to put in other young plants to take the places of the dead ones?—*A. M.*

It is not the time of planting that is the secret of the mischief. The young plants have been starved by the older plants taking from them all the moisture of the soil. The summer was very dry, and under such circumstances the young plants with no depth of root run would soon begin to suffer. The autumn rains came too late to save them. In attempting to repair your hedge in the manner suggested you will always have to face the difficulty of the old plants taking nourishment of the soil away from the young ones, but by dint of careful and consistent waterings subsequent to planting, and, perhaps, a more favourable summer, you may succeed next year where you have failed this. At least, the attempt is worth making.

Mons. Chénon de Léché, which is a beautiful rosy-buff-coloured variety, shaded yellow. There were also very fine specimens of "Hairy Wonder," and a great many others which space will not permit to mention. This being the first year it has been open to the public it is really a splendid collection.

The accompanying illustration prepared for us by Mr. John Ianson, 140, Shear Brow, Blackburn, Lancs., gives a view of the collection as it appeared on the above-mentioned date. The pressure of the Chrysanthemum shows on our space prevented us from reproducing the photograph at the time.

SPORTING OF CHRYSANTHEMUMS.

THE Rev. Geo. Henslow lectured to the assembled fellows of the Royal Horticultural Society on the "Sporting of Chrysanthemums" on the 14th ult. Mr. C. E. Pearson occupied the chair.

In his opening remarks the lecturer said that Chrysanthemums appear to produce more sports than any other of our cultivated plants with the exception of Roses. It is not the fashion to call seedlings sports, although we might just as well do so, seeing that Nature also produces many variations

or yellow, and then back to buff again. We find that the distinct forms of the flower known in the present day in the older sorts, and the plants which came to this country from China and Japan were ready for English workers to deal with.

The Rev. G. Henslow then went on to say that he had received a good deal of intimation with regard to Chrysanthemum sports from the various large growers. A hundred had been sent to him, together with the colour of the flower, and the history and parentage of the plant.

Included in this number were thirteen yellows. These in most cases were deeper yellows than the parent plants. The red, too, in the parents had changed to a deeper red in the sports. This was possibly the result of selections, although salts of phosphate of ammonia often had the effect of deepening the colour.

Of red sports from red flowers there were nine; of bronze from red there were thirteen; and of buff from bronze five, but there was not a single instance in the varieties brought under his notice of yellows sporting to red. He inferred from this that if we granted the development of colours in accordance with the recognised idea Nature had performed the change from yellow a long while ago, and did not feel inclined to change back.

Here the Rev. G. Henslow pointed out the difference between the yellow and other colouring matters. The yellow was granular, whereas the other colours are liquid.

Of reds changing to yellow no examples had been furnished him, although there was the Changeable Buff before referred to. They might infer from this that if the other colours, including red, had sprung from yellow, Nature had made the change so long ago that she evidently did not care to change back again.

Of reds changing to white there were ten examples received. All colours can easily take on the albino form, excepting yellow. The variety Madame Desgranges on first opening exhibited a sulphur-yellow hue, but turned white with age, owing to the way in which the yellow granules were spaced out. White seedlings were capable of giving rise to a great variety of colours. Thus the old bronze Ahutilon never changed till a white seedling, Boule de Neige, appears. This was crossed, and thus broken up, and all the other colours resulted from it. The same applied to Chrysanthemums continued the lecturer. The fact about white forms giving rise to many and various colours in the flowers of the progeny was known in the cases of Carnations and Tulips over 200 years ago.

Dealing with the green Chrysanthemum, Professor Henslow said, that not one had been sent for him to examine, and he was consequently unable to say much about it. He could not say without examination whether it was a reversion or not. In analysing Ixias, Professor Church found that the green was due not to chlorophyll, but to a modification of the purple. It was quite possible that the green in the green Chrysanthemum was due to chlorophyll, and in that case it would be a reversion.

Some varieties sported more than others; and in such cases they formed a sporting family as in Queen of England, Empress of India, etc.

The Rev. G. Henslow then proceeded to explain the development of the flower in the hands of the florists, how the short disc florets were converted into ray florets, also the breaking up of the borders of the florets which gave the dragon-mouthed forms. It was stated, however, that sporting generally took the form of change of colour, change of form of the florets being comparatively rare. In some of the very large flowers a multifold head was produced—a sort of "hen-and-chickens" arrangement—but no attempt was made to preserve this form.

In the hairy varieties there were a number of out-growths arising from the surface of the floret. These terminated in points, and constituted the so called hairs. The crestring in Begonias, Daffodils and Cyclamen was an analagous phenomenon, and was probably due to over-nourishment.

The fact of the same sport appearing in several places at once was next commented on. This was not confined to the Chrysanthemum, for the double Petunia was not known to exist until it occurred simultaneously in England, Scotland, and France.

The cause of the variation of colour in sports was a problem of great difficulty. It was possible that it was the result of the dissociation of colours due to the effect of hybridising and crossing of the parents.

The exact cause of sporting is unknown. Some credit of course must be given to the climate and the soil, and various big names were used to explain the phenomenon, but none of them were entirely satisfactory. Although we had no direct control of the plant we could do what we liked with the soil, and thus indirectly effect the economy of the plant. For instance, some growers found that striped Dahlias were best kept clean in poor soil. Mr. Low had expressed an opinion that starving Chrysanthemums had important effects, whilst Mr. Burhidge had said that good cuttings of sports should be grown in poor soil without stopping, but should not be starved.

Practical men were apt to look askance upon the scientist, but they should remember that the latter could only work upon definite observation and information, and the practical men were of all others in the best position to supply the information that the scientist wanted. Practical men, however, often did not appreciate the value of minute observation. Before any explanation could be given of sporting it was necessary to study the circumstances amidst which each sport occurs, the history of the plant, its progress, and development. If this had been done exhaustively he might at that moment have

been holding forth on the origin and the development of sports.

At the close of the lecture Dr. Masters offered a few remarks. He said that "sporting" in the Chrysanthemum in a general way was easy enough to understand. The Chinese and Japanese had cultivated the plants for 2,000 or 3,000 years, during which time they had been crossed and recrossed, intentionally, and unintentionally for many times. This had shaken the stability of the plant so to speak, and a very slight shaking of the colour cells, as in the shaking of a kaleidoscope, would suffice to produce a new arrangement. He believed the theory of the "dissociation of colours" accounted fairly satisfactorily for the phenomenon.

A vote of thanks to the Rev. Henslow brought the meeting to a close.

ZONAL PELARGONIUMS AT SWANLEY.

WHILST some popular flowers seem to have reached the zenith of their beauty and the highest pitch of excellence, the Zonal Pelargonium, year by year, exhibits a still greater improvement, until we begin to wonder where the development is going to stop.

Messrs. H. Cannell & Sons have for many years taken the charming flower under their special protection, and grown it by the thousand; indeed, no matter at what time a visit is paid to the Swanley Nurseries, houses full of Pelargoniums are to be seen, the plants a mass of flower, and the flowers themselves as fine—well, as Swanley Pelargoniums always are.

Such easily-grown and floriferous plants as these never come amiss at any time of the year, but in the dull months their value is enhanced a thousand-fold.

The needs of the ordinary establishment do not require that there shall be some of them in flower the whole of the year round, but by growing a sufficiency of plants a continuity of bloom may easily be obtained from the middle of October till March.

The Swanley collection has nothing to surpass and very few to equal it in any part of the world, for every variety that is worth growing is there, and new ones are constantly being added, for in addition to those raised at Swanley the Messrs. Cannell have a keen eye for meritorious varieties raised elsewhere.

During the past autumn at the various shows throughout the country the Swanley firm has largely exhibited cut blooms of their "Zonals." These exhibits have compelled the admiration of everyone, both from a decorative point of view and for the intrinsic merit of the flowers themselves.

Grand as such exhibits have been, however, one must see the plants at home before it is possible to obtain a true estimate of their value and beauty.

Such a pleasure was afforded us during a recent visit to the Swanley Nurseries, for there were three span-roofed houses, each 100 ft. long, crammed with plants, which were literally blazing with colour. Not only was the number of expanded flowers remarkable, but the size of the trusses was prodigious. The same might be said of the individual pips, which displayed a regular circular outline, and in most cases opened till they lay quite flat.

Almost every hue, except blue and black, was represented, scarlets, crimsons, pinks, and whites being in indescribable profusion, whilst there were many scores of intermediate shades, filling every possible gap between the more pronounced colours. It was only when we came to minutely examine these that we were able to appreciate their subtle tints to the full, for such a sight as was here spread out before us dazzled the eyes when an attempt was made to crowd all the range of colour into one comprehensive view.

The single-flowered varieties were the most conspicuously in evidence, and, arranged as they were in bold masses of one colour, were singularly effective. Amongst the novelties sent out by the firm for 1897 special mention should be made of Mrs. Pole Routh, which is certainly one of the finest forms in existence. The colour is a mottled salmon, shading deeper towards the eye of the pip. The habit of the plant and its general behaviour is all that could be desired. King of Crimsons, sent out at the same time, exhibits a rich, glowing crimson hue, with an enormous truss and pip. Sir Jas. Kitson, another novelty, is

the boldest flower in the whole section of magenta-coloured varieties. The habit is first class. These three varieties at least should be in every garden, where, judging from the way they behave at Swanley, they will be found magnificent subjects for winter work.

Amongst the crimson and scarlet section the following forms were particularly charming:—Souvenir de W. B. Miller, fiery crimson, with a large white eye; Iris, bright purple-rose; Phyllis, salmon-rose; and Kitty, soft cherry-red with a white eye.

Florists are still striving earnestly to obtain a true yellow-flowered form. Aurea Perfecta marks the nearest approach as yet to the desired object. J. H. Arderne is also in this way. There is a distinct shade of yellow in each of these flowers, but it is disguised and hidden by the preponderance of red.

Brittania is a very handsome form with purple flowers. The petals are very large, and overlap each other to a great extent, thus giving the pip a very substantial appearance. Royal Purple, also a standard variety, must not be forgotten. This has been greatly admired wherever it has been shown. The colour is very rich and deep, and altogether this form is a distinct advance on the older King of the Purples.

Duchess of Marlborough is one of the most pleasing of the salmon-flowered section. The flowers are mottled a good deal with white and pink. A. F. Wootten and Oenone are other capital sorts belonging to this colour division.

Of whites we found a goodly selection. Niagara, Virginia, and Snowdrop are three magnificent varieties. Amy Amplett is better known than either of the three, but is distinctly behind them.

Countess of Buckingham, deep rose-pink, is one of the very finest of its class. Pink Domino is as remarkable for its huge trusses of bright pink as for its dwarf, vigorous, and spreading habit.

The double varieties have not been forgotten in the march of progress, although they are not so suitable for winter blooming as the singles, from their greater liability to damp off during foggy weather.

Raspail Improved is well named, for it is an appreciable advance upon the old Raspail in size of both trusses and pip, the other characteristics of habit, constitution, and colour belonging to the older variety having been retained in the newer. Golden Gate is well worth attention, from the fact that the orange-scarlet shade it sets forth is all too scarce in the ranks of "Zonals."

The Double Jacohy is the counterpart of the single form in colour and habit, but the blooms are all very double. This is one of the most useful of the double varieties.

Beauté Poitevine, Eteranthe, M. Alphonse Ricard, Hermine, and Lady Candahar were, in conjunction with other varieties too numerous to mention in detail, in capital condition. Right through the collection, indeed, from the first plant to the last, the same vigour of habit and close jointed sturdy growth assured us that we were looking at plants that not only were naturally first-rate doers, but on whose behalf cultural skill of no mean order and unvarying attention had been bestowed by Messrs. H. Cannell & Sons.

THE QUALIFICATIONS AND DUTIES OF A GARDENER.

HIS DUTIES.

(Concluded from p. 267.)

THE foregoing remarks have treated principally upon the student. I now come to the fully qualified gardener and his duties; and that these duties are onerous none will deny. They are so many and so varied that it is almost difficult which to place in the front; but I think most of you will agree with me that when a man takes his first head place, or a new charge, whichever it may be, his paramount duty should be to find out from his employers what their likes and dislikes are respecting fruit, flowers, and vegetables, as it is not the least good to think you are going to be successful unless you study their requirements in this respect. The next duty and of equal importance is discipline. This is essential whether you are head over two or twenty, whichever the case may be; and here the old adage applies: "example is far better than precept."

To "practice what we preach" should be our motto, and example includes, among many others,

punctuality. This must be enforced, especially where you have a number of men under you. The gardener should be at his post (health permitting) every morning at the specified time, the men are to begin work so as to direct them as to what their labour is to be for the day; and a gardener must be able to lead and not be led. He must also command authority. By this I do not mean that he need be harsh and driving, but to see all the employees under him do their duty. He must look into details and keep a watchful eye over all that is placed under his charge; for he alone is held responsible, and must point out to his assistants, when this or that plant requires to be cleaned or re-potted, and what compost he would like to have used, or Vine disbudded, tied down and stopped.

The same with Peach trees, Figs, Cucumbers, Melons, &c. If he has not the time to do this himself he must be competent to show his young men how to perform it; and the same holds good in the flower and kitchen garden respectively; for if you have a labourer that does not know how to use a tool, or how to put in a plant, it is your duty to give him the lead and put him right.

Of course, a gardener, when he has a large place under his charge, and many men to superintend, has not the time to do much manual labour himself; and here, in my opinion, he is placed at a disadvantage compared with a man holding a single-handed place, because the latter can, at least, see to all his plants, fruit trees, and crops in general, in the way of potting, watering, and so on. He has the satisfaction of knowing that the work has been properly performed; but how often do we find in these smaller places things in general well done? By this assertion I do not wish to cast any or the slightest disparagement on under gardeners. The majority of them, that is, those who are fond of their work, perform their duties to the best of their abilities, but it takes many years before a man is competent to be called a gardener.

Though, as I said just now, having a love for our work is half the battle. The knowledge of gardening is a thing that is never complete in my opinion. There is always room for improvement, and how often is it that our failures eventually lead to success? We profit by those said failures and persevere to overcome them, with the result, generally speaking, of better crops of fruit, finer vegetables, or a better flowered plant, whichever the case may be. It is only by dogged perseverance in the present age, with so much competition, that we can hope to reach the highest standard of excellence in the cultivation of fruit, flowers, and vegetables.

He must also thoroughly understand the art of pruning. I consider the head gardener ought to do all this under glass, at any rate in the fruit department, such being my practice, and I do a good bit outside when time permits. Of course, there are exceptions to the rule, extra large establishments being provided with a foreman for each department, probably men not much under thirty years of age with good experience, capable of being entrusted with this work; but it requires great judgment and should only be undertaken by qualified hands.

Disbudding, too, must claim the gardener's attention, there being a right time as well as a right way to do this; and herein lies the secret of success as to whether you will reap the best crops of fruit that this stage makes possible, or whether by mismanagement you succeed in getting only a badly formed tree, or a mass of unripened shoots.

Thinning the fruit is another duty the head gardener should perform, as this requires care, the Grapes excepted, as it would be impossible for him to do all this himself where several houses are devoted to this fruit. He should give a helping hand so as to be able to point out to his assistants how to thin a bunch of Grapes, which is most tedious work and requires daily attention in the early spring and summer months. The watering of the borders that may contain the roots of fruit trees, or plants must be seen to by the gardener. No hard and fast line can be laid down, as soil, position, and the season must guide him in this to a great extent.

Seed sowing is another item that calls for the qualified gardener's care. Especially is this the case with some of the flower seeds, as some are so minute. For instance, Begonia, Calceolaria, Gloxinia, and such like, if covered with much soil would fail to germinate, so this must be performed by an experienced hand or failure will surely follow.

The packing of fruit and flowers to go by rail, when your employers may happen to be at a distance, often falls to the lot of the gardener, and must claim his attention, as fruit in particular requires to be carefully handled, such as Grapes, Peaches, Strawberries, Figs, and such soft delicate kinds that may have to be despatched. I always do this myself; but my assistants are about and can always see how it is performed, which I hope will be of service to them later on.

Hardening off plants for bedding out and other purposes must rest with the gardener, as no precise date can be fixed as to when it is safe to fully expose them. The weather must guide one in this to a great extent, as also must be the housing of them again in the autumn, as a slight frost may cripple such things as Bouvardias, Callas, and many others that are stood out in the open during the summer months.

I must now pass on to outside work, and will touch upon the flower garden and pleasure grounds. Of course, there is a deal of supervision required here, from April up to the middle of November, when, as a rule, most of the deciduous trees have shed all their leaves. Often in the month of March the mowing machine has to be brought to the fore, and when once this is started there is always a lot of cutting and clipping to be done around trees and shrubs, flower beds, and walks. To keep one's place in good trim this must be done about every ten days up to October, when less often will suffice.

Towards the end of May the putting out of tender bedding plants absorbs a lot of the gardener's time; also the marking out of the beds, where the various kinds have to be planted, and seeing that the same is being properly performed. Later, the pegging down, staking and tying, wherever necessary, and last, though not least, the watering of the same demand almost daily attention. Neither must the weeding and the rolling of the walks be lost sight of; nor must the plants that soon fall a prey to mildew, green fly, caterpillars, and maggots, such as Roses, Verbenas, and many others be overlooked. From early in October the birch brooms must be kept incessantly on the move for six or eight weeks.

This date (October) brings us to the kitchen garden. The gardener must soon see about the raising and storing of most of the root crops; the manuring and eventually the trenching and digging of ground for the various crops of vegetables, and allocating the plots for each kind to be sown or planted in early spring must not be lost sight of, if a succession is to be kept up. The root pruning of fruit trees that may be making rank growth needs attention most autumns. The gathering and storing of Apples and Pears require a lot of time bestowed upon them as each kind becomes fit through the months of August, September, and October; and these require the gardener's personal attention.

None knows better than he the many insects that we have to fight against, among fruit trees in general, from February to September, or rather, all the year round, if we take the green and black fly, red spider, Autumn and Winter Moth, Apple-blossom Weevil, and the Gooseberry Sawfly, each one very destructive in their season, and requiring a deal of perseverance to keep them at bay.

As I said before, it is a decided advantage to a gardener to be able to draw out a plan in the way of beds, paths, or roads, level a piece of ground, and do similar work, whenever called upon to do so.

I must not omit still another duty, and an important one I consider; and this is the gardener's usual walk round with his lamp through all the glass-houses from the end of September to the end of March. My time, to see that the required temperature is somewhere near the mark, is about 9 p.m. each night. This march round sets one's mind at rest before retiring for the night if you find all is right in this department. Not only is this the case, but the young man on duty takes more pains with his work in the way of stoking and regulating his fires, with the knowledge that his chief will be on the alert at his usual hour, and, naturally, his first duty in the morning is to repeat the visit.

In most large places the employer usually finds one or more gardening periodicals each week. These should be passed on to the young men when the gardener has perused them. These papers help to keep the gardener and his assistants in touch with the times and up-to-date gardening, which, as a profession, dates back to the beginning of time, for does not history tell us how Adam, the first living

man, was placed in charge of the Garden of Eden to dress it and keep it? It is doubtful whether Adam possessed those many qualifications just enumerated, and we know for a certainty that he had not one hundredth part of the duties to perform that the present age gardener has. This reminds me of the lady gardeners, as we are told that Eve, the first woman, was also placed with Adam as a help-mate; but I do not think it proved a very great success, as these so-called lady gardeners have not made much headway as yet.

I understand there are one or two at Kew and other places, but I do not think we have much to fear that they will supersede us. I think household duties are more suitable for the fair sex.

I could name a host of other duties that a gardener has to perform; but enough has been said to show that his post is no sinecure. It is certainly a trifle different from what it was in the year 1850, even if we are to judge by that familiar board that is placed at Bicton, and says, "The gardener at a hole looks out, &c., &c.," presuming, of course, that he spent a deal of time there. I do not think the subject that I have spoken upon this evening has been placed prominently enough before our younger members of the craft, to whom we must look to uphold our profession in the next century. I would like to see the county councils take the matter in hand, and arrange a few lectures at convenient centres, so that those young men could attend and reap the advantage of such. I could hope that my well-meant, though imperfect, paper may be a means to that end.—James Mayne.

LESSONS FROM CHRYSANTHEMUM SHOWS.

Now that the "laugh and riot" of the "Chrysanthemum feast" is o'er, it should be profitable for us, as 'Mum points out on p. 247, to reflect calmly on some of the lessons that have come to us amidst the tumult, if so be that we can evolve from them something of practical advantage for the future.

The craze for size seems in no way to have abated. The "big bruisers," as 'Mum calls them, are still striven for with might and main, but there seems a tendency to limit these monsters to their proper sphere—the show board—and more, to insist upon the other phases of Chrysanthemum culture receiving due attention. The idea seems to have gained firm root that it is not sufficient to have, at a Chrysanthemum show, a vast quantity of giant blooms arranged with becoming regularity in seemingly endless lines upon show boards, with an odd group or two of plants dotted here and there to break the monotony.

The break away into having flowers cut with long stems, and arranged in such a way as to give some idea of the natural pose of the flowers upon the plant, was a pleasing and a happy idea, although its application in limiting the blooms to three in a vase, leaves something to be desired. However, it has caught on to a wonderful extent—witness the mammoth prizes offered this autumn by the Scottish Horticultural Association for blooms staged in this way, and also the announcement recently made of the special class for a number of vases of such flowers arranged for next year by the National Chrysanthemum Society.

'Mum is on the right track when he calls for larger vases and more flowers in them. We should then have such noble and imposing exhibits as those which constituted such a conspicuous feature of Mr. Norman Davis' group at the Royal Aquarium in November. Whether other foliage besides that borne by the plants should be permitted in filling these large vases is a matter of detail. For the sake of variety miscellaneous foliage might be permitted in some cases and prohibited in others.

With regard to the "artistic groups of plants or flowers" the public is being surely if somewhat slowly educated up to them, for the haphazard fashion of crowding the plants together in such a manner as to annihilate the individuality of each plant, and leave nothing but a blur of colour no longer is sought after. The public has found that it needs something better.

'Mum also comments very sensibly upon the influence of light and air in developing the colour of the flowers. Growers in the vicinity of London and other large towns and cities are heavily handicapped from the "colour" point of view, and it is

not, therefore, surprising that with very few exceptions those who are not naturally outside of the smoke screen hasten to put themselves there. This is an undeniable proof of the high esteem in which "colour" is held amongst cultivators. Mere size, of course, can be obtained almost if not quite as well in the town as in the country, with the exception of the increased tendency towards damping in the town flower.—G.

THE GOLDEN MONTEREY CYPRESS.

(*CUPRESSUS MACROCARPA LUTEA*.)

THANKS to Messrs. Dickson, of Chester, no brighter or in every way more desirable Conifer has, during the past 25 years at least been brought before the public than the subject of this note. The habit is graceful, the colouring rich and subdued, while the striking difference in tint between the bright cinnamon of the bark and soft golden hue of the deliciously fragrant foliage still further adds to the value of the Cypress for strictly ornamental purposes.

There is an upright, and a spreading form of the Monterey Cypress in cultivation, and evidently this golden variety has been raised from the former, the habit of growth being first sufficiently strict to impart a neat and pleasing outline, the stiffness and formality usually attending fastigate Conifers being quite lost sight of in the lithe, slender, and finely divided branches and branchlets.

In certain golden Conifers the foliage colouring is too glaring and pronounced, and several have fallen into disuse on this account—a fault that can certainly not be found with the present plant, which, though strikingly distinct, is yet of a decidedly rich and subdued tone.

There is nothing patchy about the foliage colouring, the whole being regularly suffused with the warm golden tint for which the plant is so remarkable, this extending not only to the leaves but to the bark of the young wood as well.

Being of good habit, perfectly hardy, and retaining the lower branches intact it makes an excellent pot plant and stands long-continued drought and neglect in a wonderful manner.

The Royal Horticultural Society awarded a First-class Certificate to this Conifer, but a further proof of its popularity is the rapid rate at which it is being propagated in some of the London and suburban tree nurseries.—A. D. Webster.

PRACTICAL GARDENING.

ON Thursday, December 16th, Mr. W. P. Wright delivered his sixth and last lecture of the course to a large and attentive audience at Eynsford. Mr. H. Cannell occupied the chair. The subject of the evening's lecture was "Summer crops of vegetables." Peas and Beans were pointed out as being some of the most important of these. Mr. Wright alluded to the great number of new sorts sent out each year, some of which turned out satisfactorily, and others quite the reverse. He had come to the conclusion that the best plan was to make a selection partly of new and partly of old standard varieties. The dwarf, first early Peas, which needed no sticks, were some of the most useful. The first of these was Chelsea Gem, and the second English Wonder. Daisy was a little later, but a fine Pea. Of exhibition varieties he had found Peerless, Matchless, Duke of Albany, and Alderman very satisfactory, whilst Autocrat was to be specially recommended.

With regard to Beans he advised his audience to grow, in the "runner" section, the old Scarlet for general purposes, whilst for exhibition purposes Prize-winner, Hill's Prize, and Best of All were first-class. Dwarf French Beans would be well represented by such varieties as Canadian Wonder, and Ne Plus Ultra. Taylor's Broad Windsor and Leviathan Longpod were two excellent Broad Beans.

Turning to cultural details the lecturer urged the advisability of giving special attention to the preparation of the soil, for a piece of land well prepared in the spring would give a heavy crop of Peas in the summer, and Turnips in the autumn. Admirable results had been secured by working in a dressing of stable manure a foot below the surface, and sprinkling wood ashes on the surface layer. This plan kept the roots cool and assisted them in combating mildew.

He quoted Dean Hole's remark that the allotment system will always have two opponents—"the idle man who will not garden, and the ignorant man who doesn't know how."

Mr. Wright displayed some excellent lantern views of Peas and Beans to illustrate his remarks.

to a day quite spring-like in the warmth and buoyancy of its atmosphere, the flowers were all looking their best. The following forms were amongst the finest and most interesting;—

C. SATIVUS.—It is from this species that the greater part of the saffron of commerce is collected.



THE GOLDEN MONTEREY CYPRESS.
(*CUPRESSUS MACROCARPA LUTEA*.)

At the conclusion of the lecture Mr. H. Cannell warned his hearers against pinning their faith to cheap seeds, which were unreliable.

One of the most interesting features of the evening was the presentation of Mr. H. M. Pollett's Silver Cup to Mr. William Howard, who has for the space of sixty-six years occupied his allotment, during which time he has proved a successful fruit and vegetable grower. Mr. Cannell presented the cup to Mr. Howard and congratulated him on his long and successful tenure. What an amount of pleasure and profit, physical and mental, said the chairman, must the cultivation of this allotment have given to Mr. Howard in the course of so many years. Mr. Howard in a few words expressed his thanks to Mr. Pollett as the donor of the cup, and to Mr. Cannell for the kind way in which he had presented it.

Mr. Cannell next proceeded to distribute the prizes earned by the allotment-holding competitors for vegetables. The exhibition contained some splendid vegetables from the Eynsford Allotments, of which there are now fully a hundred. Messrs. H. Cannell and Sons, Swanley, sent an excellent collection of vegetables not for competition. The Swanley Cider Company sent samples of Cider.

AUTUMN-FLOWERING CROCUSES.

THE genus *Crocus* is chiefly represented in gardens by the many fine varieties of *C. vernus* and *C. versicolor*, which are so bright and handsome during early spring. Autumn-flowering forms have for some reason or other been much neglected, and it is not often that we see them grown to any extent, with, perhaps, the single exception of *C. speciosus*, the value of which even then is not fully known or appreciated. There are, however, very many pretty things among them, and given a fine autumn some very fine effects may be produced in the garden by their aid. For a number of years Messrs. Barr & Sons have made a speciality of these pretty flowers, and their nurseries at Long Ditton contain a splendid collection, which is ever being added to and developed under the aegis of Mr. J. W. Barr, who loves the flowers with all the fervour of an enthusiast. We spent a very pleasant day among them in October last, upon which occasion, thanks

The flowers are large, violet in colour, and variously marked with lighter purple or violet. The plant is one of great antiquity, and has been cultivated by various peoples for many hundreds of years. Many well marked varieties have originated from this species, some of them having been accorded specific rank.

C. s. CARTWRIGHTIANUS has its flowers smaller and shorter than those of the type. The pistil is longer than the stamens, which are sulphur-yellow in colour. The stigmata are red. The flower is light lilac, charmingly veined with deeper lilac. The plant is a native of Eastern Greece and the Cyclades.

C. s. ELWESII has light purple, stellate flowers of medium size. The structure of the flower and the habit of the plant generally come close to the widely-distributed and well known *C. s. Pallasii*, from which it differs chiefly in the colour and size of the flowers. The plant is found in the neighbourhood of Symrna, at an altitude of from 3,000 to 4,000 ft. above sea level. The Crimea is probably its eastern limit. The *Crocus* is mentioned by Virgil in his *Georgics*, lib. i., cap. xvi.

C. s. PALLASII, as grown at Long Ditton, has stellate, rosy-lilac flowers. In the description of it given by George Maw in his "Monograph of the genus *Crocus*" it is stated to be "smaller in all its parts than *C. s. Elwesii*." It is the most widely distributed form, according to the same author, and varies a good deal in colour, ranging from pale lilac to light purple, according to the locality.

C. s. HAUSKNECKII has been described by Boissier as a distinct species. The corm is smaller than that of the type, and the pistil is shorter relatively to the stamens. It was collected by Hausknecht at an altitude of 5,000 ft. above sea level on Delechani and Sangar, calcareous mountains in Western Persia, and was also found at Kharput in Hindustan, on October 15th, 1865. This latter locality is worthy of notice by reason of the fact that it is the most eastern point at which any form of *C. sativus* has been found.

C. LONGIFLORUS.—From a garden point of view this species is one of the handsomest. The flowers are of medium size, the individual segments being ovate-lanceolate in shape. They vary in colour from rosy-lilac to purple-lilac, and are veined with

deeper purple, and have a yellow throat. The anthers are yellow, and the slightly lobed stigmas crimson-red in hue. This species flowers from October to November, is very hardy, and especially suitable for planting in grass or in suitable parts of the wild garden. Small offsets flower the next year after planting. Saffron is collected in Sicily from wild plants of this species, although the supply of the commodity thus obtained does not affect the market to any appreciable degree.

C. ASTURICUS.—According to "Maw" this is the common species in the north of Spain, where it is distributed over the country, lying between 2° and 7° west longitude. The flowers have a bearded throat, as in *C. vernus*, but in other respects approach closely to *C. nudiflorus*. The segments of the flowers are linear-lanceolate in shape, and the flowers stellate and dwarf in stature. The colour is purple with a white throat. The stigma is much divided, and, like the anthers, yellow.

C. CANCELLATUS is a charming flower, light mauve in colour, shading to white with age. The blooms are prettily striated with rich lilac, and look exceedingly chaste and pretty. This species runs through 29° of longitude, and 8° of latitude, *i.e.*, from northern Palestine to Armenia. The eastern forms have blue flowers with various markings, whilst the western forms are white or pale.

C. SALZMANNI is noteworthy, because it is the only autumn-flowering species common to both Europe and Africa. It is chiefly to be found in the neighbourhood of Tangier, between latitudes 35°, 30', and 36°, 30'N. It has also been discovered in Tetuan and Beni Hosmar, which "Maw" states to be the most south-westerly point at which any Crocuses have been gathered. The flowers are produced in October and November, according to the season. They are very large, the segments being lanceolate in shape. The colour is a pretty shade of light lilac. The plant bears a general resemblance both to *C. Chusii* and to *C. asturicus*, but the leaves attain their full development at the flowering time, and this at once sets it apart from the latter species.

C. SEROTINUS is supposed by some to be the finest of the autumn-flowering Crocuses. The flowers are of medium size, and the segments ovate-lanceolate in shape. The colour is pale lilac, and exceedingly delicate and pretty.

C. CILICIUS LILACINUS.—"Maw" takes this to be a variety of *C. cancellatus*. The flowers are small, light mauve in colour, striated with purple-blue. The base is yellow. The segments are linear and obtusely pointed. The whole plant is very distinct and pretty. The long, feathery, orange-yellow stigmata are not the least charm.

C. HADRIATICUS CHRYSOBELONICUS.—This is not far from *C. sativus*, as evidenced by the character of the stigmas, the colour of the flowers being the chief distinction. The plant is very dwarf, and the flowers being very near the ground are particularly liable to become splashed with mud. The flowers are white, with an orange-yellow blotch at the base. The type is a native of Albania and the Morea, and is distributed over the ground lying between 36½° and 40° North latitude.

C. MEDIUS is one of the very finest of the autumn-flowering Crocuses. The flowers are large and nearly globose in shape. The colour is rich purple, with lines of deeper purple, and a white throat. The anthers are short and yellow, and the stigmata bright coral-red, giving a handsome set off to the whole flower. The plant is hardy and a most robust grower. It is confined to a narrow belt of the Riviera between latitude 45° and 47° north. It has been found in quantity at Mentone in the Holly Wood, on the north-east side of the cemetery. The leaves remain quite dormant until spring, but the flowers are produced in October and November.

C. PULCHELLUS, a native of the shores of the Bosphorus, is well named, for it is a most beautiful form. The white anthers serve to distinguish it readily from *C. speciosus*, which has orange-yellow anthers. The colour of the flowers is light lilac, with a prominent yellow base. The stigmata are very long and feathery.

C. ZONATUS is a small but very pretty flower that produces a very brilliant effect when seen in the mass. The flowers are of medium size, and globular in shape, the individual segments being broad and massive. The colour is a delicate light mauve, with

striations of purple. The conspicuous feature is an orange-yellow central zone of rather irregular outline.

C. VALLICOLA comes near to *C. zonatus*, but lacks the conspicuous zone, which is replaced by a ring of faint yellow spots at the base. The colour of the flower is French-white or mauve, veined strongly with lilac. This is a very rare species, but also an uncommonly pretty one.

GARDENING MISCELLANY.

CHRYSANTHEMUM THE WHITE MRS. FILKINS.

FROM yellow to white is not a common line of sporting amongst Chrysanthemums, nor, perhaps amongst any other class of flowers. A bloom of Chrysanthemum, the White Mrs. Filkins, comes from Messrs. H. Cannell & Sons, Swanley, Kent, which we should understand to be a sport from the yellow or typical variety. In any case only one bloom could be spared owing to the predilection of the ladies who would have this new comer for its graceful and delicate beauty. Now and again we have a grower from the man who loves small flowers in preference to the giants of the show boards, which have lost all modesty, as he says, on account of their inordinate size and lack of beauty. Well here is his opportunity, and that of everybody else concerned. The yellow Mrs. Filkins is now well known, and the white form need no longer be a stranger. We forget whether this belongs to the feathery, fluffy or plummy section, but that is a secondary matter; the heads are light, graceful, pure white, and made up of florets that are deeply cut into five slender fringes, that are nothing, if not fine, in texture, refined and light as a feather. We would compare it to a white variety of the Sweet Sultan, only less lumpy.

THE WINTER CALVILLE BLANC APPLE.

A READER of *L'Agriculture Moderne*, enquires why the Paris market is not better supplied with the fruit, so much appreciated, of the Calville Blanc Apple, that queen of winter Apples, and what are the cultural needs of the tree.

The following are the practical remarks we think good to give our readers on this interesting question:—Never plant the Calville Blanc as standard or half standard trees, this variety, the most delicate of the many kinds of Apples grown requires, on the contrary, small size and good exposure to the east either in espalier or counter-espalier form. In espalier take the vertical cordon with a single branch or the small U or three branched candelabrum. In the first case plant the trees at a distance of 30 centimetres (11.75 inches) from each other; in the second 60 c. (23.5 inches), and in the third 90 c. (35.3 inches). For the Apple tree in counter-espalier the horizontal cordon is generally employed either unilateral or bilateral, which is more common. But we think the small fan should always be preferred; it is easily obtained and guided. Its initial point is a one-year-old scion, cut down when completely rooted to two lateral buds at about a foot from the ground. The two branches which shoot from this cutting are then guided obliquely at an angle of about 45°; they intercross with those of the neighbouring trees and together form very graceful squares. This shape is very productive, consequently to be recommended, especially for the Calville Blanc d'Hiver.

It is besides very wisely employed on a large scale at the Versailles National School of Horticulture, where results are excellent, as also in the principal arboricultural establishments about Paris where its superiority is recognised. In rich clayey soils plant Calville Blanc grafted on the Paradise stock. In poorer soils silicious or calcareous adopt the Doucin stock. For the small fan let the distance between each tree be 27½ ins. on the Paradise, and 39 in. on the Doucin; give this form a height of 39 in. to 47 in.

Here is another piece of advice which certainly is of value. Do you want Calville Blanc winter Apples with wax-coloured skins? If so put each Apple in a paper bag as soon as it is the size of a walnut. The

fruit will grow regularly under this cover, unspotted and marvellously fine in the late autumn. These bags are removed successively beginning after the first fifteen days of September, firstly tearing the bags at the top so as to accustom the fruit to the air. This curious method is not known enough and deserves all possible popularity. Finally, if you want to grow an exquisite Apple in standard form with all the qualities of the Calville Blanc, its form though more elongated, plant the *Lineous Pippin* variety the real name of which, according to M. F. Jamin, of Bourg-la-reine, is *Lincoln Pippin*, and *Belle fleur jaune*, according to M. Baltet, of Troyes, who adds that by its good quality this fruit deserves the name of Calville Relnette. You can always distinguish the Lineous Pippin Apple by the size of the seed cells.—*L'Agriculture Moderne*, Oct. 3rd. 1897.

LAND TRANSFER IN AUSTRALIA.

THE sale of real property in Australia is greatly facilitated by the cheap and expeditious manner in which land is transferred under the Real Property or Torrens' Act, which had made the process as easy as the purchase of a commodity in a retailer's establishment, no matter whether the land transferred consists of only a few square feet or several thousand acres. The system has been adopted by all the Australasian colonies. It came into force in New South Wales as far back as 1862, dealings in real estate before that year having been regulated by the Deeds Registration Act of 1843. The Real Property Act completely revolutionised the procedure in regard to land transfers, and was modelled on the lines of legislation in South Australia adopted at the instance of Sir R. R. Torrens—hence the popular name of "Torrens' Act." The chief features of the Act are the transferring of real property by registration of title instead of deeds; the absolute indefeasibility of the title when registered; and the protection afforded to owners against possessory claims, as a title issued under the Act stands good notwithstanding any length of adverse possession. From the passing of Torrens' Act all lands sold by the Crown were conveyed to the purchasers under its provisions, and the provisions of the old law were restricted to transactions in respect of grants already issued. The area for which grants under the old system had been issued in 1862 was 7,478,794 acres; since then 1,150,115 acres have been brought under the provisions of Torrens' Act, so that the area still under the Deeds Registration Act is 6,328,679 acres. Lands are allowed to be placed under Torrens' Act only when their titles are found to be unchangeable; but thousands of acres are brought under the Act during the course of every year, so that it is merely a question of time when the whole of the lands of the colony will be under a uniform system. The area of Crown lands conveyed and of private lands brought under the Torrens' or Real Property Act during the period it has been in force was 18,489,691 acres, of the estimated value of £40,077,517. Where private lands have been brought within the provisions of the Act all previous deeds have been cancelled. The transfers and conveyances of private lands which take place during ordinary years indicate in some measure the condition of business; but in some years they cannot be relied upon as giving more than an indication of speculation or inflation. During 1888, when the land boom was at its height, land to the value of £11,068,873 changed hands; but thence the amount annually became less until 1895, when it stood at £3,674,837. With the revival of trade and industry in 1896 there was an increase, the figures for that year being £4,221,330, with every prospect of a further increase in 1897. As already mentioned, the Real Property Act provides that on the issue of a certificate the title of the person named on the certificate is indefeasible. Provision is, however, made for error in transfer, by which persons might be deprived of their rightful property, as should the transfer be made to the wrong person the holder of the certificate cannot be dispossessed of his property unless he has acted fraudulently. To indemnify the Government for compensating persons who, through error, may have been deprived of their properties, an assurance fund has been created by a contribution of one halfpenny in the pound on the declared capital value being levied on property first brought under the Act, and upon transmissions of titles of estates

of deceased proprietors. It is an undeniable proof of the value of the Act and the facility of its working that payments from the assurance fund to the 31st December, 1896, in respect of titles improperly granted, amounted to only £3,113. The assurance fund, which forms part of the Trust Fund of the Colonial Treasury, amounted to £151,730 at the close of 1896, and bears interest at rates varying from three to five per cent. The accretions to this fund, that is, interest and collections, average from £8,000 to £9,000 per annum, while the total withdrawals during the whole currency of the Act have not reached £3,000; thus, as there is every likelihood of the amount annually added growing larger as years roll on, the fund bids fair to reach considerable dimensions.

OBITUARY.

MR. JAMES BROWN.

It is with deep regret that we record the death of Mr. James Brown, sixty-five years of age, gardener for over forty years at Abercairney, Perthshire, the splendid domain of Captain Moray, on December 22nd.

Mr. Brown was for many years a keen competitor with vegetables and hardy fruits. At Perth, Dundee, Edinburgh, and Glasgow his skill as a cultivator was strikingly exemplified. Mr. Brown's services as a judge were much in request. By reason of his knowledge and conscientious adjudication he commanded the respect and confidence of exhibitors. His work in the fine gardens under his charge, and devotion to his employer's interests were duly appreciated by the gallant captain, who is descended from generations of forebears distinguished for their integrity and urbanity as employers and proprietors.

Mr. Brown succeeded his father-in-law, the late Mr. James Arnot. Abercairney was the home of the McIntoshes, of Dalkeith, and Drumlanrig Gardens, and one of the most beautiful seats in Scotland.

QUESTIONS AND ANSWERS

* * * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Habit and Growth of Maples.—*Notts*: *Acer colchicum* is more correctly named *A. pictum* *ruhrum*. It forms a small tree, 15 ft. to 20 ft. in height and has spreading or ascending branches. The leaves are five-lobed, rather thin in texture and beautifully coloured or tinted with red from spring to autumn, particularly while young growth is being made. We have seen it doing well both in heavy and sandy soil; and if the latter is fairly moist the tree will in time attain a height of 20 ft. or nearly. It grows fairly rapidly after it is well established, making growths of 1 ft. to 2 ft. till it is nearing its full stature. The Snake Barked Maple (*Acer pennsylvanicum*) also known as *A. striatum*, also attains a height of 20 ft. under favourable conditions, but in some cases it forms a spreading top, making a wide head rather than a high one. The leaves are much larger than those of *A. pictum* *ruhrum*, and the bark is covered with wavy, pale or white lines. It grows well enough in sandy soil, provided it is neither too poor nor dry. In its native country of North America it is recorded as growing only 8 ft. to 10 ft. in height, but in this country it varies from 10 ft. to 20 ft.

Professor McOwan on Fruit Culture.—*J. L.*: We think your best plan would be to write to the Secretary of the Emigrants' Information Office, 31, Broadway, Westminster, London, S.W. Professor McOwan, F.L.S., is the director of Gardens and Public Parks, Cape Town, Cape Colony. He might be willing to give you the information you want, but we doubt very much whether it would be his duty to do so.

Catkins of Hazel.—*H. C.*: It is nothing unusual for the male catkins to be on the trees at this period of the year, so that they cannot yet be considered early unless they are actually shedding the pollen. The male catkins are usually well advanced in September, before the fall of the leaves. They keep

increasing in length when the weather is open and otherwise favourable, and the pollen gets matured and shed in January, February, or March, according to the district in which they are growing and the mildness of the season.

Araucaria excelsa.—*A twenty years' subscriber*: We compliment you on the length of time you have been subscribing, and wish you many returns of the year, but you might verify and note down the dates as an aid to memory. You speak of *Araucaria excelsa*, but we think you mean the hardy one, *A. imbricata*. *A. excelsa* requires greenhouse treatment, and grows so rapidly and tall, that even in botanic gardens it becomes necessary to cut off the top, so that cones are seldom, if ever, produced in this country to show whether the trees are male or female. Many Conifers have the sexes on different trees, which are therefore male and female. This is usually the case with the *Araucarias*, but occasionally a tree proves an exception by producing both male and female cones. If you turn to THE GARDENING WORLD for January, 1896, p. 313, you will see an illustration showing male and female cones on the same branch or twig. The tree on which they grew is at Cudham Hall, Kent, where this behaviour has been evinced for the last eight or nine years. This is exceptional for *Araucaria*, as far as observations have yet been made, the trees being generally either male or female.

Annuals for Cut Flowers.—*Elton*: The following are useful and showy annuals that are perfectly hardy and may be sown in the open ground about the end of March or the beginning of April, the figures denoting their usual height:—Sweet Peas, 3 ft. to 5 ft., *Lavatera trimestris* *alba*, *Malope trifida* *grandiflora*, 18 in. to 2 ft., *Convolvulus tricolor*, 12 in., *Clarkia elegans*, 18 in., *Gedelia* *Lady Albemarle* and other varieties, 12 in., *Candytuft* of various colours, 12 in., *Chrysanthemum carinatum*, in variety, 15 in., *Chrysanthemum coronarium*, single and double, 15 in., *Calendula officinalis*, in variety, 12 in., *Coreopsis tinctoria*, 18 in., double annual Larkspurs, 12 in., *Nigella damascena*, 12 in., Iceland and Shirley Poppies, 12 in. to 2 ft., *Scabiosa atropurpurea*, 18 in., and *Nasturtiums* in variety. Sow the *Nasturtiums* in April. Several of the half-hardy annuals might be sown in pans or boxes in March and brought on under glass. Amongst these we might mention China Asters, Ten Weeks Stocks, and East Lothian or Intermediate Stocks. The latter might also be sown in July or August and kept through the winter in pots under glass lights for planting out in spring to bloom about May and June. Wallflower may be sown at different times to furnish a long supply of flowers. If sown early in the year, some would bloom in November if the weather is open. By sowing in May, June, and July you will get a succession. Small plants last best in severe winters. Everlastings are very useful, and amongst them you could sow *Helichrysums*, *Rhodanthe Manglesii* and *Acroclinium roseum*. Sow in the open about the third week of April, or treat them as half hardy annuals in frames. The above will give a great amount of variety.

Names of Plants.—*A. L.*: 1, *Reinwardtia trigyna*; 2, *Acacia riceana*; 3, *Acacia verticillata*; 4, *Coronilla glauca variegata*.—*W. J.*: 1, *Odontoglossum Pescatorei*, a very fine variety; 2, *Laelia anceps Sanderiana*; 3, *Laelia autumnalis*; 4, *Oncidium tigrinum*.—*T. Wesley*: 1, *Jasminum nudiflorum*; 2, *Selaginella Martensi robusta*; 3, *Polypodium rupestre*; 4, *Cryptanthus acaulis zebrina*; 5, *Chlorophytum elatum variegatum*.—*A. James*: 1, *Hamamelis virginica*; 2, *Picea Smithii*; 3, *Juniperus sinensis*; 4, *Cupressus nutkaensis*.

Communications received.—*W. B. G.*—*A. D. W.*—*R. M.*—*M. T.*—*A. McDonald.*—*A. Hope.*—*H. C. Prinsep.*—*T. B.*—*A. K.*—*D. B.*—*J. R.*—*W. Davidson.*—*R. H.*—*R. S. O.*—*Sésamé.*—*Walter Crane.*—*A. O.*—*G. Coborn.*—*S. Caswell.*—*Rubens.*

TRADE CATALOGUES RECEIVED.

H. CANNELL & SONS, Swanley and Eynsford, Kent.—Complete Catalogue of Golden Seeds.

HARRISON & SONS, Royal Midland Seed Warehouse, Leicester.—Leicester Seeds.

DOBBIE & Co., Rothesay, N.B., and Orpington, Kent.—Dobbie's Catalogue and Competitor's Guide.

W. ATLEE BURPEE & Co., Philadelphia, Pennsylvania, U.S.A.—Burpee's Farm Annual (Vegetable and Flower Seeds).

SAMUEL DOBBIE & SON, Heathfield Gardens, near Chester.—A Select List of Vegetable and Flower Seeds.

DAVID W. THOMSON, 24, Frederick Street, Edinburgh.—Seed List, 1898.

T. METHVEN & SONS, 15, Princes Street and Leith Walk, Edinburgh.—1898 Seed List.

A Special Offer to Readers of THE GARDENING WORLD 25/- BOOK for 8/-

NO HOME SHOULD BE WITHOUT ONE.

Ogilvie's Encyclopædia OF USEFUL INFORMATION AND WORLD'S ATLAS.

No Single Book ever before contained such a Wealth of Knowledge.

By Special Arrangement with the Publishers of the "Encyclopædia of Useful Information and Atlas of the World," we are enabled to offer to the Public a Magnificent 25s. Volume for 16 of the coupons, which will appear weekly, together with 6d. each, accepted in Weekly Instalments, or the Coupons may be held until the whole period has elapsed and brought or sent to the Office with 8s., and 6d. towards carriage.

A COMPLETE ILLUSTRATED LIBRARY IN ITSELF.

A universal assistant and treasure-house of information on every conceivable subject, from the household to the manufactory. In short, gives information about everything, is absolutely indispensable to everyone in all walks of life; the contents being so separated, indexed, and arranged that they can be turned to at once. It is

THE BEST { BOOK OF } EVER
INFORMATION } ISSUED.
Size of Encyclopædia: 9 by 11½ inches. 656 Pages.

It contains

MANY MAGNIFICENTLY ENGRAVED
COLOURED MAPS,

and a description of every country under the sun, besides much other matter relative to the Home, the Farm, the Factory, a Dictionary of Statistics—many Useful Tables, Poetical Selections, Synonyms, Famous Bridges and Ships, How to Calculate, How to Cook, How to Get Rich, How to Cure all Diseases, How to Succeed in Business, Table of Weights and Measures, and

HUNDREDS OF OTHER TOPICS OF
GREAT VALUE TO EVERY PERSON

who desires to be up to the times. To see the Book is to want it. To Members of Mutual Improvement Societies it will prove of inestimable value.

The articles are written by men whose lives have been devoted to the subjects treated, are short and concise, but contain full information up to date. It is to be consulted on every subject that arises in everyday life, by old and young alike. It contains a complete Illustrated Atlas of the World.

IN THESE DAYS OF COMPETITION

it is imperative that a Gardener should be a well-informed individual. Here is an Encyclopædia containing an immense amount of knowledge that will be of the greatest service to him.

YOUNG GARDENERS,

do you wish to be successful? Then remember that to possess knowledge is the surest way to achieve success.

It is elegantly bound in Morocco Cloth, with beautifully designed Gilt Side-stamp and Red Edges, making at once the most handsome and durable as well as THE MOST USEFUL BOOK EVER MADE or sold for 25s.

1198.

COUPON.

OGILVIE'S ENCYCLOPÆDIA OF
USEFUL INFORMATION,
AND WORLD'S ATLAS,
(Published PRICE 25s.).
16 COUPONS, AND 6d. WITH EACH.

Name _____

Address _____

Postal Orders or ½d. stamps may be sent.
COUPONS AND CONTRIBUTIONS MAY BE
LEFT at or SENT TO the Office for

THE PUBLISHER OF

THE GARDENING WORLD.

COPIES OF THIS BOOK CANNOT BE
BOUGHT. They can be obtained only by using
these Coupons.



The 31st Edition is Now Ready.

200 PAGES. 150 ILLUSTRATIONS.

PRICE SIXPENCE, POST FREE.

(by Parcel Post—it is so large).

CONTENTS—The Best Seeds and Potatos for Garden and Farm; also Descriptive Lists of Carnations, Chrysanthemums, Dahlias, Fuchsias, Gladioli, Herbaceous Plants, Pansies, Pelargoniums, Pentstemons, Phloxes, Pinkes, Pyrethrums, Roses, and Violets; with full Cultural Directions for each.

PRESS & OTHER OPINIONS OF THE BOOK.

WEST HUMBERSTONE.—“Your Catalogue and Guide safe to hand. I am very pleased with it, and I am sure every every Amateur, in particular, should have one in his possession, as they are worth 100 times their cost.”—T.H.

Leeds Mercury.—“For a useful selection of vegetables and flowers, and a trustworthy guide in the culture of these, it is vastly ahead of ordinary catalogues.”

ARBROATH.—“Very many thanks for your valuable Catalogue and Guide. As an Amateur, I find cultural instructions of immense value.”—D.A.

Bell's Weekly Messenger.—“Contains elaborate and complete articles on cultivation for exhibition as well as ordinary purposes. It is thus far more than a mere catalogue—quite an encyclopædia of farm and garden plants.”

YARM.—“Thanks very much for your Catalogue of 1897. In looking through it, I find it is even better than last year's, which I thought could not be surpassed.”—W.C., Gardener to Sir T. Richardson, M.P.

Apply early, and please mention this paper.

DOBBIE & Co.,

SEED GROWERS AND FLORISTS TO THE QUEEN
ROTHESAY.

BEGONIAS A SPECIALITY.

Seed saved from prize plants. Choicest mixed, single or double varieties, 1s., 2s. 6d., and 5s. per packet; collections (seed) single, 12 named varieties, separate, 9s. 6d.: 6 ditto, 3s. Tubers, named singles, from 18s. to 50s. per doz.; choicest seedlings, 3s. to 30s. per doz.; bedding, choicest, 3s. to 9s. per doz.; choicest named doubles, from 18s. per doz.; choicest seedlings, 6s. to 30s. per doz.; choicest mixed, for bedding, 9s. to 18s. per doz. Catalogues gratis.

JOHN LAING AND SONS,

Begonia Growers, &c.,

FOREST HILL, LONDON, S.E.

CHRYSANTHEMUMS.

“WHICH ARE THE BEST VARIETIES?”
A QUESTION ASKED BY EVERYONE.

FOR ANSWER SEE MY CATALOGUE
(POST FREE.)

GODFREY, EXMOUTH, DEVON.

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue

JAMES CYPHER,

Exotic Nurseries, CHELTENHAM.

THE ROYAL GARDENERS' ORPHAN FUND.

THE TENTH ELECTION of CHILDREN

to the Benefits of this Fund, consisting of an allowance of 5s. per week (subject to the conditions stated in Rule XIII), will take place on FRIDAY, February 18th next, at “Anderson's Hotel,” Fleet Street, London. All applications must be made on a properly printed form, copies of which may be had gratis of the Secretary, or any of the Local Secretaries. Such form must be correctly filled up, duly signed, and returned to this office not later than Tuesday, December 21st, 1897.

A. F. BARRON, Secretary.

Royal Gardeners' Orphan Fund, Chiswick London.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. MCARTHUR, The London Nurseries, 4, Malda Vale, London W.

**SUTTON'S
Amateur's Guide
IN HORTICULTURE**

For 1898

Contains full particulars of
**THE BEST VEGETABLES FOR THE TABLE;
THE BEST DISEASE-RESISTING
POTATOES; AND
THE MOST BEAUTIFUL FLOWERS.**

The most complete Seed Catalogue issued. Profusely illustrated with 194 illustrations.

Price 1s., Post Free.

**SUTTON'S
ABRIDGED LIST
OF
VEGETABLE and FLOWER SEEDS**

especially suitable for Owners of
Small Gardens.

It is beautifully illustrated, and contains descriptions of the BEST VEGETABLES, POTATOES, and FLOWERS.

Gratis and Post Free on Application.

SUTTON'S SEEDS
GENUINE ONLY FROM SUTTON & SONS, READING.



“Gardening is the proudest of human pleasures, and the greatest refreshment to the spirit of man.”—Bacon.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JANUARY 8th, 1898.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, January 11th.—Royal Horticultural Society; meeting of committees at 12 o'clock. Sale of Lilies, Rhododendrons, and Roses at 12 o'clock by Messrs. Protheroe & Morris.
WEDNESDAY, January 12th.—Sale of Lilies, Roses, and Begonias at 12 o'clock by Messrs. Protheroe & Morris.
FRIDAY, January 14th.—Sale of imported and established Orchids by Messrs. Protheroe & Morris.

TOWN AND SUBURBAN PLANTING.—Arboreal culture is a favourite theme with many who live in cities and towns; but notwithstanding the natural love for trees they are very frequently badly mismanaged, owing to the treatment they receive at the hands of those who are neither gardeners nor foresters. The men employed by corporate bodies to plant, protect, and prune the trees under their jurisdiction are mostly unskilled labourers without even the experience of a jobbing gardener. We have frequent instances of the disfigurement of town trees, even in cases where there is plenty of room for them to display their natural habit of growth. An instance of this on the south coast came to our notice recently. The same thing happens elsewhere, and a paper on the subject by Mr. John Wilson, Leazes Park, Newcastle,

appears in the *Transactions of the English Arboricultural Society*, Vol. III., p. 329. He says that the judicious planting of trees in towns is admitted to be both a pleasure and a substantial benefit to the inhabitants. Though street planting has not always been attended by successful results, corporations or the powers that be are recommended to select the most favourable and roomy situations for planting before trying the more crowded or congested thoroughfares, which, however, should not be attempted at all where the presence of trees would hamper the traffic and other business of the place. Wherever planting is deemed advisable it should be undertaken with a clear understanding of the worst that can happen when the trees get established. He warns people against Utopian ideas about umbrageous side walks and green canopies where the realisation of such is impossible.

Numerous details are given about the preparation of the sites to receive the trees, the old soil to be taken away and its place taken by fresh material. The soil in old-established streets is generally totally unfit for the growth of young trees, and the pits for them should be 5 ft. in diameter and 3 ft. in depth. This would render the operation a costly one, but the writer hints that this work could most conveniently be undertaken while new streets are being laid out. All this is generally disregarded, however; and we are often surprised that the trees can live after their roots have been cut back to the stumps and laid by the waysides to await planting till such times as holes sufficiently large to admit the mutilated roots have been cut with pick and spade in the consolidated sides of old streets. It must take many years before such trees can support themselves against gales of wind without rigid staking, which becomes all the more necessary owing to the height the specimens are grown before being considered fit for street planting. Mr. Wilson thinks that they are too often treated as posts to be dealt with mechanically, instead of being regarded as living organised bodies, and urges that the rank and file of planters should have some knowledge of “How Trees Grow.”

He is also much concerned about the formality of the planting so generally adopted. As far as streets are concerned it is difficult to see how formality can be avoided if the trees must follow the outlines of the pavement or the houses; but at the same time there seems no reason why the trees employed should be all of one kind. In our opinion the greater variety the better so long as there is space for the trees to assume their respective natural habits; for therein lies half their beauty. Mr. Wilson lays great stress upon this feature. While admitting a certain amount of liberty for the trees, the situation demands that some restraints be placed upon wild nature, and just at this point most of the difficulties in connection with the management of trees arise. Those responsible for the pruning of the trees should have a well balanced judgment and a cultivated taste, so that they may place sufficient restraint upon growth as may be required by the exigencies of the situation, without disfiguring and making them assume unnatural shapes. The periodical hacking to which some trees are subjected is not only outrageous to good taste, but radically wrong. Cutting down the head of a tree till it assumes the appearance of a badly worn broom inverted is simply barbarous; but worse things happen, as when the trees are allowed to grow into shapely proportions till some one invested with a little brief authority suddenly discovers that they want pruning, and orders some ignorant labourer to proceed and give them a thorough hacking.

NEPENTHES.—Great interest continues to be manifested in this family of plants, both from a scientific and a horticultural point of view. The building of a special house for *Nepenthes* at Kew, where the plants can be accorded the special treatment necessary to their welfare, and yet be open to the public, is another case in point. A comprehensive paper on the subject was read by Mr. Harry James Veitch at a meeting of the Royal Horticultural Society, in September last; and this makes its appearance in the part of the *Journal* of the society just now issued. The article in question is copiously illustrated with woodcuts interspersed with the text, some of them full-page or double-page figures. The author pretends to deal with the subject only from a horticultural point of view, but the information tendered, together with the illustrations, places a considerable amount of science at the disposal of students who care to avail themselves of it. Notwithstanding the number of species which have been introduced, and the many hybrids raised artificially, there are yet some remarkable forms with which the British public have not yet become familiar, including *N. Lowii*, *N. edwardsiana*, and *N. Rajah*. The latter, of course, is well-known to those who have been striving to learn the secret of its successful culture; but as that has not yet been mastered the plant has not found its way into many gardens. Nevertheless, *N. madagascariensis*, though the first species discovered, was one of the latest to be introduced, and success may yet attend the cultivation of *N. Rajah*.

The paper under notice embraces the history, geography, introduction of species, artificial hybridisation, and the culture of the subject. To gardeners desirous of mastering the details of cultivation, the same must be of great interest, since the progress of the plant is followed from the seed to the stage at which fertilisation is effected. The illustrations of the seeds and seedlings are extremely interesting, as giving everybody concerned an opportunity of studying and becoming familiar with a baby *Nepenthes* from its earliest stages of growth, including the embryo while still in the seed. Horticulturists rarely follow up the subject with the same attention to details in the early stages of growth. The thirty-six known species are confined to islands in their native habitats, with the exception of *N. khasiana*, and with three or four exceptions they are included within the equatorial zone. The metropolis of the family is Borneo, nearly half of them being confined to that island, while the others are scattered over the adjacent islands between New Caledonia and Madagascar. *N. Pervillei* from the Seychelles, *N. madagascariensis*, and *N. khasiana* are considered outlying stragglers from the main body. The climate of their native habitats shows that high temperatures and plenty of moisture are prevailing conditions, there being occasional showers even in the driest months of the year.

Holly for Christmas decorations comes largely from Sussex and Beds for the London markets.

The Gipsy Moth is comparatively a rare insect in this country, though it is only too abundant and destructive on the Continent and in America. The Gipsy Moth Commission in America was using about half a ton of arsenate of soda daily in waging war against the pest last season.

The cultivation of Coffee as an industry is growing in popularity in the Mackay district of Australia. Not only has the Sugar Cane been grown too frequently on the same land, but the industry itself has not been very prosperous lately. Coffee culture is being advocated as a substitute for the benefit of the farmers.

Royal Horticultural Society.—The first meeting of the Royal Horticultural Society in 1898 will be held as usual in the Drill Hall, James Street, Westminster, on January 11th, 1 to 4 p.m.

A Curious Error.—An American firm which catalogued *Araucaria imbricata* as one of the wonders of the vegetable kingdom lately received a letter from a lady asking for more information about the "vegetable," and particularly how it was to be cooked.

An old Taxodium.—In the Cemetery of Tulle, a small city, situated on the road between Oaxaca and Guatemala, by Tehuantepec, there is a *Taxodium*, which at 5 ft. from the ground has a circumference of forty-four metres, including the sinuosities. Its greatest diameter is twelve metres and its smallest six metres. The height of the tree is fifty metres, and the spread of the branches 100 metres. The estimated age is 2000 years, and Americans aver that it ought to hold the record as the oldest vegetable.

Cypripediums and Odontoglossums.—Hybrid *Cypripediums* are now very numerous, yet there is a good demand for really fine things. At the Sale Rooms of Messrs. Protheroe & Morris on the 31st ult. a piece of *C. nitens superbum*, bearing only two flowers, was secured for 6 gs. An Award of Merit was accorded it a few years ago by the Royal Horticultural Society. A small piece of *Odontoglossum crispum*, consisting of a few pseudobulbs and carrying only four or five flowers, was secured at the same place as the above for 5½ gs. Needless to say it was a good one.

Eastbourne Horticultural Society.—The members of this society sat down to their annual dinner on the 9th ult., at the Queen's Hotel, Eastbourne. Mr. G. Boulton, the president, occupied the chair. After the viands had been properly discussed, Alderman Strange proposed "The Eastbourne Horticultural Society," which he congratulated on its success. Councillor Sharp, and Mr. Pike replied. In reply to the toast of "the president," given by Mr. A. Standen Triggs, Mr. Boulton said that he had been connected with the society from its beginning. He had seen it down, he had seen it rising, until it had attained its present satisfactory condition. He hoped that it would still continue to prosper. Vocal music enlivened the proceedings.

Torquay Gardeners' Association.—At the meeting held on the 17th ult. Mr. J. Wilson, gardener at Belton Lodge, read an instructive paper on "Flowers for Decorative Purposes." He dealt at length with floral combinations for the dinner table, bouquets of all kinds, groups, etc., and described in detail two elaborate dinner-table devices he had recently made. The paper was illustrated by a quantity of flowers, Mr. Wilson himself bringing sprays of *Bougainvillea*, *Poinsettias*, *Camellias*, and *Tea Roses*. Mr. J. French sent a vase of *Chrysanthemums*. Mr. W. B. Smale had a group of *Begonia Gloire de Lorraine*, and *B. haageana*. Mr. F. C. Smale contributed a centre piece for a floral dinner table. The President and Messrs. W. B. Smale, G. Lea, J. French, S. Vallance, and Love took part in a brisk discussion.

Bute Botanical Society.—The monthly meeting of this society was held in the Episcopal Church Hall, Rothesay, on the 21st inst., Mr. Matthews in the chair. The minutes of the previous meeting were read by Mr. John Ballantyne, who is, we may remark, the keenest and best hotanist in the county of Bute. A paper on "Interesting Ways of Plant Fertilisation" was then read by Mr. Wm. Cuthbertson, who confined himself chiefly to pollination. The explanation of his experiments and observations went to prove the advantage of cross over self-fertilisation. Insects, wind, and rain were the chief agencies by which this was effected naturally. By means of well-executed diagrams he showed many of Nature's contrivances to prevent self and secure cross-fertilisation. Mr. S. Jones afterwards read a paper on the "Gardener's Art," which was full of research, and rendered enjoyable by touches of quaint humour and quotations. He described the gardens of various peoples from a remote antiquity down to the present time, illustrating his remarks by pictorial and other figures. The papers were followed by a discussion, during which Mr. Matthews strongly urged the institution of public gardens in every town.

A noble Plant.—One of the grandest specimens of *Anthurium Veitchii* in existence is to be found in the princely establishment of Mr. F. L. Ames, North Easton, Mass., U.S.A. It measures fully fifteen feet in diameter.

Societe Centrale d'Horticulture du Nord.—The double number of *Nord-Horticoles* for December, and only just come to hand, announces that this is not a new society, but a new name for "le Cercle Horticoles du Nord." Young and ardent professionals full of the future as well as distinguished amateurs will maintain and advance the noble reputation of horticulture in the North of France.

Erratum.—At page 277, line 36, from the bottom of the third column, for "on the contrary, the petals are ovate," read, "on the contrary, the petals of *Laelia anceps crawshayana* are ovate, &c." In comparing the two varieties *L. anceps Whiffeni* and *L. a. crawshayana*, it was unfortunate that the latter name was omitted from its proper place, as the description following the line in question refers to it.

A Speckled Blackbird.—Referring to a note in THE GARDENING WORLD of last week about a white Blackbird having been seen in Kensington Gardens, it may interest you to know that there is a speckled one here, which has been noticeable almost daily about the grounds for the last three years. When first seen it had only a small speck on the head, but it is now three parts white, the development having taken place gradually since first noticed. It is a male bird, and is very tame owing, no doubt, to the fact of its receiving greater attention than the others of the same species.—James Gibson, Devonhurst, Chiswick.

Flowers in mid-winter.—With the exception of the cold snap which visited parts of England just before, and broke up on the Sunday after, Christmas, the winter has so far proved a wonderfully mild one, and more than one Christmas dinner table was decorated with flowers, both in and out of season, plucked from the open. In addition to the Christmas Roses, which regularly make their appearance in the winter time, Violets have been blooming very freely. A correspondent writes from Eynsford, in Kent, saying that towards the end of December he picked several blooms of *Gentiana acaulis*. At Sidmouth, in South Devon, the Primroses seem to have forgotten that according to the calendar it is yet winter. As if to be not outdone by Devon, the Golden Valley, Chalford, Gloucestershire, boasts of having gathered Primroses, Clematises, and Gloire de Dijon Roses on Christmas Day.

Gardeners' Royal Benevolent Institution.—A special general meeting of the members of this institution will be held at "Simpson's," 101, Strand, London, on Thursday, January 20th, 1898, at 2.50 p.m., for the purpose of electing two trustees to fill the vacancies caused by the death of Robert Hogg, LL.D., and the resignation of John Lee. The fifty-ninth annual general meeting of the members will also be held at the same place and on the same day at 3 p.m., to receive the report of the committee, and the accounts of the institution (as audited) for 1897; to elect officers for the year 1898, and other affairs; and also for the purpose of placing nineteen pensioners on the funds. We note that ten of these being in distress, and having in every way complied with the rules and regulations, the committee will recommend the ten applicants to be placed on the pension list without the trouble or expense of an election in accordance with Rule III, 5. Only nine vacancies remain, therefore, to be filled from amongst forty-four candidates, over and above the ten already mentioned, the moral of which is self-evident, namely that more help is needed. We are requested to state that the annual friendly supper of the members of this institution and their friends, will take place as usual, at "Simpson's," 101, Strand, on Thursday, January 20th, at 6 p.m., after the annual meeting, when Arthur W. Sutton, Esq., of Reading, will preside. Friends who are desirous of being present are asked to intimate their intention to George J. Ingram, Secretary, 50, Parliament Street, S.W. We also have much pleasure in announcing that his Grace the Duke of Portland has promised to preside at the 60th annual festival dinner of the Gardeners' Royal Benevolent Institution to be held, it is hoped, in June next, but the date is not yet fixed.

The Kew Pelican.—A creature which left the Oasis of Plenty for the Desert of Distress: The Kew Gardens Pelican—killed by someone who ought never to have been trusted with a gun—October 19th, 1897—far, far from home.—*Punch*.

Lilium Harrissii.—This popular Lily is now grown in considerable quantity in Natal, South Africa. The African bulbs have behaved very satisfactorily in this country, and the Bermuda growers will probably find the Cape a serious competitor in the Lillium-growing industry.

The Silver Y Moth (*Plusia Gamma*), according to Miss Ormerod, proved very destructive to Mangold foliage during the past summer, at Kenmare in Ireland. It is very common in Britain, but lives on a great variety of plants, and does not generally seem to be guilty of serious damage to anything in particular.

A White Asparagus Sprengeri.—A Philadelphia correspondent of *The Florists' Exchange* mentions a seedling of this beautiful decorative plant that is so heavily variegated with pure white as to have only a line of green on each of its small leaves. The amount of green is sufficient to enable the plant not only to live, but to grow as vigorously as the type, according to the writer.

Mr. J. Dawe, of Lukesland Gardens, Ivybridge, has just completed a successful course of six lectures which he was engaged to deliver by the Devon County Council. Mr. Dawe dealt with fruit culture, with special reference to cottage gardens. Practical open air demonstrations were given in pruning, grafting, etc. The attendance at the lectures was satisfactory throughout.

Elm Trees in Ross Church, Hereford.—Except in glasshouses trees are very uncommon in houses, so that the two Elm trees in the old church of Ross are great curiosities. They grow at one end of the aisle, near the pew formerly occupied by Mr. Kyrle, who was, when alive, famous in the neighbourhood for his love of trees. They were originally suckers from the roots of some large Elms outside, which had to be cut down some years ago. These trees, as might be expected, are not notable for great vigour, but they have trunks as thick as a man's leg.

Gardeners, Protect Your Friends.—We have frequently read the account of the introduction of a ladybird named *Vedalia cardinalis* from Australia to California, where a white scale known as *Icerya purchasi* was threatening the entire destruction of the Orange tribe so extensively cultivated there. The December number of "Knowledge" states that the white scale in question is now no longer an important injurious insect. In Britain we have a considerable number of species of ladybirds which prey upon various kinds of aphides, and other soft-skinned vermin. These beetles are generally either black or red, the predominating colour being spotted with the other, and easily recognised, so that every cultivator should take care not to molest them more than he can help.

Messrs. Fell & Co.'s Root Show.—The annual root show promoted by Messrs. Fell & Co., of Hexham, was held in the Town Hall, Hexham, on the 13th and 14th December. The entries were fully equal to those of former years, and the high quality exhibited in former seasons was more than sustained this. Swedes and Mangels were especially good. Messrs. T. Rutherford & Co., Brokenheugh, Haydon Bridge, secured the leading award for twelve Swedes, and Mr. Robert Ard was first for six yellow Turnips; also for six white fleshed Turnips and twelve Potatos. Mr. A. Maughan, Shaw Well, sent the best collection of agricultural produce in twelve kinds. The prizes were for the most part given by Messrs. W. Fell & Co. The display of Apples was excellent. Mr. Harris, gardener to the Duke of Northumberland, Alnwick Castle, sent a capital collection that included such varieties as Bramley's Seedling, Newton Wonder, Ribston Pippin, Dumelow's Seedling, and Tyler's Kernel. Mr. Elliott, formerly one of Messrs. Fell & Co.'s pupils, who is now in charge of King's Acre Nurseries, Hereford, also had a nice lot of Apples, some of the most noteworthy sorts being Annie Elizabeth, Golden Noble, Gascoigne's Scarlet, and Tower of Glamis.

Philadelphia is unique in having an "Onion Club."

All the Difference.—Clergyman: "My child, beware of picking a toadstool instead of a mushroom; they are easy to confuse." Child: "That be all roight, sur, that be. Us bain't agoin' to eat 'em oorselves—they're agoin' to market to be sold."

South American Forests.—Thousands of acres of forest in South America have been cut down, and the home they afforded to epiphytic Orchids thus destroyed. This is especially the case in the regions suitable for the cultivation of the coffee. The plantations of the latter are, year by year, increasing. The Cattleyas are the greatest sufferers, although *Odontoglossums* have also been affected to a considerable degree.

Mistleto.—From the orchards and woods of the "West Countris" vast supplies of Mistleto are placed on the market. A gentleman at Penzance has a plant growing in his garden, which, he says, can be traced back as having been there for upwards of a hundred years. A correspondent writing from a village in north Devon, says that there is a huge bunch growing over a wall in his village, and overhanging the public road. He mischievously suggests that the district council should cause a seat to be placed there.

The Canna Disease.—In a recent bulletin of the Trinidad Botanic Gardens it is stated that one of the new strains of Canna imported for the gardens has been badly attacked by a yellow rust called *Uredo Cannæ*, described as a parasite on Cannas from Brazil. Bordeaux mixture seems to have had no effect upon the fungus, and the infested plants soon die. This disease has not hitherto been heard much of, but, if its virulence and deadly character are not exaggerated, it soon will be. Meanwhile, we have no doubt that stringent measures are being taken to limit as far as possible, the sphere of its operations, otherwise the queenly Canna will be in some danger at what is practically the beginning of its horticultural career.

Roof Gardens have up to the present not "caught" in London, although several attempts have been made at various times to naturalise them. In American cities and towns, on the other hand, the roof gardens constitute a happy feature of gardening, and in some of the most crowded cities the poor as well as the rich have them attached to their houses. Great business houses, too, utilise their large roof areas in this way, and their employes reap the advantage. At the present time we have an instance of roof gardening a little nearer home. Mr. Julius Wernher has formed a very pretty terrace garden on the flat roof of Bath House, Piccadilly. He is, of course, not the first West End resident who has followed out the idea, but if he succeeds where others have failed in popularising this style of gardening he will at least score a triumph.

Dessert and Cooking Apples.—In the judging of Apples a considerable amount of doubt must often exist as to whether certain varieties should be classed as culinary or dessert. With a view to obviate this difficulty the council of the Royal Horticultural Society made a classification of a considerable number of varieties, stating definitely which were to be regarded as dessert and which culinary. Judges at the shows of the society will now have to be provided with the lists, so as to obviate mistakes, such as occurred at last year's Crystal Palace show. Hitherto, Blenheim Orange has been admissible in either class at various shows, but it is now classed as a dessert variety alone. The Council admits, however, that the distinction is arbitrary, and that "everyone is at liberty to use a variety for any purpose he likes." Many will, no doubt, fail to see that information is tendered by the statement. The intention, however, is to make a fixed line of division, solely for exhibition purposes, to prevent disappointment at their shows. In order to have the proposition universally adopted, it might have been worth while consulting with the leading societies throughout the country, because if adopted by them likewise, all the smaller societies would sooner or later follow suit. We offer the suggestion gratis.

Plant diseases distributed by Insects.—Recent experiments conducted by Italian scientists are stated to demonstrate conclusively that moulds and other fungoid diseases are readily carried by insects from diseased to healthy plants.

Christmas Trees are not always young trees but the top of old ones, or the thinnings of woods and forests. This year they have come from the north of England, from Scotland, Woking in Surrey, and largely from Belgium.

The Sacred Lily.—The selling of worthless roots as rare bulbs too often proves a paying game for the unscrupulous vendor, but a losing one to the buyers who may not only lose their money but their temper. It is declared that hundreds of gardeners have been victimised by a man selling what he called "bulbs of the Chinese Joss Flower or Sacred Lily." These gardeners could hardly have been professionals, but that does not make the offence any the less. The vendor had a coster's barrow, on which he had the nut-like fruits of the Water-chestnut (*Trapa natans*)—price sixpence each. On the barrow also were pictures of plants bearing flowers of large size and brilliant colours, which would have made the Sacred Lily itself (*Narcissus tazetta chinensis*) green with envy. These fruits are obtainable in Covent Garden at twopence or threepence a dozen. They constitute an article of food in the far East, where they are grown in great quantity. This man having done good business in Brighton left for a tour amongst other provincial towns. One of our correspondents noticed the scoundrel in several places, and tackled him upon the subject, whereat the vendor replied that he knew too much, and should give him a chance.

Hybrid Roses.—Professor J. L. Budd, of the State Agricultural College, Iowa, U.S.A., has been busy since the spring of 1892 in crossing the beautiful *Rosa rugosa* with pollen from such varieties as General Jacqueminot, Lamarque, and La France. He has as a result a large plantation of hybrids. The plants show a good deal of variation in the habit, style of growth, foliage, and flowers, but all are alike in being vigorous and healthy. A large percentage of the flowers have come single, but they exhibit a wide range of colour and size, some of the smallest being little buttonhole Roses, whilst the largest run to a diameter of fully 5 ins. The colours merge from deepest crimson to purest white. The influence of the variety General Jacqueminot is very marked in the rich hue of the flowers of the progeny. Professor Budd's hybrids will largely augment those raised from *R. rugosa* and some of the best German Roses by the German growers, and their perfect hardiness, the ease with which they stand drought, and their high decorative value should make them eagerly sought after both in the "States" and the United Kingdom as well as, in a less degree perhaps, upon the Continent.

"Who Sets the Fashion in Flowers?"—This question is discussed by a writer in *Longmans*, but there is no attempt to answer the question. Too often the rarity or the price of the specimen is the determining rule. No matter how beautiful it is, so soon as a bloom can be easily obtained it is termed common, and loses interest forthwith, adds the writer. This may be true to some extent but not to the degree that the writer claims. The Rose has more than held its own, and the national emblem of Southern Britain seems likely to do so still. The Primrose and the Violet are both common and fashionable, both of them perhaps from sentiment, particularly the former. Price is undoubtedly an attraction to the collector of Orchids who has the means to gratify his passion for collecting, but we think the high esteem in which Orchids are held generally is due quite as much to their intrinsic beauty as to the comparative rareness of some of them. Fashion in flowers, just the same as fashion in other things is worked by more than one string, and in this one direction the workings of the human mind are very complex. We do not claim that gold is highly esteemed because it is rare, or that diamonds are eagerly sought after by the *beau monde* because every man cannot dig them in his back garden, although of course the price is regulated by the relations of supply to demand, but the demand for these things is decided by their intrinsic value. A man sees a flower, and is attracted by it for a while, but like an overgrown child he tires of it, calls for something new and—the fashion changes.

THE NEW CATALOGUES.

It almost seems as if no season was now entirely exempt from catalogues and lists, but the finest and heaviest mostly appear when the old year is passing into the new. In any case gardeners are on the outlook at this season for the new catalogues that are to serve them with every requisite for the garden during the year that has just been ushered in. Our weekly announcements show those that are on the move. Amongst the earliest of the well-got-up catalogues to reach us in December was that of Messrs. SUTTON & SONS, Reading, of which we made mention at p. 246.

Next in sequence came "Carters' Tested Garden Seeds," from MESSRS. JAMES CARTER & Co., High Holborn, London, with a sprightly and clean-looking cover, having a coloured illustration of varieties of the Comet Aster on the front, and another of *Dianthus chinensis Heddewigii* on the back. Coloured illustrations are not yet entirely abandoned for there is a well executed one of various popular florists' flowers facing p. 96. Numerous other illustrations with which the pages of this massive annual are adorned are mostly photographic reproductions, many of which are admirably executed. We would mention especially the photographs of Peas, Carter's Improved types of Runner Beans, the Melons, Carrots, Cauliflower, Onions, and Carter's Snowball and other Potatos amongst the vegetables. Many flowers are also well represented.

The Catalogue of Seeds, &c., sent out by Messrs. JAMES VEITCH & SONS, Ltd., Royal Exotic Nursery, Chelsea, is also freely illustrated with numerous photographic reproductions, all well executed, and which go to show the popularity of this art for representing garden produce. Peas, Potatos, Melons, Mushrooms, and all the Cabbage tribe are well displayed by means of the process we have just mentioned. Many flowers are in no way behind the vegetables, the natural characteristics of Veitch's Petunias, China Asters, Foxgloves, *Streptocarpus*, *Phlox Drummondii*, &c., being brought to great perfection. The full page and coloured illustration of Veitch's large-flowering Sweet Peas is simply charming, and the best plate of this popular class of flowers we have yet seen. The colours are beautifully contrasted and brought out with great fidelity to nature.

The Spring Catalogue of Messrs. WEBB & SONS, Wordsley, Stourbridge, comes out in rich brownish-purple covers, ornamented with raised gold lettering. Here again photography has been turned to good account in the excellent illustrations of Scarlet Runners, French Beans, Cauliflower, Broccoli, Melons, Onions, Peas, Tomatos, Potatos, and other vegetables, which are abundantly represented on almost every page. There are also some good reproductions of flowers from photographs, but a good few woodcuts are still utilised in this section. Altogether it is a well got up publication.

MESSRS. DOBBIE & Co., Rothesay, come up with their Catalogue and Competitor's Guide as full as ever, indeed, fat with its onerous burden of vegetable and flower seeds, the florist's varieties of the latter being very fully recorded and otherwise dealt with. The illustrations are numerous, though moderate in size, and consist mostly of woodcuts. The lettering in various colours on the front cover constitutes another triumph of the printers' art.

MESSRS. H. CANEELL & SONS, Swanley, in their Complete Catalogue of Golden Seeds, also use woodcut illustrations very largely, though by no means exclusively, the larger ones being mostly photographic reproductions. A circular bed of *Antirrhinum*s shows what may be done with a judicious arrangement of the dwarf races around the taller growing types.

MESSRS. CHARLES SHARPE & Co., Limited, Sleaford, issue a well-printed catalogue of "Standard" Seeds, illustrated by woodcuts and photographic reproductions, Peas and Potatos particularly being admirably represented by the latter process.

PUBLIC PARK NURSERY, ROTHESAY.

HERBACEOUS and alpine plants receive the most attention from Mr. Michael Cuthbertson, Public Park Nursery, Rothesay, N.B. Spring and summer are the best times to see these things in perfection, or, at all events, to see the greatest number of plants in bloom at any one season. During the second week of September last we made a hurried inspection

of the nursery, but lack of time prevented us from doing more than making a general survey of the plants cultivated. Some rare border and alpine plants have, however, been got together, and those desirous of seeing them should pay a visit of inspection during the spring or summer months.

The Saxifragas, of which many sorts are grown, look best during May and June when in full bloom. Sedums and Sempervivums are also grown in great variety, being well adapted for cultivation on rockeries. *Acoena Novae Zealandiae* grows and flowers well in this equable climate on the banks of the Firth of Clyde. Another uncommon plant is *Saponaria ocymoides*, of creeping habit, and well adapted for hanging over the ledges of rockeries. More choice even is *Ramondia pyrenaica*, which was grown in pots, though we think it would answer well if planted between sandstone rocks in the damp climate of this western district.

It is now some years since *Veronica longifolia subsessilis* was introduced, yet it still remains the first and most effective of the group, of which *V. longifolia* is the well known type. Some or other of the forms are to be met with in every garden, but *V. l. subsessilis* has yet an abundance of room for dissemination in British gardens before every cultivator makes a practical acquaintance with it. *Galtonia candicans* (the Cape Hyacinth) makes an admirable companion for plants in beds of a most varied description. In this northern latitude it reaches perfection in August and September. Other choice herbaceous subjects in bloom on the occasion of our visit were *Helenium pumilum*, *Chrysanthemum maximum*, late flowering Phloxes in great variety, and the choice *Montbretias* now rapidly getting disseminated amongst the leading gardens everywhere.

Dianthus neapolitanus is a richly coloured hybrid, with crimson-scarlet flowers, that does well in cool northern districts particularly. The variegated *Hypericum moserianum tricolor* is being recognised at the hands of many growers. It grows more slowly than the type, though that is always a neat, beautiful, and interesting plant. *Tropaeolum tuberosum* is anything but a common plant, notwithstanding that it gives the greatest satisfaction in gardens of a widely varied description at different points between Rothesay and the Channel Islands.

British Ferns are not overlooked, their cultivation in this equable and moist climate being of the easiest description, even in the open ground. *Chrysanthemums* are also grown to some extent, the flowers they furnish in autumn being very serviceable, as are those of Sweet Peas, which keep on flowering till late in the autumn. Several varieties of *Mimulus* are grown, including *M. cupreus*, *M. cardinalis grandiflorus*, and others of those types. *Violas* are at home in this northern district, and are grown in some quantity. During the summer months the glasshouses are largely devoted to the cultivation of Tomatos. The nursery is within easy reach of the pier at Rothesay.

A TAME WILD BIRD.

I WAS very much interested in "The Strange Freak of a Blackbird," page 278, and can fully realise the interest W. K. must have taken in his dicky-birds. I am sure no one who has never had a *tame wild bird* (Irish) would believe how interesting they are. For instance, we always have two or three robins' nests in our greenhouses each year. Last spring one built on a shelf within a foot of our heads where we were dodging about all day packing, and actually stole the moss and bits of cocoanut fibre or anything it could lay it han'—oh, no—beak upon.

One young rascal got so bold that it used to be about with one or other of the members of the establishment almost the whole day; and no cage bird ever had half so much notice taken of it. It would hop about on the potting bench and pick out wireworms and other moving insects; but its favourite morsels were earwigs and spiders. It would feed out of our hands, follow us indoors, or into the greenhouses and shop, and was always twittering. The amount of insects he or she would eat is simply marvellous—sometimes twenty earwigs at a meal! We very rarely wasted an earwig, spider, or wireworm, but used to put them in a glass bottle; and it was amusing to see him (it I mean) when the bottle was presented. He would dance round the bottle like a pig round a potato sack, and

no other robin dared tread over the chalk mark; for robins (like the tribes in India) have a sort of settlement of their own, and there is fighting when other tribes intrude (this is an object lesson). Our robin got so well-known amongst the people who used to come to see the *Chrysanthemums* that they used to bring crumbs for him to feed out of their hands; but "no," says he, "give me a spider, and the bigger, the better."

On my return from Ireland, poor Bob had disappeared. Oh those blooming cats! I am thankful there is no duty on cats. I would rather have one robin than forty cats. I offer, gratis, this hint to gardeners who grow *Chrysanthemums*, "tame a robin."—*W. Wells, Earlswood.*

FLOWERING SHRUBS THAT THRIVE UNDER TREES.

As most of us well know it is difficult to get grass seeds to grow under the shade of trees; and if good turf is laid down, after a few years the ground again becomes bare. Especially is this the case where very little light or sun reaches the spot. And if this should be the case anywhere in the pleasure grounds, what is more objectionable than to be constantly seeing such barren places when a few plants would quickly remedy the evil? I give a few which I find do well under and in proximity to tall Conifer and deciduous trees that have got leggy and where turf will not make the least commencement to grow.

The bushy *Veronicas* grow and flower well with this treatment, where not too much exposed to cutting winds. These are not quite hardy in some counties, but where they do stand out and thrive I can confidently recommend them for this purpose.

Some of the species of *Berberis* are well adapted for this, notably *B. Aquifolium*, *B. Darwinii*, and *B. nepalense*. The various green and variegated *Periwinkles* as well as the stronger growing *Ivies* do well as an undergrowth or as margin plants. Most of the *Aucubas* are amenable in this position, and it is best to plant both male and female plants or berries will be scarce. Nothing with me thrives better than the old St. John's Wort (*Hypericum perforatum*) which increases very fast and also flowers well every year, though immediately under a large spreading Oak tree.

Before planting the ground should be broken up and have some well-rotted leaf soil or short manure worked in, as such positions are sure to be impoverished. The plants should have a thorough soaking of water and not allowed to suffer for the want of such the following summer during the hottest and driest months.—*J. Mayne, Bicton.*

THE MONKEY AND THE TOMATOS.

A YOUNG gardener not a hundred miles from London Bridge made up his mind to try a number of the best varieties of Tomatos in order to ascertain which was the most suitable for the establishment under his control. Seed of seven or eight varieties, in as many packets, was procured.

Sowing time in due course arrived, and the seed packets were taken in a basket to a vinery, where pots and compost already prepared were stored in readiness for use. Before the gardener commenced sowing the seeds, the dinner bell warned him that he had another duty to perform during the next hour, and he obeyed the summons, leaving the packets unopened, and in no special danger, as he thought, or failed to think—most likely the latter.

A monkey kept on the premises, and securely housed in his cage close by, had been intently watching this preliminary performance; but like most of his kind was discreet enough not to ask any questions which might arouse suspicion. Curious to know all about the contents of those packets, he reached and opened every one of them during the absence of the gardener, and left the seeds of all the varieties mixed indiscriminately at the bottom of his cage. On the return of the gardener the monkey had a lively time of it during the afternoon, and twice attempted to drown himself in the tank; but on each occasion was fished out before his rash act had time to take effect.

The Tomato seeds were scraped together, sown in mixture, and planted out in due course. Every year for the last three or four summers, such fruits as most nearly approached the ideal market Tomato were selected from some hundreds of plants. Whether the present strain originated from one variety, or can claim lineal descent from the eight it would be difficult to say; but certainly the medium-sized fruits are shapely, smooth, highly coloured, solid, and of excellent flavour. The setting and cropping qualities of the plants are equally good. The mystery of parentage, however, remains where the meddlesome and inquisitive monkey left it.—*J.*

HARDY FRUIT GARDEN.

THE pruning of standards, and the pruning and nailing or tying of wall trees, are now occupying the chief part of the attention in this department. With the open season there is everything in favour of getting this class of work well forward before the swelling buds render the operation hazardous. It must be borne in mind, however, that the mild winter will be sure to cause an early spring, and the season for such work will thus be proportionately shortened, unless we have a further taste of winter. The late cold snap was of service in putting a check on too forward buds, but the speedy recurrence to high temperatures will restore things to their precocious state.

STANDARD APPLES.—In the case of orchard trees the work of pruning is reduced to a minimum, and in some quarters dispensed with entirely, or to quote a homely phrase, "the pole of the axe used instead of the head." An annual look round, however, would be of service, inasmuch as timely attention will help to lengthen the lives of fruitful trees, and bring to esteem it their special lot in life to bring forth nothing but leaves. Any dead branches that may be observed should be cut out without delay, since, if left they only serve to carry decay to more vital parts of the tree, and also serve as a harbourage for insects. Any branches that are observed to be crossing each other must also be seen to. Usually the best plan of dealing with them is to cut one clean out. Spray-like growths that are observed to be issuing from the main branches toward the centre of the trees should likewise be taken out, as it only serves to choke up the centre and exclude the light and air that are so necessary for the proper maturation of the wood and the formation of fruit buds. Where large branches have been cut the wounds should be dressed with coal tar as a preservative.

PYRAMIDAL APPLES.—If proper attention has been given to summer pinching the winter pruning of these becomes a very light matter. It simply consists in cutting out all dead snags or injured spurs, and in making clean cuts where the summer pinching has left rather ragged ends, or in completing the spurring back to the fruit buds where necessary. The shortening of the leaders must finally be seen to if close pruning is followed. Leave these at lengths varying according to the strength of each growth, and with a keen eye, of course, to the future symmetry of the tree. Shorten to a wood bud, which should point outwards, so that the next shoot may be in the desired direction. When the upper bud points inwards the growth is towards the centre of the tree, and thus a crooked main branch results.

EXTENSION SYSTEM FOR APPLES.—In not a few gardens close pruning is carried to excess, and the result is stunted trees that never carry half the fruit they ought to. Unfruitful bush or cup-shaped trees of this kind may often be vastly improved by allowing the leaders to remain at their full length, pinching back the laterals during the summer in order to foster the development of fruit buds at the bases of the spurs, and following this up at the winter pruning by cutting over the spurs where necessary and removing snags or dead wood. Of course the growth made by the leaders during the first year or two is great, but each succeeding season lessens it until the branches reach what is practically their natural limit of growth. It may be argued that such trees as these are ungainly objects from their great height, but surely this is counterbalanced by the increased crops of fruit. If desired, a few trees only may be first treated in this fashion, and then, once the success of the system has been demonstrated, it may be extended.

Most old gardeners shun the use of secateurs in pruning, and stick to the older-fashioned knife, not without some reason be it said, for there can be no doubt that the latter is the safer instrument to use, more especially when dealing with young trees. A good pair of secateurs, however, if properly used makes a fairly clean cut, and bruises the wood very little indeed. The point therefore is, do not the greater facilities for speed given by secateurs more than make up for a slightly inferior cleanness of cut? For small fruits at all events the secateurs are far and away ahead of the knife, and we have never been able to trace evil results from their employment upon cordons and espaliers, and pyramidal, close-pruned trees.

PLANTING AND TRANSPLANTING.—As long as the soil is not too wet the planting of all kinds of fruit trees may be pushed on. Transplanting too may claim consideration in cases of trees that have hitherto proved unfruitful. The check consequent on lifting may induce them to set well with fruit buds during the coming season, and the following year will then be all the richer in fruit.—A. S. G.

Kitchen Garden Calendar.

THE rains which have fallen so abundantly after the frost have made the soil so unworkable in low-lying places, that it would be far better to defer getting thereon until it has somewhat dried up, than to run any risk of losing a crop through trampling upon the ground when it is in such a condition. Stiff retentive soils are always difficult to manage, though, if taken in hand at the proper time, they are usually more suitable for the production of good vegetables than those of a light sandy nature, which are, however, always more easily worked. There is always plenty of work to do in this department, if the cultivator will only look around him; and as many of our vegetable crops transplant so well, they can be brought forward in a limited space under cover.

PEAS.—If these are sown in large 60's where the pots can be afforded the protection of a cold frame, a three-light box would hold sufficient for a large establishment; and those of first-class quality could be grown, such, for example, as Early Morn, Gradus, Sutton's Early Marrow, Gem, and the like. If from ten to a dozen seeds are placed in a pot of the above size, 100 pots will be sufficient to plant a row 22 yards long. By sowing now and keeping the plants protected at night and exposing them fully on all favourable occasions in the daytime, they will be both sturdy and well hardened off, ready for planting out when favourable weather occurs, towards the latter part of March, or in the more northern districts, early in April. From such sowings we have frequently gathered Peas at the end of May and early in June. Peas do well when grown in pots, and now that the Chrysanthemum season is past there will be ample room to bring them along. It is not necessary that they should be sown in large pots, as they transplant admirably, so that where room is limited the smaller pots may be used. Where there are several successional Peach houses there will be no difficulty in bringing them forward, so that good crops may be gathered early in May. Some varieties are hardier than others and these should be chosen for sowing in the open ground as soon as the weather is favourable. Springtide, Exonian, and Duke of York are good tall kinds; while Chelsea Gem, William Hurst, and Carter's Seedling are very good dwarf kinds. These latter may be sown on a warm border as soon as the soil is in a workable condition.

ONIONS.—Where large Onions and Leeks are desired a sowing of these should be made in boxes, which should be placed where a gentle heat can be afforded, so as to ensure free germination. When the seedlings appear they should be kept as near to the glass as possible. A sprinkling of Lettuce and Cauliflower may also be treated in the same way.

FORCED VEGETABLES.—There is now a great demand for forced vegetables, and as these entail a great amount of labour special preparations should be made for their growth. Hot-beds should be formed for Carrots, Potatos, Asparagus, and such things, of sufficient depth to retain the heat till there is sufficient warmth generated by the sun to maintain the requisite temperature. If leaves were got together when they were dry, two-thirds of these to one-third of stable manure will retain the heat far longer than stable manure alone. Care must be taken to rid the soil of any insect pests before sowing and planting, or the crop will either be a failure or very much damaged. Young snails are very partial to Carrots just as they appear through the soil, so that a sharp look out should be had for these. A sowing of Radishes should now be made on a slight hot-bed, and where the soil is light and dry a pinch of seed can also be put down in a warm border. This should be covered with straw mats or litter till such time as the seed germinates, after which the covering may be dispensed with in the daytime, unless it is very frosty. Birds are very destructive to this crop just as the young plants are making their appearance; therefore a close watch must be kept. When the weather

is unfavourable for outside work Seakale cuttings can be made. If the lower end of these is cut in a diagonal manner, and the top horizontal, there will be no difficulty experienced in planting them. When the cuttings are made they should be covered with decayed litter to protect them from frost.—*Kitchen Gardener.*

The Orchid Grower's Calendar.

ODONTOGLOSSUM CRISPUM ALEXANDRAE.—At the famous auction rooms of Messrs. Protheroe & Morris, in Cheapside, on Friday, we were given a chance to select from a splendid importation of this, the most popular, the most easy to grow, and the most variable of all the cool house Orchids. There are, doubtless, amongst the purchasers some to whom a few hints on their treatment will be of some service.

Our plan with imported *O. crispum* is on arrival to get the plants thoroughly cleaned, cutting away any decayed pseudobulbs, some of the old bracts, &c, but in doing this always be careful not to expose the young growths too much. They do not appear to us to come away so freely as they do when protected for a time with the bracts, which is after all only natural. This being done lay them out singly on the stage of the cool house. Here they should remain for about three weeks, when, if the house is a fairly moist one, they will have plumped up and be in a fit state to pot. Sometimes, however, at this time of the year, we get some very severe weather, and the houses dry up very quickly consequent on the hard firing that obtains. Such being the case we would recommend a layer of live moss being put on the stage to lay the plants upon. This will help them considerably.

In potting up imported plants always use as small pots as is possible, and plenty of drainage. Some there are that advise their being put in crocks alone for a time, but it is not a practice of ours, believing, as we do, that it is a waste of time. The compost should be Polypodium or peat-fibre (the latter for preference) and an equal quantity of Sphagnum moss. The peat should be fairly moist, and the moss also, but not wet, and pressed around the plants moderately firmly, so that the plants do not topple over at every little touch. Until established they may be stood pot thick, which prevents their drying up too quickly. A gentle syringing over head to keep the moss alive is all they require till the growths are well up and roots are running through the compost, when the supply should be ample. Some are afraid to syringe overhead in the winter, but there is no need for alarm unless the temperature is allowed to run down low. It is not safe to let it go below 45°, unless the outside temperature is exceptionally low.

This Orchid may be described as one of the cleanest grown, when the atmospheric conditions of the house are suitable; but with severe weather and hard firing, it is subject to the attacks of yellow trips, which secret themselves in the hearts of the young growths, crippling the same and spoiling the spikes completely, if not kept under. Dipping in a solution of tobacco water and fumigating with XL All will keep them in check.

If these few hints are acted upon we feel sure that the results will be as satisfactory as are our own.—C.

Tubercles on the Roots of Pea Plants.—Some experiments have been conducted at the Louisiana Experiment Station, U.S.A., with the view of ascertaining the influence of deep and shallow planting upon the root tubercles of Pea plants, the depth to which the nitrifying germs penetrate, and the results of transferring them to different host plants. The Field Pea was planted at depths varying from 1 in. to 6 in., and the root system was best developed in the case of plants from seeds placed at 2 in. or 3 in. from the surface. Pots were filled with soil taken at depths varying from 1 ft. to 3 ft., but tubercles were found in relatively small quantities only on those plants grown in soil not more than 12 in. below the surface, the rest having no tubercles. When the surface was artificially inoculated with germs, root tubercles were produced in abundance. The experiments also go to show that each species, or at most, each genus of plants has a different microbe peculiar to it.

HINTS FOR AMATEURS.

CHRYSANTHEMUM CUTTINGS.

THE amateur who takes up the culture of the Chrysanthemum in order to find something to occupy his spare time often discovers that he has got rather more to do than he bargained for at the start. Right through the year he finds that there is always something to do in connection with his favourites, and that unceasing care and vigilance must be exercised the whole season through.

At this time of the year all Chrysanthemum growers, both big and little, amateur and professional, are concentrating all their energies upon the getting up of stock. For purposes of general culture we treat the Chrysanthemum as an annual, that is to say we rear the plants, flower them, and throw them away in the one year. It must not be supposed from this that the old plants could not be successfully grown on for another year, or for a number of years for that matter, for the reverse is the case, but experience has demonstrated that finer flowers are borne by the younger plants, and so, despite the increased amount of trouble, we propagate every year.

In the case of those who grow upon a large scale, or who enter extensively into the whirl of competition at shows, an early start is made with the cuttings, for the blooms are scarcely off the plants in November before a diligent search is made for the cuttings, more especially of varieties that are new, of the greatest service, or more than commonly shy in throwing up suitable cuttings. From November onward to the end of January is the busiest part of the year for seeing to the cuttings that are destined to produce plants to bear blooms of show size. Even after the end of January, and for fully another month or even six weeks, cuttings may still be inserted for yielding plants to furnish flowers for decorative work.

Of late years the practice of growing exhibition blooms in 6 in. or 7 in. pots has received a good deal of attention. It has been demonstrated beyond question that it is possible to grow plants in the pots that shall throw first-class blooms. Such plants are of the greatest service for the formation of groups of Chrysanthemums which are each year becoming a more noteworthy feature at the shows. The blooms these plants carry are not always large enough to take their place upon the show board by themselves, but they come in very handy where two or three fair-sized blooms are required for completing a stand. In some cases, on the other hand, the flowers are fully able to hold their own with regard to size in competition with the others borne by plants grown in the larger pots. The month of March is the time for inserting cuttings to give this kind of material. By that time there will be plenty of cuttings, and only the least need be taken.

It will be seen at once that by this method the rooting of cuttings in the worst months of the year, viz., November, December, January, and February, is obviated, and this is a matter of considerable importance to the amateur who has to feel his way along, as it were.

For ordinary purposes the present is a capital time to take the cuttings, for each day now will bring a slight increase in the light, whereas in November we had to look forward to a daily decrease in that valuable commodity. Cuttings inserted now, moreover, have a fairly long season of growth in front of them—quite long enough with skilled treatment to produce first-class flowers.

Striking the Cuttings.—During the last few years a great revolution has taken place in the actual treatment of the cuttings. Formerly it was not an uncommon thing to see them coddled and placed in warm houses or hot beds. The result was, as might have been expected, drawn, spindly looking plants, with thin, yellow, and weakly foliage. But this was not the worst, for the check consequent on potting, and the shift into cooler quarters was so severe that it was a long time before the plants pulled themselves together and made real progress. All this delay was naturally a loss of valuable time, that brought its own penalty at flowering time. Nowadays nobody, unless it be the veriest tyro, thinks of subjecting the plants to heat. "Keep the cuttings cool" is the advice that would be given to

the enquirer by any and every successful grower, and sound advice it is, based upon that surest of foundations—practical experience. It will thus be perceived that no expensive glass structures are necessary to root Chrysanthemum cuttings, and, in fact, no further convenience than the ordinary amateur can well command. There are many winters, indeed, in which a cold frame would afford all the shelter needed, but we cannot depend upon this, and, therefore, some structure is needed from which the frost can be excluded at will. The great drawback to the welfare of the cuttings when they are placed in a cold frame with no other protection than mats is not so much the degree of cold but the exclusion of the light, which may result for a week two or together when frost holds day and night in such a way that it is impossible to remove the coverings from the frame.

Clear a place on the greenhouse stage where there is plenty of light, and stand on it a small hand-light. In this put a layer of about 4 in. of clean ashes. This will serve to plunge the little pots in. Coconut fibre refuse may be used if desired, but ashes are rather cleaner and better.

Selecting the Cuttings.—There is a good deal more art in this than many people fancy. There is a great tendency to go for fat, succulent shoots, but these rarely do so well as the more wiry ones, having, among other bad qualities, a greater tendency to damp off. First of all do not take the cuttings, unless it is absolutely unavoidable, from the plants which have been very highly fed. This practice carried on over a series of years has a very prejudicial effect upon the stamina of the plants. If possible a few plants should be grown specially each year for the production of stock. No stimulants of any kind should be given them, and they will then produce quantities of sturdy, wiry shoots. The best cuttings are furnished by the suckers thrown up from the roots. Some growers are fond of taking these off with a hard base and a few roots attached, but although these are almost certain to root they do not seem to make so much headway as others which have been cut off above the surface of the soil. A good cutting should be from 2½ in. to 3 in. in length. Steer clear of "stem" cuttings, i.e., shoots that are thrown directly out from the hard stem of the old plant. Such rarely do well, and are always liable to prematurely throw flower buds.

Soil and Pots.—The compost should consist of equal parts of loam and leaf soil, with enough sharp sand added to keep the whole open. A capital addition is a little of the ash obtained from the combustion of the stems and leaves of the old plants. About a thirtieth of this in bulk may be added to the heap and well mixed up. It is astonishing to note the difference that is apparent between young plants grown in soil to which the ash has been added, and others which have not had this attention paid them. The pots used should be small, rather long thumbs. One crock at the bottom, covered with a little of the roughest of the compost, will be sufficient drainage. One cutting should be inserted in the middle of each pot. Roots are more quickly formed, perhaps, when the cuttings are placed close to the edge of the pot, but there is then a difficulty in getting the young plants into the middle of the larger pots during subsequent shifts.

Subsequent Treatment.—After the first watering but very little water will be needed, and that must be applied carefully and with discretion. Keep the handlights closed for the first week, and shade if necessary from sun should the days be bright. After the expiration of the week, if the cuttings are looking well, a chink of air may be admitted, increasing this as the days go by. Should flagging be observed, however, the lights must go on at once. In a few weeks' time the lights may be removed during the middle of the day, and finally may be left off altogether. Pay close attention to damping. Any leaves that show signs of it should be removed at once to prevent the infection spreading.

Fuchsias.—Both those plants which have been grown in pots and those which were planted in the flower garden last summer and were lifted from thence at the beginning of October may be laid closely together on their sides. No water will be needed. It will be advisable, however, not to lay the plants too close to the pipes.

Agapanthus umbellatus.—These plants will do with a place underneath the stage but it should be as far forward as possible close to the border of the path-

way, so that they may get plenty of light. It is a common but erroneous practice to keep the plants without any water at all from the time they are boused in the autumn until they are put out of doors again next spring. This treatment is little short of barbarous, and it is only by reason of its unfailing good nature that the Agapanthus stands it. Give the plants a fair amount of water, sufficient to keep a healthy green hue upon the foliage instead of the sickly yellow that one often sees, but not a drop of liquid manure or any stimulant whatever.—*Rex*.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Bees.—*G. A.*: The super should be taken off the hive at once. There will be no bees in it, of course, but it would tend to make the hive cold and draughty. We think you ought to cover your hives up more warmly.

Rose Marechal Niel.—*Enquirer*: You may certainly grow this Rose in a large pot under glass, but the plant will not do so satisfactorily as it would if it were planted out. Can you not make up a bed of soil beneath the stage to accommodate it? Use good loam, and add to it a sixth part of short, well-rotted manure.

Smilax Going Wrong.—*A. A.*: It is more than likely that your plants were injured by frost. The fact that they are throwing up fresh growths from the bottom would seem to point to this.

Begonias.—*Star*: If you have a warm house you might sow the Begonia seed about the end of January. As the seed is very fine it must only be lightly covered with earth. The seedlings will be sure to exhibit a good deal of difference in the colour of their flowers. Hence you will not be able to make use of the plants this year for filling beds where the colours are to be restricted to one or two. For filling mixed beds, of course, they are suitable enough.

Freesias Turning Yellow.—*Yeo*: You have subjected your plants to too much fire-heat, and this is the cause of the foliage going yellow. You appear to have given sufficient water at the root. Try and surround your plants with a more kindly atmosphere.

Pear Louise Bonne of Jersey.—*Amator*: This variety will do remarkably well either as an oblique or an upright cordon.

Red Currant.—*Amator*: The Old Dutch Red is a variety of long standing, and when well grown is a good all-round variety. The fruit is of good flavour and colour, and the tree will grow and crop well in almost any locality.

Dahlias.—Is it necessary to divide the roots of Dahlias before planting them next year? I have quite as many plants as my garden will contain, and therefore I do not wish to propagate.—*Dahlia*.

You may if you choose cut away some of the smaller tubers before you plant the rootstocks, but this is not at all necessary. The safer plan will be to plant them just as they are and thin out the growths presently if the plants threaten to become too big. You will then be able to go to work warily.

Clubbing in Cabbage.—*Greengrocer*: This is caused by a slime fungus which infects the roots of the plants. In pricking out the plants from the seedbed into their permanent quarters it is always well to be on the lookout for the first evidence of the disease and to reject such plants as show the protuberances, even if the latter are but small. A good dressing of gas lime should be applied to the ground while it is vacant previous to the Cabbages being planted. Two bushels of gas lime will form an effective dressing for three rods of ground in bad cases. The gas lime should be obtained fresh from the works if possible.

Sparrows and Carnations.—I notice during the

last few weeks that the sparrows have made a dead set at my Carnations, and that they have plucked off many of the leaves, and bitten others in two. Do the birds obtain any food by doing this, or is it done out of sheer mischief? For my own part I am inclined to the latter idea.—*Vexed.*

Our correspondent doubtless is right in his surmise. Sheer mischief will cause sparrows to do much.

HYDRANGEAS IN COUNTY DOWN.

THE accompanying photograph is a view of a Hydrangea garden at Old Court, Strangford, Co. Down, the residence of the Right Hon. Lord de Ros,

It would surprise many to see the Fuchsias; for they grow twelve and fourteen feet high, and I have measured some of the trunks nine and ten inches in diameter.

This pretty demesne is situated on the western shores of Strangford Lough, and the Hydrangeas shown grow within forty feet of the water's edge. The building shown in the background is his Lordship's private chapel. It was built in 1529, and presented to the Earl of Kildare (Lord de Ros, ancestor), by his agent, Valentine Payne. There is a churchyard adjoining the chapel, but it was closed a few years since on sanitary grounds. His Lordship is always most willing to give anyone permission to visit his beautiful demesne, and a

straightens and recovers, at least partially, its freshness; then all that part of the stalk which has been immersed in the hot water is cut off and the flowers replaced in cold water.

GLASGOW BOTANIC GARDENS.

DURING a hurried ramble through the houses and the grounds of the Botanic Gardens, Kelvinside, Glasgow, last autumn, we had sufficient time to note a vast improvement upon things as they were at the time of our previous visit several years ago. The people of Glasgow like to see showy and what are usually termed useful plants in contradistinction to



HYDRANGEAS IN COUNTY DOWN, FROM A PHOTOGRAPH TAKEN 23RD DECEMBER, 1897.

K.C.V.O. The photograph was taken by the Right Hon. Lady de Ros, who is a horticultural enthusiast. The variety grown is the ordinary *H. hortensis*, and the photograph gives one a good idea of the mildness of the weather (it being taken on December 23rd, 1897), in the Emerald Isle.

Coniferae of every description find a congenial home here, many of the varieties growing to such an extent as to puzzle experts who are used to seeing specimens grown in England and Scotland. Cupressus, Cryptomerias, and shrubs of all kinds have a robust look about them which surprises many on their first visit to the arboretum. Desfontainia spinosa grows luxuriantly and flowers in profusion.

good many avail themselves of the privilege which is so kindly granted.—*Diosma.*

To keep cut flowers fresh—Cut flowers can be kept longer, says the *Gazzetta delle Campagne* of last August, by previously placing a little powdered charcoal into the water of the vases, but the end of the stalk must be cut a little daily. A little camphor dissolved in the water also preserves freshness. A solution made with one litre (88 quarts) of water and three grammes of sal ammoniac (1692 drams) answers the same purpose. When the flowers begin to fade they can be revived by dipping the ends of the stalks into boiling water. When the water cools the flower

those that are merely of botanical interest, so that the greatest alterations or developments are along those lines. Of course this also is one of the features of the National gardens at Kew, but the grounds and houses at Glasgow are not so extensive and must be utilised to the best advantage. With this object in view, batches of useful plants are grown wherewith to keep up a display in the show houses to which the public are admitted.

At the time of our visit the Chrysanthemums were still in the open air. About 3,000 were grown mostly in the bush form, with a few confined to single stems. They flowered well and were dealt with in our pages during the proper season. In the Ewing

range of houses a recently acquired collection of Cacti is accommodated. *Clianthus Dampieri* in pots and planted out was displaying its remarkable flowers. The Moss house still contains a collection of mosses and various other cryptogams, including grand pieces of *Todea superba*, the Killarney Fern and other species of *Trichomanes*, also *Hymenophyllum* and that curious subject named *Mesplitis*, which grows best on a living Tree Fern stem.

PRIVATE HOUSES.

Passing thence into the pits and private houses we noted large batches or sometimes a houseful of such things as Chinese Primulas, *Streptocarpus*, show, fancy, and zonal Pelargoniums, Ferns, stove plants, Orchids and Poinsettias. Young and old plants of the latter had been cut down and grown on with three to four fine heads on a plant. Amongst Orchids such things as *Dendrobium crassinode*, *D. nobile*, *D. wardianum*, *Coelogyne cristata*, *Cattleyas*, and *Miltonias* were finishing up excellent growths. The cool *Odontoglossums* were also making good headway. A feature in this latter house was an edging to the benches of *Nepeta Glechoma variegata*, which hung down in long and beautifully variegated festoons.

ORCHID HOUSE.

Autumn is not the time for the best display of Orchids, yet a considerable number were in bloom including the curious *Pholidota*, *Dendrobium Phalaenopsis*, and *Oncidium incurvum*, with long panicles of flowers. Very fragrant was *Anguloa Clowesii*, and handsome were *Odontoglossum grande* and the Swan's Neck Orchid (*Cynoches chlorochilum*). Both interesting and always pretty are *Oncidium dasystyle* (the Bee Oncid), *O. flexuosum*, *Spathoglottis Fortunei*, *Masdevallia triaristella*, *Epidendrum cochleatum*, and *Dendrobium thyrsoflorum*, the latter being of course showy and conspicuous. Passing into the

FERNERY

We noted a general collection in fine condition; but the house also accommodates collections of insectivorous plants such as *Sarracenias* and *Droseras*. Conspicuous amongst the latter were *D. capensis* and *D. binata*. Fine plants of *Plumbago capensis* were trained under the roof, and seemed satisfied with their surroundings. For the convenience of the public the houses are connected and lead from one into the other, the temperature and moisture being suited to the several occupants.

AZALEA AND GREENHOUSES.

Of Azaleas it is interesting to note how well they are cared for. Many tall and perfectly pyramidal specimens show that they find many admirers amongst the good people of St. Mungo. Hybrid greenhouse *Rhododendrons* are represented by large and pyramidally trained specimens of *R. Countess of Haddington* and *R. Gibsoni*. The porch of this house was brightened with *Lilium speciosum* in pots.

Witsenia corymbosa in a No. 1 pot, and measuring 4 ft. to 5 ft. through, was coming into flower the second time, and constituted the feature of another house. There is a similar plant in the Botanic Gardens, Glasnevin, which is slightly larger if anything; but the two plants are amongst the finest in the British Isles. The stem is woody, much branched, and bears tufts of leaves on the branches like a miniature Iris, and cymes of sky-blue flowers. The species might not inaptly be described as a tree Iris. *Lonicera sempervirens* was flowering profusely on the roof. *Centradenia divaricata* is not unlike a Myrtle when flowering profusely. The foliage of *Vitis purpurea* was deep purple. The finely trifoliate leaves of *Rhus excisa* recalled *Choisya ternata*.

SUCCULENT HOUSE.

The collection of succulent plants is pretty extensive, and amongst them is a fine specimen of the Elephant's Foot (*Testudinaria elephantipes*), always an object of great curiosity. There are also large and well grown plants of *Agave Americana* (in a massive tub), *Euphorbia grandidens*, the Night Flowering *Cereus*, and the Old Man Cactus (*Pilocereus senilis*). Many others are noteworthy of their kind, and if their object is to be gaunt, grotesque and forbidding to the hands in their respective coats of mail, they certainly succeed.

PALM HOUSE.

A roomy house accommodates many fine Palms that are attractive to the general public by reason of their majestic heads of feathery or fan-shaped leaves always suggestive of tropical countries.

Sabal blackburniana stands 20 ft. high to the top of the fan-shaped leaves, supported by a massive trunk. The huge panicles of green and black fruits are attractive at all seasons. *Livistona chinensis* belongs to the same group, and is massive beside a fine tree of *Euterpe edulis* having gracefully arching leaves of another type. The tall clean stem of *Seafortia elegans* carries the head of foliage close to the roof. There are several tall trees of *Astrocaryum mexicanum* whose trunk is always guarded with formidable, black spines. The long lianes, characteristic of a tropical forest, are supplied by the supple and winged stems of *Vitis pterophora*, leaping from point to point of whatever object may be supporting them. Bananas are represented by many tall, fruiting stems. Stove *Begonias* and other fine foliage plants occupy some of the side shelves.

ECONOMIC HOUSE.

There is a fine collection of economic plants at Glasgow, and if the species are not numerous, the plants are in excellent condition. They are planted out in the central bed of the house, and afforded sufficient room to develop into large, well furnished specimens, in many cases fruiting freely. In this category may be placed *Cinnamomum Cassia*, *Ficus Parcelli*, *F. Cooperi* and *F. edulis*. The numerous orange-red, globular fruits of *F. Cooperi* were very showy. The fruits of *F. edulis* are produced in quantity along the old, leafless portions of the stems. There are also tall and vigorous plants of *F. religiosa* and the Mango tree. A grand specimen of *Passiflora quadrangularis* was carrying its third crop of large, egg-shaped fruits for the season.

TROPICAL FERNERY.

A general collection of tropical Ferns was in healthy and fresh condition. A special feature of this house are the several cork arches on either side of the building, and planted with Ferns and various fine foliage *Begonias*. Nothing, however, was better done than the healthy and vigorous specimens of *Gymnogramme schizophylla gloriosa*, suspended in wire baskets, Maidenhair Ferns in baskets also show that a bold attempt has been made to break away from the usual formalities of plant houses; and of this we should like to see more.

STOVE AND AROID HOUSES.

The usual occupants of the stove are well represented, including large and healthy pieces of *Anthurium Veitchi*, *A. crystallinum*, *A. warocqueanum* and others. *Coleus*, *Dracaenas* and *Caladiums* uphold their respective sections, together with a mixed assemblage of *Begonias*. *Costus speciosus*, by no means a common plant, was well flowered; and the same may be said of *Thunbergia alata*, in orange and white varieties.

Amongst the more notable of the Aroids were large and well furnished plants of *Anthurium acaule*, *A. Reine de Belges*, with rosy-pink spathes, *Caladiums*, *Alocasias*, *Calatheas* and others of that ilk, in healthy condition. *Vandas*, *Aerides*, and other Orchids, that delight in plenty of moisture, occupied the side benches.

WATER-LILY HOUSE.

This is devoted to tropical and sub-tropical species and varieties such as *Nymphaea Lotus ortgiesiana*, deep red; *N. stellata zanzibarensis*, intense blue; *N. devoniensis*, with large and rosy-red flowers; and various others, with which the tank was crowded. The above, although so late in the season, were still flowering. Many kinds of Gourds were trained to the roof, adding greatly to the interesting character of the house. Pitcher plants in pots and baskets suspended from the roof, also had congenial quarters here.

KIBBLE PALACE.

This is practically a temperate house or winter garden, but is kept gay at various times of the year with such flowering subjects as may be in season. It is a large circular building, with a domed roof, and a wing on each of two sides. The circular portion is 150 ft. in diameter, so that it is at once a prominent and conspicuous feature of the garden, and of which the citizens may well feel proud. At the time of our visit, the two wings were gay with *Lilium speciosum*, early-flowering *Chrysanthemums* in pots, *Cannas*, *Fuchsias*, tuberous *Begonias*, *Pelargoniums*, &c. *Lapagerias*, white and red, were flowering profusely on the roof overhead.

The roof of another portion, surmounting a fountain and circular basin, is draped with *Roses*, *Passionflowers*, *Lapagerias*, and *Clematis Henryi*, all flowering profusely at the time of which we speak.

The central portion of the dome is not furnished with glass, but opaque, and under the shade of this a fine collection of tall Tree Ferns in grand condition is located. Radiating around the Ferns are tall plants of various kinds hailing from temperate countries, and including fine trees of *Araucaria Bidwilli* and *A. excelsa*; also *Rhododendrons*, *Camellias*, *Acacias*, *Fuchsias*, *Aralias*, *Pittosporums*, tall trees of *Eucalyptus*, floriferous specimens of *Datura sanguinea*, and *Clerodendron foetidum*. A large specimen of *Acacia decurrens*, with fine foliage, has pressed itself against the glass till it has assumed an umbrella form. There is also a tall and fine tree of the fan Palm, *Trachycarpus excelsa*. Long, flowering shoots hung down from a giant *Fuchsia* trained under the roof. Very effective was a large bush of *Arundinaria falcata* having long branches, gracefully arching over one of the side walks. There is no more rampant climber than *Cobaea scandens*, which here reaches over a great portion of the roof, scrambling up, as it were, from the pillars supporting the roof, and hanging in leafy festoons. A large specimen of the night-scented Tobacco, planted out in a side border, is not only perennial, but flowers all the year round.

ROCKERY AND AQUATIC PONDS.

In a semi-shaded portion of the gardens a rockery has been constructed by Mr. D. Dewar, the curator, who has been making his influence felt in every corner and department of the place. The rockery is situated not far from the Kibble Palace. Herbaceous and Alpine plants are planted in suitable positions, and Ferns occupy the shaded end. In a bog bed filled with suitable occupants *Primula japonica* might have been seen flowering entirely out of its season, as a result of the abundance of moisture, perhaps, for it was in front of a dripping well. Behind the rockery is the hardy Water Lily pond, well filled with a collection of *Nymphaeas* in bloom on the occasion of our visit. A fountain occupies the centre of the pond. On higher ground is another pond filled with a general collection of hardy aquatics, mostly British and including fine clumps of the rare *Ranunculus Lingua*.

HERBACEOUS BORDERS.

The borders mostly run from the higher grounds towards the hothouses, and being public promenades are filled with a great variety of showy flowering plants. In autumn there were masses of *Carnations* in bloom, also *Gladioli*, *Oenotheras*, *Golden Rods*, *Michaelmas Daisies*, *Coreopsis*, *Godetia*, *Malva*, *Coronilla*, *Hypericum*, *Impatiens Roylei*, &c. There were also beds of *Anemone japonica alba*, *Rudbeckia speciosa*, *Golden Rod* and *Galtonia* in mixture, *East Lothian Stocks* and other subjects on the grass not far from the walks and giving great variety.

Mr. Dewar is to be congratulated on the keeping of the gardens which are now a source of great attraction to the citizens of Glasgow. He is well supported by his foreman in the glass department, Mr. James Rourke.

BENMORE, ARGYLLSHIRE, N.B.

"Where fairy Eck sleeps 'neath the azure dome,
And Holy Loch lies fringed with silver foam—
There nestles sweet Benmore, a regal home."

Benmore, as the above lines indicate, is charmingly situated in the vale, or Strath, of Echaig, a delightful spot between Lochs Eck and Holy, the overflow of the former, in addition to the River Masson and numerous mountain burns, going to swell the waters of the latter. Thus the vale is made musical with running water. Great mountains tower up on either side, and thus one is reminded of the "Prince of Abyssinia," and the "Happy Valley," where, "from the mountains on every side, rivulets descended that filled all the valley with verdure and fertility."

Dr. Johnson, then, must have had some such scene as this in his mind, when he penned that fascinating story concerning *Rasselas*, and which *Boswell* states he read religiously once a year at least.

Be that as it may, Benmore is a fine structure and a fine estate. It is built in the Scotch baronial style, and takes its name from the Gallic "Beinn Mhor," which means "the great hill"—the great hill attaining an altitude of 2,433 ft.

The mansion, which is lighted by electricity, is occupied by William Younger, Esq., of the celebrated

Yonger's Ales. The gardens and pleasure grounds are extensive and well conceived; and are presided over by Mr. Stark, who must be a busy man to be able to compass the exacting work of so large and varied an estate. "The sides of the mountains were covered with trees, the banks of the brooks were diversified with flowers"; in fact, a small fortune has been spent on trees; Conifers line the hills; Conifers adorn the dale; Conifers have congregated together in all parts of the grounds; Conifers constitute the arboretum; in fact, Conifers are like our troubles, they never come alone, but in battalions. Avenue after avenue of these beautiful trees are very much in evidence, and in luxurious growth; the Scottish clime with its copious rainfall and heavy mists being seemingly suitable to this particular natural order of trees—*Picea nobilis*, *Wellingtonia gigantea*, *Pinus Strobus*, *Picea nordmanniana*, *P. Pinsapo*, *P. concolor*, etc., responding in fine style to the dripping skies. *Cupressus lawsoniana*, *Cedrus Deodara*, *C. atlantica* and its variety, *glauca*, *Araucaria imbricata*, and *Abies Douglassii*, among others, go also to show the quality of the site and the quantity grown.

The arboretum also affords a fine view from the mountain sides above; in fact, we,—*i.e.*, Mr. John Fraser, The Gardens, Ardenlee, Dunoon, and Mr. McLeod, The Gardens, Hafton House, Hunter's Quay,—entered by the gate leading to Loch Eck, where Mr. Stark courteously met us; and after traversing Puck's Glen—a perfect fairyland of Ferns and Mosses—and scrambling up a considerable height, we descended by winding and romantic paths into the vale below. Here, after inspecting the arboretum, above described, at close quarters, we were invited to a substantial and welcome Scotch tea, which, coming on the top of a ten mile walk, was much appreciated.

After this interesting ceremony was duly accomplished, we took to the large glass structure known as the "Winter Garden," which fact seems to imply that even in this comparatively warm corner of bonnie Argyll, weather, more or less vigorous is not unknown.

This large structure—which measures 150 ft. by 50 ft. and is proportionally lofty—is, however, unheated, *i.e.*, no firing has been used of late years; and yet the contents seem to be doing remarkably well. Palms, Tree Ferns, Eucalyptus, Camellias, Acacias, etc., content themselves with mere protection. The Silver Tree Fern (*Dicksonia antarctica*) is a fine specimen; the variegated New Zealand Flax (*Phormium tenax variegatum*), is all there in green and gold; while the Blue Gum (*Eucalyptus globulus*) is 18 in. in girth, 3 ft. from the ground, and 40 ft. high. *Bocconia frutescens*, *Datura* (*Brugmansia*) *sanguinea*, *Dicksonias*, and Climbing Roses, etc., vie with each other for the upper spaces, the ground line being covered with smaller and dwarfer plants. There is also a very handsome marble fountain and basin, round which British Ferns, like *Athyrium Felix-foemina cristata*, *Polystichum angulare proliferum*, *Lastrea pseudo-mas cristata* or *Osmunda regalis cristata*, display their beauties to advantage. Moreover, the whole of one side is clothed with Ferns of various species and varieties, the wall being wired and padded in the usual way.

Thence we visited the stoves and greenhouses where an immense quantity of material is stored for various purposes. In one of the former *Aristolochia elegans*, a beautiful free-flowering climber of elegant habit adorned the roof; while in one of the latter the pendulous blossoms of *Lapageria rosea* and *L. r. alba* were worth looking at. *Campanula isophylla* *alba* were white with flowers and bespoke July, rather than September, the time of our visit.

But let us get out in the open again—the day warrants it, for it happens to be one of those glorious occasions when all nature seems to unite to make amends for man's benefit. With a cloudless sky, with a soft, sweet sun, and with just enough of gentle zephyr in the air to encourage locomotion, one cannot help feeling the joy of existence, the pleasure of life. In the borders *St. Bridget Anemone* is gay with colour; and all this display is the result of a sowing last March. Herbaceous plants are in fine form; such things as *Montbretia crocosmiaeflora*, with orange-scarlet flowers; *Lysimachia clethroides*, with upright spikes of white blossoms; *Achillea Eupatorium*, with brilliant yellow heads; *Hemerocallis fulva flore pleno*, with double bronzy-yellow blooms; *Helenium pumilum*, another useful yellow plant; *Chelone obliqua*, rosy-purple; *Phloxes* in

variety and a dozen other things, including *Colchicum autumnale*, with bright purple tubes, will give the reader some idea of the flush of colour which still prevails in this fertile valley.

By-the-bye there is one other flower which does well in these parts, and which must not be omitted, viz., *Tropaeolum speciosum*, a flower which, for colour, contour, and habit, can hardly be overrated. Here, there is a long line of it scrambling over an iron railing, its rich vermilion-scarlet blossoms glowing in the soft sunlight like "flames" of fire. Mr. Stark, however, is of opinion that the best position for it is at the foot of a hedge, where it will be comparatively dry, and where it can cling to the latter for support. This may be a suitable site in a moisture-laden clime, but would, we think, be certain death to it in the sunny south. As we had no time to inspect other departments of this very interesting garden, we passed down another avenue of Pines and made our exit by the "Golden Gate."

This, again, reminded us of the "Happy Valley," for it is a fine piece of wrought iron workmanship, emblazoned with that sovereign colour from which it takes its name. On either side of the Golden Gate trees of *Cupressus lawsoniana* stand as sentinels, while the Scotch Fir and the native Larch form the vista in the beautiful background. No one can look on such a picture as this without being affected; and so it was with us. We acknowledged the power of Nature and the glory of landscape effect; we saw and were conquered; we said "adieu"! and retraced our steps, but the vision of beauty still lingers with us.—*C. B. G., Acton, W.*

ORIGIN OF SPORTS.*

WHAT is termed "sporting" in *Chrysanthemums* is by no means uncommon. A few of the very best sorts at present in cultivation have been derived from this source. So far as I know no explanation of a satisfactory kind has been forthcoming regarding their origin. In a recent issue of the *Journal of Horticulture*, one of the best known and most competent authorities on the history and cultivation of the *Chrysanthemum*, writes:—"With all our increasing knowledge we do not appear to be any the wiser with regard to the origin of 'sports.'"

The plant sent in by Mr. Mirrlees to-night is a variegated "sport." The divergence is seen in the leaves. The root is not changed, and a small twig at the top shows the normal character of the plant. Now as we have two varieties on this plant, to perpetuate them it is only necessary to take cuttings of both. The root cuttings would produce plants true to the original, and the variegated portion would perpetuate the sport. For some considerable time the sport shows a tendency to revert to the original. Even after they become what is called "fixed," variegated sports are difficult to retain, and frequently revert entirely.

Variegation can hardly be called a disease. We have many very delicately marked leaves, that are not rich in chlorophyll, which are noted for their vigorous growth. They are, however, very susceptible to injury. The slightest check is apparent, either from chills or moisture.

There are instances on record of double sporting, that is, of one variety sporting in different places with the same result. It is noteworthy that no change takes place in the form of the flower, the colour only being changed. For example, a pink flowered variety gives a terra-cotta sport, while another pink variety produces a yellow sport, and still another pink variety gives a perfect green flower.

Regarding the origin of sports, I can only give the result of my own experience, extending over thirty years, which is that hybridism is the principal cause of all sports. I will give an example of this. By cross-fertilisation I have frequently produced sports in the tricolor *Pelargonium*. To accomplish this I take a silver-leaved or tricolor *Pelargonium* as the seedbearing parent, and a zonal as pollen plant. The seedlings resulting from this cross would mostly take after the pollen parent, while a small proportion would resemble the seed bearer. These, of course, would be kept if as good as the parent, but the plants resembling the pollen parent would likely be thrown away. If, however, these plants were kept,

* A paper read by Mr. George Russell, Redlands, Glasgow at a meeting of the Natural History Society of Glasgow.

at some time or other they would reveal their hybrid origin by throwing out a sport. I used to cross these plants by the hundred, and had good opportunities of seeing the results.

Take another genus. *Azalea indica* is another instance. I have seen as many as four different sports on the one plant, all clearly showing that cross-fertilisation was responsible for them also. The *Azalea* being a hard-wooded plant, it takes some years before you can see the result of the crossing. From seedlings of my own crossing I have also had sports from the *Azalea*.

Orchid sports are very rare. So, until recently was their hybridisation. Twenty years ago Messrs. Veitch, London, were about the only operators, but now nearly every one who has Orchids is crossing and raising seedlings. A number of natural hybrids are known, which makes it probable that hybridism may have had some influence in the production of the few sports we have. Four years ago I showed an Orchid sport, namely, *Coelogyne cristata*, variegated. The *Coelogyne* is more inclined to sport than any other Orchid I know. Mr. Whitton, I recollect, had one, and another friend, Mr. Brooman White, Arrdarroch, had a variegated plant of *Odontoglossum*.

Dendrobium nobile in three different places—one of which was Redlands—produced a variation, named *D. n. Cooksonii*, after the gentleman who first showed it at a meeting of the Royal Horticultural Society.

If then, sports can be produced by hybridism, I do not see how it can be denied that it has more than anything else to do with the "Origin of Sports."

THE NEPENTHES HOUSE AT KEW.

THE highly ornamental appearance of the *Nepenthes*, apart from the fact of their interest to the botanist and the student of Nature, has given the plants a claim upon the special attention of the gardener both in the private establishment, and in the more pretentious Botanic Garden. The idea of a house specially devoted to them, which has so successfully been carried out by the authorities at Kew during the past year, has thus been an exceedingly happy one. Until recently there was no home for the *Nepenthes* in our great national garden, although the plants found fairly comfortable lodgings in stove number 9, and in the warm pits in the propagating department, the latter, of course, not being open to the general public. It is true that there were some excellent specimens of the most noteworthy species, hybrids, and varieties in "number 9," but they did not impress themselves so strongly upon the visitor as they might, and would have done, had the different members of the collection been all brought together into one place.

The new house, which was built by the Messrs. Dorey, of Brentford, lies on the eastern side of the T range, and adjoining stove "number 9," from which access is obtained to it. It is a well built and substantial span roofed erection, measuring some 75 ft. in length, by 12 ft. in width. As the principal occupants of the house are suspended from iron rods attached to the roof, there is no need for the stages with which plant houses are usually provided. Instead of the stages we find beds at the ground level enclosed with substantial stone curbing, covered with finely crushed coke, which has a neat and cleanly appearance. These beds are filled with various large stove plants, including Palms, Pandanads, *Crinum*s, and *Heliconias*. There is a 3 ft. central passage covered by iron gratings, the greater portion of the pipes being disposed in the cavity below.

The temperature for the winter months is fixed for 60° to 65° Fahr., or that of an ordinary warm stove. It was kept much hotter than this at first, but it was found that no better results were obtained by the greater degree of heat.

The house was opened to the public at the beginning of last October.

The collection is at present composed of twenty species, twenty-three garden hybrids, and three other forms, whose exact status is obscure—forty-six in all. The whole of the plants appear to be in excellent health, and the majority of them are well-pitched. Some especially handsome specimens of *N. intermedia*, *N. rafflesiana*, *N. lindleyana*, *N. morganiana*, *N. mixta*, *N. Hookerae*, *N. Curtisii*, and *N. C. superba* are very conspicuous.

As the number of garden hybrids produced by enthusiastic hybridists becomes multiplied so will the collection increase, ditto its value for purposes of reference and identification. Those who are interested in this curious class of plants will find much to engage their attention in the latest completed addition to the glass at Kew.

HINTS FOR EMIGRANTS.

FROM information supplied us by the chief clerk at the Emigrants' Information Office, 31, Broadway, Westminster, S.W., we extract the undermentioned particulars.

There is no demand for anyone in Canada at this season of the year, except for domestic servants. The routes to the new Klondike gold-fields are now closed by ice, and will not be again opened till May: explorations of the various Passes are now being made, and it is expected that the best routes will be known shortly. Persons going there should leave England not later than in March or April, but only those who are strong experienced miners or men accustomed to prospecting for minerals in wild and unsettled countries, and have at least £300 for journey and food, should think of going; all others are strongly warned against going there.

In New South Wales there is no demand for more labour, and many workmen at Sydney are unable to find employment; the number, however, of the unemployed, both at Sydney and in country districts, is now much less than it has been in previous years.

Reports from Melbourne, Ballarat, and other towns and districts in Victoria state that there is no demand for more labour; gold miners however, have been busy. The vine-growing industry—for which Victoria is admirably suited by nature—is now in a very depressed condition, owing to the low prices offered for the wine, and the general want of co-operation among the wine producers.

In South Australia there has been a remarkable revival in gold-mining during the last year or two: the total yield of gold is still small, but it was nearly four times as large in 1896 as it was in 1895. There is no demand for more mechanics or farm labourers.

Queensland has been suffering for some time past from the tick plague, which has seriously damaged the cattle industry, and from drought, which has been prevalent throughout Australia. From these causes the demand for labour has been small, but the numerous railway and other works, which are now in progress, are helping to provide labourers with work. An agricultural college has been recently established under Government at Gatton, where students may learn farming for a small fee, and other steps are being taken to promote agricultural settlement. The progress of gold mining, and other branches of the mineral industry, has been very satisfactory. In agricultural districts there is a demand for good ploughmen and farm hands. The sugar industry is in a prosperous condition, and there are excellent openings for farmers with a little capital, after they have acquired some experience of the country.

In Western Australia there is a good demand for carpenters, bricklayers, and other mechanics; a large number of public works are being carried out by the Government, which provide work for artisans, navvies, and other labourers. Saw-mill hands have been very busy in the timber districts, and some of the gold fields have been in want of experienced miners; domestic servants are much needed.

In Tasmania the important saw-milling industry of the Huon district in the south-west of the colony has greatly improved of late, and work has been brisk. A report from the mining town of Zeehan, on the west coast, states: "There is a good demand for country carpenters, and a fair one for blacksmiths; good miners can always get work."

Large numbers of persons continue to arrive in Cape Colony from England and Australia, and many find much difficulty in getting work. In the case of any local demand arising, it is readily supplied by men from Johannesburg (Transvaal) and other parts of South Africa, where the labour market is overstocked. Speaking generally, there is at the present time no demand for anyone in the Colony except thoroughly skilled mechanics; inexperienced hands will find great difficulty in getting work.

Farmers in Natal, as in other parts of South Africa, have experienced great losses from rinder

pest. There is very little demand for more labour in the Colony, and many persons at Durban have been unable to find employment.

Female emigrants are strongly warned to use the utmost caution in regard to advertisements in the United Kingdom offering them situations at high wages as domestic servants, barmaids, &c., at Johannesburg, in the Transvaal.

THE LATE MR. JAMES BROWN.

BEING now in a position to give a portrait of this well-known gardener, we now give a few more particulars concerning him. He was a native of



MR. JAMES BROWN.

Fifehire, where he was born early in the thirties, being in the 65th year of his age when he died. Mr. Brown served his apprenticeship at Grange Muir Gardens, in the same county. He commenced his career at a time when travel was less common amongst gardeners than at the present day. That, coupled with the fact that the value of his services was early recognised, prevented him from making a long sojourn as a journeyman amongst the gardens of the country; for we find that he left the gardens at Dupplin Castle, on the banks of the River Earn, near Perth, at the age of twenty-one to take up a position in the gardens of Abercairney House, Crieff, about eight miles westward. Here he remained till the day of his death, a period of forty-four years.

Needless to say, he earned the esteem of his employer, by virtue of duty faithfully fulfilled within the walls of the garden. Whether as a judge or a successful exhibitor outside the garden, he earned and enjoyed the esteem of his fellow gardeners and others with whom he came in contact. He has been regarded as a man of mark almost ever since the present generation of gardeners can remember.

He went to church on the 12th ult., when, it is believed, he caught a chill, for he complained on the next day, took to bed on the Tuesday, and died on the tenth day afterwards (22nd December). Acute pneumonia was the cause of death, being all the more regretful because it came so suddenly.

Rabbits in Australia and New Zealand.—Opinions are now divided at the Antipodes as to whether the great spread of rabbits is a blessing or otherwise, according to *The Queenslander*. In South Australia the industry of preserving and exporting rabbits has attained such dimensions, that benefit rather than harm has apparently resulted from the greatly despised and blamed bunny. The latter, it is admitted, has reduced the capability of the land for the rearing of sheep and cattle; but the number of people employed in capturing, preserving, and shipping the rodent is greater than that section of the population which has been driven off the land by the rabbits. Something like 96,000 of the latter were shipped to Britain in one day and 150,000 more remained in the stores in a frozen state. A writer hailing from Otago, New Zealand, wishes that

"rabbits were of no more value than rats and other vermin," for then the people would labour unanimously for the destruction of the pest. Whether frozen rabbits are worth 6d. or 10d. in London, the trade is and always will be a mere bagatelle compared with the loss caused to the community generally by them.

RECOLLECTIONS OF THE QUEEN'S REIGN.

AT whatever department of human affairs we take a survey of the remarkable advance made during the present reign it is most astounding; and the progress made in horticulture is well abreast of the strides made in other directions. The present reign has witnessed some of the most surprising results in the evolution of cultivated flowers and plants which have ever been attained in the world's history, and some of the results were never even dreamt of till well within the present reign. One of the most notable is the hybridisation of Orchids by which means many most beautiful and valuable additions have been made to a family of plants, upon which Nature herself has been most prodigal in her gifts of enchanting beauty. Then the fancy Pansies, full of a rich beauty peculiarly their own as we now know them, have had their rise and progress during the present reign, which, too, has witnessed the addition of a host of beautiful additions to what most of us fondly style the Queen of Flowers. Even Poppies have in a marvellous way yielded to the guiding hand of the florist, the most notable instance being the Shirley Poppies, which have under the guiding hand of the Rev. W. Wilks made the name of a small village a household word in all temperate climes.

It has seen many changes in popular taste, witnessing the rise into general popularity of gold and silver tricolor Pelargoniums, and also the gold and bronze section. When these sections were at the zenith of their fame, prices were paid for some kinds which rendered them, if divested of pots and soil, many times more valuable than their weight in gold. This may appear to some of your readers an extravagant assertion, but the writer has had ample means of verifying the statement. In the flowering sections of zonal Pelargoniums, our earliest acquaintances were Globe Compactum and Huntsman. This was before the advent of Tom Thumb. The white and pink varieties, so far as memory serves me, were unknown. The nosegays to a large extent were the creation of Donald Beaton, and the doubles came on the scene a few years later.

The present reign, too, has witnessed the rise and decline in popular favour of the Hollyhock. During the fifties, the time of its greatest popularity, many new varieties were sent out from nurseries, and found a ready sale at 10s. 6d. each. It formed quite a leading feature, both as spikes and single flowers, at Metropolitan and provincial flower shows. During the latter half of the fifties it was attacked by a disease totally unlike what is now known as the Hollyhock disease, which destroyed some of the best collections. So far as I know, that eminent florist, the late Charles Turner, found it the only foe of the kind he could not grapple with; at all events owing to its ravages he gave up the Hollyhock in despair.

The number of plants introduced during the present reign is simply legion, many possibly consigned to oblivion, and others retained, commanding universal popularity. When viewing some of the most artistic groups of plants ever set up, the thought crosses the mind, what would our forefathers have said of them; for with the limited materials at their command, similar results would have been unattainable. The art of the hybridiser has done much to enrich our stores of decorative material.

In this connection the name of the late Mr. Bause deserves a passing comment, he being the originator of the modern forms of Coleus. Weeds though some may term them, they have proved of great value as decorative plants. His name will, I think, be perpetuated in *Dieffenbachia Bausei*. I well remember being at Chiswick one day and congratulating him on his success with Coleus. The pride and satisfaction with which he showed me the seedling plant of *Dieffenbachia* was delightful. The present race of *Dracaenas* is largely the result of his labours. He was the raiser of many varieties, and his skill as a grower has never been surpassed.

Turning to flowering plants the tuberous Begonias, which seem almost a thing of yesterday, have yet

been among the most popular of flowering plants for something over twenty years. These, as we now have them, constitute one of the most triumphant successes of the reign. To the foresight and indomitable perseverance of Mr. J. Laing, senior, of Forest Hill, much of this is attributable. When he took them seriously in hand, some, who ought to have known, thought that very little, if anything, more could be accomplished, than had been. Now we have nurserymen growing them by the acre, and see them displacing to a large extent the older kinds of bedding plants; and in their varied forms they constitute one of the principal adornments of our conservatories. Many a humble cottager rejoices in the possession of a few as window plants.

Gloxinias, Streptocarpus, and Caladiums have improved by leaps and bounds. The same may be said of Cyclamens, Primulas, and Cinerarias. I have plants of the latter dating back to the early part of the reign, which to those who only know Cinerarias as they now are, would be scarcely recognisable. With respect to Dahlias I am very much of Dr. Hogg's opinion concerning the show and fancy varieties. The Cactus varieties, now so popular, are quite a recent addition; and are, many of them, for decorative purposes, far superior to the older types.

Now for the 'Mums; possibly the most popular, with the exception of the Rose, of all cultivated flowers. Their present popularity is largely due to the introduction and improvement of the Japanese section, prior to which they were losing to some extent their hold on the public. The evolution of these from the thread-like and fantastic forms, first exhibited by Mr. J. Salter, to the broad-petalled and enormous flowers we now commonly see, is one of the marvels of the age. These are destined to oust from cultivation the older Chinese varieties; for, at the present rate of progress, it will not be long before there appears among them incurved varieties as perfect in form with much larger flowers, and having the robust habit of growth which renders them easiest to manage. This will cause a sharp twinge of regret to many a lover of the older class of flowers; but the inevitable will have to be accepted with as good grace as possible.—*W. B. G.*

HURST & SON'S CLOVER AND GRASS SEED CIRCULAR.

January 1st, 1898.

WE trust our annual report upon the past Clover and Grass seed harvests may be of interest to our customers.

From personal observation and careful enquiries in all the Clover seed producing districts of our own country, we are of opinion that the total yield will be under the average. From some of the Continental countries we hear of good supplies, and America appears to have an abundance of seed to export.

ENGLISH RED CLOVER AND COWGRASS will vary more in quality and character than they usually do, and we are of opinion that the superior grades will be very scarce. The eastern counties have by far the largest crops; the southern, western, and midland counties have in the aggregate a largish acreage, but the samples from these districts that we have already seen show inferior quality, not well-ripened, and the yield per acre unusually small. Yearling, or rather two-year-old, seed, for there was only a small quantity saved in 1896, is now almost exhausted. As heretofore, we have the most favourable arrangements for purchasing English seeds on the various markets from veritable sources, and whatever we offer as "English," customers may absolutely rely upon.

SINGLE CUT COWGRASS is in small supply. We shall have as usual some well-known pedigree stocks.

FOREIGN RED CLOVER.—France and America seem to have the largest crops: from both countries offerings have already been freely made in large quantities; the States seeds are clean, but lack size. The North of France samples are the best we have seen from there for some years, large-grained, and of good character. As usual, there will be considerable quantities of the very weedy, small-grained, seed from the badly-farmed districts of the South of France. Canada has not at present placed much on the markets, and neither Germany nor Russia offer with the freedom they have done for several seasons.

WHITE CLOVER.—A fair English crop, but fine samples will be scarce. The large American supply that characterised last year's trade cannot be repeated, but the German offerings are plentiful, especially of the lower grades. The finest samples are undoubtedly scarce everywhere.

ALSIKE seems to be in much smaller compass this year. For several seasons it has been abnormally plentiful, Canada sending us heavy supplies. So far this season the offerings are on a very restricted scale, and samples lack good colour. The German crop, we hear, is an average.

TREFOIL.—A smaller crop of English than usual, and although the Continental crops are not up to an average, perhaps, the very large quantities of yearling seed still held in this country will prevent prices being high.

LUCERNE.—Short crops both in France and America.

SAINFOIN.—English Giant an under-average crop; a fair supply of English Common. French Giant is reported scarce, and of generally inferior quality.

ITALIAN RYEGRASS.—The French crop is under average, and fine Mayenne does not offer freely; the re-cleaned qualities will be very scarce towards the end of this season. Irish crop again large, and of good quality. English quite up to average.

PERENNIAL RYEGRASSES.—Not quite such large crops as for several years past, but still plentiful. The natural weight per bushel lower than last year.

NATURAL GRASSES vary as usual. Cocksfoot is in fair supply from New Zealand, but we are not getting offers from America. Timothy still plentiful. Crested Dogstail in larger supply than for several years. Meadow Fescue very fine, but not so plentiful as last year. The Poas in short supply; this applies also to Sheep's and Hard Fescue.

WHITE MUSTARD.—A fair average crop of good quality.

RAPE.—Smallest crops for some years.

SPRING TARES.—Reported below average.

WINTER TARES.—Very large supplies held over. A considerable speculation has taken place in these at the tempting prices current last autumn.

GARDENING MISCELLANY.

BEGONIA HAAGEANA.

IN the newly-erected wing of the temperate house at Kew is a grand plant of this handsome Begonia. In common with the other subjects in the house it is planted out in a prepared bed, and, like them too, has been flourishing finely. The plant in question is between 4 ft. and 5 ft. in height, is clothed right to the ground with vigorous foliage, and is carrying several large panicles of light pink flowers, its whole appearance, indeed, being one of apparently perfect health. At the other end of the garden the pot plants of *B. haageana* are looking miserable enough from the effects of the fog. Can it be possible that the mere fact of the plant being accommodated in a more natural way in a border instead of in a pot is the cause for the difference in its behaviour under the same trying conditions? Experiments carried out on a larger scale would soon prove this. Meanwhile, if the fact is an accident it is a sufficiently striking one.

SPORTING OF CHRYSANTHEMUMS.

I WAS pleased to see Dr. Masters' remarks at the close of the paper on the "Sporting of Chrysanthemums" (p. 281) read by the Rev. Geo. Henslow. Thirty years ago I used to cross Pelargoniums largely, and found it perfectly easy to produce sports in plenty; indeed, they came oftener than wanted. I notice Mr. Pockett, of Australia, is in favour of hybridism as the most likely cause of sports, and he should be, I think, one of the best authorities, as he flowers thousands of seedlings every year.—*Geo. Russell.*

ROOTS OF PLUM TREES.

LATELY I examined the roots of some Plums growing against walls, which were partially lifted during the early part of September. The long roots, which were then shortened back and re-planted in fresh soil, were healed over, and a bunch of healthy fibres emitted from each. The growth ceased when the

lifting of the roots was done, but the foliage remained and ripened off naturally. A number of Apple trees, which fruit freely every year, were making gross wood, and have been treated like the Plums, but not till the crop was gathered.—*M. T., Carron, N.B.*

HAMAMELIS ARBOREAS.

THE circular bed filled with this fine winter-flowering tree that lies close to the entrance to the Orchid houses at Kew is at the present time a very beautiful sight. The plants are sturdy, healthy specimens, every branch and twig being loaded with expanded flowers or flower buds. The flowers are very handsome and conspicuous by reason of the contrast between the bright primrose yellow petals, and the rich claret sepals. The flowers will stand a good deal of frost with impunity, and the plant, taking it altogether, is a very desirable subject for the adorning of the winter flower garden. *H. arborea*, as the specific name denotes, assumes the dimensions of a small tree, thereby being distinct from the American species, *H. virginica*. The flowers, too, are larger and finer. *H. arborea* was brought from Japan in the year 1862. It has been described in the *Botanical Magazine* under the name of *H. japonica*, but is quite distinct from that species.

PANDANUS BAPTISTII.

WITH the notable exception of *Pandanus Veitchii*, the Pandanads or Screw Pines do not bulk very largely in the ordinary collections of stove plants. The form under notice, however, is well worthy of cultivation, for it is a most handsome plant, and is without of noble and distinct appearance. The leaves are long, and arch gracefully over. They are about 2½ in. in width and very stout and leathery. The midrib is yellow and there are two or three lines of the same colour running down the whole length of the leaf by the side of the midrib so that the whole centre appears to be yellow. The margin shows a broad band of lively green. The edges of the leaves are entire and totally destitute of spines, so that there is not the difficulty in handling the plant experienced in the case of the prickly ones, such as *P. utilis*, *P. cardelabrum*, and *P. c. variegatus*. The plant is a native of New Caledonia, and like the other Pandanads needs a stove temperature. A very fine specimen is a distinguished occupant at the present time of the new *Nepenthes* house at Kew.

CHRYSANTHEMUMS FROM HELENSBURGH.

WITH the last week in the old year now gone, with its tale of work accomplished or of work left undone, into the mists of the past there came to us a box of seedling Chrysanthemums from Mr. James Bryson, Helensburgh, N.B., for our opinion. Five varieties were sent, all of them being singles. The most promising among them was one numbered 18. This is after the style of Miss Rose in build, size, and colour of bloom, but inclined to be larger. The plant, too, is evidently of vigorous growth. Not the least charm of the flowers is their strong, but by no means unpleasant smell. This variety would probably yield excellent results if grown for supplying cut flower. The other varieties were of very little value, and certainly not worth troubling more about, with the possible exception of No. 13. If this variety is a late flowerer it should be of value, although the colour, rose-magenta, is not a popular one for some reason or other. No. 16 was remarkable chiefly for the way in which the flower buds were clustered upon the tips of the shoots.

HELLEBORUS NIGER.

THE Christmas Roses have been very handsome objects in the wild garden and on the rock-work at Kew this year. The dense fogs that have visited this part of the suburbs of London have not sullied the purity of the flowers so much as they generally do. In a sheltered nook of the rock garden a batch of strong clumps of *Helleborus orientalis* is already throwing up numerous flowers buds, which if the weather hold mild for another few days will soon be fully expanded.

KNIPHOFIA PRIMULINA.

THE common *Kniphofia aloides*, or as it is variously called, *K. Uvaria*, *Tritoma Uvaria*, or *T. aloides* is a distinguished-looking plant for the outdoor garden but the species under notice, *K. primulina*, is every

whit as noticeable, although a rarity. At the present time it is flowering in the Temperate House at Kew, and amidst the generally gloomy surroundings of a foggy January day, its spikes of bright primrose-yellow flowers are conspicuous enough. The leaves are about 2 ft. long, and $\frac{3}{4}$ in. in width, with a heavy prominent midrib, and arch gracefully over. The flower scapes with the flower spikes are some 3 ft. in height. The plant in question is a stray from somewhere, nobody seems to know how or from whence it came to its present abode, but at any rate it is a vastly pretty stray. If this is normally a winter-flowering species it cannot fail to prove of great value.

APPLE DIRECTEUR RODIGAS.

A COLOURED plate of this Apple in the *Bulletin d'Arboriculture, de Floriculture, &c.*, shows it to be of medium size, with the shape of Beauty of Bath, and the rich colouring of Hoary Morning. The fruit is globular, slightly flattened, with a dark yellow ground, is heavily suffused with dark red all over, splashed and striped with crimson-red on the exposed side, and spotted elsewhere with the same hue. The flesh is white, somewhat tender, crisp, juicy, sugary, acidulated and agreeably perfumed. The quality is good, and if the fruit is not very bulky, the tree is very fertile and the fruiting regular. The tree, if left alone, takes a globular, slightly flattened form. The wood is strong and the branches numerous. The variety is a seedling obtained by selection from the culture of M. Victor Biebuyck, who strives to improve his products by selecting according to the quality of the fruit, the fertility of the tree, and its merits generally for open air culture. He expressed a desire to dedicate his Apple to M. Em. Rodigas, the director of the School of Horticulture of the State of Ghent. After tasting the fruits on February 11th, 1896, the Committee of the Cercle d'arboriculture de Belgique considered the variety deserved to be propagated.

QUESTIONS AND ANSWERS

Sowing Fern Spores.—*T. H.*:—If left to themselves the spores would naturally sow themselves as soon as ripe; but out of the thousands or perhaps millions that are sown in an ordinary fernery, very few ever germinate and fewer still grow into plants. By sowing them as soon as they are ripe you will succeed in proportion to the period that elapses before the approach of winter, in any given year. The chief or practically the only difficulty attaching to late sowing is the liability of the protballi or early stage of the plants to damp off during the dull days of early and mid-winter. Your better plan now would be to wait till the days lengthen out a bit, say towards the middle or end of next month, and then sow the spores. They would then have the whole of the growing season before them, with less danger of damping.

Butter Tree.—*A. C.*: There is nothing improbable about the story so far as you give it. Butter from a tree would simply be vegetable butter, also spoken of as vegetable fat. The Indian Butter tree is *Bassia butyracea*, from the seeds of which the white buttery substance is obtained by bruising or squeezing. Other species of *Bassia* also yield fatty matter used for making soap, for burning and other purposes.

Gas Lime and Cabbage Ground.—*W. Carr*: You may safely apply a good dressing just now without any fear of the safety of the crops that may be planted in spring arising from the use of the lime. Give a sufficiently thick dressing to show white all over the surface of the ground. Before proceeding to scatter it over the ground you should first remove all roots of the Cabbage tribe, particularly the thick nodules or tubercles which might be too large for the lime to have any effect upon the same. Take them to the rubbish heap and have them burnt when you light a fire, or bury them deeply in some out-of-the-way corner where they are not likely to be dug up for a year or more until the spores have perished.

Sowing Maize Seed.—*Western*: There is plenty of time yet, as you need not sow the seed for the next seven or eight weeks. The plants will then be sufficiently early to insure their fruiting provided you sow only early kinds which generally give most satisfaction in this country. If you sow too early you would have to repot the plants once or twice to keep them growing and prevent the roots getting pot-bound before it would be safe to plant in the open ground about the end of May. A sunny, fully exposed position is the best situation, and most likely to bring the cobs to a useful size. They cannot have too much sun beat in this country.

Grafts of Fruit Trees.—*Henry Drew*: The prunings of your fruit trees will keep perfectly well till grafting time; indeed, they will be all the better for

being cut off now to prevent them from pushing into growth before they are required in the event of the present mild weather continuing for any length of time. Take out a trench behind a north wall, where they will be cool and not exposed to sunshine. Lay in the cuttings thickly, but not so that they will form beaps, otherwise some of them may get dried up before the time arrives for using them. Cover them for more than half their length, and tread the soil firmly against them.

Aubergine and Egg Plant.—*R. Wood*: Both of these names are applied to *Solanum esculentum*, also known as *S. Melongena*. For garden purposes they may be regarded as representing two well marked groups of varieties of the plant. The name Aubergine is generally applied to the elongated and purple forms, resembling Marrows in form, but only 3 in. to 4 in. long or thereby. The fruits of the Egg plant proper are white, much smaller than those of the Aubergine, and in shape like a hen's egg. All require similar treatment in a pit or stove, at least during their earlier stages.

Names of Plants.—*A. J.*: 1, *Aspidium falcatum*; 2, *Aspidium caryotideum*; 3, *Sparmannia africana*.—*W. K.*: 1, *Oncidium pulvinatum*; 2, *Oncidium crispum*; 3, *Eucomis punctata*; 4, *Pelargonium denticulatum*.—*R. Milne*: 1, *Mentha Requeini*, not a species of *Thymus*; 2, *Nephradium molle corymbiferum*; 3, *Pteris tremula Smithii*; 4, *Tsuga canadensis*; 5, *Camellia japonica* var.; 6, *Erantbemum nervosum*; 7, *Goldfussia isophylla*.

Communications Received.—*A. D. W.*—*A. P.*—*J. R.*—*McDougall Brothers.*—*A. O.*—*Examination.*—*A. V. S.*—*E. Jackson.*—*Diosma.*—*Robert Sydenham.*—*Sutton & Sons.*—*R. H. S.*—*J. G. H.*—*G. T.*—*R. Mearns.*—*Aloe.*—*P. P.*—*S.*, *Waltbamstow.*—*Dianthus.*—*Peaches.*

TRADE CATALOGUES RECEIVED.

WEBB & SONS, The Royal Seed Establishment, Wordsley, Stourbridge.—*Webb's Spring Catalogue.*
R. B. LAIRD & SONS, Edinburgh.—*Vegetable and Flower Seeds.*

DICKSON'S, LTD., Chester.—*Select Vegetable and Flower Seeds, Seed Potatoes, Garden Requisites, &c.*
ROBERT VEITCH & SON, 54, High Street, Exeter.—*Catalogue of Kitchen Garden and Flower Seeds.*

KELWAY & SON, Langport, Somerset.—*Wholesale Catalogue of Seeds.*

TOOGOOD & SONS, Southampton.—*Toogood's Garden Seeds.*
CHARLES SHARPE & CO., LIMITED, Sleaford.—*Standard Seeds.*

JOHN LAING & SONS, Stanstead, Rutland, and Southend Parks, Forest Hill, London, S.E.—*Catalogue of Vegetable and Flower Seeds, Begonias, Novelties, &c.*

S. F. RICHMOND, Ossett, Yorks.—*Descriptive Catalogue of Chrysanthemums including all the Latest Novelties of the season.*

F. SIMMONDS & SON, Mamhead Park Gardens, near Exeter.—*List of Best New and Old Varieties of Chrysanthemums.*

W. DRUMMOND & SONS, LTD., Stirling.—*Garden Seed Catalogue.*

W. J. GODFREY, F.R.H.S., F.N.C.S., Exmouth, Devon.—*Catalogue of Choice Chrysanthemums.*



THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.

Notice is hereby given, that a SPECIAL GENERAL MEETING of the Members of the Gardeners' Royal Benevolent Institution will be held at "SIMPSON'S," 101, STRAND, in the County of Middlesex, on THURSDAY, the 20th day of JANUARY, 1898, at 2 50 p.m., for the purpose of electing Two Trustees to fill the vacancies caused by the death of Robert Hogg, LL.D., and the resignation of John Lee. And the FIFTY-NINTH ANNUAL GENERAL MEETING of the Members of this Institution will be held, at the same place and on the same date at 3 p.m., to receive the Report of the Committee and the Accounts of the Institution (as audited) for the year 1897; to elect Officers for the year 1898, and other affairs; and also for the purpose of placing NINETEEN Pensioners on the Funds;

Ten to be recommended to be placed on the Pension List without the trouble or expense of an Election in accordance with Rule III. 5; and nine to be elected by votes from an approved list of 44 candidates.

The Chair will be taken by HARRY J. VEITCH, Esq., Treasurer and Chairman of Committee, at THREE o'clock.

The Poll will be open at THREE FIFTEEN o'clock and close at FOUR THIRTY o'clock precisely, after which hour no Voting Papers can be received.

The Voting Papers have been issued, and any Subscriber who has not received a copy is requested to communicate with the Secretary

GEORGE J. INGRAM, 50, Parliament St., S.W.

A Special Offer to Readers of THE GARDENING WORLD 25/- BOOK for 8/-

NO HOME SHOULD BE WITHOUT ONE.

Ogilvie's Encyclopædia OF USEFUL INFORMATION AND WORLD'S ATLAS.

No Single Book ever before contained such a Wealth of Knowledge.

By Special Arrangement with the Publishers of the "Encyclopædia of Useful Information and Atlas of the World," we are enabled to offer to the Public a Magnificent 25s. Volume for 16 of the coupons, which will appear weekly, together with 6d. each, accepted in Weekly Instalments, or the Coupons may be held until the whole period has elapsed and brought or sent to the Office with 8s., and 6d. towards carriage.

A COMPLETE ILLUSTRATED LIBRARY IN ITSELF.

A universal assistant and treasure-house of information on every conceivable subject, from the household to the manufactory. In short, gives information about everything, is absolutely indispensable to everyone in all walks of life; the contents being so separated, indexed, and arranged that they can be turned to at once. It is

THE BEST { BOOK OF } EVER { INFORMATION } ISSUED. Size of Encyclopædia: 9 by 11½ inches. 656 Pages.

It contains

MANY MAGNIFICENTLY ENGRAVED COLOURED MAPS,

and a description of every country under the sun, besides much other matter relative to the Home, the Farm, the Factory, a Dictionary of Statistics—many Useful Tables, Poetical Selections, Synonyms, Famous Bridges and Ships, How to Calculate, How to Cook, How to Get Rich, How to Cure all Diseases, How to Succeed in Business, Table of Weights and Measures, and

HUNDREDS OF OTHER TOPICS OF GREAT VALUE TO EVERY PERSON

who desires to be up to the times. To see the Book is to want it. To Members of Mutual Improvement Societies it will prove of inestimable value.

The articles are written by men whose lives have been devoted to the subjects treated, are short and concise, but contain full information up to date. It is to be consulted on every subject that arises in everyday life, by old and young alike. It contains a complete Illustrated Atlas of the World.

IN THESE DAYS OF COMPETITION

it is imperative that a Gardener should be a well-informed individual. Here is an Encyclopædia containing an immense amount of knowledge that will be of the greatest service to him.

YOUNG GARDENERS,

do you wish to be successful? Then remember that to possess knowledge is the surest way to achieve success.

It is elegantly bound in Morocco Cloth, with beautifully designed Gilt Side-stamp and Red Edges, making at once the most handsome and durable as well as THE MOST USEFUL BOOK EVER MADE or sold for 25s.

8198. COUPON.

Ogilvie's Encyclopædia of Useful Information, AND WORLD'S ATLAS, (Published Price 25s.) 16 COUPONS, AND 6d. WITH EACH.

Name _____

Address _____

Postal Orders or 3d. stamps may be sent. COUPONS AND CONTRIBUTIONS MAY BE LEFT at or SENT TO the Office for

THE PUBLISHER OF

THE GARDENING WORLD.

COPIES OF THIS BOOK CANNOT BE BOUGHT. They can be obtained only by using these Coupons.

WEBBS'

NEW

CUCUMBER, "BOUNTIFUL."

THE BEST FOR EXHIBITION

1/6 & 2/6 per packet, post-free.

A splendid new variety for either exhibition purposes or ordinary cultivation. The fruit grows to about 24 inches in length, is straight, smooth, and of deep green colour, very handsome in appearance, and of first rate quality.

From Mr. C. BROCK, Gardener to C. D. Batt, Esq., Witney.

"Your Bountiful Cucumber is the best I have ever grown for all-round work; it is very handsome in shape, length 18 to 22 inches, and excellent for exhibition purposes."

Webbs Spring Catalogue, post-free, 1s.

WORDSLEY, STOURBRIDGE.

BEGONIAS A SPECIALITY.

Seed saved from prize plants. Choicest mixed, single or double varieties, 1s., 2s. 6d., and 5s. per packet; collections (seed) single, 12 named varieties, separate, 9s. 6d.; 6 ditto, 3s. Tubers, named singles, from 18s. to 50s. per doz.; choicest seedlings, 3s. to 30s. per doz.; bedding, choicest, 3s. to 9s. per doz.; choicest named doubles, from 18s. per doz.; choicest seedlings, 6s. to 30s. per doz.; choicest mixed, for bedding, 9s. to 18s. per doz. Catalogues gratis.

JOHN LAING AND SONS,

Begonia Growers, &c.,

FOREST HILL, LONDON, S.E.

CHRYSANTHEMUMS.

"WHICH ARE THE BEST VARIETIES?"
A QUESTION ASKED BY EVERYONE.

FOR ANSWER SEE MY CATALOGUE
(POST FREE.)

GODFREY, EXMOUTH, DEVON.

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue

JAMES CYPHER,

Exotic Nurseries, CHELTENHAM

ROSES. ROSES.

THE BEST and CHEAPEST in the WORLD.—12 acres of Roses. 50 choice Dwarf Perpetuals for 21s. 24 choice Standards and Half-standards for 21s. 12 Half Standards, 9s. 6d. Purchaser's selection, 50 Dwarfs, unnamed, 12s. 6d. The following are my selection, carriage free; 6 Marechal Niels, 5s.; 12 choice Climbing, 7s.; 12 best Hybrid Perpetuals, dwarfs, 7s.; 6 lovely Yellow Roses, 5s.; 6 Gloire de Dijons, 4s. 6d.; 6 beautiful Fairy Roses, 4s.; 4 Austrian Briers, 3s.; 6 Mrs. Bosanquet, 3s. 6d.; 6 choice Moss Roses, 4s.; 6 old Cabbage Roses, 4s.; 6 old-fashioned Roses, 4s.; 6 crimson Monthly Roses, 3s. 6d.; 6 pink Monthly Roses, 2s. 6d.; 6 white Monthly Roses, 3s. 6d.; 6 quick-growing Climbing Roses, 2s. 6d.; 12 Sweet Briers, 3s. All for Cash with Order. Thousands of Testimonials. Catalogues free.

JAMES WALTERS, Rose Grower, EXETER.

BARR'S SEEDS

OF FINEST SELECTED STRAINS
AND TESTED GROWTH

BARR'S SEED GUIDE

FOR 1898

IS NOW READY,

And will be Forwarded Free on Application.

Barr's Seed Guide for 1898 contains a Select List of the best Vegetable Seeds and most beautiful Flower Seeds. It is full of Practical Hints, and will be found invaluable to Gardeners, Amateurs and Exhibitors. *Sent free on application.*

Barr's 21s. Collection of the Best Vegetable Seeds contains 14 Pints of Peas (best successional sorts), 6 Pints of Beans (Broad, French, and Runners), and a liberal Assortment of other Vegetable Seeds, for One Year's supply. *For full particulars see Barr's Seed Guide, free on application.*

Barr's 10s. 6d. Collection of Choice Flower Seeds contains a liberal selection of the most beautiful Annuals and Perennials. Full particulars in **Barr's Seed Guide**, in which will also be found many sterling Novelties for 1898.

All Seeds sent Carriage Paid on receipt of remittance.

BARR & SONS,

12 & 13 KING ST., COVENT GARDEN, LONDON.

Nurseries:—LONG DITTON, SURREY.

(Surbiton Station, S.W. Railway).

SEED LIST

(Free on Application).

FEATURES:—

Alphabetically arranged.

Best sorts, in heavy type, can be seen at a glance.

Probably the most explicit practical instructions for cultivation ever published in any Catalogue.

Many hints and recipes for cooking and serving the various vegetables.

Directions for the storing and forcing of vegetables

Medical qualities of many vegetables and herbs.

Prizes of £5, £3, (two of) £2, and £1 offered for photographs of horticultural subjects (see page 2 of Catalogue).

THE LIST, containing 93 pages and a profusion of illustrations, shows (a) WHAT TO GROW, () HOW TO GROW IT, and (c) WHAT TO DO WITH IT WHEN GROWN, and has been described by an Agent as one of the largest estates in England as a BOOK OF REFERENCE.

Another Customer, testifying as to quality writes:—"I should like to add that all the Seeds, &c., purchased from your establishment during the past 14 years have been of the very best quality, and have given great satisfaction."

RD. SMITH & Co.,

Seed Merchants & Nurserymen,

WORCESTER.

SEEDS.

Rudland's Celebrated Reading Seeds are grown from the finest stocks.—**Beans**, Early Long Pod, 4d.; Broad Windsor, 5d. **Peas**, American Wonder, 9d.; Wm. Hurst, 10d.; Exonian, 1/-; Duke of Albany, 10d.; Sharpe's Queen, 10d.; Yorkshire Hero, 9d. per Qt. **Cabbage**, Wheeler's Imperial, 3d.; Nonpareil Improved, 3d.; Savoy, 3d. **Carrot**, Intermediate, 2d. **Brussels Sprouts**, 3d. **Onion**, Reading Improved, 3d.; White Spanish, 3d. **Parsnip**, 2d. per Oz. Catalogues free by post or on application. Address: **RUDLAND, Seedsman, Reading.**

Established 1884. Telephone 377.

BEGONIAS.

Single, in 4 colours, 10s. 100, 1s. 6d. doz. Send for detailed list

J. D. HAMON,

CASTLE STREET, BIRMINGHAM.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Malda Vale, London W.



The 31st Edition is Now Ready.

200 PAGES. 150 ILLUSTRATIONS.

PRICE SIXPENCE, POST FREE.

(by Parcel Post—it is so large).

CONTENTS—The Best Seeds and Potatoes for Garden and Farm; also Descriptive Lists of Carnations, Chrysanthemums, Dahlias, Fuchsias, Gladioli, Herbaceous Plants, Pansies, Pelargoniums, Pentstemons, Phloxes, Pinks, Pyrethrums, Roses, and Violets; with full Cultural Directions for each.

PRESS & OTHER OPINIONS OF THE BOOK.

WEST HUMBERSTONE.—"Your Catalogue and Guide safe to hand. I am very pleased with it, and I am sure every every Amateur, in particular, should have one in his possession, as they are worth 100 times their cost."—T.H.

Leeds Mercury.—"For a useful selection of vegetables and flowers, and a trustworthy guide in the culture of these, it is vastly ahead of ordinary catalogues."

AREBROATH.—"Very many thanks for your valuable Catalogue and Guide. As an Amateur, I find cultural instructions of immense value."—D.A.

Bell's Weekly Messenger.—"Contains elaborate and complete articles on cultivation for exhibition as well as ordinary purposes. It is thus far more than a mere catalogue—quite an encyclopædia of farm and garden plants."

YARM.—"Thanks very much for your Catalogue of 1897. In looking through it, I find it is even better than last year's, which I thought could not be surpassed."—W.C., Gardener to Sir T. Richardson, M.P.

Apply early, and please mention this paper.

DOBBIE & Co.,

SEED GROWERS AND FLORISTS TO THE QUEEN

ROTHESAY.



"Gardening is the prnest of hman pleasnres, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JANUARY 15th, 1898.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, January 18th.—Sale of Anemones, Azaleas, Palms, Carnations and Cannas by Messrs Protheroe and Morris.

WEDNESDAY, January 19th.—Sale of Japanese Lillies, Stove and Greenhouse Plants by Messrs. Protheroe and Morris.

THURSDAY, January 20th.—Sale of Hardy Plants by Messrs. Protheroe and Morris.

FRIDAY, January 21st.—Sale of Imported and Established Orchids by Messrs. Protheroe and Morris.

QUALITY IN SWEET PEAS.—To many cultivators the classification of Sweet Peas according to the shape of the standard may seem arbitrary and a matter for convenience, or a thing to be ignored altogether. Those, however, who once for all give the subject sufficient consideration to clearly distinguish the differences are almost bound to come to the conclusion that there is something in it after all. It may be a matter of opinion or taste as to which class or type is the most ornamental, but that does not alter the fact that classification furnishes the cultivator with definite lines upon which to gratify his particular taste in the selection of varieties. Many growers and admirers, but particularly fanciers, will admire anything in the shape of a Sweet Pea for a time at least; but unfortunately the deformities that arise amongst them are as likely to be lauded as

those that are really beautiful. Admirers of Orchids, for instance, are satisfied with anything for a few years after taking them up as a hobby, but sooner or later they begin to recognise in what direction true beauty and quality lies, and follow them up according to the means at their command. So it must be with Sweet Peas. The idea of classifying Sweet Peas by the form of the standard was first suggested by the Rev. W. T. Hutchins, the Sweet Pea specialist of the United States, and as his arrangement is very closely identical with that of the leading growers in this country, his classification may be adopted until a better is devised. Form has precedence in this arrangement, while colour may be taken as a second basis for division.

The old form of the standard was erect, but flat, wedge-shaped at the base and of small size. This would correspond to the first group. The second group includes those that have the standard reflexed at the sides and wedge-shaped at the base. The third type has an erect and rounded standard of large size, expanded, and truncate or even auricled at the base owing to the great development of the organ there. This is undoubtedly a vast improvement upon either of the two preceding types. The fourth group would include all those having a hooded standard of large size, with auricles at the base. This also is a highly evolved form, and there are doubtless many who would give preference to either one or the other of groups three and four. In this country we know that some prefer the third group in which the standard is flat or nearly so. We consider that both forms are very beautiful notwithstanding differences of taste, and that they might be encouraged for the sake of the variety they afford in representative collections, or those having any pretensions to being so. Much divergence of opinion also exists as to whether the notched or rounded standard is the better form to adopt; but the fact remains that we have fine varieties in both divisions. Then again, Sweet Peas are not yet so firmly fixed as to prevent variation or degeneration. No flower, perhaps, is more influenced with variations in temperature and the state of the air as to moisture. A few days of sunless or comparatively sunless weather, with a soft moist atmosphere causes the flowers of Sweet Peas to spread open to their fullest extent; while an arid atmosphere will soon cause them to become more hooded than they would otherwise be. The duration of the flowers as well as their quality are greatly affected by an arid atmosphere; and other signs of degeneracy are evident when the plants are becoming played out by drought and age. The standard often becomes notched at the apex even in those varieties which are reputed to be rounded. A greater disfigurement is seen in those that develop a saddle-shaped standard owing to the same causes, coupled, it may be, with a dry and poor soil. The side shoots produced as a result of second growth likewise show more or less of these defects. Cultivation can come to the rescue, and under skilled and attentive growers, ensure success where even the best varieties might otherwise result in failure. The same thing happens with the garden Pea with which expert growers are able to cope even in dry soils and seasons. Fresh ground should be secured where possible every year, but in every case the soil should be properly prepared according as it may be heavy or light, and manured accordingly. In light soils the surface should be undulated in such a fashion that surface moisture may run into furrows where the roots of the Peas are situated, and after sowing it should also be trodden. Early sowing is also a matter of vital importance with Sweet Peas, be-

cause they thereby get firmly established before prolonged drought makes its presence felt. All these precautions are necessary to insure the quality of the flowers independently of the intrinsic merit of the variety itself; and gardeners should attend to these matters at present while the ground is being prepared for the reception of the seeds later on. A fertile soil well supplied with the requisite degree of moisture affects not only the form of the flower, but also the colour, which often varies to a degree which recalls the mutability of the Chrysanthemum. In the absence of any classification of Sweet Peas according to form, the cultivator would do well to make a classification of all that he grows and flowers, for his own guidance in succeeding years, putting new varieties to the same test as they come out.

BRITISH HYBRID PRIMULAS.—There are three very distinct forms of *Primula* in Britain over which there has been much discussion as to whether they should be regarded as distinct species or varieties of one. They are easily distinguishable by anyone gifted with the faculty of observation and the power to distinguish between one flower and another. This of course applies to the normal or typical form of each, but so many intermediate stages have been discovered between *Primula vulgaris* (the Primrose), *P. veris* (the Cowslip), and *P. elatior* (the Oxlip) that many admittedly good botanists have classed them as varieties or forms of one species. Other good authorities affirm that all three are specifically distinct, and that the intermediate forms are truly of hybrid origin. Amongst these we note that Miller Christy, Esq., F.L.S., takes his stand. In the *Journal of the Linnean Society Vol. XXXIII., No. 299*, he gives a very elaborate and excellent paper on the distribution of "*Primula elatior* in Britain," in which he discusses the relationships of the three types above mentioned. The synonymy of the botanical names is very confusing even to the best informed; but as in the case of *Abies*, *Picea* and *Pinus*, the best plan is to fall back upon the popular or English names, which most people can understand and follow.

The chief or only difficulty with the common names is that a few cultivators may still be liable to confuse the true or "Bardfield" Oxlip with the common, spurious or Hybrid Oxlip, which may occur in a state of nature as well as in cultivation. We think it a good plan to speak of the Hybrid Oxlip as the Polyanthus, for it is a yellow form that is hardly, if at all, distinguishable from garden forms of Polyanthus of the same colour. The Primrose has a flat or expanded lamina with raised corrugations or wrinkles round the eye. The wild Cowslip differs by having smaller, nodding, cup-shaped flowers elevated on a common stalk. The true Oxlip has flowers that are open in the throat, that is, without wrinkles, and elevated on a common footstalk. The Polyanthus agrees most closely with the Primrose, and differs chiefly by having its umbels of blossom supported by an elongated or common footstalk. There are other minor differences in the foliage, the leaves of the Primrose tapering more regularly to the base than in the case of the Cowslip and Oxlip.

All the three species are shown by Mr. Christy to form hybrid unions, the one with the other two, as well as reverse crosses, producing perplexing intermediate forms, which he regards, nevertheless, as true hybrids. Occasionally the Primrose produces an elongated peduncle elevating the umbel of flowers; but he is somewhat doubtful whether this should be regarded as a hybrid or otherwise. The Primrose is

the most widely distributed species in Britain. The Cowslip, although nearly as widely disseminated, is more restricted in its habitats, being partial to open meadows. The true Oxlip is confined in Britain to two districts, namely, that lying between Bishop's Stortford in Hertford, running through Essex to Stowmarket in Suffolk; and a small district in Cambridge. It is also found at two points further north, one in Suffolk and the other in Norfolk.

Mr William Johnson, who entered Kew in April 1896, has been appointed acting curator for six months at the Botanical Station, Aburi, Gold Coast, as *locum tenens* for Mr. Charles Humphries, who is to be released for a six months' holiday.

Greenwich Park.—Fifteen acres of land, hitherto attached to the Ranger's Lodge at Greenwich Park, have been added to the latter, and laid open to the public. This is another of the many acts of the Queen to commemorate the past year.

Hard on Dame Nature.—According to *American Gardening*, "nature will have to bustle if she is to keep up with the modern horticulturist." In view of the recently discovered existence of the "perfectly green Rose" and the "Rose as big as a cartwheel" this is not inapt.

The Old Kew Palace.—It was announced on Tuesday last that the Queen had graciously consented to throw open the old Kew Palace as a public museum. The grounds surrounding Queen Anne's Cottage at the far end of Kew Gardens from the main entrance are also to be thrown open to the public. Every corner of the extensive gardens will now be a free promenade to the public, with the exception of the nurseries and the reserve ground in which the private pits, glasshouses, and offices are situated, to which no one could reasonably expect admittance except on business. The Queen has been pleased to do this by way of commemorating the Diamond Jubilee year that has just closed, and her subjects cannot be otherwise than highly gratified.

Lewes Chrysanthemum Society.—The annual meeting of the Lewes and District Chrysanthemum Society took place at the King's Head, Southover, Lewes, on the 4th inst., when there was a capital attendance. Mr. Adames read the report for the past year, which, subject to an amendment as to thanks to the special prize donors, was accepted. The balance sheet showed a deficit on the year's working of £5 17s., but the society had a balance of £38 1s. 3d. at the bank to meet it. Passing to the election of officers the whole of the staff was reinstated, with the addition of the Mayor (Councillor Gates) as vice-president. A hearty vote of thanks was accorded to Mr. Adames for his services, and to the other officers. A special meeting to arrange the schedule for 1898 was fixed for the 19th inst. Mr. Shrivell's offer of a lecture on March 2nd was unanimously accepted.

Chiswick Gardeners' Mutual Improvement Association.—There was a good attendance of the craft at the meeting of this society on the 6th inst., to hear an address delivered by Mr. Alexander Dean, of Kingston-on-Thames, on "Edible Stem Vegetables." This designation he applied to such subjects as Seakale, Celery, Rhubarb, and Asparagus, the leaf-stalks of which are blanched in the case of Celery, while those of Seakale and Rhubarb are both forced and blanched. He is one of the lecturers employed by the Surrey County Council, and he explained that he was in the habit of grouping those vegetables that required somewhat similar treatment. Mr. Dean illustrated his remarks with some excellent diagrams showing how to proceed and what to avoid in the propagation and raising of those vegetables from seeds or cuttings of the roots or rootstock, according to the kind under consideration. His address led up to a lively discussion afterwards, but the allotted time was too short for all those who were desirous of speaking to take part in the same. The lecturer was accorded a hearty vote of thanks at the close of the discussion.

The Lost Kew Pelicans have been replaced by two others, now in the pond by the Palmhouse or its immediate vicinity, so that visitors are again comforted.

Mr. Harry Danney, one of the under-gardeners to the Duke of Bedford, at Woburn Abbey, recently committed suicide by hanging himself in a storeroom near his bedroom. He suffered acutely from indigestion.

Death of M. Jean Linden.—As we were going to press on Wednesday last we were grieved to hear of the death of M. Jean Linden, the deputy administrator of "L'Horticulture Internationale," Société Anonyme, Parc Leopold, Brussels, who died peacefully that morning. He was widely known throughout the civilised world for his connection with Orchids.

The Crystal Palace.—There is still some doubt as to the ultimate fate of this huge glass structure; and the *Daily Chronicle* would like to see it bought out and given to the public as a national place of recreation for ever. With this object in view our energetic contemporary some time ago issued some questions to several London and suburban corporate bodies in order to obtain a plebiscite. The questions were (1) "Do you favour the purchase of the Crystal Palace by public authorities as a public pleasure ground and a place for recreation?" (2) "Would you support a contribution from the body with which you are connected?" To these questions there were only 62 definite noes. Many replied "yes" to the first question, but "no" to the second, thus showing how far their sympathy went. From Hackney came 28 ayes, and 3 noes; Islington, 23 ayes, 1 no; Kensington, 18 ayes, 8 noes; Shoreditch, 23 ayes, 3 noes; St. Pancras, 21 ayes, 1 no; Marylebone, 15 ayes, 7 noes; Fulham, 19 ayes, 4 noes; St. George's, Hanover Square, 11 ayes, 4 noes; Westminster, 10 ayes, 3 noes; Hampstead, 11 ayes, 5 noes; Stoke Newington, 9 ayes, 3 noes; Paddington, 11 ayes; St. Luke's, 9 ayes, 2 noes; and Mile End, 11 ayes, 3 noes. Many gave affirmative replies with qualifications, the most notable of which was that if the Crystal Palace were purchased for South London, the Alexandra Palace should be given in the same way to North London.

Dinner and Presentation at Cheltenham.—On Friday the 7th inst. about seventy of the employees of Mr. James Cypher, of the Queen's Road Nurseries, Cheltenham, were entertained by him to a sumptuous dinner, prepared on the premises and served in one of the glasshouses, which had been transformed into a temporary dining room. Mr. Cypher presided and was supported by Mrs. and Miss Cypher, Mr. W. J. Cypher (vice-chairman), Mr. and Mrs. John Cypher, Mr. and Mrs. Frank Cypher, Messrs. Aston, Keylock, Weaving, Cull, and others. The dinner was partly meant to celebrate Mr. Cypher's seventieth birthday, and the post-prandial speeches and proceedings testified to the good feeling existing between employer and employed. After the usual loyal toasts, "the Firm" was proposed and received with much enthusiasm. "The Healths" of Mr. Keylock, representing the indoor department, and of Mr. Wallace in a similar capacity in the outdoor department, were heartily received in connection with two presentations that were made. Mrs. Cypher was made the recipient of a silver-plated cheese-dish and cover, bearing the inscription, "Presented to Mrs. J. Cypher by the indoor staff of the nursery, January 7th, 1898." Miss Cypher received a massive pair of alabaster vases accompanied by a card bearing the inscription, "Presented to Miss Cypher as a mark of respect by the outside staff, January 7th, 1898." The presentations were made by Mr. W. J. Cypher on behalf of the men. He considered it an appropriate time at which to make the presentation to Mrs. Cypher, at whose hands, as well as from Mr. Cypher they had received many acts of kindness; and he had great pleasure in handing her the token of respect from the staff. Miss Cypher was similarly addressed amidst the cheers of the employees. Mr. Cypher responded for both. He also reminded his audience of the present of an easy chair he had received from them some time previously, which he greatly appreciated. Vocal and instrumental music enlivened the proceedings, and a very enjoyable evening was spent.

White and Pink Clover Blossoms, when chopped up finely and served with pure cream, are reputed to furnish a delicious salad.

Erratum.—At p. 294 in the forty-third line from the top of the third column, for "Hypericum perforatum" read "Hypericum calycinum." This may be described as merely a *lapsus pennae*.

Orchids at the Sale Rooms.—The sale of *Odontoglossum crispum* at the Sale Rooms of Messrs. Protheroe and Morris, Cheapside, on the 7th inst. was the largest and most successful that has taken place for a long time. The importation was extensive, and the pseudobulbs were in excellent condition. There was a large attendance of keen buyers, and the sale was calculated to realise somewhere between £1,000 and £2,000. A grand piece realised £2 15s.; while another brought £2 10s. From 20s. to 25s. were common prices. The rank and file of pieces of moderate size averaged about 10s. each. The importation came from a good district for this species, so that buyers entertain hopes of many fine varieties when the plants come into bloom. An established price of *O. crispum roseum* was secured for 30 gs.; and another brought 9gs. A fine variety of *Laelia anceps* realised £7 10s. at the fall of the hammer. It was something in the way of *L. a. hardyana*. There was some keen bidding for semi-established plants of *Cattleya dowiana aurea*, which had made one growth since they were imported. The general run was £1 per plant, but a unique specimen fetched 18gs., the buyer being glad to get it at the price.

Devon and Exeter Gardeners' Association.—The annual supper of this society took place in the Castle Hotel, Exeter, on Friday the 7th inst. Mr. W. Chorley, of Wonford House, presided, and the vice-chair was taken by C. H. Clark, Esq., one of the honorary members. After an excellent and well-served repast the chairman called upon Mr. A. Hope to read a telegram of apology from Mr. Crahbe who was unable to preside, being detained in Cornwall. A number of letters were read explaining the absence of other members. Henry Hill, Esq., of Pinhoe, sent some dishes of Apples for the company. The loyal toast was received by singing the National Anthem. Mr. Andrew Hope, in proposing the "President and Vice-president," said he was glad to see some who were present at their first meeting. Mr. Roberts, who was then the hon. secretary of the Horticultural Society, was the first president they elected, and the selection was a good one. The speaker believed that the key of the success of the society was due to the officers having been selected on account of their interest in horticulture, and their acquaintance with the same. Mr. E. A. Sanders, their president, was the only one that had been re-elected, and this was due to his keen interest in the affairs of the society throughout its existence. Mr. Sanders had also been an active president in all weathers, notwithstanding his multifarious duties in the city. Among their vice-presidents were many men of distinction in the horticultural world, including Dr. Dangar, Mr. Baker, Mr. Cann, Mr. P. C. M. Veitch, Mr. Snow, and others. Their patrons, though not included in the toast, still showed much interest in the society, including Mr. Lethbridge, of Courtlands; the Right Hon. Sir John Kennaway, Sir John Shelley, Col. Halford Thompson, and others, all of whom had shown kindness with their annual excursions and in other ways. The toast was warmly received, and Mr. James Weeks and Mr. Rogers responded. The chairman next proposed "The Association and its Work," referring to the aims of the society, which were in the best interests of horticulture. The work they had done was recognised by authorities outside the county. The papers read at their meetings were of a valuable character, having been in many cases prepared by experts. Mr. Wallace Mackay, the hon. treasurer, responded. Mr. W. P. Parkhouse also replied, saying that he had derived much benefit from his connection with the society. Mr. Berry, the lecturer for the Devon County Council, wished the society every success. The vice-chairman proposed "The Committee," and Mr. W. Rowland and Mr. W. R. Baker responded. Other toasts proposed were "The Press," "The Chairman," "Mr. A. Hope" (the hon. secretary), "Mr. W. Mackay" (the hon. treasurer), the "Vice-chairman," and "The Host and Hostess." Songs and other entertainments beguiled the intervals during the evening.

Gardeners' Royal Benevolent Institution.—The Duke of Portland has fixed Wednesday, June 8th, for the 50th anniversary festival dinner in aid of the funds of the Gardeners' Royal Benevolent Institution, at the Hotel Metropole. We are pleased indeed to learn that so busy a man has been able to fix a date for this important function.

Wenn, Gardener, Petersham. — A respectably dressed young man was recovered from the pond surrounding the Diana fountain, Busby Park, Hampton Court, the other week. The overcoat and hat of the deceased were picked up on the bank near where the body was recovered, and the above name and address were found on a card inside the hat.

Woolton Gardeners' Mutual Improvement Society.—On Thursday of last week a capital lecture was delivered by Mr. R. Pinnington, of Rohy, on "Herbaceous Plants" under the presidency of Mr. J. Jellicoe. The lecture proved an admirable one, the lecturer laying down lines that must prove satisfactory if followed. The arrangement suggested was a wide border with a system carefully worked out as regards colour and season, introducing many of our spring hulks, to form carpeting for the loftier specimens of later flowering plants, so that heauty could be found nearly all the year round, in broken groups and patches, ignoring the old straight lines. Details of preparation and general culture were given, which should be a liberal one, and free use of manure water was also recommended to secure the best results. Tying received special notice, the practice of hunching being strongly objected to. He advised his hearers that stakes, or in some cases a small number of stakes, should be given so that the flowers or spikes were not crowded in bunches. Messrs. T. Carling, R. Todd, G. Haigh, and the chairman took part in the discussion, after which a vote of thanks was tendered to Mr. Jellicoe and Mr. Pinnington for their valuable help.

Messrs. Barr & Sons' Catalogue.—This growing annual is a great improvement on that of last year, and it is evident that the Messrs. Barr are sparing no efforts to make this a useful seed guide to amateurs and professionals alike. The catalogue makes no pretensions at showiness, but is replete with everything that can be required in the best of gardens. They have made a select list of what they believe to be the finest vegetables in cultivation, according to their own experiments and observations as well as those of other cultivators and experts. Those who require dwarf and early varieties of Maize suitable for cultivation in this country will find some of the most suitable recorded here. That the more generally grown and useful vegetables should have received their best attention goes without saying. Moreover, this is not merely a bald list of names, but page after page is packed with descriptive and cultural information that cannot fail to be useful for whomsoever intended. Flower seeds have had an equal share of attention, and a full descriptive list of the most decorative kinds given. On p. 24 are notes intended to help the amateur and beginner to sow and rear hardy and half-hardy annuals, greenhouse annuals, hardy perennials, and biennials. Four pages of photographic illustrations have been added, besides others.

FLOWERING SHRUBS THAT THRIVE UNDER TREES.

MR. MAYNE, on p. 294, mentions, amongst others, *Hypericum perforatum* as being a thriving and suitable subject. Does he not mean *H. calycinum*, said to be the Rose of Sharon? (Yes. ED.). The latter is a dwarfer plant having larger leaves and flowers than *H. perforatum*, which grows wild in abundance in many places, the margins of rivers and streams in this neighbourhood being gay with it in summertime. Although the leaves and flowers are much smaller the plant itself grows taller than *H. calycinum*. It has a large corymbose inflorescence and is rather a weedy-looking plant for gardens. If the small leaves are held up to the light the small dark dots can easily be seen, which characteristic suggests the name *perforatum*. Plants of the latter have for several years flourished on the top of a wall in this garden. Old-fashioned people, I believe, use *St.*

John's Wort to make an ointment for cuts, etc.; formerly it was held in great repute by housewives. A description from an old herbal may be interesting if only to illustrate the advance of descriptive botany.

DESCRIPTION.—Common St. John's Wort shooteth forth brownish, upright, hard, round stalks, 2 ft. high, spreading branches from the sides up to the tops of them, with two small leaves set one against another at every place, which are of a deep green colour, somewhat like the leaves of the lesser Centaury, but narrow, and full of small holes in every leaf, which cannot be so well perceived as when they are held up to the light; at the top of the stalks and branches stand yellow flowers of five leaves apiece, with many yellow threads in the middle, which being bruised do yield a reddish juice like blood; after which come small round beads, wherein is contained small blackish seed, smelling like rosin. The root is hard and woody with divers strings and fibres at it of a brownish colour which abideth in the ground many years, shooting anew every spring. This groweth in woods and copses, as well those that are shady, as open to the sun.

GOVERNMENT AND VIRTUES.—It is under the celestial sign Leo, and the dominion of the Sun. It is a singular wound herb; boiled in wine and drank, it healeth inward hurts or bruises. The decoction of the herb and flowers, especially of the seed, being drank in wine with the juice of knotgrass, helpeth all manner of vomiting and spitting of blood, is good for those that are litten or stung by any venomous creature, and for those that cannot make water."

I may add that the herbal from which this was culled has been described by an eminent living botanist as a mixture of botanical knowledge with astrological folly.—A. P.

PEOPLE I HAVE MET.

MR. ROBERT SYDENHAM.

"SECOND return Palace, please!" I thought I knew that voice, and turning round, recognised at my elbow the beaming features of my friend Mr. Sydenham. The scene was early morning in the booking-office at Ludgate Hill Station; a crowd of ardent enthusiasts seeking tickets for the great Palace fruit show.

"Travelled 'up from Birmingham this morning, Mr. Sydenham?" I asked, knowing that, when once on the road, our friend from the Midlands has a reputation for getting over a lot of ground in a very little time, often doing in a day what many would think hard work for two.

"Well, no," said he; "but I have had a lot to do since I arrived in town yesterday; you see I have lots of horticultural friends in this part of the country, as, indeed, I have in every part of the British Isles, who, like myself, make a study of special branches of horticulture, and whose collections I like to see when I am up this way. I never make it a trouble to be up early or late if I have an opportunity of seeing them, often starting at 5 or 6 in the morning and going on till 10 or 11 p.m."

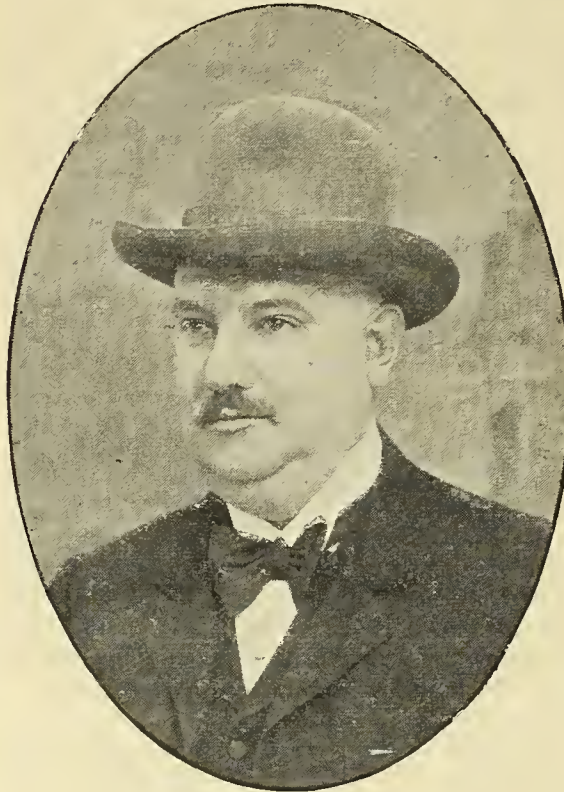
"Well you have certainly made an earnest study of the possibilities of horticulture, Mr. Sydenham"

"Yes," said he; "and I don't know another pursuit or hobby, call it what you will, out of which a man of business life can get the same amount of true recreation; it is a pursuit which opens up boundless possibilities, so to speak, and at the same time yields a solid satisfaction in the possession of a garden bright with flowers of every hue."

As the train sped along, Mr. Sydenham's views on the practicability of suburban gardens was an insight into his thoroughly genuine and earnest character. "Years ago," said he, "I was struck with the hindrance to garden developments so far as the small grower at home was concerned, by reason of the high price of bulbs and small seeds; and I set to work to find out why they should be so. That indeed first gave me the idea of distributing bulbs and so forth in a sort of private way, without any notion that one day a business of very considerable magnitude would grow up around me. As you know, my business in our wholesale jewellery firm demands a vast amount of personal time and attention, and it has only been my spare hours that I have really been able to devote to the study of bulbs and seeds. But I have made it a study, and, my friends are pleased to tell me, with a certain amount of success. Anyhow, I have made it possible for the amateur

who desires the *best things* to grow to get them in a way that shall be within his reach."

"You must have an army of correspondents, Mr. Sydenham" I remarked, recollecting the piles of letters I had seen in process of being dealt with at the Tenby Street headquarters of the Messrs. Sydenham.



MR. ROBERT SYDENHAM.

My fellow traveller assented; said he, "why, in our seed and bulb correspondence we probably deal with as many letters a day as many a similar business would do in a week; and it is a matter of gratification to me that in addition to supplying my friends with bulbs and seeds—you know we have added seeds now—I can often give them information and cultural hints which will help them. Such an army of recruits to the love of horticulture has been the outcome of my system that I am convinced, from the evidence before me every day, that very many amateur enthusiasts to-day only date back their interest to the time when they first read my publications."

"Then it follows, Mr. Sydenham, that the trade at large is indebted to you as a pioneer in this matter."

"Yes, I think that may be the feeling now; but I fancy that at the start my practical methods were thought a trifle revolutionary and at first, too, some ill-feeling found expression, that I as a confessed amateur, with the frankness to admit that much, should be able to accomplish that which the trade as a whole had failed to do or indeed to realise. They believe now, I think, that any harm I may have done in one way is more than counterbalanced by the good I have done in another."

We had by this time reached our destination at the High Level station, Crystal Palace, and Mr Sydenham was off, with a cheery good morning, and that vice-like grip of the hand, peculiarly his own, as of to emphasise all that he has told you.

A man of middle life, Mr. Sydenham is an instance of well-developed energy and enterprise. Few probably would have had the inclination, or indeed, the perseverance, to take up and supervise a business outside his own calling, which, for absolute command of detail, and the exercise of keenly directed judgment, stamps the man who engages in it successfully, as one above the ordinary run of mortals. All this is the rightful due and tribute of Mr. Robert Sydenham.

Recalling a visit I made to Birmingham in August I was struck with the enthusiasm and *esprit de corps* he imparts to the Carnation and Picotee Society's shows. An excellent judge of these flowers himself, and one of the most successful exhibitors the last three years, he has the ability to instil into others a little of that enthusiasm with which he is so replete; whilst a visit to the immense wholesale jewellery warehouse, with its strong rooms and safes, stored with gems and precious stones on one floor, and a complete and perfect seed and bulb warehouse and offices on another floor, with rooms, 67 ft. long—impresses one anew, and proclaim the man again a master of

detail, a guiding spirit in all that he undertakes, with a masterful method of accomplishing anything upon which he sets his heart. Ten years ago Mr. R. Sydenham could not have told us the name of any flowers or bulbs, whereas now, there are few, if any, who could name more bulbs correctly than he can when in flower, or name the Hyacinth bulbs in their dry state.—Gyp.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Odontoglossum crispum guttatum pittianum. *Nov. var.*—This magnificent variety is now flowering with H. T. Pitt, Esq., Rosslyn, Stamford Hill, London, after whom it is named. The original *O. c. guttatum* is nowhere by comparison with the variety under notice, and the owner may justly feel proud of it. The flower is of average size and a very fine round form, the petals overlapping the sepals considerably. The ground colour is pure white, thus bringing into great prominence the group of large chestnut-red blotches on the centre of the sepals. The petals are also similarly adorned with a group of smaller blotches. The white lip has a large, nearly heart-shaped, chestnut-red blotch in front of the crest, and several small ones on either side of the crest. The possessor of it secured it last year as a very small piece at the sale rooms of Messrs. Protheroe and Morris, Cheapside. Since then it has more than doubled in size, and now carries nine of these beautiful flowers on a spike. Mr. Pitt intended to exhibit the plant at the meeting of the Royal Horticultural Society on Tuesday last, but the morning was frosty.

Cypripedium W. H. Cannon, *Nov. hybr.*—This bold flowered and handsome hybrid was obtained from *C. nitens superbum* with the pollen of *C. insigne Chantini*. The dorsal sepal is white, with a pale green base, heavily blotched with dark purple for two-thirds of its length; the upper portion is white, and marbled with purple along both sides. The petals are of a rich brown, edged with yellow. The lip is also of a shining dark brown, the mouth of the pouch being bordered with old gold. The rich spotting is easily accounted for, seeing that both parents are characterised by the abundance and prominence of their markings. It is now in the possession of William Handel Cannon, Esq., Vanda Lodge, Whitton Road, Twickenham, Middlesex, in compliment to whom it has been named.

CYPRIPEDIUMS AT FALKLAND PARK.

LITTLE or no fog of any consequence prevailed in Christmas week on the high ground at Falkland Park, South Norwood Hill, the residence of T. McMeekin, Esq. It often happens that the sun is shining on the top of the hill while all the lower ground in the valley of the Thames is invested in a thick sooty fog, and so it was on this occasion.

Cypripediums are always in season when the conditions are favourable, and the undermentioned species, varieties, and hybrids, amongst others, have been flowering for some time past. *C. williamsianum giganteum* is flowering for the first time from plants raised at Falkland Park, between *C. villosum superbum* and *C. harrisianum*. The cross has been raised by other growers so that the original name given the progeny has been adopted. Though the plant is small the lip and petals of the flower are of handsome proportions, well meriting the varietal name. *C. Calypso Falkland Park var.* is a striking and handsome hybrid, with flowers of great size and beautifully spotted on the dorsal sepal. The most remarkable peculiarity of the plant is that the lateral sepals of the flower are perfectly separated from one another.

C. Niobe is one of the prettiest of the *C. fairieanum* hybrids, having the dorsal sepal Apple-green at the base, the upper three-fourths being white and beautifully marbled with rose. The blackish-brown blotches on the petals of *Cypripedium venustum Falkland Park var.* are very noticeable, both petals and lip being of large size and tinted with reddish-brown. *C. crossianum* and *C. c. amandum*, flowering together, show the characteristics and differences of the two admirably. Though they are generally regarded as distinct hybrids, the difference is one of degree only, the type being almost entirely un-

spotted, while the variety is heavily spotted with brown. Rather a distinct thing is *C. J. Bartels*, which is the offspring of *C. callosum illustre* crossed with the pollen of *C. villosum Boxallii superbum*.

C. Mrs. Botterill was raised at Falkland Park, and is a beautiful hybrid between *C. lathamianum* and *C. savageanum superbum*, both parents being themselves hybrids. The dorsal sepal is white, marked with purple along the centre, and very pretty. The black cilia on both edges of the petals of *C. Smithii* are very noticeable; the hybrid resulted from *C. lawrenceanum* crossed with *C. ciliolare*, and is intermediate in character. The handsome *C. oenanthem superbum*, with its glittering flowers, is well known. The above are only some of the *Cypripediums* in bloom at present, the collection being widely representative of this popular section of the family.

A specimen of the elegant *Saccolabium bellinum* 1 ft. high carries four spikes of flowers on the stem. The species is seldom seen of this height. *Calanthe Veitchii* has been flowering in quantity for some time past. It is yet rather early for *Dendrobiums*, yet a number may be seen in bloom, including *D. wardianum*, *D. Ainsworthii*, *D. formosum giganteum*, *D. Dearei*, with the green throat, and the beautiful *D. findlayanum*. Mr. A. Wright gives attention to both warm and cool house Orchids, *Cattleyas*, *Dendrobiums*, and *Cypripediums* being particular favourites.

PHYSALIS FRANCHETTI.

THIS, Red Winter Cherry, as it is commonly called, is, as the introducers, Messrs. J. Veitch & Sons, claim, a novelty of sterling merit, and worth a place in every garden. For winter decoration of vases, or for church work, it is invaluable. Some ladies, who were interested in church decoration, seeing it for the first time last autumn were quite charmed with it, and I think when better known and more abundant it will be largely used. Its large bright-red calyces, or leafy capsules, show very conspicuously in dark corners and out-of-the-way places, and when interspersed with the silvery *Honesty* and ornamental dried grasses may be used for a variety of purposes, and in various ways. According to a contemporary, several cultivators have failed to obtain satisfactory results, and complain that no fruit or capsules were obtained, and this is easy to understand. It is strictly a perennial and requires two seasons to reach the flowering stage.

From Messrs. Veitch's catalogue one is apt to infer that seed sown in spring will give plants strong enough to flower and fruit in the following autumn, and here is where the disappointment comes in. I purchased a packet of seed in the spring of '96, which I sowed and planted out in due course, and allowed the plants to remain. Large roots formed underground, and last spring these threw up stout growths that bloomed freely, producing an abundance of fine fruit and husks which were much admired. I am sure those who felt disappointment this autumn, if they allow their plants to remain, will be amply rewarded next year.—*Arthur Pentney*.

THE PLANT HOUSES.

Cool Conservatory.

If the supply houses have been worked to advantage the conservatory should now be gay and bright with forced flowers. There will consequently be a good deal of shifting in of new plants and moving out of shabby ones if the house is to be kept in trim. As long as we are favoured with the mild weather we are at present enjoying, the process of shifting has no special terrors. It is only during frosty weather, and when the supply houses are situated at some distance from the conservatory that the removal of plants gives such a lot of trouble.

LILIES OF THE VALLEY.—Small 48-sized pots fitted with selected Berlin crowns render good service. Every one of these crowns can be relied on to throw a good bloom, and they may be forced very easily indeed. Moreover, the blooms last a long time in condition. The clumps, although rather cheaper as far as first cost goes, are not really so in the end, for they do not produce so many or such fine flowers as the selected crowns.

CHINESE PRIMULAS are a host in themselves, for there is a good deal of diversity in the habit and

foliage of the plants as well as in the colours of the flowers, which now range from a respectable blue, red, and crimson, to pure white. That splendid form, *Sutton's Star*, is one of the finest things for conservatory decoration that can possibly be grown. The flowers are not so large as those on the dwarf plants, and they are rather looser in build, but they are produced in imposing pyramidal masses that rise to a height of fully 2 ft. upon well grown plants. This gives the section a wonderfully distinct appearance. The fern-leaved varieties, too, are exceedingly handsome, both flowers and foliage being very ornamental. *Sutton's Giant Strain* exemplifies varieties with flowers of huge size, and great substance that stand the drying influence of fire-heat remarkably well. White and crimson, and several shades of pink are available. The double and semi-double varieties, too, are exceedingly useful, for not only are they capital decorative material as pot plants, but the flowers can be turned to excellent account for cutting. A representative collection of Chinese Primulas is almost a necessity for every establishment where a good deal of conservatory furnishing has to be done. Not infrequently, however, we see the plants arranged in a stiff and formal fashion in rows—a proceeding that much detracts from their effectiveness. Very pretty groups may be devised by staging the plants in batches with Ferns, *Grevilleas*, and other foliage plants, and individual taste will suggest effective modifications of these.

CYCLAMEN bulk quite as largely as the Primulas, and although there is not quite so much diversity of habit amongst them as in the latter they are most useful subjects. The crested varieties, such as *Bush Hill Pioneer*, are handsome and distinct. In gathering the flowers for cutting it will be well to draw the stems clean out, for if they are cut off, the ends which remain damp off and spread the decay all round.

Other forced flowers that are now available will include Roman Hyacinths, *Narcissi*, *Lilacs*, *Deutzias*, *Staphylea colchica*, and *Azaleas*, of which a constant supply must be kept up by the forcing houses.

ERICAS AND EPACRISSES.—Such *Ericas* as *hyemalis*, *E. b. alba*, and *E. gracilis* have been rendering a good account of themselves of late, and now they are further reinforced by the pretty and distinct habited *E. melanthera*, which is just coming in. Seeing how liable *Ericas* are to take harm from draught it will be well to give the plants a warm corner of the house. Many of the *Epacris*s are commencing to open their flowers, and the plants will soon be a blaze of beauty. In the meantime a little weak liquid manure should be afforded them—cow manure, if the position of the conservatory warrants its use.

RICHARDIAS.—The *Arum Lilies* are deservedly great favourites, and seeing that they are comparatively easy to grow it is always advisable to have a good batch of them. *R. africana* stands first in point of usefulness, for there is no more noble subject than a good plant, with one or two flowers open. That very dwarf and sturdy form, the *Godfrey Calla*, should find a place in every establishment, for it flowers with great freedom, and the blooms come in very handily for cutting. The fine yellow species, *R. Pentlandi*, and *R. elliottiana* can scarcely be too highly praised—both of them should be grown.

DAPHNE INDICA RUBRA.—Considering the sweet scent exhaled by the flowers of this pretty *Daphne* it is curious that it is not grown in greater quantity, for it is, in fact, an ideal plant for a conservatory, where fragrance is only second in importance to colour and size of flower. For button-hole work, too, there is nothing finer. Through the winter months the watering can will have to be used very carefully upon these plants or the leaves will go sickly and yellow, and the flower buds will drop before they have a chance to expand.

VIBURNUM TINUS.—All gardeners know this plant in connection with the outdoor garden, but to some of them no doubt its behaviour as a pot plant under glass is an unknown quantity. To those who have not seen it tried in this capacity we can only say that it is a distinct success. The plants readily assume a symmetrical bush-like habit, and, providing they are not exposed to too much heat, they flower as well as they do in the open-air. Very ornamental plants may be grown in six and seven inch pots.

Pits and Frames.

In the supply department the introduction, to heat at suitable intervals of the various subjects needed

for the furnishing of the conservatory, is now a most important item in the routine of work. The houses in which forcing of this class of material is being carried on should be given a temperature ranging between 55° and 60° Fahr. The plunging beds will need to be occasionally refreshed by means of linings of fresh fermenting material, unless they are well-fitted with hot water pipes. Keep the syringe at work morning and afternoon, using for syringing, water at the same temperature as the house.

LIGHT.—So all important is light to the welfare of plants generally, and so serious are the effects that are produced by its partial absence or diminution by the fogs that have been so prevalent of late that active steps must be taken to insure as much of it as possible. The damage directly done to plant life by the fogs in the metropolitan area is incalculable, but even after the fogs themselves have lifted they leave behind them a disagreeable reminder in the shape of a thick grimy deposit upon the glass that effectually excludes the light. This undesirable shading must be removed at once. A few hours spent using mops or long haired brushes, dipped in water, will much improve matters, even although the time can be ill-spaced on account of the shortness of the days.

PROPAGATING BEDDING PLANTS.—Where a large stock of bedding plants has to be worked up it is imperative that a start should be made early in the year. The tops may be taken off last autumn's *Pelargonium* cuttings, and put in without delay. As soon as the growths are long enough batches of cuttings of *Lobelias*, *Althernantheras*, *Heliotropes* and *Verbenas* should likewise be inserted.

DAHLIAS.—The old rootstocks of rare or special varieties should be introduced to heat at an early date. They may be laid close together on a bench or temporary stage near the glass, on which has been placed a few inches of soil, and covered lightly with soil. An occasional syringing will assist them in breaking into growth. It is necessary to make an early start with those sorts that it is intended to propagate extensively, but the beginning of February will be early enough for the main stock.

BOUVARDIAS.—Some of the strongest old plants which were allowed to go absolutely to rest in the latter part of the autumn, and have been hibernating under the stage in a cool house, should be brought out, slightly pruned by cutting off the tops of the shoots, and introduced to a temperature of about 60° to produce cuttings. The young shoots strike readily if taken off when they are from 1½ in. to 2 in. long, inserted in very sandy soil, and plunged in a propagating frame having a temperature of 70°. Five-inch pots will be found a suitable size. If by any means the cutting case is full and no room can be found for the *Bouvardias*, the latter will do very well if placed in the body of a warm house, and covered with a bell glass, but in this case the glass should be taken off daily and wiped dry.

CHRYSANTHEMUMS.—Continue to insert cuttings until a sufficient stock has been obtained. Cuttings that are rooted may be taken out of the handlights, and placed on shelves close to the glass, but before giving them this shift give them plenty of air whilst they are in the handlights, in order to see whether they can stand the exposure without flagging. The old plants may now be consigned to cold frames, and may, if desired, be lifted out of their pots. This will give an opportunity of having the latter washed ready for further use during wet weather, when help from outside is usually available.

CYCLAMEN.—A sowing of seed may now be made as a succession to the autumn sowing. Sow rather thinly, and bury the seed not more than a quarter of an inch deep. As *Cyclamen* seed germinates more or less irregularly it is well to have plenty of patience with it.

GLOXINIAS.—Sow a pinch of seed in a well-drained pan filled with sandy soil to within half an inch of the rim. The seed should be scattered thinly, and a little very fine soil sprinkled lightly over it. Cover the pan with a sheet of glass and place it on a shelf in a warm house. A batch of the old plants should also now be started for early blooming. Place them near the glass and water them repeatedly until the balls are moistened through. As soon as the young growths begin to push potting may be conducted.

ACHIMENES.—A small batch of these for early work should be started. The old plants have been allowed to winter in the pots in which they flowered last summer. A few of these should be knocked out for present need, but the remainder may be allowed to stay where they are until they are required a few weeks hence.—*A. S. G.*

HINTS FOR AMATEURS.

Forcing Asparagus.—No matter at what time of the year it may be forthcoming, Asparagus never comes amiss; for the demand is always in excess of the supply, but it is doubly precious in the winter months when it is only by judicious and careful forcing that it can be obtained. It is a rather expensive vegetable at such a time, no matter whether it is purchased from the market or the greengrocer, or grown at home. Not only must a fairly high degree of heat be given the roots to throw them into activity, but this heat must be continuous and well sustained, otherwise the best results cannot be expected. Then, again, there must be a sufficiency of ground to grow on a supply of roots, for after they have once been subjected to the strain of forcing the roots are of no further value, and may as well be thrown away at once. In many gardens beds which have become nearly worn out are dug up and the roots employed for forcing preparatory to throwing them away. Even in such cases, however, it is obvious that there must be some store from which to repair the waste of forcing, for if only a single bed be destroyed occasionally, another one must be made to supply its place if the supply is to hold out.

Forcing in Frames.—This system is, perhaps, the one most usually followed in private gardens for supplying early material. A hotbed of fair size and depth is erected, and the frame with its attendant lights placed on the top of it. The hotbed should be made about 3 ft. bigger each way than the frame itself so as to allow of a margin round which the person may pass who has to attend to the frame. Three or four inches of fine soil should next be placed in the bottom of the frame and levelled nicely down. Upon this the roots may be placed. Pack them closely together until every corner is filled. Afterwards cover with a layer several inches thick of any light soil, leaf mould for preference, and the work is completed. If the hotbed be composed to a large extent of stable litter there will be no difficulty in getting sufficient heat for as long as it may be required. The best produce is that grown in a steady temperature of 60° Fahr., although 65°, and even 70° of heat may be given when it is necessary to cut heads by an early date, and the time is short; beyond the last-named temperature, however, it is not advisable to go in any case.

The cultural routine, after the roots have been packed away in the manner suggested, is exceedingly simple. A good watering with tepid water should be given to settle the soil, and occasional sprinklings with the syringe or a fine rose-can, should be given subsequently as required. A little crack of air may be necessary at first as the gases given off by the hotbed in its first stages will be rather rank and strong. After the first heat of the bed has subsided, the lights should be kept fairly close, but air may be given on bright or mild days. Should the heat of the frame decline too low it must be raised by means of linings of fresh fermenting material placed round the sides and trodden down firmly. At night-time the frame should be covered with mats, for even if frost does not supervene, the temperature will be rather low, and a covering will be necessary to keep in the heat.

If the amateur cannot see his way to the construction of a hotbed, either from lack of the necessary materials, space, time, or all three together, fairly good Asparagus may be obtained by placing the roots in a warm house. A vinery that is being forced, and was started with that intent about the middle of December, or even earlier, is a capital place, for here the buds will develop slowly, and will acquire almost as much flavour as if they had been grown in the open ground. The humid state of the atmosphere too is very much to their liking. The Asparagus bed may be made up on the Vine border in much the same way as it was in the frame, viz., first a layer of 4 in. or thereabouts of soil upon which the roots are to be packed closely together, and then a covering layer of leaf mould, not less than a couple of inches in depth. The produce from these forced roots may be cut off down to the last bud, for sticks that are too thin for serving at table in the ordinary way will be greeted for the purpose of flavouring soups by the cook.

A frame heated with hot-water pipes is one of the handiest contrivances for forcing Asparagus, because the heat is not only constant, but it can be regulated

at will. If such a frame is possessed by the amateur he may turn it to capital account in this way, although the difficulty is that such a handy fixture is almost sure to be wanted for something else, such as bedding or other tender plants. During cold and windy weather the frames should be warmly covered with mats to economise the heat.

Supposing all the above contrivances to be wanting, the amateur need not entirely despair, for the roots may be laid in shallow boxes, and the latter placed beneath the greenhouse stage. Of course, the heat here would not be great enough to bring about actual forcing, but the slight stimulus will cause the heads to be thrown up much sooner than they are in the open ground, and they will be very sweet and of capital flavour.

The above remarks apply only to the practice of lifting and forcing the roots. The reader will have come to the conclusion that it is an expensive and a rather wasteful method of procedure to indulge in, unless there is a supply of old, nearly worn-out roots to fall back on. This is only a reasonable conclusion to come to, and so we may proceed to look at the other system whereby early Asparagus can be obtained. This is to force in the open, leaving the beds as they are, not disturbing the roots, but simply inducing the buds to appear earlier than they would under ordinary conditions. The outdoor beds are specially constructed with a view to this intent, and, although the trouble and first expense are considerably increased thereby, they are without doubt both repaid in the long run. A good instance of handily built beds is furnished by those at Syon House, Brentford, and from them each season Mr. Wythes cuts some splendid samples of what Asparagus should be, and not what it too often is. The beds in question are about 4 ft. in width. They are not raised above the level of the surrounding ground, but are enclosed on all sides by a brick wall sunk in the ground to the depth of several feet. The wall itself is not solid, but is perforated with holes, which not only permit of the roots finding exit if they require it, but, as we shall see presently, afford a ready passage for the heat generated by the fermenting material. The alley between the beds is 2 ft. in width, and the bounding wall of the beds on either side converts it into a deep pit-like cavity. Each autumn, say about the beginning of November, this is cleared out and refilled with fresh leaves and other heating substances.

Such beds as these can scarcely fail to give satisfaction if they are properly looked after, and not cut too hard. Of course, the sooner that cutting is begun upon these plants the sooner must it cease, otherwise the bed will not last for very long, but will soon become worn out.

Their management is exceedingly simple. All that is necessary is to cover over the beds with a heavy layer of leaf mould immediately after the fermenting material has been placed in the intervening trenches. Over the top of this should be placed boards or shutters to throw off the rain. These may be lifted off every morning to allow of the produce being cut.

Asparagus forced in this fashion is very nicely blanched, and is much valued on account of its tenderness.

Another method of forcing the coveted esculent without lifting the roots is to cover portions of the beds with frames, placing around the latter thick linings of fermenting material. As the heat goes out of these linings they must be renewed. The frames are kept quite close, and are heavily matted over, both to keep in the heat and to promote blanching.

From the variety of methods mentioned above, all of which will be attended with success if properly carried out, the amateur may select according to his circumstances and requirements.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Fuchsia Cuttings.—*G. T.*: You have kept the old plants rather warmer than you ought to have done, hence the breaking into growth so early. If you have a propagating frame or a house in which a gentle heat can be given, you may strike the cuttings easily enough, even thus early in the year. Good cuttings

are furnished by young shoots between 2 in. and 3 in. in length. Take them off with a heel, *i.e.*, a portion of the old wood attached to the base of the cutting. If you have no propagating frame either put the cuttings on a shelf in a warm house or put them on the plant stage and cover them with a bell-glass. This should be taken off and wiped each morning, otherwise the cuttings will be liable to damp. After the cuttings have been taken off, the old plants may be pruned still further if necessary.

Planting Narcissus.—I have some bulbs of *Narcissus Golden Spur*, which were overlooked last autumn. Is it too late to plant them now? *S., Walthamstow.*

It is certainly very late in the season, and the bulbs will be much weakened by being kept out of the ground so long; but if they are good bulbs they will flower fairly well, and will recoup themselves by another season. Plant at once.

Pruning Black Currants.—*P. P.*: What you want in your bushes is a sufficient supply of young wood. You must, therefore, cut out each year as much of the old wood as you can. Next thin out the weakest and most spindly of the young growths. Do not attempt, however, to shorten any of the growths, for those that remain should be left at full length, otherwise you will spoil the cropping powers of your trees.

Autumn-sown Peas.—*R. Mearns*: It is evident from what you say that mice are the disturbing element among your Peas. It is advisable to soak the seed in petroleum for about twenty minutes preparatory to sowing. Had you done this the mice would not have troubled the Peas. You might remember this hint for next autumn. You must now employ traps to catch the marauders.

Seakale.—*G. Tarn*: The small side roots or thongs may be cut off the main roots when the latter are lifted for forcing. Tie the little root cuttings into bunches, and cover them with leaf soil or sand. They will then keep as well as if they had remained undisturbed in the ground.

Horseradish.—Please tell me the way to propagate Horseradish, and the best time to do it.—*A Reader.*

Horseradish may be propagated by root cuttings in the same way as Seakale. Choose clean straight pieces of the smaller roots, cut these up into lengths of from 4 to 5 in., and the cuttings are made. They should be dibbled into ground that has been deeply dug some time before the old plants commence to grow in the spring. By the following autumn these little root cuttings will have developed into stout serviceable roots.

Parsnips.—*A. O. E.*: Leave the Parsnips in the ground for the winter. The roots are much sweeter when kept in the ground than they are when lifted and stored in a shed or house. If severe frost threatens cover a part of the break with a layer of dry hay, straw, or bracken. This will keep the frost out of the ground and enable the roots to be lifted at any time.

Oil Stove in Greenhouse.—*Opal*: There must be something wrong with the oil stove to cause the unpleasant smell. Certainly harm will result to the plants if this is continued. Consult a practical man used to dealing with such lamps.

Dieffenbachia picta is the name of the plant you send, *E. Alton*. It needs stove heat, but may be grown in a greenhouse during the warmest part of the summer.

Epiphyllum truncatum.—*E. Alton*: This is generally grafted on pieces of *Pereskia aculeata* and *P. Bleo*. This is to give the plants a stiff stem to lift their trailing branches above the ground, and not because cuttings will not strike easily enough. The cuttings should consist of points of the branches two or three inches in length taken before the plants commence to make fresh growth. Place the cutting pots on a shelf in a warm house, but do not cover them with a bell glass or they will be likely to rot.



PEA CARTERS' EARLY MORN.

PEA CARTERS' EARLY MORN.
 THE possible improvements amongst garden Peas have not yet all been exhausted, judging from the appearance of this new variety and the results that have been obtained from it by a trial amongst gardeners last year. After an effective cross has been made it takes six years or thereby to fix any new variety that may

finally be selected from amongst the progeny of the original. This fact may be gleaned from the history of Carters' Early Morn, which was obtained from Daisy crossed with Lightning. Both of these varieties are now well known, the latter having first been offered to the public in 1887, that is, ten years ago. Daisy did not come before the public till 1892, and that was

the work of seven years of patient care in selection from a cross between Carters' Stratagem and Giant Marrow.

In 1892, when Daisy was first placed before the public, Messrs. James Carter & Co., High Holborn, London, set about crossing Daisy with Lightning, in order to get a first early Pea, having the sweet

marrowfat qualities, and size of pod of the wrinkled and later varieties, including Daisy, the mother of the new Pea under notice. When the pods ripened during the first year of the cross there were three white, three blue, and one green seeds in a pod. Two seeds, namely a blue and a white, were smooth, and the other five variously wrinkled. All of the seeds were sown and an observant eye kept upon them to see whether any of them held out promises of the characteristics desired. After five years of repeated selection Early morn at length became evolved, while another year's trial proved that it had become fixed.

As will be seen from the accompanying illustration the pods are straight, of great thickness, and when well grown they equal in length those of Duke of Albany or Daisy, even when they are in their best form. It is very little behind the earliest round-seeded varieties, while the pods are well filled with seeds of excellent marrowfat flavour. The haulm grows about 3 feet high; and if the seeds are sown during February or March the crop will be fit to gather some time in June.

FORESTRY.

FOR a period of years, many eminent men have been using their influences, and taking steps to bring the subject of forestry before the Government, pressing it forward that it is the nation's duty in disseminating a scientific knowledge of the subject. There are good hopes that the efforts that have been, and are still being, made will ultimately succeed. Should they fail, the nation will be a sufferer; while the hope of Government support lies in the future.

It is satisfactory to be able to record that the advocates of a higher and more improved system of forestry have the joy of seeing some fruit of their labours, in more than ways than one. They contended that it was the duty of our universities to open their doors and impart a knowledge of the principles of forestry, and to give one instance of fruit, I shall mention the forestry class in the university of Edinburgh, which is presided over by Colonel Bailey, who is an undoubted authority on forestry. The winter session of the above class was opened by Colonel Bailey on the 12th October, and in his introductory address he dealt with "Our timber supplies." From the *Scotsman* I take a brief extract of some important truths that the lecturer expounded believing that they are of interest to your readers.

"The lecturer stated the quantities of wood annually imported from foreign countries, and proceeded to show that the supplies from these countries could not be depended on. The consumption of wood in the United States exceeded by more than 50 per cent. what their present forest area could produce as an annual yield, and the demand increased 25 per cent. in every ten years. That meant that the States would very soon take the whole of the wood that Canada might have to spare, &c." The lecturer then discussed the situation in Canada, whence he had lately returned. He said "no effective measures of conservancy or regulations of fellings had yet been taken. The forests were cut without thought of regeneration and fires swept through them burning up young trees with the old ones, vast tracts which a few years ago were covered with unbroken forest were now completely denuded, and there was little to be seen but bare rock with burnt and bleaching trunks. The effect was not only to render enormous areas unproductive, but to dry up springs, lessen the flow of rivers, cause floods by sudden thaw of snow, and drought over large areas in summer. That condition of affairs extended over vast areas up to and into the Rocky Mountains, and the valley of Columbia. The time was not far distant when Canada would cease to be a timber-exporting country unless a proper system of forest management was introduced without delay. Considering the uncertainty of their foreign supplies, it was a matter of national importance to grow their own supplies at home—that was to grow wood in sufficient quantity—of a quality suited to their requirements."

This brief outline of Colonel Bailey's address gives us harrowing details of the conditions of our wood supplies, and I am sure it will impress itself on most thoughtful men, that the subject of forestry demands serious attention. It appears to me that it is the bounden duty of those who are more less engaged or connected with forestry to study it. We

have many eminent authorities in our midst, whose attainments in the scientific and practical departments of forestry are an honour and credit to them. The times demand that the field of knowledge and intelligence of the subject must be evidenced, and that a greater number of individuals should turn their attention to it.

I am not for a single moment overlooking the highly commendable progress that has been made in many ways, and especially by some societies in arousing attention and bringing it prominently before the public. I am aware of untiring efforts and zeal by the leaders and members of societies and others, which will never be compensated nor receive any reward. I am making no appeal to these or on behalf of any society. From a financial point many, with the varied claims made on them, prefer to keep outside these societies. My contention is that by a greater number taking more interest and studying its varied aspects, this increasing intelligence will possibly aid and help those that are striving for a higher and better system of forestry. If sympathy given to a good cause has been productive of beneficial effects, surely then—the wider the interest taken in forestry—the benefit will be of some importance in the cause of progress.

One does not expect that every individual who turns to the study of the question will become the possessor and master of a sound knowledge of the most scientific principles that are found or known in the domain of forestry. The higher the attainment the better it will be for the individuals and the progress of forestry; but it is of considerable importance to get a grasp of the subject and the interests that are at stake, for I am confident that in many quarters these are not fully realised.

The basis of the truths contained in Colonel Bailey's address have long ago been digested by many; but this is no reason against extending these truths to the field of a far wider circle of individuals.

It is to be trusted that this subject of national importance will meet with greater support than it has received in the past; and that many defects of the past management of forests in our and other lands may be rectified; that the dark blots and stains flapped in our faces—of inferior home timber and the eternal stipulations in specifications of foreign woods—will be gradually removed; and that a higher and better system of forestry will take the field, and model forests for instruction and experiments become established in our midst.—*J. Cameron, Byethorn Gardens, Corbridge-on-Tyne.*

MEADOWBANK NURSERY, ROTHESAY.

WHILE paying a visit of inspection to several places in Rothesay last September, we had a run through the grounds of Mr. Alex. Lister, florist, Meadowbank Nursery, Rothesay, and could see at a glance that Dahlias, chiefly the show and fancy types, were one of the chief specialities here. Many other florists' flowers are cultivated, but Mr. Lister devotes considerable attention to Dahlias, of which he is a successful exhibitor.

That show Dahlias are well known and appreciated will be gathered from the mention of such varieties as John Walker, John Rawlings, Wm. Keith, Purple Prince, Norma, J. T. West, Coronet, Nubian, Pioneer, James Cocker, Maude Fellowes, Mrs. Gladstone and many others that are of constant occurrence on the show boards at all the leading Dahlia shows. While inspecting the varieties what struck us most was their remarkably dwarf and sturdy habit. The soil is very heavy and inclined to clay, and this, no doubt, explains to some extent the dwarfness of the plants; while climate would also share in that responsibility.

Other fine varieties belonging to this section were Harry Walton, yellow, edged bronzy-red; Agnes, golden-yellow and of fine form; William Powell, a very large form of a softer yellow; Mr. Charles Noyes, deep buff-yellow, and Bismarck, a huge crimson-purple flower. Edged varieties were well represented, including Mrs. Morgan, white, tipped with purple and very pretty; Shotsham Hero, pink, and edged with deep purple; Majestic, white or soft lilac, tipped with purple and fine in form; and Mrs. Langtry, buff, with a broad, deep purple edge. Amongst the choicer selfs we noted W. H. Williams, a huge glowing-scarlet flower; Joseph Green, crimson-scarlet; Duke of Fife, deep crimson, almost

maroon; John Hickling, clear yellow and of fine form; James Stevens, of a handsome orange hue; and Yellow Boy, a huge, finely built flower. Many other show varieties, scarcely inferior to the above-mentioned, were in the collection, but time, or rather the lack of it, prevented us from going more largely into details.

Fancy Dahlias were by no means neglected, but fully maintained the importance of their section. Mrs. Saunders we have always looked upon as one of the best and most charming of this section. The florets are yellow, tipped with white. The paler colour being confined to the tip serves to distinguish a true fancy (according to the florists) from the edged varieties in the show section, where the darker of the two colours is disposed round the margin or confined to the tip. Prince Henry is lilac, with crimson markings. General Grant is buff yellow, flaked with crimson. Greater complication is noticeable in Lottie Eckford, which has white flowers, flaked with red, and mottled with purple. It is also a neatly built bloom. On the contrary, Gaiety is yellow, mottled with buff, and shaded with white. Dazzler is a buff-yellow mottled with crimson. Very curious is the mixture of colours displayed by John Cooper, which is white, flaked and mottled with maroon.

Other florists' flowers cultivated here are Violas, Penstemons, Carnations, Roses, and Pelargoniums, all of which have their special uses in the business conducted by Mr. Lister.

A general collection of hardy herbaceous perennials is an adjunct to most of the nurseries in Scotland, the climate of which is particularly favourable to the growth of this class of plants, getting more and more popular every year. *Coreopsis lanceolata*, *Statice latifolia*, the true *Eryngium alpinum*, and *Sidalcea Listeri* are choice things we noted, which should be present in every collection of this character. The flowers of *Sidalcea* are satiny pink, but the fringed corolla is the special characteristic of the plant, which received an Award of Merit from the Royal Horticultural Society last summer.

NOTICES OF BOOKS.

HARDY HERBACEOUS PLANTS.

HARDY PERENNIALS AND OLD-FASHIONED GARDEN FLOWERS. Describing the most desirable plants for borders, rockeries, and shrubberies, and including both foliage and flowering plants. By John Wood. Illustrated. London: L. Upcott Gill, 170, Strand, W.C. Price 3s. 6d.

THE book under notice is intended to meet the wants of amateurs in quest of hardy perennial plants upon which they can rely to give them the longest succession of flowers during the year in the open ground. The writer is an amateur who loves his garden, and has successfully cultivated all the plants of which he speaks at his home at Woodville, Kirkstall, Yorks. This latter fact in itself would limit the number of hardy herbaceous subjects that might be grown with ordinary care in various other parts of the country, better favoured in the matter of climate. Nevertheless the plants recorded in this octavo volume of some 330 pages, including an index of the species and varieties, show that Mr. Wood's garden must be extensively stocked with these hardy subjects. He grows something like thirty-five species and varieties of *Saxifraga*, though the names employed are not always that of the botanist. Indeed, unless he were a botanist himself, he could hardly be expected to furnish the botanical name in all cases, for many things still remain incorrectly named in gardens throughout the country.

The generic names of the plants are arranged alphabetically and under them come the specific appellations, having the same order of precedence. The botanical names are followed by the synonyms, if any, and those again by the common names and occasionally by old names now neglected. The author is evidently interested in ancient descriptions, of which he gives a quotation now and again from such herbalists as Gerard and Parkinson. In speaking of "reeky" towns he makes use of a word that smacks distinctly of very old English, but nevertheless a very graphic term. We do not quite agree with the writer, however, when he uses such names as *Andromeda tetragona*, and *Acaena Novae Zealandiae*, and then gives the correct names (*Cassiope tetragona*, and *Acaena microphylla*) as synonyms.

The author is at his best when he describes the method of treatment by which he succeeds in cultivating any of our troublesome favourites. For instance, he experienced great difficulty with *Cassiope tetragona*, for many years trying it in various positions and soils. Then he hit upon the plan of digging out a hole about 18 in. in diameter and of similar depth. This was filled with sandy peat made firm, and the surface of a neighbouring walk so sloped that all the surface water would run into the hollow cavity formed, thus transforming it into a miniature bog. A partially shaded position was selected for this and the *Cassiope* rewarded him with satisfactory growth. He propagates it by division, and plants the pieces deeper in the soil than they had been previously, by which means the old and dead leaves are buried, and fresh roots are emitted higher up the stems. His excursions into descriptive matter and his method of cultural treatment are rather lengthy, but in our opinion are the most valuable part of the book; and space permitting, we consider that the method by which success is attained should always form the feature of books meant to guide or assist the amateur or even the young professional gardener. Mr. Wood says that *Anemone alpina* closely resembles *A. sulphurea*, and is considered to be the parent of the latter; yet he describes *A. sulphurea* as if it were a distinct species. He could have improved upon his descriptions if he had placed *A. sulphurea* under *A. alpina* as a variety of the latter, which, indeed, it is. He might have mentioned a larger number of the Michaelmas Daisies or Starworts than he has, for many of the showiest and most floriferous October flowering species and varieties that fill the cut flower vase are omitted. They have now a much greater number of admirers and cultivators than they had a few years ago, and this result is largely due to the excellent qualities and undoubted beauty of many of them having been brought to the notice of the public by various cultivators in different parts of the country, and to the trial of them that was made by the Royal Horticultural Society at Chiswick. The author will have a surprise in store when he comes to make the acquaintance of *Heuchera sanguinea*; for it is the finest and most handsome of all the *Heucheras* without detracting from the merits of those he has recorded.

The book is admirably printed on good paper and is freely illustrated throughout with woodcuts of well-known and many, to amateurs, little known hardy plants worthy of a place in every collection of any pretensions.

WORK IN THE GARDEN.

My Garden Diary for 1898. Publishers, Sutton and Sons, Reading.

THIS annual publication of some 28 pages has its front cover adorned with a garden scene in April, when Tulips, Wallflowers, *Doronicums*, Apple blossom, &c., enliven the scene. Pale and dark blue and pink varieties of *Myosotis alpestris* *Victoriarum* brighten the back cover in a tasteful and artistic way.

The diary is purely a calendar of operations that may be conducted in the garden, and the left-hand pages record this work for each month of the year. Even for the month of January it is remarkable what a number of things claim the attention of every gardener who desires to be up-to-date in supplying the necessaries (we shall not say luxuries) of modern establishments. Eleven paragraphs serve the purpose of reminders (pointers our American contemporaries would say) of the work that might or should be done even at this early period of the year. Peas, Dwarf Beans, Cucumbers, Carrots, Lettuce, Radishes, Potatoes, Cabbages, Cauliflower, Strawberries, Artichokes, Celery, Rhubarb, Seakale, Longpod Beans, and numerous flowers require attention during the present month. At the bottom of the same pages, various events and matters in connection with them are recorded for the benefit of those concerned. The mean temperature for the month, the height of the barometer and the rainfall taken from the monthly averages at Greenwich during the last 55 years are items for which many may find a use while conducting their garden operations.

The right-hand pages furnish the days of the month and week, together with the rising and setting of the sun and moon. A considerable amount of blank space on these pages is intended for notes and memoranda, which might be rendered not only interesting but useful by diligent and keen observers

for future reference. These diaries could of course be filed every year for future use, so that records made in them would come in useful at any future time. Incidentally we note that the day lengthens 1 h. 11 min. during the month of January, to wit, 25 min. in the morning and 46 min. in the afternoon. During the shorter month of February, the day gains 1 h. 41 min. by the close of the month—the gain being 52 min. in the morning, and 49 min. in the afternoon. The unfortunate part of it is that within the smoky compass of London we often fail to discover either sunrise or sunset. Under favourable circumstances, however, gardeners can calculate upon that increase of daylight.

HOLIDAY WALKS.

A district fresh to English holiday makers, and reached as easily as the Ardennes, will be opened up in "New Walks by the Rhine," by Percy Lindley, whose "Walks in the Ardennes" and "Walks in Holland" did so much to popularise new Belgian and Dutch touring grounds. Starting from the Rhine mouth at the Hook of Holland, "New Walks by the Rhine" will cover the picturesque wooded and rocky side valleys of Rhineland, from the Ahrthal, near Cologne, to the Neckarthal and the "Blue Alsatian Mountains" of the Vosges; and will include the districts of the Taunus, Eifel, Odenwald, Hunsruck, and the Palatinate. Living is said to be as inexpensive in some of these districts as in the Ardennes. Mr. J. F. Weedon will supply the illustrations. The handbook will be published shortly.

DAPHNE INDICA RUBRA.

FLOWERS that are possessed of an agreeable fragrance in addition to a fair share of beauty, and that flower in the winter months, are unfortunately all too rare, but among the number this pretty *Daphne* occupies a very high position. A small plant with two or three flowers will scent a house, so strong, and yet so agreeable, is the perfume.

Amongst gardeners generally *Daphnes* are looked upon as being somewhat difficult to grow, and there is no doubt that they are intractable to some extent unless their wants are pretty closely looked after. Occasionally we come across a miserable looking plant or two of the type, *D. indica*, in private gardens, and it is the exception indeed to see them looking really happy. The variety under notice is not more fortunate. Mistaken kindness with water is, we presume, the most fruitful cause of sickness among the plants, which are, moreover, allowed to remain for years in the same pot until the drainage is choked up, and the soil, as a natural consequence, sour and waterlogged. As if to increase the burden laid upon these poor plants every scrap of flower is eagerly cut off them as soon as it makes its appearance, and the result is that they soon look bare and scraggy.

If they are to do really well more reasonable treatment must be accorded them. The pots must be well drained to start with, using as a compost fibrous loam and peat in equal proportions, with plenty of clean, sharp sand. Pot fairly firmly. The plants are naturally of slow growth, and it is thus a mistake to overpot, but the drainage must be kept clear or failure will result. Even during the growing season water should not be given before it is required, and during the winter months, while the plants are enjoying a partial rest in the greenhouse before being taken into a gentle heat at the beginning of the year to induce them to flower, even less water will be required. At this stage of their career, indeed, too much care cannot be exercised.

Then again caution must be observed in cutting the flowers. Those on weakly plants should not be cut at all, and on the stronger plants those should be selected from the most vigorous shoots which have plump buds in the axils of their leaves, which will subsequently break into growth. The practice of indiscriminately hacking off each scrap of flower cannot be too strongly condemned.

After flowering is over and the plants commence to break into growth they should be potted, if this is necessary, taking care to avoid too large a shift. A gentle heat and an occasional syringing will assist them much at this time, and lay the foundation for well furnished plants. As the pots become filled with roots, liquid cow-manure, with a little soot mixed, may be applied with advantage,

but if an error is to be made in the giving of stimulants let it be on the side of weakness.

As the growths harden and mature themselves the plants may be placed amongst the ordinary greenhouse hard-wooded plants for the autumn, to enjoy their partial rest, during which they must not be excited in any way.

If this course of treatment were followed we should not hear so many complaints about the plants being "miffy" doers.

With regard to the propagation of the plants, grafting is usually employed, the common *D. Mezereum* being the favourite stock. Plants are obtained much quicker by this method than by cuttings, but grafted plants almost invariably go gouty and deformed at the point where the scion was inserted upon the stock, and as the years go by this infirmity becomes aggravated with each succeeding season. Cuttings, although much slower in making plants are really more satisfactory in the long run, and for private establishments that have to be, as nearly as possible, self-supporting, this system of increasing the stock is to be preferred to grafting.

The cuttings should be composed of points, some three inches in length, of the half-matured shoots of the current season's growth. Take these off about the middle of August and insert them in pots or pans filled with sandy soil. Place them in a cool house, and cover them with bell-glasses. Shade carefully, and keep moist until a callus is formed, then remove them into a gentle heat, where they will root. They should be kept gently moving all the winter, although growth will be very slow. The young plants should be ready for potting off into 3-inch pots some time during March. Their subsequent treatment will be the same as that advocated for the older plants.

As the varietal name denotes *D. i. rubra* has more colour in the flower than has the type, but otherwise there is little or no difference.

At the time of writing there is a fine batch of plants in flower at Chelsea, with Messrs. Jas. Veitch & Sons, Ltd. We found upon inspection that all these have resulted from grafts. They are all full of flower, and a peep into the house they occupy affords a treat to the visitors' senses of both sight and smell.

GRAND YORKSHIRE GALA.

THE annual meeting of the guarantors and life members of the Grand Yorkshire Gala was held at Harker's Hotel, York, on the 7th inst., under the presidency of Ald. Sir Joseph Terry, when there was a good attendance.

The chairman, on rising, read letters from several important absentees regretting their inability to attend. Referring to the Gala of last June when the flower tents were wrecked by a disastrous gale, he said that the circumstance had prevented the public from seeing the usual beautiful floral exhibition. If it had not been for the disaster he believed that the show would have been of an exceptional character, and would no doubt have been immensely appreciated. The damage done by the storm of wind amounted to £600, a catastrophe which had never been previously experienced. The circumstances everywhere created regret, and expressions of sympathy had been received from many, including exhibitors. Mr. Atkinson, of Sheffield, had sent the society a donation of five guineas. Continuing, he said he sincerely hoped they might never again experience similar conditions. The coming season he trusted would be so eminently successful as to recoup them for the loss of the past.

With regard to the coming fête he announced that they had been again able to make satisfactory arrangements with the Bootham Asylum authorities. The Lord Mayor (Mr. Edwin Gray) and the City Sheriff (Mr. Harold Copperthwaite) had been elected life members, and the former had consented to act as president for the current year. He then formally proposed that his lordship be so elected.

The proposition was seconded by Ald. Border, and carried with unanimity.

Ald. Sir Christopher Milward proposed the re-election of Sir Joseph Terry as chairman of the council, seeing that he had been associated with the society for many years, and had always taken a great interest in its welfare. He was sure the audience would join with him in congratulating Sir Joseph on the fact that he had attained his seventieth birthday.

It was a pleasure to the citizens to see him so hale, hearty, and able to discharge his important duties. His improved health was matter for rejoicing, and he hoped Sir Joseph would be spared for many years to come. Ald. Purnell seconded the proposal which was heartily endorsed.

Sir Christopher Milward was proposed as vice-chairman, but to this he demurred on the ground that he had been ordered complete rest on account of the unsatisfactory state of his health. Ald. Border eventually consented to stand again and was re-elected vice-chairman.

The other officers appointed were:—Treasurer, Mr. Joseph Wilkinson; secretary, Mr. C. W. Simmonds; and auditors, Messrs. Pearson and Taylor. The usual committees were also elected. The following members were elected on the council: Ald. Sir Christopher A. Milward, Messrs. R. Anderson, G. Balmford, J. Blenkin, J. Biscomb, Ald. Clayton, J. W. Craven, M. Cooper, H. C. Day, Ald. Dale, Councillor Foster, G. Garbutt, T. G. Hodgson, J. J. Hunt, A. Jones, G. Potter-Kirby, E. B. Kendall, T. M. Lambert, Ald. Purnell, E. S. Robinson, H. Scott, W. S. Sharp, and J. B. Sampson.

For the ensuing gala it was arranged to spend £650 on floral arrangements, including the £50 as a Victorian commemoration prize, offered last year, but not awarded; also £200 for music; £100 for fireworks; £150 for amusements; and £50 for balloons.

Votes of condolence were presented to the families of the late Sir Frank Lockwood, Q.C., M.P.; Mr. T. P. Bulmer, J.P.; and Mr. George Dennis, all of whom had been associated with the gala.

The proceedings terminated after the health of Sir Joseph Terry had been proposed by Ald. Purnell, who congratulated him upon having attained his seventieth birthday, and said that no gentleman in the city was more esteemed.

STRAW MATS.

THE use of these is very wide spread, but at the same time I submit they are not so much used as they well might be in very many instances where straw costs but little. They are very much cheaper than any other material for covering pits and frames. Many who might avail themselves of them fail to do so, not knowing how to make them. We have seen and practised several methods closely resembling one another, the materials used being twine and straw. The mats are made of different thicknesses to suit the purposes for which they are required, and being made to roll up, the objections to this plan are that unless made very thin they are, when wet, heavy to move about, and are at all times very littery.

For the two reasons stated I have adopted a fresh method of making them. This is done by procuring 2-in. galvanised wire netting of a light gauge, the width of which should correspond to the length of the lights to be covered. The netting should be cut in lengths rather more than double the width to be covered in order to allow sufficient material to cover in the two sides. This must be determined by the thickness the mat is purposed to be made. In many instances, for the convenience of lifting about and storage, when not in use, it will be found preferable to make two mats for each light. Having the netting in readiness, double it over and place a straw band in at the bend, fastening it in position with twine, taking care to have the wire, when doubled, as straight and square as possible. Then lay in the straw of the required thickness, straightening and even pressing it firmly against the band till 1 ft. or more according to circumstances is filled up; then insert another straw band, press the straw down firmly, and fasten the band tightly in position with twine drawn through the netting from top to bottom. Continue the process till the mat attains the required dimensions.

The top and bottom require a little care to finish them off satisfactorily. The best way is to lay in a straw band, allowing some of the loose straw to just cover it top and bottom. Make all secure by drawing the two edges of the netting together with twine, enclosing the straw band at the same time and making it secure to the netting. This also applies to the finishing off at the side of the mat opposite to its commencement. The advantages of mats made in this way are greater durability and freedom from litter. They are readily moved about, and the

netting gives them a certain amount of rigidity which admits of their being stood against anything where the wind can play through them and so dry them far more quickly than mats made in the ordinary way. One of the principal objections to these thick mats is the difficulty of drying them.—*W. B. G.*

WESTMOUNT, GLASGOW.

FOR many years past Westmount, Kelvinside, Glasgow, the city residence of Hugh Stevens, Esq., has been noted for its fine collection of cool Odontoglossums, though other sections of Orchids and indoor gardening generally are well cared for by his genial and courteous gardener, Mr. David Wilson, who every now and again asserts his prowess in the Orchid classes at various flower shows in Scotland.

Mr. Wilson, like many another gardener, has been drawn into the fascinating operation of hybridising Orchids, for we noted a healthy batch of *Dendrobium* seedlings with pseudobulbs 2 in. to 3 in. in length. The seed was sown in April, 1896, and the plants have already made their second growths, the first having leaves only $\frac{1}{2}$ in. in length, so that no time has been lost since germination took place.

We happened to visit the place just after a ball had been held at the seaside residence of the owner, so that the cool Odontoglossums had been severely punished in order to supply cut flowers. A few had escaped the knife, and spikes were being thrown up plentifully to renew the display of bloom. *Odontoglossum acuminatissimum* seemed to be a natural hybrid between *O. crispum andersonianum* and *O. luteo-purpureum*. *O. Rossii majus*, *O. crispum*, and *O. Pescatorei* were also well represented. The plants were in robust health, and accommodated in a well-constructed, well-lighted house, the framework and staging of which consists of iron. A large number of the plants are elevated on iron, movable pedestals, which serve the purpose of bringing the plants near the glass and of keeping them out of the way of slugs to a large extent. *O. Rossii majus* and other compact-growing kinds are suspended in baskets from the roof.

In one of the warm Orchid houses numerous *Cypripediums* were flowering freely, including a grand piece of *C. Morganiae*, carrying ten large flowers on five spikes. This same plant took the first prize in a class at the Edinburgh show in September last. *C. harrisianum superbum* also carried very fine flowers, as did *C. Charlesworthii*, *C. Sedenii*, and various others. The flowering of some hybrid *Cypripediums* is also eagerly looked for. A fine piece of *Oncidium incurvum* supported half-a-dozen graceful spikes. *Dendrobiums*, in the same house, were finishing up admirable growths. *Begonias* of the *B. corallina* type and *B. haageana* also served to keep the house gay with their showy and attractive flowers.

Passing into a low span-roofed house we found a splendidly grown collection of *Crotons* of a useful decorative size. Other fine foliage plants located here included *Episcia fulgens*, *Pelionia pulchella*, *Fittonia Verschaffeltii*, *F. argyryneura*, *Alocasias*, *Schizocasia sanderiana*, *Caladiums*, in many fine varieties, *Selaginellas* and other indispensable things for establishments where the owners are really plant lovers. Being all scrupulously bright and clean they afforded ample testimony of the care bestowed upon them.

The hothouses are peculiarly situated in being built on the steep bank of a glen or valley, so that flights of steps both outside and inside the houses lead from house to house on different terraces. The conservatory is a roomy building on one of these terraces, and has climbers upon the roof, including well-flowered *Lapagerias*. Large plants of *Asparagus plumosus nanus* climb to the roof upon strings, and are found useful in many ways. A collection of large-flowering *Chrysanthemums* was even then flowering from the early buds. *Hydrangea paniculata grandiflora*, *Begonia metallica*, *Clerodendron fallax*, and other useful subjects were flowering profusely.

The stove contained a collection of *Ixoras*, *Crotons*, *Dracaenas*, *Ananasa sativa variegata* and others of that class. They were clean, healthy, and vigorous, while many of the fine leaved subjects were displayed to the best advantage by being elevated on iron pedestals like those employed in the Odonto-

glossum house. A large piece of *Angraecum caudatum* was noticeable in this house. The huge leaves of *Sphaerogyne latifolia* are always interesting. Here also was another old favourite, namely, *Beaucarnea recurvata*, of which there were two specimens, each 6 ft. or more in height.

A lengthy and lofty cool house stands on the highest terrace, and here again we found a great variety of subjects for which a cool airy atmosphere is suitable. Some large plants of *Eurya latifolia variegata* showed how ornamental they may be when well grown. The orange-scarlet flowers of *Fuchsia Mrs. Rundle* showed themselves to great advantage suspended from the rafters of the house on drooping sprays. *Crinum mooreanum* was in fine form. The long drooping or creeping shoots of *Nepeta Glechoma variegata* answer admirably as an edging to the benches of cool houses. Very few British weeds can aspire to such honourable distinction. Many cool Orchids found suitable quarters in this house, the *Odontoglossums* throwing up many fine spikes.

Amidst the love for flowers in this establishment, Vines are not neglected. One viney was filled with *Gros Colman*, *Alicante*, and *Lady Downes*, the first-named being conspicuous on account of the handsome proportions of its berries, and *Alicante* by reason of its high colour and finish. The next viney contained a heavy crop of Grapes not quite finished at the time of our visit. The varieties grown included those already named, with the addition of *Madresfield Court*, which we considered exceptionally fine. Lack of time prevented us from inspecting the flower garden; and having been only half-an-hour or less upon the premises Mr. Wilson accompanied us to the next place of call for the sake of "Auld Lang Syne," and to make up for the brief stay.

GARDENING MISCELLANY.

ARAUCARIA EXCELSA.

WE were reminded of the usefulness and popularity of this pretty *Araucaria* as a pot plant on seeing a splendid batch of it during a recent visit to the Chelsea establishment of Messrs. Jas. Veitch & Sons, Ltd. Whilst other plants that have claims upon our regard were hanging out unequivocal signs of distress as the result of the fogs, these plants looked not a whit the worse. In a small state *Araucaria excelsa* makes a handsome table plant, and is alike effective in plant stands or windows in the dwelling house, since a shapely little specimen can be accommodated in a 48-sized pot. In its later stages it makes a noble occupant of the more pretentious winter garden, if care is taken, while it is yet young, to see that it is not permanently disfigured by the premature loss of one or more of its branches. At no time of its life is it difficult to grow, and at all times it is beautiful.

"ORCHID HUNTING, ITS HUMOURS AND ADVENTURES."

This was the title of a paper given by Mr. G. Lee before the members of the Torquay District Gardeners' Association recently. Mr. Lee dealt in an interesting fashion with the adventures of Orchid-hunters in various parts of the world. Some of them had spent years searching for certain plants in wild and desolate regions, risking life and limb amongst swamps, savages, and wild animals, and the story of their lives read like a romance. It was said that Roezl, and other early collectors, used to buy the semi-sacred plants of the priests, and what they could not buy they bribed the natives to steal for them. Mr. Lee cited a very amusing incident in the life of M. L. Hamalin, a French collector in Madagascar, who was made blood-brother to one of the chiefs. Whilst Orchid-hunting on one occasion Hamalin's escort was under the command of a brother-in-law of the king's. This young chief was killed by a lioness, and Hamalin was made responsible for his death. He was offered the alternative of marrying the young widow and taking the family belongings or being greased and burnt. Hamalin took the widow, but found a speedy pretext for returning to England sans his enforced bride. The lecture was illustrated by some fine Orchids shown by Miss Lavers, Mrs. Wilson, and Lady McGregor.

TROPAEOLUM SPECIOSUM.

I CAN assure "C.B.G." that there are favoured spots even in the sunny south (or foggy, shall we say?) where *Tropaeolum speciosum* will thrive. I remember a few years ago seeing a very healthy specimen growing on a wire fence bounding a tennis lawn, and that was a very sunny spot in a sunny county, or rather in a county noted for the sandy character of its soil, and therefore greatly influenced by the sun. Last year I was in the same garden, not 100 miles from Acton, and although I cannot remember seeing this particular fence, I was struck with the beauty of several fine examples of the *Tropaeolum* which were growing in Rhododendron beds, rambling over the heads of their supporters and bearing a profusion of scarlet flowers. If only I had the pen of "C.B.G." to describe that picture, I would start every reader of THE GARDENING WORLD growing, or trying to grow, *Tropaeolum speciosum*.—A. P.

BEGONIA GLOIRE DE LORRAINE.

THIS "glory" among Begonias has made for itself many friends, and secured a good deal of well-merited attention. The dense fogs which have done so much damage of late to plants in general and Begonias in particular have only served to demonstrate an excellent quality that the plant possesses of resisting the influence of the fog, and although we would, perhaps, have been better pleased had the fogs been content to leave us alone, and not put us and our plants to such a severe ordeal, it is well to know the capabilities our floral friends possess in the direction indicated. There are a number of sturdy little samples of this Begonia in the Begonia house at Kew that do not seem to have suffered appreciably, despite the fact that in the same house may be seen many other plants half stripped of their leaves, and generally appearing as very pitiful looking objects indeed.

SOCIETIES.

ROYAL HORTICULTURAL.—January 11th.

CYCLAMEN, Chinese Primulas, Orchids, and fine foliage plants were the features of the first meeting of the year on Tuesday last. A few brightly-coloured Carnations also furnished a hit of colour to the tables. Fruit was as well represented as anything, particularly Apples and Grapes.

Messrs. Hugh Low & Co., Upper Clapton, London, N.E., exhibited a small group of Orchids set up with Palms and Maidenhair Ferns. They had a beautiful hybrid *Cypripedium* named *Cyp. F. S. Roberts*, of which *C. niveum* was one parent, the other being unknown. Interesting was a pale yellow *Odontoglossum* named *O. crispum tackianum*. There were also several other fine forms of this popular species. *O. Hallii* as well as several forms of *O. crispum andersonianum* were in good form and interesting.

Messrs. F. Sander & Co., St. Albans, staged a small group of Orchids surrounded by well grown plants of *Dracaena godseffiana*. *Laelia anceps Dawsoni*, *L. a. sanderiana* and *L. a. Hillii* are all good forms of this popular *Laelia*. Several *Dendrobiums*, including *D. Johnsoniae* and the hybrid *D. Dulce Oakwood var.*, and *Cypripedium Calypso* were beautiful and interesting types of their respective kinds.

Fred Hardy, Esq., Tyntesfield, exhibited plants of *Cypripedium insigne Sanderiae*, *C. Calypso*, and a form of *O. crispum andersonianum*.

Captain Holford, Westonbirt, Gloucestershire, sent a fine collection of cut flowers of hybrid and other *Cypripediums*, including *C. leeanum superhum*, *C. Calypso*, *C. Niobe*, *C. insigne citrina*, *C. Wallace Lunt*, *C. lathamianum*, and various others which were eagerly inspected by the visitors. He also had fine bunches of *Laelia autumnalis* (Silver Banksian Medal).

De B. Crawshay, Esq. (gardener, Mr. S. Cooke), Rosefield, Sevenoaks, exhibited cut flowers of *Laelia anceps amesiana Crawshay's var.*, a very attractive and well formed flower.

Isaac Carr, Esq., Poolemeade, Swerton-on-Avon, exhibited some hybrid *Cypripediums*, including the finely blotched *C. Gwendoline*. *C. L. N. Ingram*, Esq. (gardener, Mr. T. W. Bond), Elstead House,

Godalming, showed the handsomely blotched *Cypripedium Magnet*. F. A. Rehder, Esq. (gardener, Mr. Norris), The Avenue, Gipsy Hill, staged the hybrid *Cypripedium Rehderianum*, a very dark sort.

One of the brightest and prettiest exhibits was the large display of *Cyclamen* made by Messrs. Sutton & Sons, of Reading. The specimens were dwarf, exceptionally free-flowering, and the flowers needed no support. The collection consisted of seedling plants raised from seed sown in November, 1896, and illustrated the various types of this beautiful flower. Among the varieties that attracted the most attention were Sutton's Salmon Queen, flowers of a bright salmon colour deepening to crimson-purple at the base; Sutton's White Butterfly, unsurpassed as a white variety, with flowers remarkable for their great substance and good form; and Sutton's Vulcan, of the darkest crimson colour and a charming contrast to Butterfly. The "Giant" varieties were noticeable for the extraordinary size of the blooms. The forms shown of this strain included Sutton's Giant White, with flowers of lovely form and of the purest whiteness; Sutton's Giant Crimson, especially distinct and telling, brightening up the appearance of the whole group; Sutton's Giant Pink and Sutton's Giant Crimson and White. For comparison, a few specimens of *Cyclamen persicum*, the original type, were exhibited, which illustrated the great strides made in this now popular winter-flowering plant. There were also some semi-double forms, and others with the margins of the segments charmingly lacinated that were both handsome and interesting. A Silver Flora Medal was awarded.

Messrs. John Laing & Sons, Forest Hill, S.E., received a Silver Flora Medal for a very showy group of flowering and foliage plants. *Clivia striata aurea* was represented by a finely variegated piece. There were also two grand plants of *Begonia Gloire de Lorraine*. *Nepenthes*, *Crotons*, and *Dracaenas* were all very bright and handsome, and the whole of the plants were attractively staged. *Dracaena Distinction* and *D. Excellens* were two of the finest forms.

Messrs. H. Cannell & Sons, Swanley, Kent, staged a capital table of Chinese Primulas. This was a very representative collection, many of the leading types being on view. Amongst the singles Eynsford Red, Swanley Yellow, Distinction, Cannell's Pink, Swanley Blue, Eynsford White, Emperor Improved, and My Favourite were well shown. A hatch of double varieties included such well-marked and useful varieties as King of Purples, Mrs. R. Crabbe, Annie Hillier, and Teronica (Silver Flora Medal).

A nice hatch of *Cyclamen* came from Messrs. Hugh Low and Co., Bush Hill Park, Enfield. The plants were exceptionally sturdy, and the flowers very large and fine. White, crimson, pink, and purple were the colours of the varieties shown. Samples of the new tree Carnation Winter Scarlet were also on view (Silver Banksian Medal).

A grand array of Primulas came from Mr. John Box, West Wickham. The plants were wonderfully vigorous, and the foliage, [more especially of the Fern-leaved varieties was really splendid. The flowers were also of great size and substance, but all the petals were much crimped and gophered. The type of the whole exhibit was that class of Primula common to the Midlands, where a much longer season of growth is afforded the plants. Princess Mary, Queen of Primulas, Rosamond, Wickham White, and Cannell's Pink were some of the finest forms forthcoming (Silver Flora Medal).

Sprays of the winter flowering shrubs, *Garrya elliptica*, *Hamamelis arhorea*, and *H. japonica zuccariniana* were exhibited by Messrs. James Veitch and Sons, Ltd., Chelsea. A stand of cut-blooms of hybrid *Rhododendrons* of the Javanico-jasminiflorum section was also sent by the Chelsea firm. Lord Wolseley, Minerva, Sybil, Aphrodite, Thetis, and Amabile were all vastly pretty varieties.

Four pans of *Narcissus monophyllus*, full of flower were sent by Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N. A pot of *Fritillaria oranensis* also came from the same firm.

At a meeting of the fruit and vegetable committee a Silver Banksian Medal went to Mr. W. J. Empson, gardener to Mrs. Wingfield, Amptill House, Amptill, for thirty dishes of excellent Apples and Pears. The fruit was in good condition for the advanced season of the year. Gascoigne's Scarlet, Baumann's Red Winter Reinette, Beauty of Kent, King of the

Pippins, and Ribston Pippin were some of the best Apples.

A Silver Knightian Medal went to Mr. J. Bury, Petersham Grange, Byfleet, Surrey, for a collection of well preserved Grapes.

Fifteen dishes of Apples were submitted for the Veitch flavour prize. Mr. J. C. Tallack, Livermere Park Gardens, Bury St. Edmunds, was placed first with Margil. Col. Brymer, Islington House, Dorset, was second with Claygate Pearmain.

Two dishes only of Pears were sent. Mr. C. Ross, gardener to Captain Carstairs, Welford Park, Newbury, was first with Josephine de Malines. Mr. Thos. Rochford, Turnford Hall Nurseries, showed the new Grape, Turnford Hall. Messrs. T. Francis Rivers & Son, Sawhridgeworth, showed Citrons, and a bunch of Grape Mrs. Pearson.

A cultural commendation was awarded to Mr. J. Miller, Ruxley Lodge, Surrey, for a splendid box of Mushrooms.

QUESTIONS AND ANSWERS

* * * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Climbers for Pillars.—A. C.: Although your district is wet we should understand that the temperature is mild and equable, and that you would have little frost or snow. If so a good many climbers ought to succeed. Amongst deciduous kinds you might well try Tea Rose Gloire de Dijon, Noisette Rose Wm. A. Richardson, *Wistaria chinensis*, *Jasminum officinale* (white), *J. revolutum* (yellow), *J. nudiflorum* (yellow and flowering in winter), Honeysuckle, *Aristolochia Siphon*, *Clematis Jackmanni*, *C. Flammula* (small sweet-scented flowers), *C. Viticella* (small purple flowers), *Rosa moschata* (the single Musk Rose) and *Lonicera flexuosa aurea reticulata*. Amongst evergreens you might use varieties of the Ayrshire Roses, also *Crataegus Pyracantha*, the broad-leaved Ivy (*Hedera Helix latifolia*), *H. H. palmata*, and other varieties of Ivy which you might feel inclined to use. *Passiflora caerulea*, *Clematis montana*, and *Solanum jasminoides* are somewhat tender, but very handsome climbers. They flower profusely in various parts of the country where the cold is not too great for them. *Ampelopsis Veitchi* would not produce showy flowers, but the foliage is very effective and quite distinct from any of the above kinds.

Worms in Carrot ground.—A *Grampian Reader*: We are not quite sure whether you mean that your ground is infested with earth worms, or simply the grub of the Carrot Fly. If it is the former we scarcely think they would do the Carrots harm. Old garden soil, rich in vegetable mould, is always more or less infested with earthworms; but this matter could be greatly remedied by an application of lime which would cause the vegetable mould to decay more rapidly and become fit for plant food. Most likely, however, you mean the grub of the Carrot Fly which makes the roots wormy. We have no great faith in dosing the ground with paraffin as we consider it inimical to plant life, especially if used in any quantity. Should you be determined to use it, the best plan would be to wait till the Carrots are germinated, and then get a barrow load of river sand on which you should pour sufficient paraffin as to moisten it or taint it sufficiently to make it offensive to the winged state of the fly. Scatter this thinly all over the ground between the lines, without letting the sand touch the plants. The operation might be repeated after an interval of two or three weeks while the Carrots are in that stage when the grubs do most harm. This will help to drive away the mother flies and prevent them from laying their eggs there. The only way you could spread paraffin and water evenly over the ground would be by the syringe, stirring it all the time, otherwise you cannot keep them mixed. Well prepared ground often grows better Carrots than attempting to correct it by insecticides. Trench the ground 2 ft. or 3 ft. deep if the soil is good, otherwise bring some fresh soil and spread over the old, mixing the two in trenching. Lime would improve heavy or old garden soil rich in humus. Wood ashes would be distinctly advantageous in most cases. Trenching is advantageous in burying the pupae of the fly. Heavy soil is sometimes improved by a dressing of peat, and burnt clay crumbled up finely serves the same purpose and promotes the growth of the Carrots.

Slugs on Strawberry Beds.—*Dodford*: It is difficult to deal with slugs on so large a scale as you mention, especially when one considers how well

CARTERS

GREEN PEAS—JUNE TO NOVEMBER.

CARTERS

A correspondence was raised in the Daily Press last Autumn upon the shortness of the season when Green Peas are available, both in gardens and on the market. We now offer the following as representing the best collection selected from 1,024 rows we had under trial last season. It would be difficult for us to give precise dates for putting the seed into the ground, as so much depends upon soil and situation. Successional sowings may be made any time between these dates, and the last sowing not later than the second week in June.

| NAME. | DESCRIPTION. | HEIGHT. ft. | WHEN TO SOW. | EXPECT READY TO PICK. | CARRIAGE FREE. Per pint. Per qt. |
|--------------------------|-------------------------|----------------|-----------------|--------------------------|-------------------------------------|
| Carters' Lightning | First Early White Round | 2½ | In February | May to June | 2s. 3s. 6d. |
| Carters' Early Morn | First Early Marrowfat | 3 | End of March | During June | 2s. 3s. 6d. |
| Carters' Daisy | Second Early Marrowfat | 1½ | Middle of April | Early July | 2s. 3s. 6d. |
| Carters' Danby Stratagem | Mid-season Marrowfat | 3 | End of April | July | 2s. 3s. 6d. |
| Carters' Model Telephone | Main Crop Marrowfat | 5 | Middle of April | July | 2s. 3s. 6d. |
| Carters' Model Telegraph | Main Crop Marrowfat | 5 | End of April | July and Aug. | 2s. 3s. 6d. |
| Carters' Michaelmas | Late Marrowfat | 3 | May to June | Sept. to Nov. | 2s. 3s. 6d. |

The Collection. { 1 pint each of 7 varieties, price 12s. 6d. } Carriage Free.
 { 1 quart each of 7 varieties, price 22s. 6d. }

PURCHASERS SHOULD SEE THAT THESE PEAS ARE IN OUR SEALED PACKETS.



The Queen's Seedsmen,
 237, 238 & 97, HIGH HOLBORN, LONDON.

they are protected by the foliage of the Strawberries. Clayey and heavy soils are often infested in the way you mention. Nevertheless, it might be worth your while to try some remedies. Wood ashes or charcoal dust is considered a better remedy than either soot or lime. This might be scattered over the ground in spring after growth has been proceeding for some time. A second application might be given before covering the ground with straw to protect the berries from being splashed with sand and mud. Ducks might be allowed to roam at large over the Strawberry ground at all times until the berries get to some size. A good way of applying lime would be to steep some quick-lime in a large barrel or two and then water the ground with it by means of a rosed watering pot. This should be done in moist warm weather when the slugs are out feeding, or on dewy mornings or evenings. The lime water should be allowed to settle till it is clear before using, and if very strong it should be diluted. Nitrate of soda dissolved in water and distributed over the ground in the same way is also said to be a good remedy. If done after the fruits are of some size, it would be less likely to cause an over luxuriance of leaves, than if it were done earlier. Wet weather is your chief enemy, greatly assisting the slugs, when the crop is ripening.

Unfruitful Walnut.—*J. T. Thurston*: It would be difficult to say exactly why your tree will not fruit more abundantly without knowing something of the circumstances of the case. Trees raised from nuts do not as a rule come into bearing until they are eighteen or twenty years old, though frequent transplanting in the nursery stage sometimes causes them to come into bearing as early as the sixth year. Trees that are budded or inarched always come into bearing at a much earlier age than trees raised from nuts. As to the other points at issue we suggest that you root-prune the tree if it is growing too vigorously. Take out a trench half way round the tree and at a distance of 5 ft. from the trunk, cutting the stout roots with a clean cut, and also those that penetrate the soil perpendicularly. This may be done now, and the remainder at the end of next September. If your tree is in poor soil feeding would be the most obvious remedy. This could be done by top-dressing the soil very heavily with old but rich soil from beneath the potting benches, mixing it with leaf mould, wood ashes, and well decayed stable manure. This could be done now and again next autumn. The Walnut also likes shelter from cutting winds, especially in spring when the tree is in flower. Late spring frosts also destroy the blossom. Climate is a potent factor in the fruiting of the Walnut; but there should be no difficulty on that score in your district. Shelter from east winds would be serviceable, however. You will have to study which of the above remedies most applies to your case and act accordingly.

Excrescences on Apple Trees—*Examination*: Your trees are very badly affected with the American Blight (*Schizoneura lanigera*) a species of woolly plant louse allied to *Aphis*, and, in fact, belonging to the family *Aphididae*. The specimens you sent us are as bad as we have seen upon young trees. The Woolly Louse attacks the bark of the young shoots in summer, and punctures the bark in order to suck the juices. As a result the injured shoots cannot swell properly, but split, and then develop warty excrescences of spongy tissue. The insects take up their quarters where they get the most shelter. You did right to wash the shoots with an insecticide. You do not mention what you used, however. You should repeat the operation again in spring when the weather gets warmer. A useful wash can be made with a solution of 5 lbs. of quicklime, 1 lb. of sulphur, and 2 gallons of water, heating until the sulphur is dissolved. Use a painter's brush, half worn, with

which to wash the shoots, rubbing the insecticide well into the axils of the branches and the cavities in the injured wood. The work might be repeated during summer if the pest shows itself. Paraffin emulsion is another good remedy, but must be carefully and properly made to prevent damage to the foliage. A safe remedy would consist of Gishurst's Compound, which you may use in lather from the cake, rubbing it well into all cracks and crevices. You might remove some of the soil from the base of the trees, and re-place it with fresh. Persevere till you succeed in eradicating the pest.

Name of Fruit.—*J. G. H.*: Apple Tom Putt.

Names of Plants.—*A. D.*: *Phyllanthus angustifolius*, sometimes called *Xylophyllum angustifolium* in gardens.—*J. T. Thurston*: 1, *Berberis Aquifolium*, popularly known as the Mahonia; 2, *Lavandula dentata*.—*G. M.*: 1, *Viburnum Tinus*; 2, *Pinus excelsa*; 3, *Pinus Strobus*; 4, *Libocedrus decurrens*; 5, *Retinospora leptoclada*; 6, *Abies Veitchi*; 7, *Cryptomeria japonica*.—*A. Westland*: 1, *Odontoglossum crispum andersonianum*; 2, *Dendrobium formosum giganteum*; 3, *Cypripedium superbiens*; 4, *Lycaste Skinneri* var.—*R. G.*: 1, *Antharium warocqueanum*; 2, *Eranthemum argenteum*; 3, *Jacaranda mimosaefolium*; 4, *Begonia fuchsioides*; 5, *Begonia semperflorens carminatum giganteum*.—*T. H.*: 1, *Helleborus foetidus*; 2, *Erica carnea*; 4, *Hedera Helix palmata*; 5, *Hedera Helix conglomerata*.

Communications Received.—*J. B. Crichton*—*W. B. G.*—*A. W.*—*McDougal Brothers*—*R. G. W.*—*Solanaceae*—*A. D. Webster*—*Lebrun*—*A. L.*—*S. G.*—*R. W.*—*N. A.*—*G. Herd*—*T. S.*—*W. A.*—*J. Mayne*—*A. S.*—*Rob.*—*O. T.*—*G.*, *Hendon*—*Hardy Plants*—*F. Ayres*—*E. Morton*—*N. B.*

TRADE CATALOGUES RECEIVED.

- PAPE & BERGMANN**, Quedlinburg, Germany.—Catalogue of Vegetable and Flower Seeds.
- BARR & SONS**, 12 and 13, King Street, Covent Garden.—*Barr's Seed Guide*.
- THOS. S. WARE**, Hale Farm Nurseries, Tottenham, London.—Catalogue of Vegetable and Flower Seeds.
- ROBERT SYDENHAM**, Tenby Street, Birmingham.—Unique List of the best Vegetable and Flower Seeds.
- M. CUTHBERTSON**, Rothesay, N.B.—Flower and Vegetable Seeds, Herbaceous Plants, Roses, Pansies, Violas, &c.
- DICKSONS & Co.**, Seed Merchants, 1, Waterloo Place, Edinburgh.—*Dicksons' Garden Seeds*.
- WILLIAM BAYLOR HARTLAND**, Seedsman, Patrick Street, Cork, Ireland.—Year book 1898, High Quality Garden Seeds.
- KELWAY & SON**, Langport, Somerset.—*Kelway's Manual of Seeds, Plants and Bulbs*.

SEED MARKET REPORT.

London, Jan. 11th, 1898.

Messrs. Hurst & Son, 152, Houndsditch, and 27, Seed Market, Mark Lane, report a moderate enquiry for agricultural seeds. English Red Clover is being marketed slowly and price is expected to recede when weather is more favourable for threshing. Foreign Red Clover is in full supply and very cheap. White Clover offers at reasonable rate. Alsike neglected. Trefoil steady. Ryegrasses unchanged.

McARTHUR & CO.'s 1898 HORTICULTURAL GUIDE for Amateurs & Exhibitors.

SENT POST FREE TO INTENDING CUSTOMERS.

THIS Guide or Catalogue is beautifully arranged and illustrated, and contains one of the finest selections of Novelties in the Kingdom. The greatest care has been taken to select the finest quality seed, and cannot fail to give satisfaction. All who wish to have beautiful flowers in their greenhouses, and in the open ground, at about half the price advertised by other firms, should send for this Guide.

The very smallest orders are acceptable, and will receive as much attention as the larger ones. Threepence in the Shilling discount allowed for CASH ONLY on all orders booked before the end of January, and can be forwarded whenever customers wish.

Order this Guide AT ONCE to prevent disappointment, as I have only a limited number of copies and cannot reprint. My advertisement for Prize Collections of Flower Seeds will appear in January.

Please mention this Paper to—

McARTHUR & CO., Seed and Bulb Merchants,
 Medbourne, Market Harborough.
 LATE:—STONCOT NURSERY, Sutton, Surrey.

COVENT GARDEN MARKET.

January 12th, 1898.

| FRUIT.—AVERAGE WHOLESALE PRICES. | | VEGETABLES.—AVERAGE WHOLESALE PRICES | |
|---------------------------------------|-------------|--|-------------|
| s. d. s. d. | s. d. s. d. | s. d. s. d. | s. d. s. d. |
| Apples ... per bushel | 6 0 12 0 | Artichokes Globe doz. | 2 0 5 0 |
| Cobbs | 22 6 24 0 | Asparagus, per bundle | 1 0 1 6 |
| per 100 lbs. | 1 0 2 0 | Beans, French, per | 0 9 1 0 |
| | | per lb. | 0 9 1 0 |
| | | per dozen | 2 0 |
| | | per half sieve | 1 0 1 6 |
| | | Cabbages ... per doz. | 1 0 1 3 |
| | | Carrots ... per bunch | 0 3 |
| | | Cauliflowers.....doz. | 1 6 3 0 |
| | | Celery.....per bundle | 1 0 1 6 |
| | | Cucumbers per doz. | 6 0 8 0 |
| | | Endive, French, doz. | 1 0 2 0 |
| | | Herbsper bunch | 0 1 |
| | | Horse Radish, bundle | 1 6 2 6 |
| | | Lettuces ...per dozen | 1 3 |
| | | Mushrooms, p. basket | 1 0 1 6 |
| | | Onions.....per bunch | 0 4 0 6 |
| | | Parsley ... per bunch | 0 3 |
| | | Radishes... per dozen | 1 6 1 3 |
| | | Seakale...per basket | 1 6 2 0 |
| | | Small salad, punnet | 0 4 |
| | | Spinach per bushel | 2 1 3 0 |
| | | Tomatoes..... per lb. | 0 6 1 0 |
| | | Turnips per bun. | 0 3 |
| | | | |
| CUT FLOWERS.—AVERAGE WHOLESALE PRICES | | PLANTS IN POTS.—AVERAGE WHOLESALE PRICES | |
| s. d. s. d. | s. d. s. d. | s. d. s. d. | s. d. s. d. |
| Alum Lilles, 12 blms. | 4 0 6 0 | Maidenhair Fern, 12hs. | 4 0 8 0 |
| Asparagus Fern, bun. | 1 6 3 0 | Mimosa, French, | 9 1 0 |
| Azaleas, doz. sprays | 0 9 1 6 | Narcissus, white, | 2 0 3 0 |
| Bonvardias, per bun. | 0 6 0 8 | French, doz. huns. | 2 0 3 0 |
| Carnations doz. blms. | 1 6 3 0 | Orchids, doz. blooms | 1 6 9 0 |
| Chrysanthemums | 1 0 4 0 | Pelargoniums, 12 bun. | 4 0 8 0 |
| dozen blooms | 1 0 4 0 | Pyrethrum doz. bun. | 1 6 3 0 |
| Chrysanthemums, doz. | 6 0 15 0 | Roses (indoor), doz. | 6 1 0 |
| bunches | 6 0 15 0 | Tea, white, doz. | 1 0 2 0 |
| Daffodils, per dozen | 1 3 1 6 | Perle 1 6 4 0 | |
| Euoharls ...per doz | 4 0 6 0 | Safrano 1 0 2 0 | |
| Gardenias ...per doz. | 3 0 6 0 | (English), | |
| Geranium, scarlet, | | Pink Roses, doz. | 2 0 4 0 |
| doz. bunches | 5 0 8 0 | Smlax, per bunch ... | 1 6 3 0 |
| Lillium longiflorum | | Tuberose, doz. | |
| per doz. | 4 0 6 0 | blooms ... | 0 3 0 4 |
| Lily of the Valley doz. | | Tulips, various, doz. | 0 9 1 6 |
| sprays | 1 0 2 0 | Violets (Parma), per | |
| Lilac (French) per | | bunch | 3 0 4 0 |
| bunch | 3 0 4 6 | doz. bun. | 1 6 2 0 |
| Marguerites, 12 bun. | 2 0 4 0 | | |

WEBBS' CHOICE CELERIES.

The Best in Cultivation.

WEBBS' NEW GIANT WHITE.

Valuable for exhibition or table purposes. The heads are very large, white, and exceedingly crisp and sweet in flavour.

1s. per Packet, post free.

WEBBS' PINK PERFECTION.

A new early variety. The stalks are large, thick, and of rich nutty flavour; retains its freshness a long time after being dug up.

1s. per Packet, post free.

WEBBS' MAMMOTH RED.

THE BEST RED CELERY. Very large, solid, crisp, and possessing an excellent nutty flavour. Grown successfully everywhere.

6d. and 1s. per Packet, post free.

See Webbs' Spring Catalogue, post free, 1s.

WEBBS'

Wordsley, Stourbridge.

BEGONIAS A SPECIALITY.

Seed saved from prize plants. Choicest mixed, single or double varieties, 1s., 2s. 6d., and 5s. per packet; collections (seed) single, 12 named varieties, separate, 9s. 6d.; 6 ditto, 3s. Tubers, named singles, from 18s. to 50s. per doz.; choicest seedlings, 3s. to 30s. per doz.; hedding, choicest, 3s. to 9s. per doz.; choicest named doubles, from 18s. per doz.; choicest seedlings, 6s. to 30s. per doz.; choicest mixed, for hedding, 9s. to 18s. per doz. Catalogues gratis.

JOHN LAING AND SONS,

Begonia Growers, &c.,

FOREST HILL, LONDON, S.E.

CHRYSANTHEMUMS.

"WHICH ARE THE BEST VARIETIES?"
A QUESTION ASKED BY EVERYONE.

FOR ANSWER SEE MY CATALOGUE
(POST FREE.)

GODFREY, EXMOUTH, DEVON.

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM

ROSES. ROSES.

THE BEST and CHEAPEST in the WORLD.—12 acres of Roses. 50 choice Dwarf Perpetuals for 21s. 24 choice Standards and Half-standards for 21s. 12 Half Standards, 9s. 6d. Purchaser's selection, 50 Dwarfs, unnamed, 12s. 6d. The following are my selection, carriage free: 6 Marechal Niels, 5s.; 12 choice Climbing, 7s.; 12 best Hybrid Perpetuals, dwarfs, 7s.; 6 lovely Yellow Roses, 5s.; 6 Gloire de Dijons, 4s. 6d.; 6 beautiful Fairy Roses, 4s.; 4 Austrian Briers, 3s.; 6 Mrs. Bosanquet, 3s. 6d.; 6 choice Moss Roses, 4s.; 6 old Cabbage Roses, 4s.; 6 old-fashioned Roses, 4s.; 6 crimson Monthly Roses, 3s. 6d.; 6 pink Monthly Roses, 2s. 6d.; 6 white Monthly Roses, 3s. 6d.; 6 quick-growing Climbing Roses, 2s. 6d.; 12 Sweet Briers, 3s. All for Cash with Order. Thousands of Testimonials. Catalogues free.

JAMES WALTERS, Rose Grower, EXETER.

BARR'S SEEDS

OF FINEST SELECTED STRAINS
AND TESTED GROWTH

Barr's Ne Plus Ultra French Bean.

A fine forcing variety, very early, and producing an abundance of fine pods Per quart, 1s. 6d.

Barr's Earliest French Shorthorn Carrot.

A favourite for soups, and extremely early; the best variety to sow in frames. Per oz., 10d.

Barr's Pride of the Market Cucumber.

A specially fine selection, dark green, and of handsome shape, a favourite in Covent Garden Market. Per packet, 1s. 6d.

Barr's Improved Telegraph Cucumber.

A fine selection, handsome straight fruit of fine flavour, very prolific. Per packet, 1s. and 1s. 6d.

Barr's "Eureka" Melon.

A grand new scarlet-fleshed variety, fruit large and densely netted, flavour delicious, heavy cropper and early; a splendid exhibition variety. Per packet, 1s. 6d. and 2s. 6d.

Barr's First of All Radish.

Fine little, short leaved, very early Radishes, scarlet or white. Each, per oz., 6d.

Barr's Early Ruby Tomato.

Large, solid, bright scarlet fruit, of fine form; an abundant cropper, and best first early Tomato. Per packet, 1s.

Barr's Thick-fleshed Tomato.

Surpasses all other varieties for depth of fruit, solidity of flesh, high quality, and heavy cropping. Per packet, 1s.

Barr's Seed Guide, containing a full descriptive

List of the best vegetables and most beautiful flowers, sent free on application.

BARR and SONS,

12 & 13 KING ST., COVENT GARDEN, LONDON.

SEED LIST

(Free on Application).

FEATURES:—

Alphabetically arranged.

Best sorts, in heavy type, can be seen at a glance.

Probably the most explicit practical instructions for cultivation ever published in any Catalogue.

Many hints and recipes for cooking and serving the various vegetables.

Directions for the storing and forcing of vegetables Medical qualities of many vegetables and herbs.

Prizes of £5, £3, (two of) £2, and £1 offered for photographs of horticultural subjects (see page 2 of Catalogue).

THE LIST, containing 93 pages and a profusion of illustrations, shows (a) WHAT TO GROW, (b) HOW TO GROW IT, and (c) WHAT TO DO WITH IT WHEN GROWN, and has been described by an Agent as one of the largest estates in England as a BOOK OF REFERENCE.

Another Customer, testifying as to quality writes:—"I should like to add that all the Seeds, &c., purchased from your establishment during the past 14 years have been of the very best quality, and have given great satisfaction."

RD. SMITH & Co.,

Seed Merchants & Nurserymen,

WORCESTER,

TO THE TRADE.

NEW VIOLET Mrs. J. J. ASTOR.

We beg to draw the attention of all growers of Violets to this beautiful double variety now first introduced by us from America. Of a lovely shade of rosy-heliotrope, the fine flowers are rather darker than Mme. Millet, and the growth more vigorous. It is also a surprisingly free bloomer, early and very sweet scented. The stock being limited, we advise all intending purchasers for spring delivery not to delay sending their orders which will be executed in rotation. Over twenty-five other varieties in stock.

Send for Trade List to—

THE MANAGERS, HOOD GARDENS, TOTNES.

SUTTON'S PEAS

For Early Work.

SUTTON'S MAY QUEEN.

Per quart 2/6.

'Your May Queen is the earliest and finest-flavoured Pea I have ever grown. Side by side with William I. and American Wonder, May Queen was a fortnight in advance. I picked them in the third week of May.'—Mr. GEORGE TOMLINSON, Gardener to D. SYKES, Esq

SUTTON'S A1.

Per quart 3/-

'Your A1 is the best and earliest Pea I have grown, coming in one week before William I.'—Mr. F. F. WHITEHEAD, Gardener to J. H. FISHER, Esq.

SUTTON'S EXCELSIOR.

Per quart 3/-

'For forcing, border and early growing, your Excelsior Pea is superb. It bears pods in pairs at every joint, well filled and of handsome shape.'—Mr. ALBERT PRIOR, Gardener to P. FRANCIS, Esq.

SUTTON'S SEEDS
GENUINE ONLY FROM SUTTON & SONS, READING.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JANUARY 22nd, 1898.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, January 25th.—Sale of Lilies by Messrs. Protheroe and Morris.

WEDNESDAY, January 26th.—Sale of Japanese Lilies, by Messrs. Protheroe and Morris.

THURSDAY, January 27th.—Sale of Hardy Plants by Messrs. Protheroe and Morris.

FRIDAY, January 28th.—Sale of Imported and Established Orchids by Messrs. Protheroe and Morris

POTATO EXPERIMENTS IN IRELAND.—It is not surprising that the celebration of the tercentenary of the introduction of the Potato at Dublin on the 9th and 10th December 1896, should have given some fresh impetus to the cultivation of the noble tuber in the Sister Isle. Mr. William Hosford, of Cork, has been giving an account of his experiments, with varieties largely picked up at the tercentenary exhibition, in the *Irish Farming World*. In speaking of the Potato crop of 1897 in Ireland, he considers it the lightest and most indifferent in quality they have had for many years past. Potatoes planted on well prepared dry land previous to the 25th March gave a fair average; plantations from that time till the middle of April on low lying land gave half a crop; while grass land, turned up into lazy beds about the end

of April and the beginning of May produced a crop not worth the trouble of lifting. Old customs die hard, but surely a crop that is so valuable in Ireland deserves better attention than the system of culture known as lazy beds. Mr. Hosford says there are three requisites in order to insure a profitable crop, (1) a good variety of seed; (2) proper cultivation, including manuring; (3) the right season of planting.

Independently of his results with the different varieties of Potatos, his experiments with manures are interesting, if only to confirm the results obtained by good authorities in this country. Mr. Hosford says that until recently it was the belief that profitable crops of Potatos could not be grown without farmyard manure; but he now affirms that the idea is not a correct one, though he asserts that good farmyard manure contains most of the ingredients necessary for the growth of the Potato. In our opinion it is largely a question of the state of the soil as to the humic matter it contains, and the nature of the season as to dryness or moisture. A good tilth of the soil would also tend to compensate for any lack of humus and a dry season. Farmyard manure, if really well made and not subjected to wasteful loss, acts mechanically as well as chemically by greatly assisting the retention of soil moisture, without which the Potatos would be unable to utilise the nutritive elements in the soil. Granted sufficient decayed animal and vegetable matter in the soil, and a moderate rainfall, farmyard manure could easily be dispensed with in the cultivation of Potatos. Ireland is better supplied with moisture during the growing season than this country, and could, therefore, the more readily dispense with farmyard manure for this particular crop. We understand that the planting of Potatos in low lying and bog land is the cause of more than half of the trouble with Potato culture in Ireland. Farmyard manure in such land is generally a greater evil than all the good derived from it under those conditions, for the simple reason that it favours the rapid growth and spread of the Potato disease, fostering it in any season, but more particularly when wet.

The experimenter speaks very highly of artificial manures, and we can quite believe they would give even more satisfactory results in Ireland than in this country, because they do not retain the moisture so favourable to the growth of the Potato fungus. Potash is required by the Potato plant in considerable quantity, and can be supplied most cheaply by the use of the salt known as kainit. He mixed this with an equal quantity of the best superphosphate (35 per cent. soluble), and used it at planting time. A small dressing of nitrate of soda was given when the Potatos were being earthed up; but in some of the lines sulphate of ammonia was employed instead of the nitrate. The sulphate is usually the stronger of the two nitrogenous manures, but the only perceptible difference was that the Potato haulm kept green for a week longer in the case of the sulphate. The results of using these three manures in the manner indicated were obviously good. Where the nitrogenous manures were both omitted the growth of the plants was weak. This is what we should have suspected, for nitrogen favours vegetative growth, and is of primary importance to Potatos. In other plots kainit and superphosphate were each used separately along with farmyard manure at planting time. Kainit gave the better result, thus showing that for Potatos the order of importance for all these artificial manures is (1) nitrogen (2) potash (3) phosphates. The first applied as a dressing, when earthing up the Potatos, and the two latter given in mixture with farmyard manure at plant-

ing time gave the best results of all. The net result again proves that an over-supply of one particular element of plant food, without an adequate proportion of all the other necessary elements is useless and wasteful.

The skill of the cultivator is put to the test when he determines by experiment what particular elements of plant food are most deficient in any given soil; for by supplying this deficiency, and that only, he gets the best possible crop with the smallest necessary outlay upon manure. Mr. Hosford also pitted farmyard manure against the artificial fertilisers in separate pots, and was greatly surprised at the much better results given by the latter alone. The plants supplied with the artificial manures led the way from the first and maintained it to the last. They also gave the greater weight of tubers, which were of equally good quality when cooked. The question arises whether or not the benefit obtained by the use of artificial manures will only be temporary. This is only what might be expected, because being more readily soluble than farmyard manure, they would to a great extent get used up the first season. This need not trouble the cultivator, who practises a judicious rotation of crops, for if the land requires more humus for the retention of moisture, it can be applied for the sustenance and benefit of the succeeding crop which may not suffer from the Potato disease. In the case of land containing sufficient humic matters its fertility can be renewed by a fresh application of the artificial manures removed by the Potatos.

Royal Gardeners' Orphan Fund.—We have to announce that C. E. Keyser, Aldermaston Court, Reading (formerly of Stanmore) will preside at the annual festival dinner of the Royal Gardeners' Orphan Fund, which will be held on April 20th, at the Hotel Metropole.

Royal Horticultural Society's Meetings and Shows, 1898.—The following are the dates fixed:—February 8; March 8; 22; April 12; 26; May 10; 25, 26, 27, Temple Show; June 14; 28; July 12; 26; August 9; 23; September 6; 20; 29, 30; October 1, Fruit Show; October 11; 25; November 8; 22; December 13.

Liverpool Horticultural Association.—On last Saturday evening the members of this society held their annual reunion at the Adelphi Hotel, Liverpool, Mr. W. Fletcher Rogers, hon. treasurer, occupying the chair. The gathering proved a most successful one, 120 members and friends being present. After the dinner an entertaining smoker was carried out with unanimous appreciation, Messrs. R. P. Ker & Sons adding in no small degree to this gratifying position.

Public Gardens of Exeter.—The capital of Devon has recently become conscious of her responsibilities in the matter of making the public gardens more attractive, and operations with that object in view will shortly be commenced. Several of the watering places on the south coast of Devon, with the exception perhaps of Torquay, are no better supplied in this respect. Brighton, the queen of watering places on the south coast, is as bald, or more so than most other maritime resorts. Notwithstanding these facts it is asserted that meteorological observations have proved that Devon and Cornwall enjoy a climate in some respects superior to that of the Riviera. Why then do the inhabitants not put their gardens in order to attract the visitors who annually seek enjoyment at the maritime resorts of the Continent on the shores of the Mediterranean. Should Exeter succeed in beautifying the gardens of the already interesting and quaint old city, other resorts, particularly those on the sea board, might well follow the example. The paper by Mr. Richard Gill, of Penryn, read at the last meeting of the Devon and Exeter Gardeners' Association, showing the capabilities of the south western counties to support a rich and varied vegetation, some of which flower in the open air from mid-winter onwards, should nerve the people to plant freely, and judiciously.

The old way is the best.—First lady gardener: "So you have given up gardening of which you pretended to be so fond." Second lady gardener: "No fear; I wanted a job, so I just said 'yes' when the gardener asked if I would take sole charge of his nursery."

Rose Kaiserin Augusta Victoria.—*The Florists' Exchange* announces that a pure yellow sport from this hybrid Tea Rose is reported from Waynesboro, Pennsylvania. It opened on Christmas morning. If that had opened in London we fear the air was too impure for anyone to have discovered it.

Royal Horticultural Society.—The Council having been consulted as to a proper mode of the use of the Victoria Medal by members of the trade have decided that the only permissible method is by the letters V.M.H. following the name of the holder of a medal. No other mention of the medal can be properly made in any application pertaining to horticultural trade or relating thereto.—*W. Wilks, Secretary. By order of Council.*

"Garden and Forest."—With the completion of the tenth volume of this excellent American paper, devoted to gardening and forestry, on the 1st inst., its publication was discontinued, after ten years' useful service. The publishers announce that they have made an experiment extending over ten years with the view of establishing a weekly journal devoted to gardening and forestry, but absolutely free from all trade influences. The ten years' trial has shown conclusively that there is not a sufficient number of people in the United States, interested in the subjects at issue, to make a paper of this class self-supporting. This, we consider, is matter for regret; but surely the time cannot be far off when gardening in private establishments in the United States should represent a big and important interest. The florist there is simply a trader and entirely different from the cultivator and lover of flowers for their own sakes in this country.

Loughborough Gardeners' Association.—Mr. A. Hamsere presided at a meeting of this society on the 4th inst. Mr. J. Lansdell, of Barkby Hall Gardens, gave a lecture on "Soils." In his opening remarks the lecturer dealt with the formation of soil from the rocks through the action of the atmosphere, rain, etc. The disintegrating influences of the lichens on the rocks upon which they grew also received mention. Specimens of various soils were submitted for inspection, a few remarks being given on each. The fertilising of soils by the admission of nitrogen was next explained at length, and the great advantage of proper draining touched upon. From experiments made at Rothamsted in the month of June it had been found that the temperature of well-drained land was 67° Fahr., whilst on undrained land it was as low as 47°. On the approach of winter vacant land should be broken up to a good depth and left to the influences of rain, frost, etc.

Torquay Gardeners' Dinner.—The Torquay District Gardeners' Association held its sixth annual dinner at the Union Hotel, Torquay, on the evening of January 4th. Dr. Hamilton Ramsay filled the chair. Apologies from several gentlemen who were prevented by stress of business from being present were read. Upwards of seventy sat down to dinner, including Mr. W. B. Smale, J.P., Dr. Horton, and Messrs. A. Shelly, W. A. Masterman, J. Dendle, A. Chandler, G. J. Bulgin, G. Goodman, and Fred. C. Smale. The usual loyal toasts having been duly honoured, Mr. J. Dendle submitted "Success to the Association." He alluded to the services rendered by the president and secretary. Mr. F. C. Smale, in responding, appealed to gardeners not members to join the association. They had received £6 more in subscriptions than ever before during the past year, and they had now a list of members 130 strong. Mr. A. Shelly proposed the "Readers of Papers." The health of the president was heartily drunk at the invitation of Mr. W. B. Smale, who eulogised the services Dr. Ramsay had rendered both to their association and to horticulture generally. Dr. Ramsay's garden, continued Mr. W. B. Smale, was a splendid advertisement both of Torquay's climate, and of the achievements of horticulture. Dr. Ramsay briefly replied. Music contributed by Messrs. A. J. Blacker, J. C. Lockyer, G. H. Brierley, Damerell, and Prowse enlivened the proceedings.

Mr. H. B. Lloyd, for the past seven months on the staff at Kew Gardens, and formerly of Croxteth Park, Liverpool, has been appointed assistant curator under Mr. John H. Holland, curator at the Botanic Station, Old Calabar. Mr. William H. Johnson, whose appointment we mentioned last week, sailed for Aburi on the 19th inst.

Royal Horticultural Society.—The society's annual examination in the principles and practice of horticulture will be held on Tuesday, April 5th, 1898. Candidates should send in their names not later than the 1st of March. A Scholarship of £25 a year for two years is presented by G. W. Burrows, Esq., F.R.H.S., Member of the Court of the Worshipful Company of Gardeners.

Kelway's Manual.—This might almost be placed in the category of books, except for the nature of its contents, for it measures 10½ in. by 8½ in. and runs to 200 pages. The covers are ornamented with a coloured illustration of one of Kelway's new single Paeonies, the combination of shades and tints of the exterior and interior of the flower being admirably represented. Messrs. Kelway & Son, Langport, Somerset, are well known for the specialities which they cultivate so extensively in their nurseries at Langport. Some of them, such as Gladioli, Delphiniums, Pyrethrums, tree or Moutan Paeonies, and herbaceous Paeonies are illustrated with large photographic reproductions. Single and double flowered Cinerarias also receive a considerable amount of attention. Amongst vegetables, Peas, Runner Beans, Onions, and Potatos also constitute some of the finer pictures of the Manual, which is also a catalogue of all classes of plants likely to be required in the garden, herbaceous, shrubby, hardy, and tender. It is also a seed list, containing every requisite for the kitchen garden, as well as sundry farm crops. Most things recorded are more or less fully described, a considerable amount of information being attached to the garden flowers, such as a record of the height, the months of flowering, the colour of the flower, use, soil, position, treatment, and other remarks. These things will be of great service, not only to amateurs, but also to those who are not so well versed in the subject of botany as to remember what the various plants and flowers should be like.

Scottish Horticultural Association.—The annual meeting of this association was held on the 11th inst., at 5, St. Andrew Square—Mr. Todd, president, in the chair. Mr. R. Laird, the secretary, in his report congratulated all concerned on the very large measure of success which had attended the efforts made in bringing the association to the high state of perfection both as regarded its literary work and the influence it had brought to bear in cultivating the tastes of the general public with a love for horticulture in its higher branches. From its foundation in 1877, each year had shown a large increase in membership, which had been the means of establishing the association on a sound basis. In referring to the first minutes the membership numbered about 100, while at the close of the present session the number was 600. The last Chrysanthemum show, held from 18th to 20th November last, proved to be a gigantic success, there being 242 competitors. That being the Diamond Jubilee, it was resolved to commemorate the event by offering a special grand Jubilee prize of £150 for twenty varieties of Chrysanthemums in vases. The association also resolved that, to still further mark the appreciation of this event, to allocate the surplus profits of the show to charitable purposes. The sum realised, £250, was allocated as follows:—£100 to the Pavilion Fund of the Royal Infirmary, £50 to the Sick Children's Hospital, £50 to the Royal Gardeners' Orphan Fund, and £50 to the Gardeners' Royal Benevolent Fund. Mr. Alex. Mackenzie, the treasurer, submitted the financial statement, which showed that the revenue for the last show amounted to £1,264 7s. 8d., and the expenditure to £1,189 6s., showing a balance of £75 1s. 8d. There was also a balance of £88 19s. 2d. on the association's funds, and this left a total surplus of £164. The reports were adopted, on the motion of Mr. R. W. E. Murray. The following officials were elected:—Hon. president, the Duke of Buccleuch; president, Mr. M. Todd; vice-presidents (two vacancies), Mr. D. P. Laird and Mr. James Grieve; secretary, Mr. Robert Laird, 17, Frederick Street, Edinburgh; assistant secretary, Mr. J. H. Murray; and treasurer, Mr. A. Mackenzie.

An Observatory for the Royal Botanic Society.—At a recent fortnightly meeting of this society, held at the gardens, Major Cotton, who presided, said that the year 1897 had been a very eventful one in the history of the society, and he was pleased to be able to congratulate the Fellows upon the improvement in the prospects. A new lease for the maximum period of thirty-one years had been promised by the Commissioners of Woods and Forests. Not only were the gardens open for study to pupils at the various medical schools, but a school of practical gardening had been started, with the approval and aid of the London County Council. The council of the British Astronomical Association were taking steps to build and equip an observatory in the gardens. Reference was made to the great increase in the number of Fellows admitted to the society during 1897, being over eighty above the average annual number for the last ten years.

Shirley Gardeners' Mutual Improvement Association.—A meeting of the above society was held at the Parish Room, Shirley, Southampton, on Monday the 17th inst., the president, W. F. G. Spranger, presiding over a fair attendance. Mr. E. T. Mellor, B.Sc. (London), lecturer in biology at the Hartley College, gave a lecture—illustrated by lantern slides—on "Fungi; Their Mode of Life and Reproduction." The lecturer said the majority of fungi were like the beggars and thieves of humanity, living on the labours of others. He showed how they were so easily reproduced in enormous numbers, and the difficulty in dealing successfully with them to prevent this increase, even when the climatic influences were against them, owing to their being able to produce resting spores which could wait till the conditions were favourable. The lecture will be followed by another next month entitled—"Injurious and Beneficial Fungi." A hearty vote of thanks to Mr. E. T. Mellor brought a very instructive evening to a close.

Devon and Exeter Gardeners' Association.—Himalayan Rhododendrons formed the subject of the paper for the evening at the meeting of this association on the 12th inst. Mr. Richard Gill, gardener to H. Shilson, Esq., Tremough, Penryn, Cornwall, prepared a paper, but being unable to be present, the paper was read by Mr. Henry Webber, of the Royal Nurseries, Exeter. Mr. Gill indicated that the cultivation of Himalayan Rhododendrons had birth concurrently with the publication of Sir J. D. Hooker's journals of the Himalayas. Previous to that time Himalayan Rhododendrons were scanty in our conservatories, and no one apparently dreamed of their suitability for outdoor culture in this country. Their introduction instituted a new era in gardening history. When people discovered that Rhododendrons from the Himalayas could be grown in the more favoured parts of this country, the wealthy turned their attention to the cultivation of many tropical subjects during the summer months. In the southern counties of England and Wales many plants of a sub-tropical character are planted permanently in the open-air. Meteorological observations went to prove that the two most westerly counties of England enjoyed a climate superior in many respects to that of the Riviera. Some plants which get killed in the south of France during severe weather, pass the winter unharmed in the more favoured parts of those counties. Rhododendrons, whether regarded from a landscape point of view, the length of their flowering season, or their beauty of form and variety of colour, more than repaid the time and money bestowed upon their culture. It is true that some of the earlier varieties are liable to be destroyed by sharp frost, but latter displays more than make up for the loss. The humidity of the atmosphere in the west of England and South Wales, in addition to the mildness of the same, greatly favoured the wellbeing of the Rhododendrons. They also liked peat in some form or other and plenty of granite sand; but lime, chalk and a water-logged clay soil were their enemies. Being surface rooting plants they could not stand prolonged droughts. The lower branches should be carefully preserved, as they served to retain the moisture. Other details of culture were given, followed by notes about the more important of the forty-three species of Himalayan Rhododendrons described by Sir Joseph D. Hooker. T. Kekewich, Esq., J.P., Peamore, occupied the chair. A lively and profitable discussion followed the reading of the paper.

The Everbearing Peach is a variety recently given to the United States by Mr. Berckmans. It is said that the earliest fruits commence to ripen by the beginning of July, and successive crops are produced for the next three months by the same tree. The other good qualities of the variety are not so pronounced.

Chrysanthemum Show and Congress at Lille.—We are requested to say that an International Show and Congress to be held under the auspices of the Northern French Chrysanthemum Society will take place at Lille on the 10th November next. The show will be held in the Palais Ramea, a vast building eminently suitable for the purpose, and will be open five days. Amateurs and nurserymen of all nationalities are invited to take part. The Schedule will be issued in a short time, and it is expected that the Railway Companies will make a reduction of fifty per cent. in the fares.

Ealing Gardeners' Society.—On the 11th inst. there was a very good meeting and exhibition in connection with this society. In the class for a collection of vegetables (six dishes), there were six entries, which gave the tables quite a furnished effect, as the collections were well-grown and well set up, one member going so far as to neatly label his specimens with their botanical names. For instance, his Brussels Sprouts were designated "*Brassica oleracea bullata gemmifera*, Sutton's Exhibition" an education in itself. Mr. George Wythes, Syon House Gardens, supplied the incentive, the prizes going to Messrs. R. Green, J. Long, and C. Edwards. A collection of Potatos (three dishes, distinct) brought out four lots, the awards being made to Messrs. A. Crabh, W. Roberts, and C. Edwards. These prizes were in kind, and given by local tradesmen. Some other exhibits were also staged, including a dozen fine examples of Cranston's Excelsior Onion, by Mr. James Gibson, Devonhurst Gardens, Chiswick, and which were considered sufficiently excellent to receive a cultural certificate. Mr. Gihson stated that he brought them over to show that exhibition Onions, if well-grown, would keep as well as other varieties. They were large, solid, and of good appearance. Mr. Gibson occupied the chair, and in opening the meeting referred to the excellence of the exhibits and the credit it reflected on the exhibitors for the season of the year. Mr. F. Miles, Hangerhill House Gardens, then read a practical paper on Crotons, which received a meed of praise, and produced a good discussion. The botanical members preferred the more correct term of "*Codiaeums*" as representing the proper section of Euphorbiaceae, to which these garden plants belong. The chairman and Mr. Miles received the customary hearty votes of thanks.

LACHENALIAS.

WHEN well grown these Cape Cowslips make a good show in a greenhouse from the New Year onwards; and being amenable to gentle forcing a succession can be kept up by those having a good stock.

Their culture is very simple, but a few remarks may not be out of place to those who may be contemplating giving them a trial. June or July is about the best time to purchase the bulbs when resting. They should be potted up soon after receiving them, placing nine bulbs in a five and a half inch pot, or three less in a four and three-quarter inch pot, just leaving the top of the bulb above the soil. Press them fairly firm, water them if the soil is at all dry, and place the pots in a cold frame kept close until growth takes place.

I find it a good plan to cover the pots with cocoanut fibre refuse which prevents them drying up so fast. As soon as they make a new start place them as near the glass as possible, still keeping them in a cold frame or pit. Give the plants more space as growth extends, and on no account must they be allowed to suffer for want of water. As soon as you find the pots filled with roots, which is not long after potting, give them a little weak manure water once a week, and this must be continued right up to the time the little bell-shaped flowers begin to expand, increasing the stimulant as the plants gain strength.

The soil should consist of loam and leaf-soil, one-third of the latter to the former, adding a six-inch potful of bone meal and soot respectively, to each bushel of soil, with a fair quantity of rough silver sand. As with Freesias, the cooler they are brought into flower the finer the spikes. After flowering they

must be kept under glass and not allowed to suffer for water, though this must be gradually withheld as the growth matures and turns yellow, when they may be laid aside for a time. They should again be shaken out and repotted towards the end of July or early in August, discarding all offsets, unless required to increase the stock. Give the same treatment as before advocated.

There are a score or so of species and varieties, but my experience is limited to the following:—*L. luteola*, light golden yellow; *L. Nelsoni*, rich yellow; *L. pendula*, red, tipped green and yellow, a very pretty variety and a strong grower; and *L. tricolor*, very free flowering, yellow, margined with green and red. The last-named has its leaves spotted. There are some white, as well as rose sorts, the best of which I hope to add to our collection a little later. I have used them as cut flowers for vases, but to my idea they appear a bit shy for this purpose.—*J. Mayne.*

NOTICES OF BOOKS.

THE GARDEN ANNUAL ALMANACK AND ADDRESS BOOK. Published by W. Robinson, London; "The Garden," and "Gardening" Office, 37, Southampton Street, Strand, W.C. 1898. Price 1s.

THIS annual publication maintains the principal features of former years, namely, the almanack for each month of the year 1898; an alphabetical list of nurserymen, seedsmen and florists in the United Kingdom; foreign nurserymen, seedsmen and florists; horticultural builders, engineers and sundriesmen; the principal gardens in the United Kingdom; an alphabetical list of country seats; gardeners' names and addresses; the principal horticultural and botanical societies; the new plants of 1897; postal information, &c., all of which are more or less useful to various people throughout the horticultural world, but particularly in Britain and Greater Britain.

Incidentally we note that the inside title page announces that the book contains an almanack for 1897, but this must be an oversight. The weather warnings and kindred statistics of some former editions have been omitted and their place occupied by more up-to-date requirements of the gardener and gardens. A list of the principal horticultural and botanical societies, and a list of the staffs of botanical departments and establishments abroad, but in correspondence with the mother garden at Kew, are also useful additions. The volume has slightly increased during the past ten or fifteen years, the pages during that period rising from 319 to 411; and this is the case notwithstanding the fact that the new plants are now no longer described beyond a record of the award each has received, the society awarding it, the date of the same, and by whom exhibited.

The leading and most essential feature of the "Annual" is the address list given under its several headings. Leaving out of account the horticultural and botanical societies at home and abroad, as well as the botanical gardens abroad, the pages rise from 187 to 291 during the past fifteen years. This must be largely due to the greater number of addresses that have been got together, as well as to the new gardens that have been laid out since then, the increase of nurseries, and of establishments that supply the ever-increasing wants of the garden. We are amused to notice only one address given under the heading of Haddingtonshire, the rest being given under East Lothian, as if it were a separate county, which is not the case. Nevertheless the desert has not yet wholly been brought in, as Kipling would say; for many establishments now exist as deserving of being recorded as some of those that are. There is an increase of country seats in various parts of the British Isles, as well as the town or suburban residences of merchant princes, of which we fail to find record. Some of the most remote and seemingly isolated garden establishments are, moreover, in touch with the newest Rose, Chrysanthemum or Carnation, and therefore, deserving of recognition.

The names given are not, however, correct in all cases. A perfect list would be almost impossible of accomplishment for any one year, owing to the incessant changes amongst gardens, gardeners, and even employers, all over the country. Establishments in some cases get completely broken up, some

of them in fact, being built over, leaving no trace it may be of the erstwhile fine gardening establishment. This is entirely human; but the address list will be found most useful all the same.

REPORT OF THE COUNCIL of the Royal Horticultural Society for the year 1897-98, with the List of Fellows, Associates, and Affiliated Societies; also Arrangements for the year 1898. 117, Victoria Street, London, S.W.

The Report of the Council gives a list of Fellows, of whom there are something between three and four thousand. It also contains the annual revenue and expenditure account, which the Fellows will peruse with interest. From it we note that the Temple Show was at once the most popular, most expensive, but most remunerative, of the shows held by the society during the past year. It may interest our readers to know that the expenses connected with the Victoria Medal of Honour amounted to £174 14s. 3d. The produce sold at Chiswick Gardens, admissions, and other miscellaneous items, brought a return of £357 3s. 3d., reducing by that amount the maintenance of that historic trial ground. The total expenditure of the society was £5,481 6s. 3d., and the total revenue £6,303 13s. 7d., thus leaving a balance of £822 7s. 4d. on the right side, which will be the most interesting item to many.

The list of plants for distribution from the society's gardens at Chiswick accompanies the report. Some of the plants offered are scarce, as is usually the case, but Ivies and Phloxes are numerous in variety, particularly the Phloxes, of which the trial has been extensive for some years past.

The "Arrangements for the Year 1898," besides the record of arrangements, gives some interesting items concerning the examination in horticulture to be held on April 5th next. G. W. Burrows, Esq., F.R.H.S., a member of the Court of the Worshipful Company of Gardeners, offers a scholarship of £25 a year for two years to the student who shall pass highest at the examination and comply with the conditions. A similar scholarship is offered by the Rt. Hon. the Lord Amherst for 1899.

THE ENGLISH TULIP, and its History, with notes on its Culture and raising of new Seedlings. Barr & Sons, 12 & 13, King Street, Covent Garden, London, 1897. Price 1s. 6d.

The terms English Tulip apply to the varieties of the florist's Tulip, which have long been cultivated by amateur specialists, more particularly in this country, and which, presumably, have for the most part been raised in Britain. As our readers will remember, a great Tulip Conference was held by the Royal National Tulip Society in the Royal Botanic Society's Gardens, Regent's Park, on May 12th, 1897. We gave an account of the conference at the time, but permanence is also given to the papers read by their being embodied in pamphlet form. An illustration on the back cover shows the main characteristics of a feathered, flamed, and breeder English Tulip; and the text of the lecture on "The History and the Properties of the Florist's Tulip," by J. W. Bentley, will enable the would-be student to master the details that limit and hedge about a Tulip admissible within the pale of that select group of varieties originating from *Tulipa gesneriana*, which the florist proper will condescend to recognise. As in the case of many other floral phenomena, the florist has never dreamed nor been able to imagine why his breeder Tulips should in course of time become variegated, that is, broken or rectified.

The known and recorded history and other items of information will, however, constitute interesting information for those who desire to make an acquaintance with the florist's Tulip. There is also a chapter on "Seed and Seedlings of the Florist's Tulip," by the Rev. F. D. Horner, M.A., V.M.H.; and another on "The Cultivation of the Florist's Tulip," by C. W. Needham, all of them being well worthy of perusal, because written by specialists of this particular culture.

PRACTICAL HINTS ON THE CULTURE OF CACTI. By Geo. Bourne (Silver Medallist). Price 2d. Biggs & Son, 139-140, Salisbury Court, London, E.C.

This, a pamphlet of thirty pages, is No. 4 of Messrs. Biggs & Son's handy series of fruits, flowers, and vegetables. It contains a number of woodcut illus-

trations of various genera belonging to the Cactus family. The author of it is himself a cultivator of what he considers an abused and neglected class of plants, capable of affording genuine pleasure to their devotees. Their culture is of the easiest description, and they are consequently adapted for those who have little time to attend to the requirements of their plants. The stems are usually quaint and singular, but their flowers vary from the purest white to the most gorgeous carmine, crimson, and rich yellow. Many of them are well-adapted for window culture, including showy flowering kinds like *Epiphyllum* and *Phyllocactus*. The author says that in Belgium and Germany the peasants are very partial to the Rat's-tail Cactus (*Cereus flagelliformis*), of which he has seen specimens in their windows, 9 ft. in circumference, and covered with bloom.

Some pages are devoted to the cultivation of Cacti, and the information supplied will prove most serviceable to beginners. Small pots are advocated; that is, small by comparison with those generally used for plants; and established plants require repotting only once in three or four years. The various requirements of the family are discussed, including syringing, watering, and compost. The only stimulant advocated is clear soot water once or twice a week during the growing season. Propagation is dealt with, as well as insect pests. These instructions are followed by short descriptive lists of all the species, under their respective genera, which the author considers worthy of the attention of the amateur. We think the spines are more liable to cause inflammation, rather than that they are poisonous. The Hedgehog Cacti, including the Devil's Pincushion, should not be sat upon. The booklet is unpretending, but well worth twopence.

PLANTS RECENTLY CERTIFICATED.

AT the meeting of the Royal Horticultural Society on the 11th inst., the undermentioned awards were made.

Orchid Committee.

CATTLEYA TRIANAERI SANDERAE, *Nov. var.*—The sepals of this variety are of the faintest blush, almost white; but the large, ovate and crisped petals are a shade deeper in hue. The lip is by far the finest and most conspicuous feature of the flower, its rich colours being brought into prominence by the pale sepals and petals. The large lamina is much crisped and crimson purple with a white edge; the tube is lilac externally, and striped with purple internally, while the blotch in the throat is lemon. The flower as a whole is large and handsome. Award of Merit. Messrs. F. Sanjer & Co., St. Albans.

LAELIA ANCEPS AMESIANA CRAWSHAY'S VAR. *Nov. var.*—The sepals of this variety are of the palest lilac, but somewhat darker at the tips. The petals are ovate, being of the same broad form as *L. a. Dawsoni*, but of a soft lilac with deep purple tips. The lamina of the lip is dark crimson, the disc golden, and the side lobes dark purple. The flower is larger than that of the type. Award of Merit. De B. Crawshay, Esq. (gardener, Mr. S. Cooke), Rosefield, Sevenoaks.

CYPRIPEDIUM F. S. ROBERTS. *Nov. hyb.*—This beautiful hybrid was obtained from *C. niveum*, and some other unknown parent. The dorsal sepal is orbicular, acute, white and lined with rosy-purple along the course of the veins. The broadly oblong petals are declinate, blunt and rounded at the apex, lined and finely dotted with purple all over, thus giving a rosy tint to the white ground. The large and beautifully formed lip is lined with purple veins on a white ground and suffused with purple in front. It was well worth the Award of Merit it received. Messrs. Hugh Low & Co., Upper Clapton, London.

Fruit and Vegetable Committee.

PEAR PRESIDENT BARABE.—On December 14th last this received an Award of Merit, and the Veitch first prize for flavour, as recorded by us on p. 263, thus testifying to its value as a late keeping variety of excellent quality. It was brought up again on the 11th inst., when the committee considered it worthy of a First-class Certificate for flavour and keeping qualities, and made the award accordingly. Mr. W. Allan, gardener to Lord Suffield, Gunton Park, Norwich.

The Orchid Grower's Calendar.

OVERCROWDING.—The overcrowding of soft-wooded plants is well known to be most injurious, and very few succeed where such a state of things exists. Orchids for some reason or other are thought by a good many to possess the faculty or power to thrive and do well if huddled together like a drove of sheep. For a time they will certainly withstand such treatment, and only because they are slow growers in comparison with other plants is it that the harm done by not being allowed sufficient breathing room is not observed until the plants begin to lose their former vigour. Unfortunately this state of things prevails in nine cases out of every ten in places where the owners are experts and fully alive to the advantages derived from plenty of fresh air and light. The old saying, "Don't do as I do, but do as I tell you," comes in well here.

I believe for certain that the plants are found growing together in masses, but the trees are no doubt far enough apart to admit of a free circulation of air amongst them. Besides, do not the plants grow near the tops, showing that this position is most congenial to them? Lower down germination is retarded, and when it does take place the plants become puny, as do the children in our dark, overcrowded cities. In the last calendar I mentioned that plants of imported *Odontoglossum crispum* may for a time stand pot thick, and it was reading it over in print that prompted me to write an article on overcrowding, in case your readers might take it that in all cases this would apply. With imported *Cattleyas*, however, it would be very different, because if they have arrived in good condition, as we are accustomed to see them now-a-days, with plenty of leaves, they would, after the first few weeks, require to be stood well apart. This will give the young growths plenty of opportunity to come away strongly. Another grievous error into which amateurs only too often fall is that they fail to see that Orchids require to be provided with fresh material to root into annually. This arises, perhaps, from the notion that is only too prevalent amongst beginners, that Orchids can live on what some term suction alone. Imported Orchids will grow and do well for the first twelve months in crocks only if kept well supplied with moisture at the roots. They are only drawing, however, on the supply stored up in their native habitats, and after that is exhausted the plants begin to go back, and once this retrograde step commences it is a bad look out. The object, then, of every grower is to keep the plants under his charge in good condition by adding some fresh food when required in the shape of fresh live sphagnum moss and good peat.

Yet another mistake is insufficient piping when putting up new structures. Plants, like ourselves, object to the harsh heat given off from the pipes when made too hot. With a small quantity of piping this is bound to happen in very severe weather and the plants suffer accordingly. When the temperature can be kept up without overtaxing the heating apparatus the plants pass through a spell of cold weather without the attendant ill effects of hard firing.—C.

Kitchen Garden Calendar.

FRENCH BEANS.—Now that the days are getting longer these will set more freely, therefore, to keep up a supply it will not be necessary to sow quite so many at one time. The sowings, however, should not be at longer intervals than three weeks from each other, or there may be blanks. Where space is limited the sowings may be made in pots or boxes, as French Beans transplant readily if not allowed to get too long before being put in their permanent quarters. About five seeds could be put into a 48 pot, to be afterwards transferred to those of larger size. The most simple mode, however, of growing this crop is to sow the seed on slight hot beds, in pits that are heated with hot water pipes; a constant and steady heat may then be maintained. When these have to be grown in fruit houses, as is sometimes the case, a close watch must be kept for that troublesome pest the red spider, and if any are observed the leaves of the plants should at once be sponged with spidercide, which will soon destroy

them. There are many varieties of dwarf Beans, but some force much better than others. Prolific, Negro, Syon House, Early Forcing, and Ne Plus Ultra are amongst the best. It should, however, be borne in mind that there is nothing gained by attempting to grow them too thickly; better err on the side of sowing thinly than having the plants over-crowded. Special attention should be paid to this when they are grown in heated pits.

POTATOS, growing either on dung-beds or in pits heated with hot-water, must have sufficient air admitted on all favourable occasions to keep the foliage sturdy. Sets for succession may be selected, choosing those of medium size; these could be started in small boxes, and gradually brought forward till such times as the beds can be got ready for them. It is not well to start these in too high a temperature, as they only become drawn up and spindly, and suffer afterwards. Any that are forward enough to require earthing ought to have attention that the haulm may not get injured in the process. As cold frames are emptied of Strawberry plants some of these may be planted with Potatos. If the sets are placed a foot apart in the row and a distance of 18 in. is allowed between the rows fine crops may be had. A sprinkling of Radish seed may be put in between the rows. All early varieties should now be stood with the eyes upwards in a light, airy place, but, unless required for planting in frames, they should be kept as cool as possible, simply excluding the frost. Sets so treated will make short stout growths that will not easily break off at the time of planting.

ASPARAGUS.—Another batch of roots should be introduced as soon as that growing on hot beds shows signs of exhaustion, in order that the young growths may be ready for use by the time the other fails to send up a supply. If such beds receive a slight dressing of sulphate of potash or kainit, to be afterwards washed into the soil with luke warm water, or a little sulphate of ammonia dissolved in the water before watering, this will assist the plants in prolonging the supply.

GENERAL WORK.—Make small sowings of Mustard and Cress, and continue to introduce Endive, Chicory, and the like for blanching in small quantities to suit the requirements of the establishment. There is much work that can be pressed forward at this time of the year that will greatly assist the kitchen garden operations later on when work of other kind needs attention. For example, all Pea and Bean stakes should be procured and sharpened, labels should be made, any gravelling needed ought to be done, that when the soil is in a workable condition there is no hindrance to preparing it to receive the various crops. A sowing of Broad Beans should now be made, and those who neglected doing this in November should lose no time in planting a few in boxes to be brought forward under glass, and afterwards transplanted in the open. Pay strict attention to Lettuce and Cauliflower plants in frames, and as soon as any leaves show signs of decay remove them that the air may circulate more freely amongst those left. All such plants should be kept as hardy as possible by a free circulation of air whenever the weather is favourable.—*Kitchen Gardener.*

FRUIT UNDER GLASS.

MELONS.—A sowing of seed should be made at once to provide for an early crop. Sow the seeds singly in 3 in. pots, using a compost of two-thirds loam to one of leaf soil. These seed pots should be plunged in a frame having a bottom heat of not less than 70° Fahr., in order to insure speedy germination. By thus placing only one seed in a pot the young plants do not receive any check, for by the time they have filled their pots with roots and have made their first rough leaves they are ready for planting out.

Meanwhile a house should be prepared for them. A lean-to or three-quarter span pit facing to the south is the most suitable for early work, and if the floor of this is sunk for 2 or 3 ft. below the level of the surrounding ground so much the better, as these sunk houses are more economic of heat than others not thus built, and, bearing in mind that a high temperature is required for the plants throughout, this is a matter of some importance. After the beds have been cleared of the whole material the house

itself should receive a thorough cleansing, first of all by means of fumigation with flowers of sulphur, and subsequently by the washing of glass and wood-work. All the walls should also be whitewashed. If the house is part of a range the greatest care must be exercised during the burning of the sulphur to see that none of the fumes escape into the houses containing plants. It will be advisable to hang wet sacks and mats against the partition or partitions to make assurance doubly sure. The fermenting material for making up the beds, which should consist of two-thirds leaves, and one-third stable litter will have received a couple of turnings previous to this date. A third turning should be given before it is used. In making up the bed the litter must be trodden down very firmly so as to obviate as far as possible the shrinkage caused by decomposition. The soil should consist of good mellow loam. This may be placed in a single ridge along the front of the bed near to the sides of the house if a single row of plants only is to be put in; in a double ridge if two rows are projected.

CUCUMBERS.—These may be associated with the Melons in the same house if it is desired to economise space. Three-quarter span-roofed pits of the kind described have usually a narrow bed on the north side of the central pathway, and in this the Cucumbers may be placed. The two subjects may be treated the same for heat, airing, watering, etc., but as the season wears on the Cucumbers will require shade, and the Melons will not.

STRAWBERRIES.—A constant succession of these must be introduced to heat in order to keep up the supply. The size of each batch must, of course, depend upon the individual requirements of each establishment. The stock of plants should have been plunged at the beginning of the winter in ashes in cold frames, in order to prevent them from becoming too sodden. During the first stage of forcing a minimum temperature of 45° Fahr. by night will be quite high enough. If any of the deep brick pits are available these make capital forwarding places for Strawberries, if filled with leaves to afford facilities for plunging. Keep the plants well supplied with clear water, and syringe well daily to keep down red spider.

STRAWBERRIES IN FLOWER.—As soon as the blooms expand they should be gone over in the middle of the day with a camel's hair brush in order to assure the settling of the fruit. The flowers that open first are invariably the strongest and give the best fruit. Once about nine fruits are set to each plant the remainder of the flowers may be picked off. A healthy plant should ripen nine good fruits, but if more are left on, the fruits will be rather undersized, save in exceptional cases. Up to this stage clear water has been sufficient for the needs of the plants, but now assistance in the way of manurial stimulant should be given. There is nothing better than liquid farmyard manure if it can only be obtained fresh. Keep the syringe well to work, and maintain a temperature of between 60° and 65°.

VARIETIES.—Royal Sovereign is, perhaps, the best all-round variety for forcing, but Laxton's Noble makes a fine early variety. The flavour is not so good as that of Royal Sovereign, but the plants crop and do well, and the fruit colours finely and has a taking appearance. Not a few growers stick to Vicomtesse Hericart de Thury, also a good forcer; and Keen's Seedling, August Nicaise, and La Grosse Sucrée are still favourites. That splendidly flavoured form British Queen forces fairly well, but must not be hurried too much. It comes in well after Royal Sovereign, and just before the earliest plants from the open ground. All it needs is to be forwarded along gently, introducing the plants into a Peach or Orchard house about the beginning of March.

POT VINES IN FLOWER.—The vines started at the end of November are now in flower, and a rather drier atmosphere must exist in the house. The temperature should range between 65° and 70° by night with a proportionate rise by day. Go over the canes in the middle of the day, and give each of them a gentle tap with the hand to facilitate the dispersal of the pollen. Stop each shoot from two to three joints beyond the bunch, and cut off any superfluous bunches that may be shown. Great caution must be exercised in admitting air, for a check now would have serious results. Hitherto we have had very little frost or cold winds, and there has been no difficulty in keeping up the temperature with a moderate use of fire heat.—*d. S. G.*

HINTS FOR AMATEURS.

Raspberries.—Amongst all the small fruits there is none that pays better for good cultivation than the Raspberry. As a crop for market work it is rather a difficult one to manage, unless the market is close at hand, for the fruit is so soft and bruises so readily that it will not stand transit for long distances and a delayed sale. A few hours only is quite sufficient to spoil both the appearance and flavour of travelled fruit, and thus it is only when the fruit can be taken off the canes and used almost directly that it can be had in proper condition. The difficulty of obtaining good Raspberries in the market, however, is an additional inducement to the amateur gardener to grow a few for his own consumption. In the kitchen the Raspberry is held in high esteem for the making of preserves, and for imparting a delicate flavour to various dishes of cooked fruits. It is very seldom indeed that too many Raspberries are grown for those who preside in the kitchen. Then the freshly picked fruit is by no means a mean addition to the dessert table, whilst the virtues of Raspberry vinegar are well known to most.

If Raspberries are to be had in quantity and in good quality they must receive proper attention. This, unfortunately, they are not favoured with, for we not infrequently see quite as fine fruits upon the wild bushes in the woods as upon the weedy specimens that are allowed to cumber and disgrace some cottage and villa gardens. Weedy the best plants soon become if their requirements are not attended to, and it matters little what the variety is, it is sure to degenerate, and that speedily. In most cases the plants are allowed to stand for many years on the same piece of ground, and as the years roll by the latter becomes well-nigh or quite exhausted, owing to the rich feeding nature of the plants and the lack of manurial application by the grower and owner. Now a good stool of Raspberries takes up very little more room than a poor one, although a little more attention is needed, but there can be no comparison between the returns of fruit from the two.

We will first proceed to consider the seasonable requirements of a plantation that has been kept well in hand, and not suffered to "gang its ain gait."

Pruning.—In order to have an intelligent idea of the kind of pruning needed by the Raspberry we must first of all look at the kind of growth that bears the fruit, and act accordingly. The fruit is borne on canes that are in their second season of growth, that is to say, that the young canes thrown up this year will bear fruit the next. We thus see that in order to insure a regular supply of fruit, a succession of young wood must be kept up, the two year old canes that have already fruited being cut out annually to make room for the new. This is really all there is in pruning Raspberries, but on its proper performance depends to a very large extent success or failure.

The most enlightened cultivators make a practice of removing the old canes at the end of the fruiting season, thinning the young canes at the same time. The stools are thereby relieved of a burden, and the young growths that are left not only enjoy a greater exposure to light and air, but also a larger share of nutriment from the roots. The result is that by the time the winter has set in they are plump, and well ripened. To those who wish to grow first-class Raspberries we strongly recommend this system. Supposing the above to have been performed, all that is necessary to do now is to give the young canes a further thinning, selecting three or four of the best, according to the size of the stool, and cutting the others clean out. The tops should be removed at a point where the canes begin to get thin and twisted. The cut should be made slanting so as to throw off the rain. Even then the points will die back a little, but not farther than the first-joint or node. Some growers are averse to pruning at the beginning of the winter on account of this, but we have never seen any injury to result. The exposed pith is sure to die in any case no matter at what time the cut is made. Finally the canes should be secured to the pole or wire, and the job is completed.

Those plantations in which the canes were not thinned in the autumn in this fashion will take a little longer to prune, but the only difference is that the pruning is all done at one time instead of at

twice. The same lines as suggested in the first place should be followed.

Manuring.—After pruning has been completed the next job will be the application of manure. Give a good dressing of well decayed stable litter, and fork it in lightly, taking care not to disturb the roots too much. It should be buried a few inches beneath the surface, but deep stirring of the soil is not advisable. Cow manure is an excellent food, and if it can be obtained in sufficient quantities may well be made use of.

An annual dressing of this kind is very necessary if the quality of the fruit is to be maintained. Lack of this attention is one of the great reasons why we see the miserable worn-out looking specimens that we have previously referred to. If only the annual manuring is missed for one year it becomes a matter of considerable difficulty to start it again, for great numbers of roots are produced close to the surface, and suckers are thrown up all over the place. The result is that any disturbance in the way of digging puts a tremendous check upon the plants, although they may benefit by it in the long run. Where plantations have got into a bad state therefore it becomes the wisest and most satisfactory plan to root the whole lot up and have a fresh start in another part of the garden. This gives the operator time to thoroughly prepare the ground previous to planting, and the young plants have a fair chance. It will be best in such cases to obtain some fresh plants, although if the old ones are of good varieties some of the strongest of the plants may be utilised for making up.—*Rex*.

WORK IN THE SUBURBAN GARDEN.

THERE is a good deal to do in the garden nowadays, and this will afford pleasurable occupation for spare moments, thereby helping to checkmate the gentleman who is so officious at finding something for idle hands to do.

The greenhouse will take a little looking after. It will be well to ornament it with a new door handle, for string wound round a nail, although an ingenious fastening, is not a sightly one. Plants are queer things and behave strangely sometimes. One of their favourite habits is to jump off the shelf and hide beneath the stage out of the way when they are in indifferent health. Everything likes to die quietly, of course. A look under the stage will therefore show much that is novel and interesting that an unobservant eye would be likely to miss. Do not disturb these resting plants under any consideration.

Dutch bulbs in a greenhouse are grand, and it is wonderful what a lot of killing they take. The tuberous Begonias that went to sleep so quietly last autumn are still sleeping. Do not wake them yet by any means, for you are sure of them now. Pelargoniums are looking fine, but want a little hustling up. A minute examination will reveal some "fly" on them—at least if it doesn't it ought to. Here is a job for a rainy day.

Passing to the outside garden you may, on your way, give a gentle kick to an iron hoop that has strayed. It is wonderful to see how much kicking these hoops will stand. The coal scuttle that somehow got hurried about the middle of December in the centre flower bed should now be resurrected and laid on one side for a future occasion. It at least gives a furnished appearance to the garden, quite Japanese in fact, and you may even improve it by filling it with hardy Ferns. A movable Fernery such as this is an acquisition.

Two or three old hoots that were deposited on the herbaceous border at the beginning of the year may now be taken away. They may be ornamental, but they do not possess any fertilising powers as far as we are aware, although, like manures of various kinds, they are highly odoriferous. There will not be so much variety when they are gone, but something else, in the mysterious economy of backyard nature, will be likely to take their place.

Coals are rather dear just now, hence it will be policy to collect the various lumps you have shied at the cats during the last three months. Things move very slowly at this season of the year, including the cats, unless proper measures are taken.

The labels in the herbaceous border have evidently been having a scrimmage, during which some of them have got knocked out. From a sense of tidiness this should be rectified. If you do not exactly know where the labels should go try the "dickery, dickery, dock" arrangement, but whatever you do put them in straight, for a lopsided label has a dis-

reputable appearance. It will be highly interesting presently to see how the label lottery turns out.

Attend to the pruning of fruit trees, for it is a *sine qua non* to successful fruit growing that something should be cut off the trees each year, it does not much matter what, but the main stem must be left, or you will get no fruit. Your pruning knife left you at the beginning of the summer, through mistaken fondness for an outdoor life. A mouch round will probably find it, and then operations may commence. If you are in any doubt as to a certain shoot, cut it out, for habits of decision mark the truly great man in gardening as in aught else.—*Nouveau Calendrier*.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Moles.—*R. Meavns*: Apart from the vexed question of the food of moles there is no doubt that these burrowers do considerable harm to plants by cutting or otherwise injuring the roots during their mining expeditions. On lawns they are an especial nuisance, and you should make every endeavour to catch the one that is now disturbing yours. We say one advisedly, for we do not think it likely that there are a number at work, as one animal in a single night will make a lot of disturbance. You can obtain the ordinary steel mole trap from any ironmonger. This must be carefully inserted in the principal burrow.

Peach Wall.—*Peaches*: If the wall is a high one the quickest way to cover it will be as follows: Plant a row of dwarf fan-shaped trees, and train these to cover the wall to a height of 7 ft. or so. Between each dwarf tree plant one having a clean stem of about 6 ft. with a good head at the top. These taller trees should also be trained fan-wise. You may have to pay a little more in order to get trees of the right stamp, and if you order them from a local nurseryman we should advise you either to take a practical man with you or commission him to obtain the trees for you. If you write to any good nurseryman, however, and say what you want you would be served as well as, or perhaps rather better, than if you chose the trees yourself.

Root-Pruning a Plum Tree.—*Aloe*: We think you are quite right in deciding to root-prune the Plum tree. Its tendency to make over-gross shoots must be checked if it is to become fruitful. Open out a trench about 4 ft. or 5 ft. from the stem, and work gradually downwards. Cut through all the big roots, and carefully move on one side the smaller ones. Dig down until you have actually got under the ball of the tree. Afterwards work gradually towards the centre with a fork, cutting all the larger roots met with that have a downward direction. Then refill the trench, spreading out the fibrous roots that have been moved on one side in digging. Commence operations as soon as the soil has recovered from its present stickiness. The suckers thrown out from the base of the tree should be removed.

Begonia manicata.—*A. O.*: From the particulars you send it is evident that your treatment of the plants is all right, and that it is not to blame for the falling of the leaves. This might be ascribed with certainty to the malign influence of the fogs which have been so prevalent of late.

Grapes.—*A. O.*: The best white Grape to force early with Black Hamburg is Foster's Seedling.

Young Vines.—I planted a house with strong young Vines, three-year-old, last year. In accordance with advice received I took up one shoot from about 3 ft. from the ground and removed all the others. The shoots that were left have developed into first-class canes which have been shortened back to within about 6 ft. of the point at which they originated. Would it injure the canes to allow them to carry fruit this year?—*Reader*.

You may allow each cane to carry two or three bunches without fear of injury to the plants.

Cyclamen—*N.B.*: You are rather late in sowing the seed. The plants will flower late next season after those raised from the autumn sowing are past their best. The seed should be buried about a quarter of an inch deep, but not more. A temperature of 55° will be necessary to insure speedy germination.

A North House.—A glass house such as you describe, *G. Hendon*, facing to the north may be turned to good account in a variety of ways. First of all you may turn it into a Fernery with the best of results. It would also do for late Camellias, some of which might be planted out if the house is large enough, and others grown in pots. *Lapagerias* might be utilised for covering the roof. Such a house will also be handy for retarding flowering plants of various kinds. If you want it permanently furnished, however, the Fernery project would probably yield the most satisfaction.

Cherries Under Glass—Cherries are not grown so frequently under glass as Grapes or Peaches, *E. Morton*, but they are still treated in this way fairly extensively. The great thing in their under-glass cultivation is not to force them too hard at the early part of the season. Cordon trained trees are the most suitable. If you decide to plant some Cherries we shall be pleased to give you a list of good desert varieties.

NOTES FROM CHELSEA.

BEGONIA EUDOXA.

Not the least charm that attaches to the foliage of Begonias lies in the fact that they are so distinct in habit and general appearance from any other of the plants with which they are associated in the warm or intermediate houses. The curious obliquity of the leaves common to the members of the genus gives them a certain grotesqueness of form that arrests the attention of even the casual observer, and when to this is added unusual shades of green, with quaint dottings or markings, the foliage becomes beautiful, while the plants do not cease to be interesting. The accompanying illustration (for which we are indebted to the Messrs. Veitch) shows a charming novelty in this class of Begonias, which is being sent out this year by the Chelsea firm, and is certainly one of the handsomest plants ever raised



BEGONIA EUDOXA.

at the Royal Exotic Nurseries. It is of hybrid origin, having been obtained from *B. Burkei*, fertilised with the pollen of *B. decora*, a well-known and beautiful foliage Begonia.

The leaves are from 6 in. to 9 in. in length, and, as will be seen in the illustration, of pronounced obliquity. The nerves and ground colour of the upper surface are rich bronze-green, the whole

surface being thickly studded with white verrucosities, which are tinted more or less with light rose. The under surface is rich carmine in hue, and perfectly smooth. Seen in a good light this colour imparts a richness of tone to the whole leaf, which is really pellucid. In habit the plant favours that of the pollen parent, *B. decora*, which is dwarf and spreading.



DRACAENA WARRENII.

DRACAENA WARRENII.

There are now so many *Dracaenas*, representing a wide range of habit and style that a new one must of necessity be really first-class if it is to attract attention. Through the kindness of the Messrs. Veitch we are enabled to present our readers with an illustration of a very elegant new variety named *D. Warrenii*, which is the result of a cross between *D. Gladstonei* and *D. vivicans*. It was raised by Mr. Albert Offer, gardener to John Warren, Esq., Handcross Park, Sussex, from whom the Chelsea firm has acquired the stock. The plant is most distinct in habit, and is in fact one of the very finest of the narrow-leaved forms. The gracefully arching

GREENHOUSE RHODODENDRONS.

AMONGST the numerous plants in the cultivation and improvement of which Messrs. James Veitch and Sons have played a most important part there has been no more conspicuous success obtained than in the case of the hybrid greenhouse Rhododendrons. So skilfully has Mr. John Heal employed two or three species that he has given us an entirely new race of plants remarkable for their beauty, freedom, and continuity of flowering, while they are of comparatively easy culture. The value of these plants for conservatory decoration, more especially during mid-winter when flowers of all sorts or any sort are at a premium, can scarcely be too highly appraised. It does not seem to matter much what time of the year a visit is paid to the Royal Exotic Nurseries at Chelsea, some of the Rhododendrons are in flower.

On December 26th last there were no fewer than thirty-two distinct forms in full bloom, and this number had even increased when we paid a visit early in January. We found that the plants had been recently potted, and, although it would seem to be rather early in the year for this kind of work, this treatment seems to suit the plants to perfection. They are given a temperature of from 50° to 55° Fabr. by night with a proportionate rise by day during the winter months, and the atmosphere is kept constantly moist and kindly. Flowering and growth are well-nigh continuous as a consequence.

There are several distinct sections of these hybrids, both single and double flowers being represented, although the former are numerically much the stronger. By crossing the Javan species *R. javanicum*, which has orange-yellow flowers, spotted more or less with red, and *R. jasminiflorum*, a species which bears white Jasmine-like flowers with a pink eye, common to Malacca, the race of *Javanico-jasminiflorum* hybrids has been obtained. In this section we get dwarf sturdy plants with flowers of varying sizes, but generally large, and as varying, brilliant colours. Many of these have from time to time received a First-class Certificate or Award of Merit from the Royal Horticultural Society, and abundantly indeed are the awards deserved. *Hercules* is an especially grand form with huge flowers that exhibit a rich shade of orange-yellow, toned here and there with splashes of rose-pink. *Lord Wolseley* may be described as an improvement upon the species *R. javanicum*, for the flowers are bright orange-yellow spotted with rose towards the

deeply channelled leaves are from fifteen to twenty inches in length, and a little over an inch in width. The colour is rich crimson-black, the younger leaves breaking the monotony by having a comparatively broad carmine marginal or sub-marginal stripe running their whole length. The general appearance of the plant is exceedingly elegant, and it will, without doubt, be largely grown in the future

margin. Purity is a charming pure white form which comes close to *R. jasminiflorum*, but differing in the shape of the bloom, and of course without the pink eye that characterises that species. The segments of the corolla too are broader and smoother. Imogene is a large buff-yellow flower with bright carmine filaments to the anthers which set it off amazingly. On first opening the flowers of Aphrodite are blush-white, but after they have been expanded for a few days they lose the colour and change to pure white.

Of the older varieties Princess Alexandra is still one of the best, and in its own way is every whit as useful as the larger flowered newer varieties. The flowers are white, tinged more or less with blush. Princess Beatrice is of wondrously free flowering habit, and throws large, almost globose trusses of flowers that exhibit a delicate shade of yellow suffused with pink. By crossing *R. Teysmani*, a Sumatran species introduced a few years ago by the Chelsea firm, and the Javanico-jasminiflorum hybrid Lord Wolseley a magnificent form named Cloth of Gold has been evolved. This was certificated by the R.H.S. in November, 1896, so that it is still a novelty. The flowers are of great size, being fully $2\frac{1}{2}$ in. in diameter, and bright golden-yellow in hue. The tube is wide and open at the mouth, and the segments are broad, reflexed, and spreading. The truss is of great width in proportion to its depth, and inclines to a certain flatness on the top.

Repeated crosses between the Javanico-jasminiflorum hybrids and *R. multicolor* have resulted in a race or section of hybrids that contain many promising and valuable forms. *R. multicolor* itself is a very floriferous species from Sumatra, which varies considerably in the colour of its flowers. The leaves are narrow and the habit dwarf. The progeny has without exception inherited from this parent great freedom of flowering, combined with sturdy habit, and rather smaller leaves. Latona is one of the finest forms of this group. It is the offspring of *R. Princess Beatrice*, and the species above referred to. The flowers are large, cream-yellow in hue, and the segments of the limb of the corolla are broad and spreading. The trusses are rather lax. *R. Princess Beatrice* is also the parent on the Javanico-jasminiflorum side of the pure white Mrs. Heal, which was one of the finest things ever sent out by the firm. The bright orange-yellow anthers serve to still further set off the flower. Neptune, a brilliant scarlet flower, was raised from *R. Minerva* fertilised with the pollen of *R. multicolor*. Triton exhibits a delicate shade of rosy-carmine, with a yellow throat. *R. multicolor* and *R. Souvenir de J.H. Mangles* were its parents.

The form Little Beauty is noteworthy, not only on account of its beauty of which it has more than little, but by reason of the fact that it is the pioneer of yet another group or race of warm greenhouse Rhododendrons. The parents are *R. Monarch* on the Javanico-jasminiflorum side, and the species *R. malayanum*, common to the Malay Archipelago and introduced from thence in 1854. Little Beauty is dwarf and bushy in habit. The trusses, which are produced with great freedom, carry from six to nine rather small glowing carmine-scarlet flowers that have an exceptionally brilliant appearance in the dull winter months. Throughout the collection this charming plant was easily to be distinguished from its warmth of colour.

The double-flowered or Balsaminaeflorum group is a splendid augmentation to the charms of the singles. The flowers are large, very double, and are not unlike some of the finer double Balsams at first sight. From a decorative point of view they are fully as effective as the singles, and although the number of varieties is limited, a considerable range of colour is yet presented. *R. balsaminaeflorum album* is, as the name denotes, a pure white form. The flowers are of great size and substance. *R. b. aureum*, *R. b. roseum*, and *R. b. carneum* are the counterparts of *R. b. album* in yellow, rose, and flesh-pink respectively. *R. b. Rajah* is a fifth form that is to our way of thinking the handsomest of all. The flowers are bright fawn-yellow in hue, tinted at the margins of the central florets with rose—a distinct break away from the self coloured varieties.

All the foregoing forms, together with many others, of which space forbids mention, caught our eye as we were piloted round by Mr. Heal, whose care for these plants is that of a father.

REDLANDS, GLASGOW.

GARDENING is still carried on with spirit at Redlands, Kelvinside, Glasgow, the residence of J. B. Mirrlees, Esq., in the suburbs of the great city. Mr. George Russell, the genial and courteous gardener, has conducted the affairs of the garden for many years, and is as enthusiastic as ever over the Orchids, stove plants, and other subjects that make up the collection. During the past autumn we paid a visit of inspection, and passing into the stove, noted the gigantic specimen of *Anthurium warocqueanum*, bearing eleven of its huge and velvety leaves on a tall stem. Its congeners, *A. Veitchi* and *A. crystallinum*, were also in fine condition, though smaller. Very striking also was a specimen of *Dracaena goldieana*, of great size, and consisting of numerous stems, a condition in which we rarely find this species, because constantly propagated to furnish decorative plants in small pots. *Croton russelliana* is one of the best of the broad-leaved varieties, and was raised here by Mr. Russell as a result of the crossing of *Disraeli* with *andreaum*. The leaves are obtusely three-lobed and much coloured with crimson and red. Stove plants have long been well cared for at Redlands. The singular *Coryanthes speciosa* and the curious *Gongora maculata* flowered recently in this same house.

Suspended from the roof are numerous species and hybrids of *Nepenthes*, all well furnished with a wealth of richly-coloured pitchers. *N. dicksoniana* is notable for its flowering while the plants are yet in quite a small state. *N. northiana* also does well, for we measured pitchers $3\frac{1}{2}$ in. to 4 in. in length without the lid. The glaucous bloom and the blotches in the throat of this species are very handsome, as they are uncommon in the genus. The large pitchers of *N. rafflesiana* hold over a pint of liquid and ants are captured in great quantities by them. *N. Mastersi* and *N. intermedia* are also very serviceable hybrids. The pitchers of *N. hookeriana* forcibly recall those of *N. rafflesiana*, but they are shorter, wider, and more highly coloured. The freedom with which it produces pitchers is one of its valuable characteristics; and its value is here evidenced by the large number of plants, both old and young in the stove. There is a large plant of *N. Veitchi*, by no means a common species. The pitchers of *N. ampullacea* are smaller and less conspicuous than either of the above, but they are produced in great numbers, and often upon leaves that lack the usual green blade considered by scientific men a dilated or winged leaf-stalk.

The back wall of the propagating pit is beautifully draped with *Cissus discolor* and *Hoyas*. Here were some well-furnished plants of *Sphaerogynae latifolia*, though actually only recently-rooted cuttings, consisting of the tops of large plants. Many other stove plants are treated with equal success. In passing from one house to another we noted a *Dahlia* growing in a sheltered corner, a position it has occupied for the last twenty years. Surely that is uncommon in this country, particularly in a latitude so far north as Glasgow, where it "snaws" in the intervals between the showers of rain, though the latter are by far the more common.

The Orchid houses are well packed with a useful collection of all the leading classes or types of this popular family. A good many of them were in bloom on the occasion of our visit, though the bulk of them were practically out of season. A fine piece of the rare *Dendrobium brymerianum harveyanum* valued at £25, was sent here by mistake for a more common kind, and is highly valued by the possessor. It may be remembered that *D. nobile Cooksoni* turned up here some years ago in an unexpected way, as noted in our pages. Others are grown in great quantity and variety. Alongside of them was a handsome plant of the singularly blotched and marbled *Tillandsia (Vriesia) hieroglyphica*.

In one of the cool houses *Odontoglossums* and allied subjects presented a wonderfully interesting display for that particular time of the year. A spike of *Oncidium macranthum* carried twenty-five fine blooms. Other useful and ornamental subjects in bloom were *Odontoglossum crispum*, *O. Uro-Skinneri*, *O. harryanum*, and many natural hybrids belonging to the genus. The panicked brown flowers of *Oncidium confertum* are seldom seen in collections. The exceedingly pretty *O. Phalaenopsis* or *O. nubigenum*, having white flowers, tinted with violet and having violet blotches, is likewise a more

uncommon plant than it was some years ago, a fact which goes to prove that the grower takes excellent care of his favourites. Another cool house contained a fine variety of *Odontoglossum tripudians* and other interesting subjects. Tufts of prairie grass from Table Mountain, Cape Colony, were covered with seedling *Disas* which the gardener is nursing into life and beauty. Various curious and interesting subjects come into bloom amongst the grass, including a white flowered *Utricularia*. The hybrid *Disa kewensis* also finds a home at Redlands.

The *Cattleyas* are largely grown in baskets, and *C. intermedia* was amongst those in bloom. The fragrant *Oncidium tigrinum*, and a large healthy piece of *Miltonia spectabilis moreliana* helped to keep the house gay. A batch of *Saintpaulia ionantha* showed that the atmosphere of this house agreed well with it.

A house was gay with tuberous *Begonias* in all the principal colours, and as they are grown cool the plants make dwarf and sturdy specimens, with large circular flowers, some of which last season measured 6 in. across under glass—a size that is surely sufficient to satisfy the most fastidious. Single varieties are also used for bedding out and do well here during the summer months.

The conservatory occupies an elevated position abutting against the mansion, and is well exposed to light and air on all sides. Orchids in bloom were mixed with the other occupants of the house, and included such things as *Zygopetalum Mackayi*, *Acropera Loddigesii*, *Stanhopea grandiflora*, *Dendrobium formosum giganteum*, and others. The grand old specimen Tree Fern that formerly occupied the centre of this house, and had been lowered once or twice, got too tall at last and was bequeathed by the owner to the Parks department of Glasgow, and is now housed at Camphill there, under the care of Mr. Mc Iver, one of Mr. Whitton's foremen. A tree of *Cyathea medullaris*, 20 years old, now occupies the centre of the conservatory, making up in width what it lacks in height; for it has a spread of 25 ft. across the fronds, each of which has a diameter of about 5 ft. On the stems of other Tree Ferns from Australia is an unknown species of *Lycopodium*, of curious but graceful and beautiful form. It took sixteen years to germinate, or in other words the spores lay dormant upon the Fern stems which had been stored away for a great portion of that time in a cool place.

In passing through the flower garden we noted that *Violas* were freely used as edgings bordering upon the walks. *Crosford's Old Gold* is a strangely coloured flower having two black eye-like spots on the upper petals. *Holyrood* and *Bullion* are other favourite varieties. On the lawn is a pink flowered variety of Hawthorn which has been a favourite with three generations of the family, and has been shifted three times in order to get it under the eye of its admirers. The tree is yet perfectly healthy, and seemingly none the worse for the disturbance to which it has been subjected. About 600 to 700 *Chrysanthemums* in pots were standing about preparatory to their being housed; but to find room for them must have cost some thinking and shifting about of the other occupants.

Space everywhere gets well occupied here, but hardy fruit is not neglected. Amongst a collection of standard Apple trees we noted heavily cropped trees of *Cellini*, *Hawthornden*, *Lord Suffield*, *King of the Pippins*, and various others; but time being pressing we were unable to give them the attention we should have liked. "Nae man can tether time or tide," and we had to beat a rapid retreat in order to keep other engagements that same afternoon, so we reluctantly parted with our guide, philosopher and friend.

The Arnold Arboretum, Boston, U.S.A., is one of the finest of its kind in the world. It comprises 165 acres, traversed by five miles of drives and walks, and contains by far the most varied collection of hardy trees and shrubs in America. An arrangement has been made with Harvard University, which controls the fund from which the expenses of the Arboretum are supplied, and Boston City, by which the whole of the Arboretum is included within the park system of the city. Many of the plantations have been recently made, and a number of years must elapse before the young trees develop their true characteristics.

UTILITY OF EARTHWORMS.

EARTHWORMS have not a very good character in our country places. Often they are regarded as a useless product of creation, if not as enemies of culture, only to be trampled under foot when they meet our scornful gaze.

However, agriculturists have already told us that far from being injurious the worm aerates the soil with its furrows, bringing to the surface the fertilising principles carried by water into the lower layers, under the form of fine humus, absorbing humidity, aiding nitrification, possessing the value of real manure.

In fact, the worm lives on animal and vegetable remains, the decomposition of which it accelerates, rendering their assimilation by the roots of our plants easier. There is only one objection to the worm, viz., it transports to the surface microbial germs or spores, which, being produced by animals that have died from carbuncle and been buried too near the surface, might develop on the grass in pasturages and transmit disease of a carbuncular kind to cattle. It is very easy to prevent this danger by completely burning the carcasses of diseased animals or burying them very deeply, surrounded with a layer of quicklime. As such precautions should always be taken we may call worms our auxiliaries.

Mr. Wolny, professor at Munich, fully informs us of the services they render. He recently made a series of cultural experiments in two sets of boxes, in one of which earthworms were placed, whilst the other had none. The boxes containing worms always gave the best results. The following, according to *Illustrirte landwirtschaftliche Zeitung*, are the extra percentages obtained in crops:—

| | SEED. | STRAW. |
|-------------|--------------|--------------|
| Peas .. | 25 per cent. | 95 per cent. |
| Haricots .. | 69 " | 47 " |
| Rye .. | 94 " | 48 " |
| Colza .. | 92 " | 156 " |

Potatos gave 130 per cent. more tubers.

With such eloquent figures all comment is needless. Do not crush the worms!—*Agriculture Moderne*, October 3rd, 1897.

“THE TROPICAL SUMMERS OF 1896-97: THEIR EFFECTS ON THE FRUIT TREES AND FRUIT CROPS.”*

IN reviewing the many-sided effects of the tropical summers of 1896-97, the facts range themselves as favourable and unfavourable. The tropical heat, combined with drying winds, and that general absence of rain during the spring months of the period under notice, dried the soil to an unusual extent; and although in 1896 abundant autumnal rains fell, in 1897 the months of September and October were the driest known for years.

The effect of the heavy rains of the autumn of 1896 was felt in the activity of the sap and the adhesion of foliage on fruit trees rather later than usual, and consequently the trees did not get that rest which is as necessary for the vegetable world as for the animal creation; and we agree with Mr. R. D. Blackmore that the general failure of fruit crops in the spring of 1897 was largely due to that cause.

The want of power in the trees themselves to lay up that necessary nutriment, and ability to perfect embryo fruit buds, was arrested at a critical period, and as reported in the gardening papers, many cases of imperfect blossoms were noted in fruits, and doubtless many more facts would have been discovered had they been suspected and looked for.

To outward appearance the blossoms were perfect, the corollas being bold, as usual; but in many individuals either stamens or pistils were wanting. No doubt also the upper or fruit nourishing roots suffered from the want of surface moisture, and thus were prevented from doing their work—while lower anchor roots struck deeper and deeper to gain moisture and sustenance for the development of the tree, making the subject less fertile, and adding gross wood to all garden trees, and thus trees were found to require root pruning more than usual to restore that relative balance of fruit and wood-producing power which a well managed fruit tree should exhibit.

In orchards (especially among young trees) the want of fruit was a distinct benefit, as they were then enabled to form vigorous trees before starting to

crop, and a foundation was thus laid for full development and after success; as if a young orchard tree commences to crop in its earlier stages, its after-growth is checked for years, and in the future such checked trees produce pecks where bushels of fruit should be garnered.

In the dry autumn of 1897 matters were different, and the glorious and gorgeous colours of the foliage on Cherries, Peaches, and Nectarines, the fine russet-brown of the Apple foliage, and the golden Plum leaves, has led us to infer that Nature's work has been well and truly done, and with a fair spring a good all-round crop may be anticipated in 1898.

Although from a nurseryman's point of view the shorter and stouter growth fruit trees made in 1896-97 meant some loss and extra expense in staking for standard trees, &c., still the growers cannot fail to be great gainers in having the wood of fruit trees well ripened, hardened, and consolidated for future benefit, as heavy frosts tell much less severely on such perfected trees. If this is felt in the south, how much more must it benefit planters who live in the midland and northern counties! The pretty fruit shown by Mr. Day, from Galloway, and the grand Pears from Mr. Divers, Belvoir Castle Gardens, sent to the Royal Horticultural Society, bear out this fully.

The fruit crop of the Jubilee year, 1897, will be noted in our minds for its remarkably high colour and development more than for its great size. Many examples submitted to us have been beautiful beyond all former years; for example, crimson Blenheim Orange Apples, Warner's King, and other green Apples with scarlet flushes on the sunny side; and Comice and other Pears with lovely red cheeks; while many Russets have lost their character and come out with golden skins, only broken here and there with russet. Many of the less hardy Apples as Lord Suffield, Ribston, and King of Pippins, and Glou Morceau, Bergamot d'Esperen, Gansell's Bergamot, and other Pears have been so handsome and good, that planters have called for them freely, forgetting that they are not to be relied upon (as a rule) for freedom from canker, or quality. Their extra good appearance, flavour, &c., points a moral, and doubtless we ought to place these and similar good but variable Apples on walls or in warmer places. Apples of the type of American Mother, Melon, Scarlet Nonpareil, Allen's Everlasting, Duke of Devon, Sturmer Pippin, with those that do not always ripen well, as Calville Blanche, Boston Russet, Calville Rouge, Chatley's Kernel, Reinette du Canada, and Dutch Mignonne Apples, with Beurré Diel, Bergamot d'Esperen, Olivier des Serres, Beurré Rance, Beurré Baltet, President Osmonville, Easter Beurré, Zéphirin Grégoire, &c., Pears, would not be out of place on many walls which are well situated, and now devoted to a doubtful crop of Peaches or Nectarines, especially those old walls, unpointed and full of nail-holes one often sees in ancestral gardens, where choice Pears and Apples would flourish and give good results.

The extended use of large and handsome Apples for decoration should lead growers to place Peasgood's Nonsuch, Buckingham, Belle de Pontoise, the Queen, King of Tomkin's County, Twenty Ounce, Gascoigne's Seedling, &c., on walls for this purpose.

One special feature of the 1897 fruit crops was the general success of the British raised varieties, such as Nonpareil, Northern Greening, Wyken Pippin, Blenheim Orange, Devonshire Quarrenden, Yellow Ingestre, Stirling Castle, Wellington, Ecklinville, Kerry Pippin, Keswick Codlin, Winter Queening, Nanny, Hormead's, Lane's Prince Albert among Apples; and Hessel, Althorp Crassane, Hacon's Incomparable, Bishop's Thumb, Pitmaston Duchess, Crawford, Aston Town, Eyewood, and Knight's Monarch, among Pears, causing a demand to arise for trees of many old and superseded kinds, which for market purposes are yet valuable.

The general crops on the Codlin and early Apples and Pears need only be noted to state the fact that such kinds have time to recover themselves after the fruit is gathered, and so prove regularly fertile.

Exceptional prices have been made of some fruits. In our district, Devonshire Quarrenden, Ingestre, and Ribston Apples paid well (one grower selling 100 bushels of the latter as gathered at 14s 6d. per bushel), while Cox's Orange Pippins made up to 25s. per bushel retail; and Wellingtons, with a Peach-like colour, made 10s. 6d. wholesale.

As might be expected, the heat and drought have

caused all late Pears to ripen months before their usual season, and by the time this is in print many fruit rooms will scarcely have a Pear in them; at present Olivier des Serres and Beurré de Jonghe with a few of Easter Beurré from open trees are all we possess.

But we are inclined to think thorough ripening will allow us to keep Apples as late as usual, while they will certainly not be such large examples—in short, beauty will compensate for mere size.

Perhaps no outside fruit felt the grand weather of 1896-97 more than Peaches and Nectarines on walls. The trees made that reddish wood so dear to the cultivator's eye, and the crop set well. The fruit, where the trees were copiously watered, grew out to a fine size, and coloured to perfection, raising the almost lost hopes of many old gardeners and encouraging them to persevere in their open-wall cultivation. Those who had late Peaches made long prices, as the fruit under glass was forwarded by the heat, and thus made a market for the outdoor crop. Peaches and Nectarines are yearly more in demand.

We attribute the failure of the Plum crop to the causes already named, for Plums by their surface-rooting nature, would naturally be affected more than deeper-rooting fruits.

We cannot refrain from again cautioning gardeners from relying on a few varieties for an annual crop; and the best kinds for quality should be planted in various positions to ensure a return, and also to lengthen the season of each kind.

Market growers naturally go in for the sorts favoured by the public, but we are inclined to think many less known but reliable croppers should be introduced.

Strawberries, Raspberries, and bush fruits generally cropped where good deep cultivation was practised.

In conclusion, it is evident that cultivators should do all in their power to utilise all the sunshine possible, and the protection they possess, added to careful thinning of boughs and fruit, and by giving liberal encouragement to the trees that crop, and not over-stimulating those that are barren.

READING AND DISTRICT GARDENERS.

THE annual general meeting of the Reading and District Gardeners' Mutual Improvement Association was held in the club room, British Workman, on Monday, the 10th inst., when Mr. C. B. Stevens presided over a good attendance of members. The report and balance sheet read by the hon. secretary, Mr. James Pound, jun., were of a very satisfactory nature, both showing that the association was in a very flourishing condition. The membership was still on the increase, thirty-one new members had been elected during the year 1897, making over 180 "paid-up" members on the books, whilst the balance in hand was double that at the end of 1896.

The Committee regretted the death of Mr. Alfred Sutton, who had always taken a great interest in the work of the association, and had, since its formation in 1888, provided gratuitously the club room for their meetings. They also record the death of Mr. George Palmer, who was an annual subscriber from the commencement of the association. The meetings during the year had been well attended, on some occasions upwards of eighty members being present, and with the subjects so varied and interesting—such as soils; insects injurious to plant life; table decorations; summer bedding; zonal Pelargoniums; bees as friends and enemies of the gardener; kitchen garden work; Tomatos and their diseases; the Balsam; fruit growing; Sweet Peas; some types of insect pests; a chat about Chrysanthemums, &c.—much benefit and help must have been attained by meeting together.

The thanks of the committee were due to the president, Mr. C. B. Stevens, for the great interest shown, not only in presiding at their meetings, but taking an active part in all the other business connected with the association; to Messrs. Sutton & Sons for their kindness in providing a room at the Abbey Hall for the use of the members and supplying it with horticultural and other literature; to the honorary members for their kind and general support; to those who have helped forward the work by reading papers and introducing subjects for discussion; to those who have added so much interest to the meetings by bringing exhibits of flowers, &c.; and last, but not least, to the horti-

*A paper read at a meeting of the Horticultural Club on Tuesday, the 11th inst., by Mr. George Bunyard, V.M.H.

cultural and local press for publishing reports of the meetings.

After the report and balance sheet had been adopted, the following were elected to fill the various offices during the coming year: President, Mr. C. B. Stevens; Chairman, Mr. T. Turton; Vice-Chairman, Mr. G. Hinton; Librarian, Mr. J. Martin; Asst. Librarian, Mr. E. Dore; Treasurer, Mr. W. Phipps; Hon. Secretary, Mr. J. Pound, jun.; Committee, Messrs. F. Bright, C. Burton, R. Butcher, R. Chamberlain, H. G. Cox, B. Dockerill, H. Farey, W. Goddard, F. Lever, T. Neve, J. Pound, G. Smith, W. Smith, W. Townsend, H. Wilson, and J. Woolford; Auditors, Messrs. F. Tufnail and A. Smith; whilst Messrs. Cox and Woolford were elected to represent the association on the Reading Horticultural Society and the Reading Chrysanthemum Society. A beautiful group of well-grown Cyclamen was shown by Mr. Mr. W. Townsend, The Gardens, Sandhurst Lodge, noticeable being Sutton's Butterfly, Vulcan, Salmon Queen, and Giant White varieties.

FORCED FLOWERS

AT MR. WILLIAM ICETON'S.

WE have on previous visits had occasion to remark on the important part played by Mr. W. Icton, in supplying the British public with what it needs in the way of cut flowers. He has specially taken up the forcing of the Lily of the Valley, and so much space is devoted to it at the establishment at Granard Park Gardens, Putney Park Lane, that the place may well be called a Lily farm. Right through the year, from one end to the other, this handsome Lily may there be seen in bloom, although, naturally enough, there are especially busy periods as well as times of comparative slackness when the demand is small.

Any system whereby such a continuity and adequacy of supply is obtained, must of necessity be extensive and well organised, and Mr. Icton's is both. Moreover, practice has evolved a very easy and effective method of forcing, whereby the utmost is got out of the plants in the least possible time and with the minimum of waste.

The flowers are all obtained from the picked Berlin crowns which are infinitely superior to the clumps, flowering with more certainty and producing better flowers, while more can be got into the space. With the exception of one or two favoured parts our islands are not suitable for the growing of good crowns fit for forcing, and thus the chief supply comes from the neighbourhood of Berlin. Upwards of three and a half million crowns are imported by Mr. Icton each year. This represents an average of nearly 10,000 crowns for every day in the year, and between 11,000 and 12,000 for each day exclusive of Sundays. As each crown may be depended upon to flower, the number of racemes of bloom is as the number of the crowns. The winter and spring months are the busiest time of the year, and at the period of our visit there could not have been far short of 250,000 plants in full flower, or closely approaching that stage. We were informed also that in three days during Christmas week 500 dozen bunches were cut. As each bunch is composed of a dozen racemes this gives a total number of 72,000. If we allow twelve bells to each raceme—a fair average—we shall get a grand total of 864,000 of the fragrant bells.

The crowns are imported in bunches each of twenty-five. These bunches are laid in double layers out of doors and covered with soil during the winter months. A glimpse at the large area of ground even then required to accommodate them, affords to the visitor some idea of the magnitude of operations.

After the winter has passed the crowns are then consigned to a gigantic refrigerator where they are prevented from breaking into growth by the action of the cold. It is from these frozen crowns that the supply of material for forcing during the summer and autumn months is obtained. The seasons are thus made to be continuous, and they even overlap, for we were shown a batch of plants that had been kept back through the whole of 1897. Nothing in their appearance, however, could lead one to surmise this for they were fully as strong, and the flowers equally as good as those thrown by the recently imported crowns.

The plants are all grown in cocoanut-fibre in

shallow, light wooden boxes, each box containing about a hundred. A temperature of between 70° and 80° Fahr. is preserved until the flowers commence to open. In the earliest stages the houses are matted over to exclude the light, and kept thus until both leaves and flowers are well advanced. The plants are then gradually exposed to the light, the flowers expand fully, and the foliage loses much of its sickly yellow-white hue. From three to four weeks elapses from the time the flowers are placed in heat to the fully opened flower fit for cutting.

A peep into a house, filled with Lilies of the Valley, on a January day is a treat of the rarest kind. The eye is almost dazzled by the glittering white sheen of the flowers, and the warm moist air is laden with the lovely fragrance to such an extent as to be almost overpowering. Under the able superintendence of genial Mr. Kyaw, whose paternal care is manifest in this as in other branches of the establishment, the forcing of Lily of the Valley at all seasons is attended with the greatest success.

In addition to the Lilies other subjects are forced in great numbers. Thousands of Roman Hyacinths, for instance, are grown in boxes to supply the large demand. Such Tulips as Cottage Maid, Thomas Mocre, Prince of Austria, Duc Van Thol, and La Reine are also grown in great quantity, and with highly satisfactory results.

Of Liliiums there is a great store; and we would not like to say how many thousands are passed through the place each year. The quantity of bulbs potted up and standing covered with ashes in the plunging ground awaiting their turn to be removed to the houses is immense. *L. longiflorum* and *L. l. Harrisii* are the favourites. The earliest batch of the latter consists of sturdy plants about 15 in. high at the present time which will be in flower some time during March. Two or three bulbs have been placed in a 6-in. pot. Other extensive batches will keep up the succession, so that there will be no lack of flowers presently.

THE FRENCH HORTICULTURAL SOCIETY OF LONDON.

THE ninth annual dinner of the above society was held on Saturday evening last at the Imperial Restaurant, Strand, Mr. Herbert Cutbush presiding.

There was a large company of friends and members assembled, amongst whom we noticed several gentlemen representative of English horticulture, viz., Messrs. William Cutbush, H. J. Jones, J. Weathers, Harry Laing, Harman Payne, and others. The proceedings were of the heartiest nature, and dessert having arrived, speech-making and music filled up the evening.

In formally introducing the chairman to the company, Mr. Geo. Schneider, president of the society, reminded them that Mr. Cutbush's position in the gardening world and the interest he took in the society were ample recommendations for their selection of him as chairman on this occasion, and very heartily proposed his health.

Mr. Cutbush replied, saying that ever since the society was started in 1888 it had been most successful, a fact that was very largely due to the ability of its officers and the enthusiasm of its members. Numerous additions to the roll of membership had been made during the past year, and it was interesting to record that besides being represented in every European state, the society had members also in America, Algeria, the Congo, and elsewhere. Financially, there was good reason for congratulation, the society being at present in a much better position than this time last year. Many valuable additions had been made to the library, which was one of the leading features of the society. The bulletin had been improved, and the new one for 1898 will be still more so. He was pleased to raise his glass and invite them to drink to the "Continued success and prosperity of the society," coupling with the toast the name of their worthy president, Mr. Schneider.

Mr. Schneider, in reply, briefly reviewed the work of the past year, and thanked the members for the spirit of comradeship that always animated them. He also attributed a large measure of the success to English friends who kindly found room for many of the young men who desired places in this country. In conclusion he gave the toast of "The Visitors."

Mr. Harman Payne replied. The toast of "The Officers" was responded to by Mr. Friedrich.

At this point a little surprise was in store for Mr. Schneider, as Mr. Gachelin arose to make him a presentation of a case of cutlery and an address on behalf of the new members. Mr. Schneider appropriately replied to this unexpected demonstration of good feeling towards him.

Vocal and instrumental music was excellently rendered, and as a close to the proceedings the company very heartily sang the English and French national anthems.

Messrs. Wm. Cutbush & Son, of Highgate, received a cordial vote of thanks for the floral decorations.

TROPAEOLUM SPECIOSUM.

TROPAEOLUM SPECIOSUM, or the Flame-flower, is a plant to be conjured with; rather should I say it is a plant that conjures up pleasant memories, for it is only when I have been *jour de fete* that I have come across the finest specimens. It is, however, a subject fit for any theme, and one which has wound itself round my imagination, leaving, in consequence, a deep and permanent photographic impression on the retina of my visual organs. Therefore "A.P.'s" note last week has acted as an incentive, and brought back visions of the most brilliant description.

It is a plant with a character, but it requires certain simple, though necessary, conditions to bring out its character, which, when fully realised, is patent to all, and well deserves its common, as well as its specific name. But I am afraid those conditions are not obtainable even in sunny Surrey, genial though it be, because the coolness and the moisture which we find in the Welsh valleys, the Scotch glens, or the hilly districts on our western shores, are absent from our southern shires.

If, as "A. P." suggests, a sandy soil is synonymous with a sunny site, and agreeable to the plant's requirements, I ought to be able, at least, to report progress. Alas! these conditions have not sufficed! A sandy soil is a dry soil—hence I attribute the failure. But, as I do not yet intend to close the contest, I procured last spring a fresh stool, and planted it in my hardy Fern-house in a mixture of peat, loam, and leaf-soil, where, although it did not bloom, it made good growth. Should it attain a floriferous condition during the ensuing season, under altered circumstances, I should be pleased to add the reason why. I am greatly indebted to "A. P." for his compliments, which are only half-deserved, for though I may sometimes scintillate, he is always "A. P." ('Apy) in his references to plants and garden-lore—C. B. G., *Acton, W.*

LAW NOTICE.

ASHWORTH v. WELLS.

Mr. Justices Day and Lawrence were engaged on Tuesday in hearing an appeal by the plaintiff in the action Ashworth v. Wells from the decision of the learned county court judge at Manchester, who had entered judgment for defendant with costs.—Mr. C. A. Russell, Q.C., and Mr. Tweedale appeared for the plaintiff in support of the appeal, while Mr. M. Lush opposed it on behalf of the defendant.

It appeared that down to 1895 the defendant possessed a large and well-known collection of Orchids, and the plaintiff was also a grower of Orchids. In June of that year defendant sold his collection by auction, and at the auction the plaintiff purchased for twenty guineas a bulb described as a *Cattleya Acklandiae alba*. Plaintiff cultivated the plant for two years, and then it produced a purple flower. Plaintiff brought an action to recover damages for an alleged breach of warranty, and at the trial several Orchid growers were called and gave evidence to the effect that a white *Cattleya* was such a rare flower that it was seldom met with, and that the value of a plant of this description varied from £60 to £150. The county court judge, while being of opinion that if the Orchid in question had been an actual alba it would have been at the time of the sale worth more than £50, held that until the plant had shown its real nature no Orchid grower would have given more than twenty guineas for it. As the defendant had paid that sum into court he entered judgment for him with costs.

Mr. Justice Day said he had come to the conclusion, somewhat reluctantly, that the county court judge had erred in the matter of law. He was not in a position to say what a white *Cattleya* would be

worth if it were discovered; it was impossible to speculate on the value of a thing which had never been known to exist. However, he thought the plaintiff was entitled to recover not only the money he had paid for the Orchid, but interest on that sum and compensation for the trouble and expense to which he had been put in growing the Orchid for two years. Therefore the appeal would be allowed with costs, and the case sent back to the county court judge for a new trial.

Mr. Justice Lawrence concurred.
Leave to appeal granted.

GARDENING MISCELLANY.

ROSE, WHITE MAMAN COCHET.

THE Tea Rose known as Maman Cochet succeeds well in this country, and frequently makes its appearance on the exhibition table. As a result of this it is popular with a large number of growers. The new variety has pure white flowers of the same size and beautiful form as the type. It also possesses the vigorous habit and free flowering character of the parent; and the flowers may be utilised for all ordinary purposes in the cut state as well as for exhibition purposes. We note that its merits were recognised at the Hamburg exhibition by the award of a large Silver Medal. It is now being put into commerce by that Rose specialist, Mr. Peter Lambert, Trier, Germany.

PEA CARTER'S EARLY MORN.

I WAS pleased to notice an illustration of the above new early Pea in your issue for January 15th. It is very faithfully represented. I had no hesitation in deciding what variety it was before reading the name. A small packet was sent to me for trial last spring by Messrs. J. Carter & Co, which I sowed with several other well-known varieties, and it proved a great surprise to me. It is not only very early and prolific, continuing to bear for a much longer period than any other large-podded variety that I am acquainted with, but it is by far the finest Pea for either exhibition or home use I have yet seen; and if I am not mistaken it will, when better known, become a great favourite for market use; and the flavour is excellent. I would strongly advise exhibitors that are on the look out for a good Pea to give this a trial, feeling sure they will not be disappointed.—*Edwin Beckett, Aldenham House Gardens, Elstree, Herts.*

IRIS KAEMPFERI.

My employer was in London last June, and saw the flowers of the above in a florist's window, and was so much pleased with them that we bought in a few hundred roots last autumn. A gentleman who has tried them, told me the other day, that he has had them for the last three years, but they have never flowered with him. He added that they have never been known to flower in this country. Perhaps some of your numerous readers could say something about their culture.—*Nial.*

ROSE, RED MARECHAL NIEL.

THERE are now three varieties of the popular Rose Maréchal Niel, namely, yellow, white, and red. The yellow is, of course, the old variety with which we have been acquainted for many years. The White Maréchal Niel we first recorded in 1895, and there is now a considerable quantity of it in this country. The Red Maréchal Niel is named Grossherzog Ernst Ludwig, in compliment to a gentleman of that name at Hessa. It was raised by Dr. Müller from the hybrid perpetual Pierre Notting, crossed with Maréchal Niel. It seems somewhat strange to speak of it as a Tea Rose, seeing that neither of its parents belonged to that section; but that is what Mr. Peter Lambert, Trier, Germany, is calling it, and now putting the variety into commerce. Possibly Maréchal Niel is considered a Tea in Germany. The flower is large, well-shaped, full, and of a carmine-red colour. It is also deliciously fragrant, and flowers profusely from the wood of the previous year. It is a climber, though not so strong as Maréchal Niel, though otherwise bearing a strong resemblance to it. At the Rose Show at Frankfurt-on-Main last year it was awarded a Gold Medal.

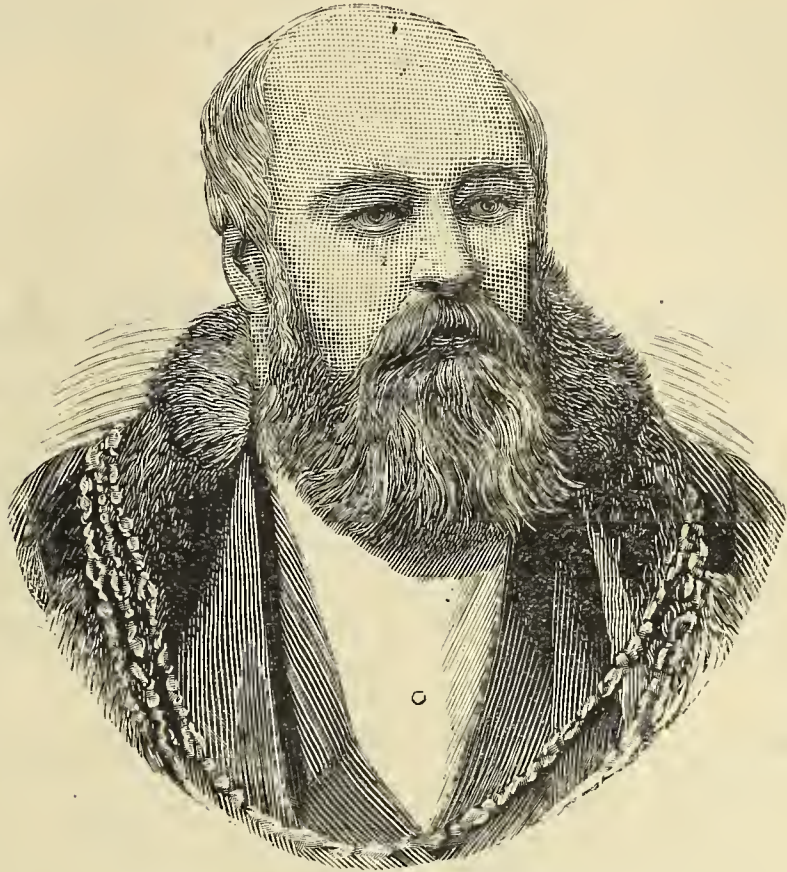
OBITUARY.

THE LATE M. JEAN LINDEN.

As briefly mentioned in last week's issue, this veteran traveller, botanist, and horticulturist died peacefully at his residence in Brussels on the morning of the 12th inst., and the world is the poorer for his loss. He was born at Luxembourg on the 3rd February, 1817, and was consequently almost on the point of

veteran collector himself conceived the idea of cool treatment for *Odontoglossums* and others which live in cool, elevated regions, and advocated the system which has since become so successful.

The subject of this notice long retained the health and vigour which were the characteristics of his youth, and though not taking so active a share in the management of *L'Horticulture Internationale* as



ALDERMAN SIR JOSEPH TERRY.

completing his 81st year. Early in his career he went to Brussels, with which city he has ever after been identified while in Europe.

The Belgian Government in 1835 sent him to South America on a scientific expedition, landing in Brazil after a journey of three months' duration. He and his companions succeeded in making extensive collections of scientific interest for the Belgian Government. Various other countries were visited north and south of the Isthmus of Panama, particularly in Central America, and, after a period of six years, he returned to Belgium. During his journeys he had many hair-breadth escapes by mountain, flood, and field, falling a victim to yellow fever, from which he was recovered by slow degrees.

His adventures, escapes, and successes so fired him with enthusiasm for travel that he did not long remain in Europe, but returned to South America, travelling extensively in Columbia, where he discovered *Odontoglossum crispum*, which was named and described by Lindley, then in the height of his career. M. Linden ransacked the mountains and forests of various provinces of that country, collecting *Odontoglossums*, *Cattleyas*, and other Orchids, which have since attained to great repute in Europe and North America. Various other countries of the South American continent were explored by him, passing northwards till he reached Cuba, from which he went to the United States, returning to Belgium after a career of ten years' travelling.

M. Linden now settled down as a nurseryman at Brussels, where he, in course of time, attained and for many years maintained a world-wide reputation in connection with Orchids and fine foliage plants, with which he has made us familiar at the Temple Shows, and in *Lindenia* and *L'Illustration Horticole* by means of his descriptions and full page, or even double page, coloured plates.

He was so familiar with the native habitats of the plants with which he has for long been identified that he sent out collectors from time to time to bring home fresh importations of well-known plants, and search for others. That he was abundantly successful in this respect the pages of those publications amply testify. Many of the valuable finds have been recorded in our pages from time to time. Several enterprising horticulturists in this country imitated M. Linden by sending out collectors. The

formerly, he maintained his position as director or administrator of the business till the last. He also had similar control over the publications above mentioned. His son, M. Lucien Linden, has for many years past relieved him of the more onerous duties of management of the establishment at Parc Leopold, Brussels. The deceased was Honorary Consul General of The Grand Duchy of Luxembourg, Commander of the Order of Leopold, and had many other honours besides. He leaves behind him a wife, son, some grandchildren, and various other relatives to mourn his loss. We tender our sympathy to the bereaved in the hour of their cruel and irreparable loss. The funeral service took place on Friday, the 14th inst., in the parish church of Saint Josse-ten-Noode.

ALDERMAN SIR JOSEPH TERRY.

This distinguished gentleman presided at the annual general meeting of the Grand Yorkshire Gala on the 7th inst., when he was congratulated upon having attained his seventieth birthday; but, scarcely have the sounds of congratulation died away, we regret having to announce, when the city of York has been thrown into grief by the irreparable loss of one of its most prominently useful and esteemed citizens.

Sir Joseph Terry was chairman of Lord Charles Beresford's election committee, and having entered upon the work with his accustomed energy, he took up his station in the Royal Station Hotel. On Tuesday he seemed full of health and vigour, and retired to rest at midnight, after seeing Lord Charles and his committee. He was seized with a violent fit of coughing about 3 a.m. on Wednesday, the 12th inst., and was dead before medical aid could be procured, although Lady Terry rang at once for help. Death was due to syncope as a result of heart disease.

Sir Joseph was born in York in January, 1828, where his family had lived before him for a long period of years. He had been Lord Mayor of York on four occasions, was knighted in Jubilee year, 1887, and filled many other public offices with great success. He entertained a great love for horticulture, in token of which he has been associated with the Grand Yorkshire Gala for a great many years, taking a great interest in its welfare, so that the society will feel the loss keenly. He had just been re-elected chairman of the council of that body on the 7th inst., when Sir Christopher Milward and Ald. Purnell congratulated him upon his hale and hearty appearance.

A portrait of Sir Joseph, then Mr. Alderman Terry, appeared in *THE GARDENING WORLD* for June 11th, 1887.

C
A
R
T
E
R
S

GREEN PEAS—JUNE TO NOVEMBER.

C
A
R
T
E
R
S

A correspondence was raised in the Daily Press last Autumn upon the shortness of the season when Green Peas are available, both in gardens and on the market. We now offer the following as representing the best collection selected from 1,024 rows we had under trial last season. It would be difficult for us to give precise dates for putting the seed into the ground, as so much depends upon soil and situation. Successional Sowings may be made any time between these dates, and the last sowing not later than the second week in June.

| NAME. | DESCRIPTION. | HEIGHT. ft. | WHEN TO SOW. | EXPECT READY TO PICK. | CARRIAGE FREE. Per pint. Per qt. |
|--------------------------|-------------------------|----------------|-----------------|--------------------------|-------------------------------------|
| Carters' Lightning | First Early White Round | 2½ | In February | May to June | 2s. 3s. 6d. |
| Carters' Early Morn | First Early Marrowfat | 3 | End of March | During June | 2s. 3s. 6d. |
| Carters' Daisy | Second Early Marrowfat | 1½ | Middle of April | Early July | 2s. 3s. 6d. |
| Carters' Danby Stratagem | Mid-season Marrowfat | 3 | End of April | July | 2s. 3s. 6d. |
| Carters' Model Telephone | Main Crop Marrowfat | 5 | Middle of April | July | 2s. 3s. 6d. |
| Carters' Model Telegraph | Main Crop Marrowfat | 5 | End of April | July and Aug. | 2s. 3s. 6d. |
| Carters' Michaelmas | Late Marrowfat | 3 | May to June | Sept. to Nov. | 2s. 3s. 6d. |

The Collection—1 pint each of 7 varieties, price 12/6; 1 quart each of 7 varieties, price 22/6, Carriage Free.

OFFERED IN SEALED PACKETS ONLY

Barter's THE QUEEN'S SEEDSMEN. 237, 238, & 97, HIGH HOLBORN, LONDON

QUESTIONS AND ANSWERS

Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Flower of Odontoglossum crispum.—T. S.: There is nothing wrong about the form of the flower, as the sepals and petals are relatively broad and overlapping one another. Before it would be appreciated, however, it would have to be twice its present size at least. We take it for granted that the plant is small and not yet thoroughly established. The true quality of the flower is best seen when the plant has attained full vigour. The variety is what we should call a light one, being nearly white, with the exception of the lip, which is blotched. The petals are beautifully crisped, and altogether the variety is pretty, but far too small at present to be appreciated.

Fowls Manure for Vines, &c.—Reader: The most valuable constituent of plant food that fowl droppings contain is nitrogen. The phosphates in it are also valuable in their way. The absolute value of the droppings would depend upon the richness of the food supplied to the fowls, and whether or not the droppings have at any time been subjected to rain or allowed to get wet. The drier they are kept till required for use the better; if exposed to rain the soluble nitrogen gets washed away and lost. Upon these facts depend the strength of the droppings and the quantity you may safely apply to Vines, Tomatos, and Strawberries. If the droppings are dry you may put a peck in a bag and sink the latter in a tub or tank containing 20 to 24 gallons of water. After it has been in the water three or four days you should give the bag a shake up now and again to facilitate the distribution of the manurial ingredients in the water. With this liquid you may water your Tomatos and Strawberries about every second or third day after the fruits or some of them are set. We should understand they are in pots. Vine borders may be watered with this solution every time they get sufficiently dry to require it. The droppings in the bag might be renewed every ten days or so. Make an estimate of the strength of the droppings according to their purity, that is, freedom from litter, &c., and whether they have previously been kept dry or not. Always err on the side of giving the liquid too weak rather than too strong. You may also give the Vine borders a dressing now of half a bushel to the rod of ground, pointing it in with a fork. About a six-inch potful of droppings might be mixed with each bushel of compost for the Tomatos and Strawberries, breaking the droppings up rather finely and well mixing them with the potting soil.

Training of Clematis.—D. W. D.: You had better attend as closely as you can to the training of the young shoots and stems as they grow during each summer for the first few years at least until they cover the allotted space. At the winter pruning it will be very difficult or impossible to do this on account of the interlacing of the stems and the twisting of the petioles or leafstalks, which become hard and woody, rendering the unravelling of the stems during winter a work of great difficulty or an impossibility. This is more particularly the case with the early summer flowering varieties. In some districts C. Jackmanni is cut down to the ground annually after frost has killed the foliage, and young stems trained up regularly every year. The best plan is to train up the young stems separately, distri-

buting them regularly over the allotted space. After they get to the top of the wires, they may be allowed to hang down loosely, at least during the summer months. They may be trimmed back more or less in winter for the sake of tidiness; but you must remember that the early flowering kinds bloom from the wood of the previous year, so that this must not be cut away, if you can avoid it. Separate the stems and tie them upright before growth recommences in spring. Do not give any pruning at first beyond cutting away dead or weak and useless shoots.

Starting Dahlia Roots.—D. W. D.: Your best plan under the circumstances would be to pot up the roots, without dividing them, in the month of March and put them in cold frames, provided they are secure from frost. In the absence of better convenience could you not make up a bed of fermenting manure to start the roots? Cover the manure with a few inches of soil and stand the pots on the top of it, covering the whole with a cold frame. This would bring the roots along as fast as anyone in a private establishment could desire. As the shoots come away give them more and more ventilation according to the state of the weather, finally hardening them off by taking the lights off altogether during the day, or even at night provided there are no signs of frost. The plants will be dwarf, but should flower well enough during the end of summer and autumn, till frost cuts them down.

Names of Plants.—G. Clayton: Acacia dealbata. —G. Ross: 1, Ficus repens minima; 2, Ficus falcata; 3, Tillandsia zehrina; 4, Carex brunnea variegata. —A. Warwick: 1, Coleonema album; 2, Pelargonium radula; 3, Oncidium praetextum; 4, Dendrobium nobile (a fairly well coloured and pretty variety); 5, Odontoglossum Rossii majus; 6, Laelia anceps —J. C.: 1, Nephrolepis davallioides furcans; 2, Nephrolepis acuta; 3, Pteris scaberula; 4, Hedera Helix arhorea. —A. Reid: Pernettya mucronata.

Communications received.—T. B.—L. K.—R. W.—Street & Co.—Sutton & Sons.—N. McF.—H. E.—A. D. W.—J. B. C.—S. N. S.—R. G. W.—W. A.—E. H. N.—J. Clanrig.—F. E.—Gracias.—L. R.—Rob.—G. Wilkins.—Enquirer.

TRADE CATALOGUES RECEIVED.

WM. CUTBUSH & SON, Highgate, London, and Barnet, Herts.—Descriptive Catalogue of Flower, Vegetable, Farm Seeds, &c.; also New Chrysanthemums. Select List of the Latest and Choicest Introductions.

JOHN SHARPE & SON, Bardney, Lincoln.—Guide to Practical Gardening.

BENJAMIN SODDY, 243, Walworth Road, London, S.E.—Soddy's Seed Catalogue.

P. LAMBERT & SONS, Trier, Rheinprovinz, Germany.—Catalogue and Price-list of Vegetable and Flower Seeds.

LAING & MATHER, Seed Merchants and Nurserymen, Kelso-on-Tweed.—Garden Seeds.

JAMES COCKER & SONS, 130, Union Street, Aberdeen.—Seeds and Plants.

SEED MARKET REPORT.

London, Jan. 18th, 1898.

Messrs. Hurst & Son, 152, Houndsditch, and 27, Seed Market, Mark Lane, report moderate supplies of Red Clover which readily sold at full prices. English Trefoil meets a demand at an advance of 2s. per cwt. in prices paid in August last. White Clover and Alsike steady.

EMIGRATION TO CANADA.

Free Grants of Land in Manitoba. Free Grants of Land, or Crown Grants at low prices, in other Provinces. Also cheap Improved Farms.

Canada exports largely Farm and Dairy produce. Canada has gold and other minerals in abundance, also immense forests, productive fisheries, important manufacturing industries, the largest area of fertile land available for settlement in the world, and a growing import and export trade in all commodities.

Pamphlets, Maps, reliable information and advice on all matters of interest to intending settlers, and as to the trade and commerce of the Dominion may be obtained gratis and post free, on application to the

HIGH COMMISSIONER FOR CANADA,

17, Victoria Street, London, S.W.

Correspondence and personal interviews invited.

BEGONIAS.

Single, in 4 colours, ros. 10s. 1s. 6d. doz. Send for detailed list

J. D. HAMON,

CASTLE STREET, BIRMINGHAM.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Malda Vale, London W.

COVENT GARDEN MARKET.

January 19th, 1898.

FRUIT.—AVERAGE WHOLESALE PRICES.

| s. d. s. d. | | s. d. s. d. | |
|-----------------------|-----------|-----------------|---------------------|
| Apples ... per bushel | 6 0 12 0 | Grapes, per lb. | 1 6 2 6 |
| Cobbs | 22 6 24 0 | Pine-apples | |
| | | per 100 lbs. | —St. Michael's each |
| | | | 2 6 6 0 |

VEGETABLES.—AVERAGE WHOLESALE PRICES

| s. d. s. d. | | s. d. s. d. | |
|------------------------|---------|------------------------|---------|
| Artichokes Globe doz. | 2 0 3 0 | Herbs per bunch | 0 2 |
| Asparagus, per bundle | | Horse Radish, bundle | 1 6 2 6 |
| Beans, French, per | | Lettuces ... per dozen | 1 3 |
| per lb. | 0 9 1 0 | Musbrooms, p. basket | 1 0 1 6 |
| Beet..... per dozen | 2 0 | Onions..... per bunch | 0 4 0 6 |
| Brussel Sprouts, | | Parsley ... per bunch | 0 3 |
| per half sieve | 1 0 1 6 | Radishes... per dozen | 1 0 1 3 |
| Cabbages ... per doz. | 1 0 1 3 | Seakale... per basket | 1 6 2 0 |
| Carrots ... per bunch | 0 3 | Small salad, punnet | 0 4 |
| Cauliflowers..... doz. | 1 6 3 0 | Splnach per bushel | 2 0 3 0 |
| Celery..... per bundle | 1 0 1 6 | Tomatos..... per lb. | 0 6 1 0 |
| Cucumbers per doz. | 6 0 8 0 | Turrips per bun. | 0 3 |
| Endive, French, doz. | 1 0 2 0 | | |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| s. d. s. d. | | s. d. s. d. | |
|-------------------------|----------|-------------------------|----------|
| Aiam Lilies, 12 blms. | 4 0 6 0 | Mardenhair Fern, 12bs. | 4 0 8 0 |
| Asparagus Fern, bun. | 1 6 3 0 | Mimosa, French, | |
| Azaleas, doz. sprays | 0 6 1 0 | bunch | 9 1 0 |
| Bouvardias, per bun. | 0 6 0 8 | Narcissus, white, | |
| Carnations doz. blms. | 1 6 3 0 | French, doz. bucs. | 2 0 3 0 |
| Chrysanthemums | | Orobids, doz. blooms | 1 6 0 0 |
| dozen blooms | 1 0 4 0 | Pelargoniums, 12 bun. | 6 0 8 0 |
| Cbrysanthemums, doz. | | Pyrethrum doz. bun. | 1 6 3 0 |
| bunches | 6 0 15 0 | Roses (indoor), doz. | 6 1 0 |
| Daffodils, per dozen | 0 9 1 6 | " Tea, white, doz. | 1 0 2 0 |
| Euonaris ... per doz | 4 0 6 0 | " Perle 1 6 4 0 | |
| Gardenias ... per doz. | 6 0 9 0 | " Safrano 1 0 2 0 | |
| Geranium, scarlet, | | (English), | |
| doz. bunches | 5 0 8 0 | Pink Roses, doz. | 4 0 12 0 |
| Lilium longiflorum | | Snillax, per bunch | 1 6 3 0 |
| per doz. | 4 0 6 0 | Tuberoses, doz. | |
| Lily of the Valley doz. | | blooms | 0 6 0 8 |
| sprays | 1 0 2 0 | Tulips, various, doz. | 0 9 1 6 |
| Lilac (French) per | | Violets (Parma), per | |
| bunch | 3 0 4 6 | bunch | 3 0 4 0 |
| Marguerites, 12 bun. | 2 0 4 0 | " .. doz. bun. | 0 9 2 0 |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

| s. d. s. d. | | s. d. s. d. | |
|---------------------------|-----------|-------------------------|-----------|
| Arborvitae, per doz. | 12 0 35 0 | Ferns, invar., per doz. | 4 0 12 0 |
| Aspidistra, doz..... | 18 0 36 0 | Feras, small, per 100 | 4 0 6 0 |
| " speolmen | 5 0 10 0 | Ficus elastica, each | 1 0 5 0 |
| Azalea, per doz. | 30 0 42 0 | Follage Plants, var., | |
| Chrysanthemums, doz. | 6 0 12 0 | each | 1 0 5 0 |
| Cineraria, per doz. | 9 0 12 0 | Lilium Harrissii, | |
| Cyclamens, per doz. | 12 0 18 0 | per pot | 2 0 4 0 |
| Draocena, various, | | Lycopodiums, doz. | 3 0 4 0 |
| per doz. | 12 0 30 0 | Marguerite Daisy doz. | 6 0 9 0 |
| Draocena viridis, doz. | 9 0 18 0 | Myrtils, doz. | 6 0 9 0 |
| Euonymus, var. doz. | 6 0 18 0 | Palms in variety, each | 1 0 15 0 |
| Evergreen, invar. doz | 6 0 24 0 | Palms, Specimen ... | 21 0 63 0 |
| Erica Hyemalis p. doz. | 9 0 15 0 | Pelargoniums | |
| Erica Graecilis, per doz. | 6 0 9 0 | Scarlets per doz | 2 6 6 0 |
| Erica, various, per doz. | 8 0 12 0 | Tulips, various, doz. | 1 0 2 0 |

WEBBBS' NEW PEAS.

WEBBBS' PIONEER.

Now Offered for the First Time.

This new Pea is a remarkably handsome blue wrinkled Marrow, growing from 3 to 3½ feet in height; it is hardy in constitution, and very early in coming to maturity, following immediately after the early small round varieties. The pods are very large, straight, and contain from 8 to 10 fine Peas of most excellent quality.

2s. 6d. per pint, post free.

WEBBBS' ASTRONOMER.

A remarkably handsome main crop variety growing about 3 feet in height. It is a wonderful and most persistent bearer, and is invaluable for general or late sowing. The pods are of medium size, closely filled with Peas of the finest quality.

3s. 6d. per quart, post free.

WEBBBS' SENATOR.

This splendid new Pea is a very remarkable cropper, the pods being produced mostly in pairs; they are of good size, and contain on an average about 9 large peas, which are sweet in flavour.

2s. 6d. per quart, post free.

See Webbs' Spring Catalogue, post free, 1s.

WEBBBS' Wordsley, STOURBRIDGE.

BARR'S SEEDS

OF FINEST SELECTED STRAINS AND TESTED GROWTH

Barr's Ne Plus Ultra French Bean.

A fine forcing variety, very early, and producing an abundance of fine pods Per quart, 1s. 6d.

Barr's Earliest French Shorthorn Carrot.

A favourite for soups, and extremely early; the best variety to sow in frames. Per oz., 10d.

Barr's Pride of the Market Cucumber.

A specially fine selection, dark green, and of handsome shape, a favourite in Covent Garden Market. Per packet, 1s. 6d.

Barr's Improved Telegraph Cucumber.

A fine selection, handsome straight fruit of fine flavour, very prolific. Per packet, 1s. and 1s. 6d.

Barr's "Eureka" Melon.

A grand new scarlet-fleshed variety, fruit large and densely netted, flavour delicious, heavy cropper and early; a splendid exhibition variety. Per packet, 1s. 6d. and 2s. 6d.

Barr's First of All Radish.

Fine little, short leaved, very early Radishes, scarlet or white. Each, per oz., 6d.

Barr's Early Ruby Tomato.

Large, solid, bright scarlet fruit, of fine form; an abundant cropper, and best first early Tomato. Per packet, 1s.

Barr's Thick-fleshed Tomato.

Surpasses all other varieties for depth of fruit, solidity of flesh, high quality, and heavy cropping. Per packet, 1s.

Barr's Seed Guide, containing a full descriptive List of the best vegetables and most beautiful flowers, sent free on application.

BARR and SONS,

12 & 13 KING ST., COVENT GARDEN, LONDON.

VEITCH'S SUPERB TOMATOS.

VEITCH'S "GOLDEN JUBILEE."

First-Class Certificate, Royal Horticultural Society, May 26th, 1897.

A splendid acquisition; one of the finest Tomatos of recent introduction, of a beautiful golden colour, magnificent cropper, and of excellent flavour.

PER PACKET, 2/6.

"FROGMORE SELECTED."

First-Class Certificate, Royal Horticultural Society.

This exceedingly prolific variety was raised by Mr. Thomas, the Royal Gardens, Frogmore. The fruit is of a bright red, medium in size, very uniform and smooth in outline, and suitable either for forcing or outdoor cultivation.

PER PACKET, 1/6.

"HAM GREEN FAVOURITE."

First-Class Certificate, Royal Horticultural Society.

This splendid variety for two successive seasons held the foremost place in the comparative trials of Tomatos at the Royal Horticultural Society's Gardens, Chiswick.

PER PACKET, 1/6.

James Veitch & Sons, Ltd.,

Royal Exotic Nursery,

CHELSEA, LONDON, S.W.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JANUARY 29th, 1898.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, February 1st.—Sale of Lilies, and hardy plants by Messrs. Protheroe and Morris.

WEDNESDAY, February 2nd.—Sale of Tuberoses, Gladioli, and Roses by Messrs. Protheroe and Morris.

THURSDAY, February 3rd.—Sale of Tuberoses, Gladioli, and Roses by Messrs. Protheroe and Morris.

FRIDAY, February 4th.—Sale of Imported and Established Orchids by Messrs. Protheroe and Morris.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.—The annual general meeting and the election of candidates to the benefits of the charity dispensed by this institution again brought before the British public on the 20th inst. some idea of the amount of distress prevailing amongst the members of the profession of gardening or their wives; and although there were fifty-four applicants for help, it can hardly be expected that this number represents the total of the indigent members of the craft, that have been incapacitated for work through age, accident or the various infirmities to which human flesh is heir. In the face of this the need for a charity of the nature of the Gardeners' Royal Benevolent Institution is self evident. Notwithstanding the vast sums that have been given for all sorts of

purposes during the past year, the institution has been fairly prosperous compared with former years; nevertheless the whole of the money at the disposal of the charity, invested or otherwise, is wholly inadequate to meet the wants of the destitute.

Close upon £3,000 has been spent in supporting the pensioners during the past year. Ten fresh ones were placed upon the funds without the trouble or expense of an election, according to Rule III., 5; and ten others were elected by the votes of the electors. One of these was put upon the list of pensioners merely by virtue of a legacy left by the late J. W. Thompson, for sometime gardener to George III., and afterwards at Syon House. The money was intended for the benefit of a widow or widows, and accordingly the widow receiving the highest number of votes amongst the unsuccessful candidates was declared elected to this benefit. Something less than the desired £5,000 to establish what is known as the Victorian Era Fund has been secured, but the fund is still open in the hope of completing the necessary amount, the interest of which is intended for the benefit of the distressed amongst the unsuccessful candidates. The fund can only provide sums ranging from £10 downwards in behalf of those just indicated. Altogether there were 97,951 votes sent in; but the extraordinary number of 1,152 were lost through the voting papers being unsigned, and owing to 117 the subscriptions for which had not been paid. This must represent a great amount of carelessness on the part of voters. The report for the past year, and the proceedings of the meeting will be found on another page.

PROFITABLE FRUIT CULTURE.—A paper on this subject was to have been prepared for the Chiswick Gardeners' Mutual Improvement Association later on in spring by Mr. S. T. Wright, the superintendent of the Royal Horticultural Society's Gardens, Chiswick; but owing to the failure of two other lecturers to turn up on the 20th inst. by reason of important engagements elsewhere, Mr. Wright undertook to fill the gap and delivered a lecture from a few notes. It was entirely of a practical nature, and dealt chiefly with the speaker's experiences in the Apple-growing counties of the west of England. As in the case of most lectures dealing with the commercial aspect of fruit culture, most attention was devoted to the Apple, which is generally admitted to be the king of British fruits for outdoor culture. For the benefit of the young men assembled, the lecturer took up the various points of cultural detail, touching upon the value of a loamy soil overlying the red sandstone formation for Apple orchards. Size and colour were two of the primary requisites in fruits to take the eye of the public. In spite of differences of opinion that still prevail amongst cultivators, we agree with the speaker that Apple orchards should not be sown down with grass, but kept loose on the surface during the growing period. This is more particularly essential in the southern counties where long continued drought often interferes with growth and a full crop upon the trees. The most suitable time for planting was declared to be the latter half of October and the first of November, for the fresh roots made by the trees before winter finally sets in enables the trees to start away freely in spring as if they had been established for some time. The question of stocks for the trees was also discussed.

In connection with the most suitable varieties to grow for market he said that in this country or the United States there may be some hundreds or thousands of varieties in cultivation, yet of this vast number it was

had policy to plant more than a few varieties whose cropping capabilities and general good qualities were well recognised. He was totally averse to the planting of early varieties as the orchards were overdone with them already. Apples that keep sound for the longest periods of time and are otherwise recommendable, should have the first claim upon the planter, because by their use the markets can be kept continually supplied without the necessity for glutting the same at any particular period. Lane's Prince Albert he placed first on the list because it keeps sound and usable from September to May, and all that time may be marketed. In the midland and northern counties few Apples were in more popular demand than Worcester Pearmain, which fetched from £20 to £30 a ton, and never less than £18. Warner's King was a large and profitable variety, as each tree would produce from $\frac{1}{4}$ cwt. to $\frac{1}{2}$ cwt. of good fruit. Usually it was a green Apple, but under certain conditions of soil, exposure and treatment it assumed an amount of colour as to render it almost unrecognisable. Cox's Pomona was a highly coloured, and attractive sort, with the additional recommendation of being a good cooking fruit. In the market it fetched 15s. or 18s. a hundredweight. There was no more continuous cropper than Golden Spire, and notwithstanding the lack of size, which detracts from its value in the market, it fetched about £12 a ton.

In the matter of flavour we, in common with many others, would place Cox's Orange Pippin first on the list, and no doubt it would be accorded the same honour for market value provided it could be cultivated successfully on as great a variety of soils as the average of sorts can. The lecturer considered that there was none better for market work on suitable land, for £2 2s. to £2 10s. was obtained for it per hundredweight. This says a good deal for the awakening of the British public to the value of flavour in preference to mere size and colour. The limited supply, however, must contribute largely in maintaining the price of the fruit of this variety. Other varieties recommended were Lord Grosvenor, for size and earliness, Golden Noble one of the freest bearers under proper treatment; Bismarck for size and appearance, though the variety is only yet under probation; Stirling Castle, for its free cropping properties and general utility; Yorkshire Beauty and Bramley's Seedling, the latter fetching £24 per ton in the market.

The principal insect pests that infest the Apple were mentioned, and remedies explained. Then followed a discourse upon the general features of Plums, Pears, Raspberries and Strawberries for market. The lecturer agreed with the general opinion of connoisseurs that Pears are very uncertain in our climate, so that little dependence can be placed upon them. In speaking of Royal Sovereign Strawberry he considered it a valuable sort for market, though many growers were yet prejudiced in favour of Sir Joseph Paxton. For late work he considered it advisable to obtain a variety with the cropping qualities of Royal Sovereign by crossing the latter with something likely to furnish the desideratum.

Odontoglossum crispum at the Sale Rooms.—The second big sale of this popular Orchid took place at the sale rooms of Messrs. Protheroe & Morris, Cheapside, on the 21st inst., when the prices realised were quite as good, if not better than on the previous occasion. Twenty-seven pieces on a stick as imported fetched from £2 5s. to £2 10s. In other cases, fifteen to eighteen fine pieces tied or fastened on a board, were bought at £12, £10 and £15 per board.

The Wild Bird Protection Act has been adopted and put in force in the counties of Inverness and Elgin.

The Rainy Season has now commenced in the drought stricken districts of the north and north-western districts of Queensland.

A Tortoiseshell Butterfly, in excellent condition, was recently caught in the office of the goods' manager of the North London Railway at Poplar.

Mr. Thomas Phillips, for three years gardener at Bellevue, Delgany, Co. Wicklow, has been appointed gardener to C. Tuysden Hoare, Esq., Bignell House, Bicester, Oxon.

"Rascal Florists."—Referring to Mr. Simpson's notes, says the *American Florist*, in the December 25th issue, a subscriber signing "Molly" says that the farther west you go the more "Rascal Florists" you meet. True! Molly—too true! and Canada Thistles and Ox-eye Daisies, and English sparrows and other things also infest the western country, but they came from the east.

Veitch Memorial Trust.—At a meeting of the trustees, held on January 19th, Dr. Maxwell T. Masters in the chair, it was unanimously resolved that medals for objects to be hereafter determined should be allotted for the present year, at exhibitions to be held at Bristol, Leicester, and Cardiff respectively. A sum of £20 was voted to the trustees of the Lindley Library towards the preparation of the catalogue now in progress. Medals were also allotted to M. Marliac, in recognition of his success as a hybridiser; to M. Ed. André, of Paris; and to M. le Comte de Kerchove, of Ghent, President of the Royal Agricultural and Botanical Society of Ghent, for their respective services to horticulture.

Eastbourne Horticultural Society.—The annual meeting of this society took place at the Natural History Rooms, Eastbourne, on the evening of the 11th inst., Mr. W. Sharp occupying the chair. The financial statement for the past year showed total receipts amounting to £136 4s. 1d., with an expenditure of £122 4s. 7d., thus leaving a balance in hand of £13 19s. 6d. The report of the committee recommended that an offer made by Mr. F. W. E. Shrivell, F.L.S., to deliver a lecture entitled "the results of four years' experiments on vegetables with and without manure" be accepted. An acceptance duly followed. It was also decided that the radius of the society's influence should be extended to ten miles.

Newcastle-on-Tyne Flower Shows.—We have received a copy of the schedule of the above. The spring show will be held in the Olympia on Wednesday and Thursday, 20th and 21st April, 1898. The summer show will be held in the Recreation Ground, in conjunction with the Northumberland Agricultural Show, on Wednesday, Thursday, and Friday, 13th, 14th, and 15th July, 1898. The Royal Horticultural Society's Council have accepted an invitation to be present, and will send a deputation with full powers to make awards. The attendance at the last joint show in the year 1893 was enormous, and the financial result was a very successful one. Copies of the schedule may be had from the Secretary, 54, Westgate Road.

West Derby Gardeners' Mutual Improvement Society.—The second meeting of this newly formed Society was held on the 5th inst., at the Social Club, Mr. J. B. Patterson presiding over a good attendance of members. The chairman in introducing the lecturer referred to the extensive culture of the Rose from a commercial point of view, and gave some interesting information as to the extent and form of this important industry, after which he briefly introduced Mr. R. G. Waterman, who had come to lecture on "Roses for Exhibition." As an introduction a few important details of its history was given with some few notices of our latter day introductions, showing the marked improvement made by our own raisers, who were now able to hold their own against the French varieties. The details of the preparation of the ground, planting, and general culture were given at some length, so that the uninitiated could follow the rules laid down. After the lecture a discussion followed in which several of the members and the chairman took part. A cordial vote of thanks to the chairman and lecturer terminated the proceedings.

Doctors are now recommending Grapes for strengthening the voice.

"Jeemes," said the laird one day to his gardener, "there was something I was going to ask you, hut man, for the life o' me I canna mind what it was." "Mebhe," said Jeemes, who had received no pay for three weeks, "mehhe," said he, "it was to spier at me fat way I was keepin' body and soul tgether on the wages I wisna gettin'."

Huxley and his Garden.—In his later life he devoted himself to gardening at Eastbourne. All through his last prolonged illness from early spring to mid-summer, he loved to hear how the garden was getting on. When the warm weather came, he spent most of the day there, and even recovered so far as to be able to walk once more into the lower garden and visit his favourite flowers. These children of his old age helped to cheer him to the last.—*Century Magazine*.

Lost Votes at the Royal Gardeners' Benevolent Election.—It is with great regret I call the attention of subscribers to the above, because 1,152 votes were lost—1,035 through not being signed, and 117 through subscriptions not being paid. This is a serious matter, for many of the candidates must suffer through the neglect. The Royal Gardeners' Orphan election takes place on Feby. 18th, therefore let me advise those who have votes not to forget to sign their names and mark their voting papers in a plain manner to save a repetition of what I anxiously draw their attention to.—*Alfred Outram, F. R. H. S., 7, Moore Park Road, Fulham, London, S.W.*

Ealing Gardeners' Society.—On the 18th current, Mr. W. Farr, Isleworth, presided over a well-attended meeting of this society, when Mr. J. Hawkes, of Osterley Park Gardens, read a very able essay on the "Cultivation of the Gloxinia." Mr. Hawkes dealt with his subject in all its stages, in fact, he covered the whole field of Gloxinia culture from the tiny seed to the full-blown flower. Mr. Hawkes' paper, in consequence, was much appreciated, for gardeners are nothing unless they are practical; and when an experienced cultivator, like the essayist, elects to go into detail, his audience—especially the younger gardeners—are always interested. The discussion which followed was necessarily terse, because each speaker admitted the completeness of the lecture and the ability of the lecturer. Mr. Hawkes and the chairman were each accorded a hearty vote of thanks.

The Killing of Rare Birds.—There are great differences of opinion, and probably always will be, about the shooting of rare birds, whether they are true natives of these islands or merely visitors and stragglers. Mr. W. H. S. Monck has a complaint about the subject in the January number of *Knowledge*. Speaking of four rare birds that were shot, he says that most probably they had mates and would have augmented their rapidly-diminishing race; but the collector with his gun must needs make these rare birds extinct birds. The result would no doubt make his specimens more valuable, while if he allowed them to escape he would have no specimens. He contends that they are not intended to be eaten, that they are harmless, and the only crime of which they are guilty is their rarity. Rather than extirpate a dying race, he would preserve them as long as possible as "footprints on the sands of time," indicating certain climatic or other physical changes, the history of which we might hereafter desire to trace. The Editors of our contemporary defends the action of killing the birds on the plea that unless "certain birds are killed ornithology will not advance. In Mr. Howard Saunter's manual recently published there are six out of the twenty-four described which would never have been known to have visited the British Islands if they had not been shot. None of the four stragglers mentioned by Mr. Monck would have bred here if they had been left, and their identity could never have been recognised, had they not been shot. The Editors do not, however, advocate the killing of every rare bird. Here is where the difficulty comes in. We would require a law preventing any but scientific men from shooting anything but certain well known and plentiful birds. For instance, a man that would shoot a tame pelican, as happened recently, could not be trusted to spare anything outside the walls of a fowl yard.

Double Sweet Peas.—Mr. A. P. Wyman, who writes the notes on the trial of Sweet Peas conducted at the Cornell University Experiment Station, in delivering himself upon the status of double varieties says, "doubles are generally strong strains and give a profusion of large bloom, most of which, fortunately, is single." Evidently he does not believe that any alteration from the natural single towards the double form of the Sweet Pea would be an improvement.

Robbery in mid-air.—In the January number of *Knowledge*, Mr. F. G. Aflalo speaks of sparrows pursuing pigeons in mid-air, white ones for preference, and snatching feathers from their breasts and sides with which to line their nests. They had commenced operations about the end of the year, though the writer had never previously seen them start their depredations till the regular nesting time in March. This circumstance he regards as an interesting sign of the abnormal condition of the weather.

The Essex Field Experiments.—A meeting to consider the results of the field experiments carried out for the Technical Instruction Committee of the Essex County Council during 1896 and 1897, was held at the County Technical Laboratories, 78, Duke Street, Chelmsford, on the afternoon of Tuesday the 25th inst. James Round, Esq., M.P. occupied the chair. Mr. T. S. Dymond, F.I.C. gave the results to the meeting. The experiments comprised (1) manurial trials on Beans, followed by wheat; (2) manurial trials on permanent pastures; and (3) experiments on laying down land to grass. The meeting was then thrown open to discussion.

Preston and Fulwood Horticultural Society.—Mr. J. Williams, F.R.H.S., Bowgrave, Garstang, read a most interesting paper before this society, on "The culture of Flowering Roots and Bulbs. This class of plants, said the essayist, to anyone with limited means or accommodation, make a special appeal, not only because of their first small initial cost, but because they have such a wide range of adaptation. Mr. Williams then gave details, both cultural and descriptive, of many valuable roots and bulbs that appealed strongly to the amateur as well as to the professional cultivator. A brisk discussion took place subsequent to the reading of the paper, in which a number of prominent members took part.

Chesterfield and District Chrysanthemum Society.—The annual meeting came off on January 14th at the Station Hotel, Chesterfield, Mr. J. E. Clayton occupying the chair. Mr. W. G. T. Burr read the balance-sheet, which declared a total revenue for the year of £106 12s. 9d. The expenses amounted to £92 17s. 8d., leaving a balance of £13 5s. 1d. This was a smaller balance than that of the previous year, but it was owing to the fact that the spring show had not been so successful. At the election of officers Colonel Allen, of Wingerworth, was chosen as president, and Mr. Burr treasurer. Mr. Nelson was re-elected secretary, and it was decided that he should have an assistant to relieve him of some of the work. An interesting feature was the presentation to Mr. Burr of a handsome oak tobacco cabinet, in recognition of his past services to the society. The presentation was made by the chairman on behalf of the meeting. Mr. Burr made a suitable reply.

The Catalogue of Messrs. Daniels Bros.—"The Illustrated Guide for Amateur Gardeners" sent out by Messrs. Daniels Bros., Norwich, is more than up to its usual standard, being printed in clear type on good paper, and well executed generally. It is of large size, runs to 144 pages, and is profusely illustrated with coloured plates, wood-cuts, and photographs of various garden flowers, varieties of Nasturtiums adorning the covers. There are also two well executed chromoliths of various garden flowers in the body of the work. There are good photographic illustrations of Peas, Potatoes and other vegetables. Flowers do not respond so readily to the photographer's art as the more solid vegetables, their colours interfering with the work of the camera, or rather they elude its powers. They are well represented, however, by pictures of various kinds. The lists of flowers, fruits, and vegetables are descriptive, and at the head of most of the genera short articles deal with the cultural treatment for the benefit of amateurs, and which will prove serviceable as reminders to many others, thus justifying the title of the guide.

Strawberries to the extent of 1,000 tons are annually sent from the Clyde Valley to the markets of Glasgow, Dundee, Edinburgh, Liverpool, and other populous centres.

Battersea Park.—A committee of the London County Council has under consideration a scheme for making this an educational centre for horticulturists and hotanists. It is proposed to utilise special portions of the park for this purpose. Practical work will be done under the supervision of Mr. Coppin, the park superintendent. Demonstrations in scientific horticulture and in landscape gardening would also be given.

Messrs Cockers' Spring Catalogue.—The seed and plant catalogue issued by Messrs. James Cocker & Sons, 130, Union Street, Aberdeen, and intended to supply the wants of the garden in spring, contains many novelties in the way of Peas, Beans, Potatoes, and other vegetables. Flowers are equally well represented by the newest as well as more recent introductions, including many things that will be appreciated, both hardy and tender. A red Rose adorns the front cover, on a golden ground, and is appropriate to this well-known northern firm of Rose growers.

The People's Palace, Glasgow Green, which was opened by Lord Roseberry on the 22nd inst., is the latest addition to the public buildings of Glasgow. It comprises a large winter garden in which the opening ceremony took place, a museum, a picture gallery, and a music hall—an entirely original departure, for no other municipal body than that of Glasgow has attempted this combination under what is practically one roof. Prior to declaring the People's Palace open to the people for ever and ever Lord Roseberry made a lengthy, but interesting speech in which he pointed out the necessity of such buildings as they were now in for the education and recreation of the people, and that he considered the action taken by the Glasgow municipal body as a sign and token of its duty and its responsibility to all classes of the great community over which it was privileged to rule.

Woolton Mutual Improvement Society.—The annual meeting of this society was held at the Mechanic's Institute, on the 20th, inst., the Rev. R. E. Roberts presiding. From the report, the position of the society shows a decided improvement in point of number of members and subscriptions. The papers have been excellent, and a greater interest has been infused into the discussions. The microscope has been used at each gathering with pleasing results. The income amounts to £21 16s. 10d., including the balance from last year of £6 15s. 8d. The expenditure is £14 11s. 8d., leaving a balance of £7 5s. 2d. A donation of £10 17s. 8d. has been sent to the Victorian Era Fund. Mr. R. G. Waterman was re-elected Treasurer and Secretary. Seven microscopes with various slides were on the table for the use of the members. Mr. R. Todd contributed forty-four varieties of cut Orchids which were greatly appreciated.

Decorations at the New Club Ball, Cheltenham.—This ball is regarded at Cheltenham as one of the special features of the social season. This year it proved a huge success, thanks, in a great measure, to the splendid way in which the floral decorations were carried out by Mr. James Cypher. One of Mr. Cypher's triumphs was an Eastern grotto set up in the recess of a window. On a groundwork of virgin cork many choice plants and flowers, including Palms, Dracaenas, Eucalyptuses, Acacias, Araucarias, Cinerarias, Tulips, and Grevilleas were displayed. Scarlet drapery was freely employed in the balconies, and here again flowers were tastefully used. The large supper table was a triumph of floral art. The centrepiece was a large Palm placed on a tall pedestal from which four arches dressed with greenery and flowers radiated to the four corners. Smaller vases were filled with many beautiful Orchids, including Cattleyas, Odontoglossums and Cyripediums in variety, as well as forced flowers, such as Tulips and Lilies of the Valley. Other and smaller tables also prettily dressed filled the corners of the room. In the second upper room there was another series of supper tables which Mr. Cypher's skill and taste had gaily dressed with the products of his nurseries.

Mr. William R. Greenway, gardener to Sir Lionell Darel, Fretherne Court, Gloucester, we are pleased to learn, is so far convalescent that he was able to leave the hospital and he taken home after being laid up for five weeks. Our readers may remember that, owing to the result of an unfortunate gun accident, he had a leg amputated above the knee.

Royal Caledonian Horticultural Society.—We note from the schedule of this society, now to hand, that £272 is offered as prizes in 128 classes at the spring show, 6th and 7th April, next. At the autumn show 14th and 15th September, £364 is offered as prizes in 263 classes. At the latter show £7, £5, and £3 respectively are offered for the most tastefully decorated table of dessert fruit; £5, £3, and £2 are offered for a circular table of plants; and similar amounts for the best and most artistically arranged table of cut flowers of hardy plants grown in the open air, besides valuable prizes in other important classes.

Birmingham and District Amateur Gardeners' Association.—The fifth annual report of this enterprising body is before us, together with the balance sheet. It is printed in a handy pamphlet form, which contains the list of members and the programme of events for 1898. The year just closed seems to have been a fairly prosperous one with the society, and the average attendance at the meetings compares favourably with that of former years. Last year 83 prizes were offered, as against 50 in 1896. The summer exhibition attracted a large number of visitors, and was a great success. The results of the Chrysanthemum show were also satisfactory, and the committee proposes to give additional prizes this year. The annual excursion was not so well supported as it might have been. This was probably owing to the fact that many of the members were away on holiday on the date fixed—August 14th. The statement of accounts shows a total income of £40 14s. 9d., which includes last year's surplus of £8 14s. 9d. The expenses for the year have been £35 17s. 2d., thus leaving a balance of £4 17s. 7d. with the treasurer. The arrangements for the first half of 1898 include papers by Mr. W. Walker, on "The Culture of the Tomato"; Mr. J. S. Cornwall, on "Chrysanthemums"; Mr. J. W. Oliver, who treats upon "How Plants Feed"; Mr. W. B. Griffith, who tackles "Judging"; Mr. C. H. Herbert, who will talk about "The Cultivation of some useful Flowering Plants for the Conservatory"; and Mr. W. B. Child, who will have something to say on "Exhibiting Plants and Flowers." The sixth annual excursion will take place on June 25th.

Ulster Horticultural Society.—The Lord Mayor of Belfast (Mr. James Henderson, J.P.) presided at the annual general meeting held at the Windsor Hotel, Donegal Place, Belfast, on the 13th inst., and favoured the meeting with a speech, in which he spoke of the society as one of the most important associations in Ulster, and deserving of the best support of all lovers of fruit and flowers in the province. The annual report and statement of accounts was then submitted by Mr. Paul, the hon. secretary. The report showed that in spite of the severe weather last year's Chrysanthemum show was better attended than on any previous occasion. Special interest was evoked by the Victoria Jubilee Championship. The best thanks of the society were due to the City Council for the use of the St. George's covered market, and also to the gentlemen who had generously given special prizes. The receipts from all sources totalled £659 17s. 2d., and the expenditure £642 14s. 2d., leaving a balance of £17 3s., which added to the balance brought forward showed a total of £72 1s. 5d. in hand. Out of this it was proposed to devote £30 to the Victoria Jubilee Hospital scheme, which would leave a sum of £42 1s. 5d. with the treasurer. Mr. M. Lees moved the adoption of the report, and in so doing spoke of the gratifying successes of local exhibitors. He thought that the society was particularly indebted to Mr. Hugh Dickson and Mr. Pollock. Mr. Hugh Dickson seconded the adoption of the report. The new committee for the year was then elected, the list of gentlemen proposed by Mr. Thomas H. Dickson, supported by Mr. McLaren, being unanimously passed. Mr. H. M. Pollock asked for a vote of thanks to the Lord Mayor, and this was carried with acclamation. His Lordship suitably responded.

HINTS FOR AMATEURS.

Raspberries.—Last week we considered the kind of treatment that healthy, vigorous Raspberries in bearing condition required in the way of pruning, manuring, etc. We have now to deal with the question of the formation of new plantations, either to replace old worn-out ones, or to supplement others already in existence.

New plantations may be formed at any time between the beginning of November and the middle of March, so that there is a fairly long season in which to work. This admits also of waiting for a favourable opportunity when the ground is fairly dry and in good working condition before operations are commenced. To make a new plantation properly requires a good deal of labour in the preparation of the site, for, as we mentioned last week, the Raspberry is a rich feeder, and it is not every soil that chemically and mechanically is fit to receive it.

Any good garden soil that is not too stiff and has been well cultivated will suit the Raspberry. Once the site has been selected the work of breaking it up, and getting it into proper fettle must proceed. In the case where such a site is upon ground that has been trenched once or twice previously, and the subsoil consequently in good condition, it will be perfectly safe to trench again to the depth of two or three feet, working in a heavy dressing of good farmyard manure, which practically contains all the necessary elements of plant food in an easily obtainable form. If the subsoil is very poor, however, it will not be wise to trench, for this means that a lot of poor soil is brought close to the surface, and as it is from the upper strata of soil that the roots of the young plants will have to first find their sustenance, the young plants are starved at the outset, and growth is slow and unsatisfactory.

When the subsoil is poor therefore it will be advisable to bastard trench, or double dig the ground instead of trenching it. The only difference between this and trenching proper is that the subsoil, instead of being brought to the surface, is broken up, turned over, and put back in its place. In order to do this properly a trench two or three spits wide, must be opened at one end of the site, the soil taken out of it being taken to the opposite end of the ground to fill up with at the last. Proceed then as in ordinary digging, turning over the top spit first, and putting the soil at the far end of the trench, then operating upon the under or second spit. Work in plenty of manure among the subsoil, for this will prove a great attraction presently to the roots of the young plants after they have got a hold of their new quarters.

Planting.—Perhaps the commonest style of planting is to place the plants 3 or 4 ft. apart in rows, a space of 5 ft. being allowed between the rows. Each stool is provided with a stout stake, to which the canes are attached. This system is one of the very best for ordinary purposes. A variation of it may be had by allowing 8 or 10 ft. between the rows, and cropping the intermediate spaces with various kitchen garden crops. We do not favour this system, however, as the roots of the Raspberries are disturbed oftener than they like when it is followed.

Espaliers.—This is a capital method of training Raspberries. The plants may be placed about 2 ft. apart in the row, and the rows may be a little closer to each other than when the plants are grown in independent clumps. We have picked some of our very finest fruit from plants trained to espaliers, the extra amount of light they get being very beneficial.

After Planting.—As it is manifestly desirable that the young plantation should commence to yield fruit as soon as possible, the canes on the young plants should, before the buds upon them commence to swell, be cut down to within a few inches of the ground. If the plants are put out in the early part of the planting season this initial pruning should remain over until spring. The effect of this is to cause the stools to throw up strong and healthy shoots which will fruit the next year. If the cutting back were not attended to, only comparatively weak canes would be thrown up, and several years might elapse before the plants got into fruit-bearing habits. When more than four, or at the most five, shoots appear the weakest should be removed at an early

date, for to allow them to remain would only be taxing the strength of the plant to no purpose.

Varieties.—For general purposes Superlative is the best variety in cultivation. The plants are vigorous growers, and heavy continuous bearers, while the fruit, which is rich dark red in colour, is of superb size and flavour. If only one variety can be grown, this is the one to select. Baumforth's Seedling is also an excellent variety. It may be described as an improved Northumberland Fillbasket, and, like that fine sort, is of vigorous and hardy constitution. The fruit is large and bright red in colour. Fastolf, too, is highly thought of by some growers. Yellow varieties are generally much appreciated upon the dessert table, where the fruit forms an agreeable change in point of colour from the red and crimson varieties. The plants, however, are not usually so prolific, and should not be depended upon for a general crop. Yellow Antwerp and Magnum Bonum are two of the best yellow sorts.

Autumn-bearing varieties are not very largely grown, although they are useful for prolonging the season. They are not such sure or heavy croppers as the summer sorts, but if there is room a few of them will be of some service. October Red and October Yellow are two of the best.—*Rex.*

WOES OF AN AMATEUR.

THE gardener who has a number of convenient glass-houses wherein he may give his plants all the attention they need, is generally unable to understand the straits an amateur, possessed of limited conveniences, is sometimes put to. I can assure you Mr. Editor that I speak feelingly on this point, as the following experience will serve to show.

Having been told that Crocuses could easily be grown in cocoanut fibre and charcoal in any sort of receptacle, with no other shelter than an ordinary dwelling-room, I made a desperate resolve last autumn to have a try. I purchased a stock of Crocuses, and some cocoanut fibre and charcoal, ready mixed. They were duly consigned to a number of glass dishes of various sizes, for which I drew upon the kitchen store. This, of course, made a row, and was the beginning of the trouble. Women profess to like flowers, but they don't seem to appreciate a man's efforts to grow them for them.

Well I'm bound to say the Crocuses themselves went on finely, and threw up a lot of strong shoots, but about three weeks ago an enemy came in the night and sprinkled them with fat bugs, or flies, or something between the two which grew and grew, and multiplied apace. I suggested to my wife that she should sponge them off, as I was busy; she wouldn't, and—there was another row.

Matters went on like this, the flies ever multiplying and fattening until some of them got too heavy to hold on to the Crocuses, fell down, and walked about the room making an awful mess. This brought the affair to a crisis, and another row.

In the nick of time there was brought to my notice an invention of McDougall Bros., in the shape of a "fumer" that was warranted to kill everything that can crawl or fly. I obtained one, and after reading the instructions carefully, I determined to make use of it. The contrivance consisted of a little tin box in two parts, the upper containing the killing stuff, and the under part a wick and some oil, or grease, or some such tackle which had to be lighted. The "fumer" was said to be sufficient for a house containing 1,000 cubic ft. of air, but as I thought my "bugs" were extra tough 'uns, I resolved to put the thing in the scullery, which contains only about 500 cubic ft., along with the Crocuses, and let it do its worst or best.

As the project had to be kept dark, the first thing was to get the "missus" out of the way, which, after lying like a Trojan, I finally accomplished, although not without exciting her suspicion, as after events proved.

To cut matters short, the plants were placed in the scullery and the infernal machine set to work. All went well for a time until I heard the front door click, and then I knew the game was up, for the "missus" had come home. In she marched with a mightily suspicious air and asked what I was doing with the mat against the scullery door, and what I had got there. I suggested that she should satisfy her curiosity herself, which she promptly proceeded to do, and then the fun began. She opened her mouth to shout and got a mouthful of fumes, which

about staggered her. I had to laugh, but then Nemesis overtook me, for the fumes blinded, dazed, and choked me. I couldn't see, neither could she, and we daren't shout for fear of another mouthful, so we beat a retreat, and that blessed "fumer" smoked calmly on and sent its insidious fumes all over the house from basement to garret.

By this time the neighbours had got a taste of it, and there were hasty slamming of windows and sundry hursts of coughing. Next door's dog began to howl, others joined in the chorus, and there was a general hubbub.

When peace was finally restored, and the house cleared of the fumes, a row of another sort began, and my meek assertion that the smell was not disagreeable at a distance was received with scathing scorn. I found subsequently that all the "flies" were stone dead, and I don't really wonder at it, for I was about "cooked" myself, the "missus" has not been right since, and the neighbours all regard me as a maniac of the worst class, with considerable ingenuity in the way of annoying people.

Moral:—This new "fumer" will, I am fully persuaded, kill any insect under the sun, but don't use it in a scullery or it will nearly kill you.—*Long Suffering.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Vines.—R. S.: A temperature of 45° Fahr. by night will be quite high enough for the Vinery for a start.

Morello Cherries.—E. Morton: Morello Cherries may be grown as standards, although the more generally adopted plan is grow them against a north wall where they do admirably, and fruit with great regularity. If you have a deficiency of wall space, however, you might well invest in a few standard trees. The pyramidally trained tree is the most suitable form.

Pear Souvenir du Congres.—Exhibition: This Pear is a seedling from that excellent variety Williams' Bon Chretien, and like it is an early sort, coming into condition in August and the early part of September. For exhibition purposes it is first-class, as it grows to a large size and is of very attractive appearance, besides being of good flavour. It does very well as a pyramid, but even better against a wall as a cordon. If you have wall space at your disposal we should advise the latter system.

Stewing Pear.—Exhibition: The most suitable stewing Pear to grow for exhibition purposes in a class where any variety is allowed would be Uvedale's St. Germain. It grows to a large size and forms a very imposing dish. For general purposes, Catillac would be our choice. Both varieties are hardy, prolific bearers, and good keepers.

Tying-Down Vines.—Will you please tell me what is the reason for unloosing the canes of Vines that are to be forced, and bending them down close to the ground? Is the practice necessary?—*Amateur.*

Taking the second question first, the practice is necessary in dealing with Vines that are to be forced early, but is not so important when the Vines are allowed to start into growth naturally. The sap naturally flows to the highest point, and the result is that the buds at the top of the cane, when the latter is allowed to keep its normal position, are better nourished than the lower ones. They start away too strongly, and appropriate sustenance that ought properly to go to the lower buds. This causes the lower shoots to be very small and weak, and under the disadvantage of early forcing they become weaker still, and do not fruit well. By bending the canes down in the manner you mention the flow of sap is more evenly distributed to all the buds along the whole length of the stem, they break into more equable growth, and we do not find one or two shoots at the top running away at the expense of the rest.

STAPELIA GIGANTEA.

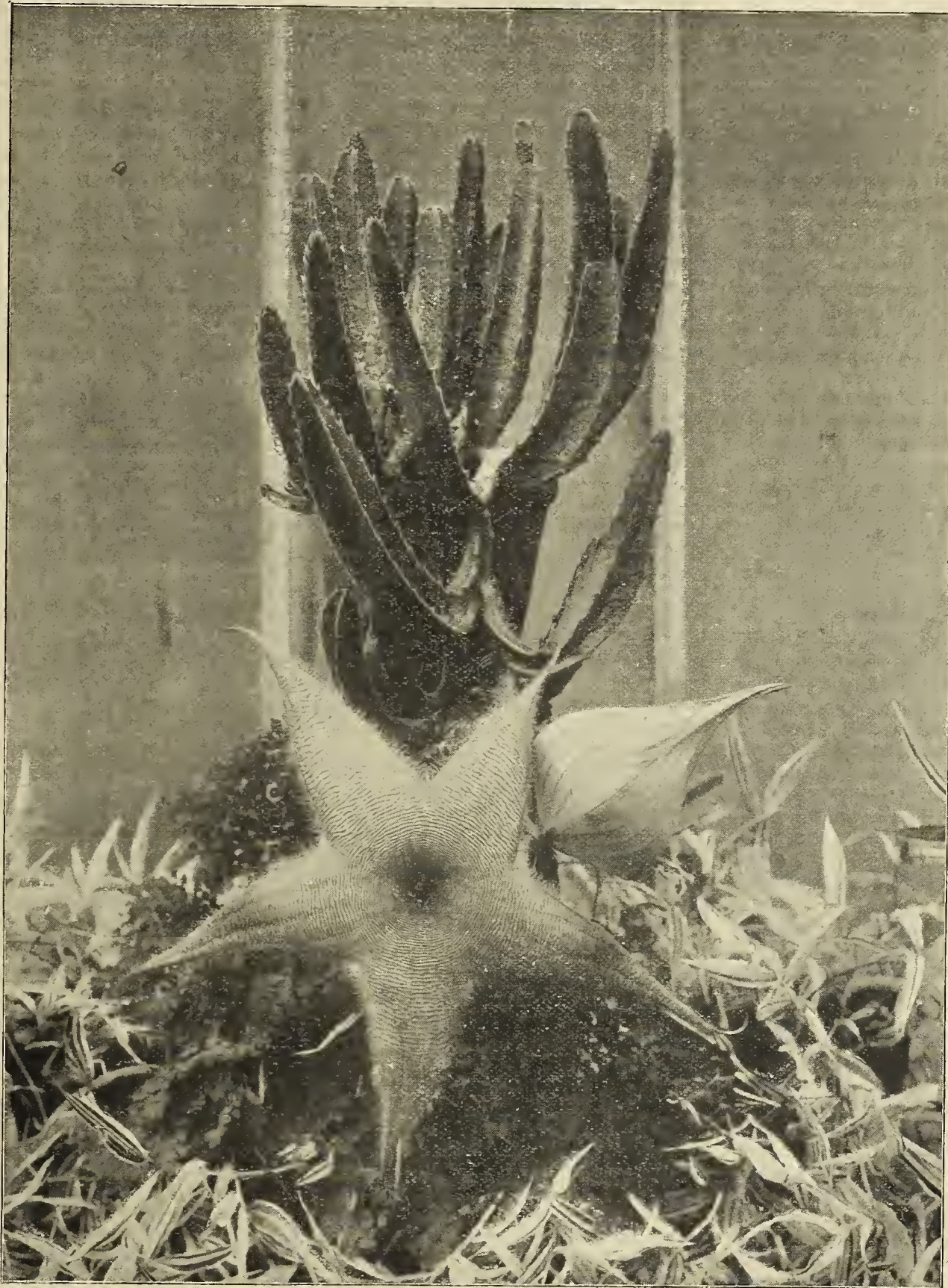
This remarkable flower is one of the wonders of the vegetable world, and the species under notice is certainly the finest and most striking of the genus. We have on several occasions seen it in bloom with flowers ranging from 10 in. to 12 in. in diameter; but as far as we know that which was flowered recently by Mr. C. F. Wood, gardener to St. Barbe Sladen, Esq., Heathfield, Reigate, Surrey, beats the record. The accompanying illustration was prepared from a photograph of the plant when in bloom. It is, of course, very much reduced, for the open flower was

thinly covered with short hairs, and fringed with hairs at the margin. The flower as a whole bears a remarkable resemblance to a gigantic starfish.

The following account of the cultural treatment of the plant is supplied by Mr. Wood:—"Perhaps a note of its management may assist those who may not have been successful in flowering this wonderful plant. Plenty of heat and full sunlight in a stove, on a shelf high up over the hotwater pipes, close to the glass are what I give our plants. They delight in a sandy and rather rough compost, consisting of loam, lime rubble, and leaf soil. Good drainage is also

GRANARD GARDENS, PUTNEY.

LAST week we made mention of the subjects which are grown in quantity by Mr. W. Iceton for the supply of cut flowers. It must not be supposed, however, that these monopolise all the attention, for Mr. Iceton runs a general plant nursery, paying special regard to those plants which find a ready sale, and are in request not only in the general market but in private gardens also. Just as Lilies of the Valley are the speciality among flowering plants, so Palms are the chief object of consideration amongst foliage plants. There is this important



STAPELIA GIGANTEA.

15½ in. in diameter, and the bud also shown in the figure measured 14½ in. when fully expanded. The first records said that the flowers were 12 in. to 14 in. across, and those figures were considered excessive for some years.

Mr. Wood grows and flowers some rare and very curious things, having first acquired the love for them some years ago when at Pendell Court, Bletchingley, under Mr. F. Ross, who then had charge of the late Sir George Macleay's renowned collection. The flower is slightly concave, but otherwise spread out, five lobed, pale yellow, and thickly covered with transverse, brownish-red bars, finely wrinkled and

necessary; also a moderate supply of water when growing, and a little feeding as soon as the flower buds are noticed. Rub off the young growths as they appear, that is, which arise on the same stem as the flower buds. By doing this while the shoots are very young I attribute my success with the flowers, for the buds have a nasty way of dropping off when left to struggle with the young growths by their side."

Cucumber Rollison's Telegraph is not only a standard variety in this country, but is thought highly of and grown largely in the United States.

difference, however, that the latter are raised and reared to saleable size at home, while, as we have already noticed, German horticulturists contribute the required annual supply of Lily crowns.

Mr. Iceton has also an extensive business as a furnisher and decorator, and several of the largest and most important metropolitan hotels are among his clients. This part of the business necessitates that there shall be a stock of good plants of all sizes upon the place, in readiness to replace others that come back in a more or less crippled condition from a lengthy stay from home, or to supply fresh orders at a moment's notice. To accomplish this, plenty of

under-glass space is needed, as well as a large staff of labour. Much of the glass in the nursery, in fact, is devoted to Palms of different sizes.

Of these houses the most conspicuous is the large conservatory, whose front faces Putney Park Lane. This is a lofty and roomy house, but it is neither too lofty or too roomy for the numbers of plants it contains. Here one sees superb specimens of such useful decorative forms as *Archontophoenix cunninghamiana*, or to give it its every-day garden name, *Seaforthia elegans*, *Howea (Kentia) australis*, *H. fosteriana*, *H. belmoreana*, *Cocos plumosa*, *Livistona rotundifolia*, *Rhapis humilis*, *R. flabelliformis*, *Phoenix canariensis*, *P. rupicola*, and *P. reclinata*. These plants are ever in demand, and a good specimen never comes amiss.

Many other smaller, but still roomy houses are filled with these Palms and a few others in quantity. One point particularly strikes the visitor, and that is the comparatively low temperatures in which many of the plants are grown. This is done for the purpose of bringing the plants up as hardily as possible, and of training them, so to speak, to stand a little knocking about. In not a few nurseries the reverse of this is often the case; for a great deal of heat is given which results in rapid growth it is true, but the plants are not so sturdy or resistant of lower temperatures should they happen to come. It is obvious that the harder training is an advantage to plants that have to stand for days, sometimes weeks, together in draughty corridors or in the arid and unkindly atmospheres of dwelling rooms.

The number of young seedling Palms in the establishment is enormous. In several of the houses we see tier after tier of shelves filled with them, and they are represented in all stages from the baby plant to the comparative veteran of four, five, or six years, and upwards. *Cocos weddelliana* alone is grown in its thousands, for it is whilst in the small state that it finds its readiest sale. It is exceedingly handsome at any time, but the price, of course, grows with the plant, and as it is not the most suitable for the amateur cultivator to try his 'prentice hand upon, the price is a deterrent. *Stenersonia grandifolia* is a distinct and handsome plant. The leaves exhibit a shade of bronze-green, and are curiously dotted over with iron rust-coloured spots. The presence of these spots has led purchasers to fancy that their plants are in a state of ill-health, or that they have been bitten by some insect or other, but the spots are natural, and no sign of either fact. *Phoenix Roebelini* is an exceedingly pretty subject, but as seed cannot be obtained of it, the price continues high. The commoner *P. rupicola*, although, perhaps, not quite so ornamental, is yet a good substitute.

Stove foliage plants are well looked after. The earliest batch of *Caladiums* is already started, and some of the plants have several good leaves already. *Dracaenas* are represented by such forms as *D. Lindenii*, *D. sanderiana*, *D. Lord Wolseley*, *D. rubra*, *D. congesta*, *D. pendula*, the handsome but high-priced *D. Doucetii*, and *D. lineata*. Of the latter Mr. Icton has a grand stock of large plants. These know their way about town pretty well, for they are great favourites for decoration. *D. sanderiana* we have never seen better, the variegation being very strong and well marked. *D. Lindenii* is especially well done, for many of the plants are perfect models of symmetry with leaves right down to the pots, and such leaves too!—of great width and substance, and splendidly coloured. Several of the taller plants have been recently "ringed" and tied round with moss to favour the formation of roots. Amongst stove Ferns *Adiantum farleyense* is exceedingly well done, and its treatment is evidently well understood. *Crotons* in variety are grown. Amongst Bamboos, *Bambusa falcata* is one of the most useful forms. It is highly decorative, and stands well. A fine stock of plants of all sizes greets the visitor.

Eurya latifolia variegata is one of the most handsome and useful foliage subjects, and we were not surprised to find that Mr. Icton goes in for it extensively. It is given an intermediate temperature, and the results are to be seen in the wonderful development of colour which characterises the foliage. Some grand specimens in 6 in., 7 in., and even 8 in. pots looked fit enough to go anywhere, for they were clothed with foliage right down to the rims of the pots, and were very different from the scraggy-looking objects that are not infrequently met with.

A most successful line at Granard Park Gardens is the decorative forms of *Asparagus*. Several houses have the roof entirely covered with it, and odd plants are trained up pillars in other houses. Vast quantities of seed are obtained each year, although Mr. Kyaw, the manager, informed us that they were queer things to fruit, for sometimes the plants would flower with exceptional freedom, and comparatively few fruits would set, and individual plants seemed to like to have a season's rest from fruiting now and again. The young stock is represented by many thousands of seedlings in small thumb pots that will soon make good plants. *A. Sprengeri* is a handsome species that is of the utmost value for the filling of baskets for suspension in the conservatory. It grows freely, and is a good doer generally. Some young plants in 32-sized pots that were placed on a shelf near the glass were presenting a very pretty picture with their long pendant or sub-pendant growths.

The popular *Smilax (Myrsiphyllum asparagoides)* which is so extensively used for decorative work is cultivated at Granard Gardens to a considerable extent. It is planted out in a specially prepared bed in a warm house, and the growths encouraged to twine round slender black strings, stretched from the roof to the ground. When trails of the delicate greenery are needed, all that has to be done is to cut these strings with the growths upon them.

Aspidistras are never a drug in the market, and any stock that can be raised is always eagerly snapped up. Quantities of young plants in thumbs are, at the present time, furnishing material for filling small fancy vases, and, of course, growing into money in the meantime. The merits of *Araucaria excelsa* are fully recognised, and the customer can take his or her choice from plants about a foot in height, shapely trees in miniature, up to stately specimens 8 ft. or 9 ft. in height, and as perfect in symmetry as the younger ones. The variety *A. e. glauca* differs from the species in having longer and more pendulous branches. The whole plant, too, is dwarfer and rather more squat in habit, but is a very pretty subject.

Before leaving the nursery we had a peep at the fine old *Stephanotis* plants, than which there are none finer in the country. They have just been pruned hard back, and the young growths were being trained in the way they should go. Both plants bear evidence of perfect health.

Both Mr. Icton and his capable manager, Mr. Kyaw, are to be congratulated on the way in which the various strings working such an establishment as this are gathered up and held in hand, for order and business activity were apparent everywhere.

VALUE OF CERTIFICATES.

LEAVING out of question the XXX and XX given to various plants by the committees of the Royal Horticultural Society, how many have considered the relative values or significance given or implied by the awarding of a First-class Certificate and an Award of Merit respectively? Awards of Merit are generally understood to be the highest recognition that can be given a purely florist's flower, which is generally raised from seed, though some of them may be, and are, sports of already existing varieties. This would imply that there is little or no difficulty attached to the raising of them, they may generally be raised in abundance, and the life of a variety may be of relatively short duration, either through degeneracy, or by their being superseded by something better. In any case Awards of Merit given to the best of them serve to mark and to encourage progress, as well as being a record of progress.

In some cases, however, particularly that of Orchids, an entirely different aspect is put upon the question, which can only be known to those who are acquainted with the circumstances under which the award is given. Let us take the Award of Merit as the unit of value, and the First-class Certificate as twice the value. The sum of the two awards would be three units of value. Occasionally an Orchid brought before the meeting would receive an Award of Merit. The same plant, if brought up at a subsequent meeting, it may be in better condition, sometimes gets a First-class Certificate. This would obviously double the value of the original award. There is another, and a frequent instance, in which a good thing gets a First-class Certificate on the first occasion it is presented. A better variety of the same thing, or in the same section, may, and does

turn up, but this only gets an Award of Merit, because a First-class Certificate has already been given to the type or one of the same affinity. If the first variety or hybrid presented gets a First-class Certificate, it would seem to be a case of progressing backwards if a better thing gets only an Award of Merit; but because the first one in the same line or pedigree blocks the way, the giving of the lower award really means that it has been added to the first, thus raising the value of the newer variety to three, instead of one. A case in point occurs in *Laelia anceps amesiana*, which was awarded a First-class Certificate on July 24th, 1888. On the 11th inst. *L. a. amesiana* Crawshay's var., with larger and finer flowers than the original *L. a. amesiana*, was brought before the society by De B. Crawshay, Esq., Rosefield, Sevenoaks, and received an Award of Merit. Looked at in this light it should combine the value of both the awards.

LOW-PRICED SEEDS A MISTAKE.

IT is a mistake to suppose that it is wise economy to obtain seeds simply because they are low in price. Nothing is more misleading than to say these are cheap. Much of the low-priced seeds are not worth putting into the ground; it is far better to obtain the very best article, regardless of the price, than to sow such rubbish.

In these days, when everything is cut so low (seeds amongst them) these are often obtained from such doubtful sources, that it is advisable to caution the amateur and young hand against sowing seeds of a doubtful quality, even if they were given, to grow. In lecturing I always point out what a mistake many cultivators make. As you often see, they go to a deal of trouble well working and manuring their land, and then go and get the lowest-priced seeds they can, which are often rubbish compared to good selected stocks. When the crop is to hand they are disappointed, and this the more so when they compare it against a good strain.

Many people never consider the time, trouble, and expense it takes to rogue out the poor and weakly portion of many vegetables. Again, speaking in a general way the best types give the smallest quantity of seed, being more shy in seeding. Compare a good selected stock of William the First Pea, against a stock that has been grown on without being rogued, and see the difference. The same may be said of most of the Cabbage family.—*J. C., Chard.*

ORCHID NOTES & GLEANINGS.

Laelia pumila praestans.—A plant of this *Laelia* has been flowering for some time past in the collection of Sir F. Wigan, Clare Lawn, East Sheen, Surrey, under the care of Mr. W. H. Young. It was obtained from the Downside collection in 1887, and if not that originally described by the late Professor Reichenbach, it may be regarded as one of the earlier importations. Reichenbach first described it in 1857 as a species under the name of *Laelia praestans*, but later on changed it to *Bletia praestans* in his *Xenia Orchidacea II.*, p. 43, t. 114. As disputes are likely to arise from time to time, we here give particulars of the plant at Clare Lawn. The petals are rhomboid, suddenly narrowed to a subacute point at the apex, and of a deeper rose shade than the sepals. We come to the crux of the situation in the lip, which furnishes the most reliable characters by which the variety can be distinguished from the type, and the variety *L. pumila dayana*. The lip of *L. p. praestans*, grown at Clare Lawn, has a curved or trumpet-shaped lip, the tube of which is tightly rolled into a cylinder with the edges overlapping one another considerably. The tube is purple externally, and dark crimson-red internally, with two very shallow ridges running along the centre, and one on either side of the central pair, almost obliterated. The lamina is small, nearly orbicular, emarginate, and of a rich crimson purple. The column is pale lilac and pressed with its back against the upper side of the tube of the lip. The pseudobulbs are fusiform, and 3 in. or 4 in. in length. The leaves are oblong, and 4 in. to 5 in. in length. It will be seen that this differs from some recorded descriptions of *L. pumila praestans* in which the disc or central area of the tube is described as orange-yellow. That of the flower we examined was dull crimson-red. *L. p. dayana* has a white disc, on which five to seven purple lines and several shorter ones are depicted.

Cattleya Trianaei Atalanta.—Delicately pretty are the colours of this *Cattleya* now flowering with William Handel Cannon, Esq., Vanda Lodge, Whitton Road, Twickenham. The flowers measure $7\frac{1}{2}$ ins. across the expanded petals, which is a fine size for a form of *C. Trianaei*. Each petal is $2\frac{1}{2}$ in. in diameter, and of a delicate blush, fading off almost to white at the base. The sepals are paler, being almost white. The lip is $3\frac{1}{4}$ ins. long, the elongated tube and the lamina being several shades darker than the petals. The customary blotch in the throat is lemon-yellow passing into white at either side low down in the tube. Coming at this early period of the year the flowers are doubly welcome, after the dense fogs that have been so prevalent for some time past along the Valley of the Thames. Mr. Cannon, by the way, is an enthusiastic lover and collector of Orchids.

TROPAEOLUM SPECIOSUM.

My friend, C. B. G., does not seem able to associate *Tropaeolum speciosum* in flower with Nature in her sunniest and best mood, and growing in soils remarkable for their light and porous character. He is a man of wide experience and never loses an opportunity of adding to his varied store of knowledge. I hope he will preserve one day in his engagement book (I know he is a busy man) next summer, and together we will go (like the two friends of whom Tennyson sings)—not to see the gardener's daughter—but to see the Flame Flower, growing and flowering in a district where a fine day is not so remarkable a phenomenon as to deserve recording.

It may interest C. B. G. to know that since his note appeared, a friend gave me a tuber of this plant, and she herself acquired her stock (which she has not yet succeeded in flowering, in a back-yard almost within a stone's throw of Kew Gardens) from a cottage garden in Egham, also in Surrey where she saw it, admired, and duly received some roots. So I am not without hope that in Middlesex I may be able to flower it, and that when C. B. G. pays me another visit he will be able to enjoy a sight of the Flame Flower, without burdening himself with his umbrella or mackintosh.—A. P.

BINROCK, DUNDEE.

LIKE many another busy industrial city in the United Kingdom, Dundee is growing at such a rate that, one after another, suburban residences get absorbed. Binrock may, however, still be considered in the suburbs of Dundee, as it is situated on the Perth Road, at the extreme western end of the city, and is the residence of W. L. Boase, Esq. Formerly it belonged to James Keillor, Esq., of marmalade fame, and, needless to say, it is still a well furnished and well appointed place. The mansion itself is a conspicuous pile, and like the gardens and grounds, situated on the steeply sloping banks of the Tay, or they may be described as situated upon terraces, the lowest one of which has practically been reclaimed from the bed of the river, and grows splendid vegetables. Trees have been planted with great liberality, so that the estate is now beautifully sheltered, shaded and secluded, notwithstanding the proximity of the much-frequented highway to Perth and other places on the northern side.

We had the pleasure of inspecting it at the end of November last after the effects of the summer season were past, and the shows were over; so that the place could hardly have been visited at a more unpropitious time. We were delighted with the natural beauty, as well as the keeping of the place, however, and considered the time well spent by an inspection of the same. From most parts of the grounds a grand prospect of hills and water opens to the eye of the beholder, including the broad estuary of the Tay, the Tay Bridge, and the towns of Newport and Wormit on the Fife side of the river, which rises steeply forming hills of no mean height, with commanding residences, thickly planted on the slopes.

Mr. A. C. Cameron, the gardener, is young and enthusiastic, being an ardent and successful exhibitor of fruits, flowers and vegetables. We have on several occasions seen his fine exhibits of the latter, in the cultivation of which he is a champion. For the decoration of the place he grows Carnations largely in summer, and Chrysanthemums for autumn and winter work. Of the latter he had something between 600 and 700 in pots, including large flower-

ing, pompon and single varieties, many of which are grown in bush form for decorative purposes.

On entering the houses we noted that they were furnished with strong slate stages, resting upon upright iron supports. This arrangement enables everything to be kept neat and clean. Single Chrysanthemums are favourites, the first house entered containing numerous varieties, amongst which we noted Dolly Vardon, amaranth, free and pretty; floriferous bushes of Mary Anderson; and Miss Rose, 2 ft. high, and laden with blossom. Golden Rosinante is a golden and bronze pompon; and the decorative *L'Isle des Plaisirs* was only 3 ft. high.

Next to this came a Peach house having borders 3 ft. wide, 3 ft. deep and wholly inside, being for early work. A fine batch of Cinerarias in 24-size pots was housed here. A vinery was also in the resting stage, and the borders, again inside, were 5 ft. wide and 3 ft. deep. Single Chrysanthemums were the feature of it at the time of our visit. Very pretty was Miss Annie Holden, a yellow sport from Mary Anderson. Other handsome and highly ornamental kinds were Gus Harris, rose; Jenny Wren, buff red; Emily Wells, rose and white, or blush at the base of the rays; S. Arthur Rose, deep yellow; S. Treasure, golden yellow, and a little smaller than the last named; and Crimson Gem which is well named. Purity is pure white, semi-double and very pretty. Amongst large flowering kinds we noted a good batch of Mme. Carnot intended for late work, the terminal buds having been taken. Fine heads were just then developing. C. H. Curtis carried larger blooms than any at the Dundee show. Niveus is almost an incurved Japanese sort as grown here.

The stove contained a fine collection of flowering and foliage plants. *Musa Cavendishii* was grown in tubs. *Eucharis grandiflora* was flowering freely. The leaves of *Alocasia Lowii* were of unusual size, and in fine condition. *Geonoma gracilis* stood 7 ft. high to the apex of the leaves, quite an unusual thing for this species. *Cocos weddelliana* was in all respects similar in size, and in healthy condition. A well-furnished piece of *Goniophlebium subauriculatum* was suspended from the roof.

Ferns are evidently great favourites at Binrock, for a large number of them were of unusual size for modern private establishments. *Davallia elegans dissecta*, grown in a basket, measured about $3\frac{1}{2}$ ft. across, and *D. fijiensis plumosa* was 5 ft. across the fronds. The beautiful dark green-leaved *D. Tyermanni* is often seen in bad condition but here it had a spread of 3 ft., and was in grand order. Very fine also was *D. bullata*, about $3\frac{1}{2}$ ft. wide in a basket. The well-known *Microlepia hirta cristata* measured 8 ft. across the fronds.

Space is a matter of some consideration here, and every glass structure is utilised to the best advantage. One had been filled with Tomatos during the past summer, Chrysanthemums in the autumn, and Richardias in winter. *Maréchal Niel* Roses, put in pots last spring, had thrown up stems 20 ft. in length by November last.

The fruit trees in the orchard house are grown in tubs, and, therefore, movable at pleasure. Of Peaches and Nectarines there are seventeen fine trees, which ripen their fruits in the order of the following names:—Early Alexander, Waterloo, Crimson Galande, Stirling Castle, Dr. Hogg, Gladstone, Barrington, and Admirable. The favourite Nectarines are Lord Napier and Elruge. All of these varieties give excellent results at Binrock. Pears and Figs are also grown under the same conditions.

Near by the great conservatory is a house devoted to Cinerarias and Chinese Primulas, both of which were coming into bloom. *Primula obconica* is hardly ever out of season. The conservatory is fitted up with the electric light, being one of the finest, if not the finest installation in Scotland. The engine which supplies the motive force is of 22 horse power, and there are seventy storage cells of large size. One end of the structure abuts against the mansion, while the other is curvilinear, and directed towards the Tay. The framework is of iron, and on the ridge is a massive lantern. The walks around the central bed of the conservatory are paved with white tesserae, and ornamented at the sides with lines of coloured ones. Around the central bed is an ornamental wall, 27 in. high, of brown enamelled bricks.

Iron gratings occupy the space beneath the side stages. The wall of the mansion forming the northern end of the conservatory is covered with wire, and padded with soil and moss, in which a great variety of fine foliage plants is grown, including long trails of *Tradescantias*. There are also Begonias of the Rex type, as well as those related to *B. corallina*; also Ferns, *Chlorophytum elatum variegatum*, *Aspidistras*, and many others which prove suitable for this kind of work. As the conservatory is wide and very high, there is a large area to cover in the way just described.

The body of the house is filled with large plants in tubs, including massive specimens of *Areca Baueri* and *Livistona chinensis*, with long and healthy leaves. *Phoenix reclinata* keeps throwing up numerous suckers from the base. *Monstera deliciosa*, Tree Ferns, *Ficus*, *Eucalyptus globulus* also occupy a considerable amount of space. The last-named tree is trained up the iron rafters of the house. A magnificent effect is produced here, when the electric light is switched on at garden parties or other functions.

The forcing of Bulbs such as Roman Hyacinths, Tulips, and other spring flowers is carried out very extensively here; and to facilitate this kind of work there are 100 frames heated with hot water. Supplies of forced vegetables are also kept up all the winter. Pits and low span-roofed houses are also used for the cultivation of Primulas, Cyclamen, Smilax, Tomatos, &c.

It was too late in the season to see the trees and pleasure grounds at their best; but we came across a bold bit of rockwork, with a fine fountain occupying one terrace. Amongst and creeping over the stones were various rock plants, Ferns and *Yucca gloriosa*, while on the top of the steep bank were neat specimens of *Retinospora*, *Olearia Haastii* and other ornamental shrubs.

The various pieces of ground devoted to vegetables were well-stocked with Leeks, Brussels Sprouts, Cauliflower, Celery, and other useful things not then lifted, and which Mr. Cameron takes pride in growing to great perfection, whether for the exhibition table or the kitchen. Altogether there are eight acres of garden and pleasure grounds within the walls. Anyone seeing the place for the first time cannot help being carried away with the beauty, magnitude, and charm of the situation and prospect. The gardener's cottage is conveniently situated at one corner of the grounds abutting on the Perth Road; and consists of eight rooms, including bathroom, laundry, and other modern conveniences.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.

THE sixtieth annual general meeting of this well-known charitable institution was held on Thursday January 20th, at Simpson's Hotel, 101, Strand, W.C. Prior to the general meeting a special gathering was held to elect two trustees to fill the places of Robt. Hogg, Esq., LL.D., deceased, and John Lee, Esq., retired. Mr. H. J. Veitch was elected to the chair, and moved that the Hon. Walter Rothschild and Bruno Schroder, Esq., should be asked to fill the office of trustees. Mr. J. Denning seconded, and the motion was carried with unanimity.

The special then became merged in the annual general meeting. The notices convening the latter were first read by the secretary, Mr. G. J. Ingram, and the report and balance-sheet for the year were then presented.

REPORT OF THE COMMITTEE FOR 1897.

It affords the committee considerable satisfaction to submit their annual report for the year 1897, together with an audited statement of accounts, and in doing so they are thankful to be able to record the continued prosperity of the institution, and its increased benefit to those old and needy people in whose behalf it was founded.

With great pleasure the committee have to report that the fifty-ninth anniversary festival dinner in aid of the funds held in May last was most successful, and they desire to express their gratitude to the Right Hon. Lord Rothschild for so kindly occupying the chair on that occasion, and for his able advocacy of the claims of the charity, which met with so liberal a response. They would also gratefully acknowledge their indebtedness to those gentleman

who so kindly served as stewards, to those who sent flowers and fruit, and to other friends who in any way assisted in making the festival a complete success.

During the past year nineteen pensioners have died, seven of them leaving widows, of whom five, whose cases on being carefully investigated and found to be in every way satisfactory, have been placed on the pension list at £16 a year, in succession to their late husbands, in accordance with Rule III., 13. The committee have now the pleasure to announce that they have decided to add nineteen additional pensioners to the number now on the funds, ten of whom, having been accepted under Rule III., 5, they recommend the subscribers to place on the pension list without the trouble and expense of an election; the remaining nine will be elected by votes from the approved list of candidates in the usual way. This addition will make the total number of pensioners 168, the largest number of beneficiaries receiving permanent aid since the foundation of the institution. And yet there will be thirty-five unsuccessful candidates who will perforce have to wait for that assistance which they so much need. The committee heartily wish it were possible for them to render aid to a larger number, but with financial responsibilities to those now on the funds, which are impossible to accurately calculate, they do not feel in a position to recommend a further increase in the annual expenditure than that entailed by the addition of the number already stated.

In the past year there have been in aid of the charity held an amateur operatic performance at St. George's Hall, kindly organised by Mr. H. Morgan Veitch; a flower and fruit stall at Richmond Horticultural Exhibition, kindly arranged by Mrs. Algernon Chancellor; garden fêtes at Reigate and other places, concerts at Altrincham, and various other functions in different parts of the country, to the promoters of which, one and all, the committee tender their very hearty and sincere thanks.

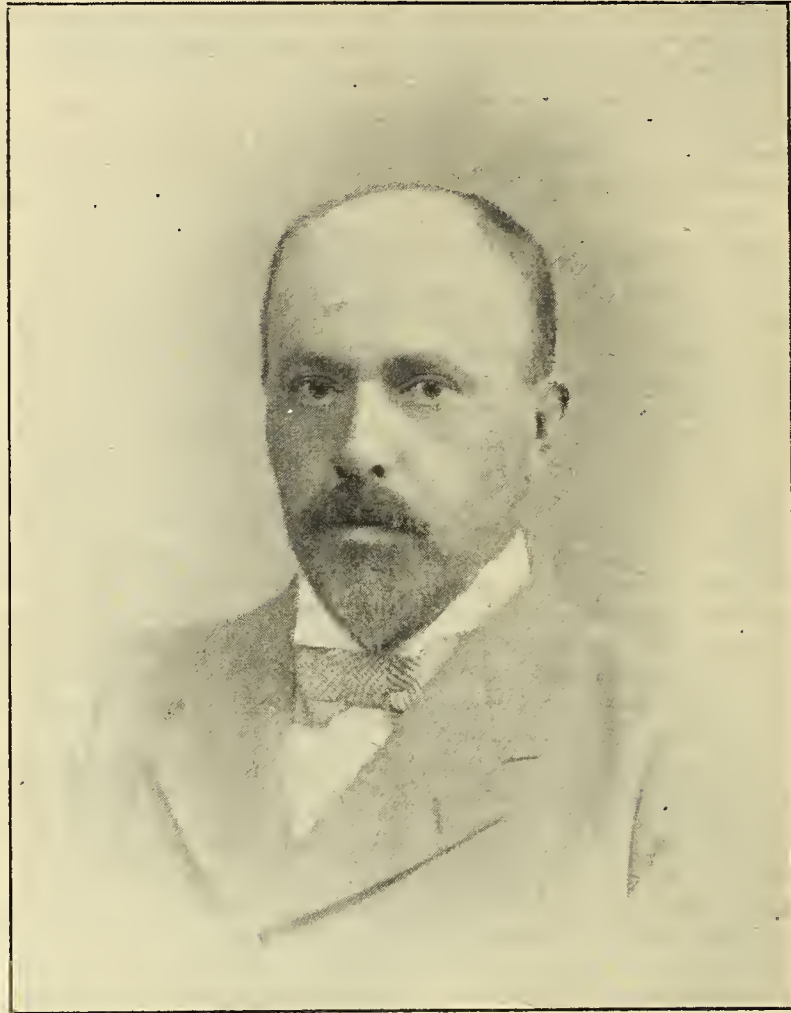
It will be remembered that the committee in their last report announced their intention to send to each unsuccessful candidate at the 1897 election the sum of £5 on June 21st, in honour of the Diamond Jubilee. This they are happy to say was done, and the grateful letters of acknowledgement received from the recipients showed how greatly appreciated were the welcome and, in many cases, timely gifts. The committee likewise announced that they had inaugurated a fund to commemorate the long and beneficent reign of our beloved Queen—the patroness of the charity. This fund, by her Majesty's gracious permission, they proposed to call the "Victorian Era Fund." They are now gratified beyond measure to state that the appeal issued in its behalf was most generously responded to, the sum of £4,075 being received, which amount has been invested in the names of the trustees in Great Western Railway 3 per cent. guaranteed consolidated stock, and the interest derived therefrom will be annually divided *pro rata* amongst those unsuccessful candidates who formerly were subscribers to the institution, in order to render them some temporary assistance whilst awaiting election, but no candidate may receive more than £10 in any one year.

The committee would like to mention the names of all those who have so liberally and kindly contributed to this special object; but whilst gratefully thanking all who did so, they hope it may not seem invidious if they particularise a few generous and munificent donations which greatly helped to secure the substantial amount raised:—His Grace the Duke of Westminster, president; Lord Rothschild and Messrs. N. M. Rothschild & Sons; the Baron Schroder, vice-president; Harry J. Veitch, Esq., treasurer; N. N. Sherwood, Esq., trustee; C. Czarnikow, Esq., vice-president; Arthur W. Sutton, Esq., member of committee; George Munro, Esq., member of committee.

The committee are happy to acknowledge the following legacies which they have received:—£457 5s. 11d. from the late Mr. J. W. Thomson, formerly gardener to his Majesty King George III., for the purpose of applying the interest for the special benefit of a widow or widows, and £100 from the late Colonel Thos. Page, formerly a life member of the institution. They also thankfully acknowledge the receipt, just before the close of the year, of special donations to the general funds of £50 from the Royal Scottish Horticultural Society, and £26 5s. from the Royal Caledonian Horticultural Society.

In common with other charities, the committee have to deplore the removal by death of several friends and supporters, amongst whom may be mentioned the late Dr. Hogg, a vice-president and trustee, who for many years took a warm and practical interest in the institution, and the late Mr. Richard Chrimes, who for upwards of thirty years had been a liberal subscriber to its funds; the late Lord Hindlip and Mr. J. Travers Smith, both of whom had been annual subscribers for many years.

Thomson, formerly gardener to George III, was left for the benefit of a widow or widows, and invested in the special fund. After the poll it was proposed that the unsuccessful widow who stood next highest on the list should receive the benefit of the legacy. She would then be known in future as the "Thomson" pensioner. The interest of the legacy was not quite enough to keep a widow on the funds, but the committee would furnish the balance. Looking at the large amount they had invested, nearly



MR. ARTHUR W. SUTTON.

They have also to record that in consequence of advancing age Mr. John Lee has felt compelled to relinquish his position as a trustee of the institution. From its commencement Mr. John Lee has been one of its warmest friends, and whilst accepting his resignation with the deepest regret, they know that as long as he may be spared he will continue to take a special interest in its welfare. It is a source of much gratification for the committee to notify that the Hon. Walter Rothschild and Bruno Schroder, Esq., have consented to fill the vacant trusteeships, and they desire to express their sincere thanks to those gentlemen for so kindly giving their services in this way to the institution.

In concluding their report the committee have to make the welcome announcement that the fifty-ninth anniversary festival dinner in aid of the funds will be celebrated on Wednesday, June 8th next, at the Hotel Metropole, when his Grace the Duke of Portland (vice-president) has kindly undertaken to preside, and from a long experience they are encouraged to hope that all those friends who have the well-being of the charity at heart will again do in this sixtieth year of its history all in their power to insure the success of the anniversary. And whilst rejoicing in the solid prosperity of the charity, they still earnestly invite the kind co-operation of its present supporters in procuring new subscribers, so that its work may be not only fully maintained, but enlarged, and the ever-increasing number of applicants helped and benefited.

The chairman moved "that the report of the committee together with the statement of accounts (as audited), be received and adopted, and that the best thanks of the meeting be presented to the committee for their able management of affairs of the institution during the past year." Mr. Veitch commented upon the fact that the past year had been a very prosperous one for the society. They were much grieved to lose their two former trustees, but were fortunate in securing the services of the two gentlemen just appointed. The legacy of Mr. J. W.

£30,000, some might be inclined to think that it was too much, but he would remind them that in order to keep faith with the pensioners already on the books they needed £3,000 per annum, and thus if the income of the society ceased there was only enough to meet these annual disbursements for about ten years. The Victorian Era Fund had been a great success. They had asked for £5,000 and had got over £4,000, which he thought was pretty good in a year when appeals had been made to charity for furnishing anything from a pump-handle to a chime of bells.

Mr. Gardner seconded, and the report and balance-sheet were duly passed.

On the motion of Mr. A. Outram, seconded by Mr. E. G. Munro, Mr. H. J. Veitch was re-elected treasurer, and cordially thanked for his past services.

Mr. Wythes proposed that Mr. G. J. Ingram be re-elected secretary. He considered that they were fortunate in securing the services of Mr. Ingram, who got through a vast amount of work. Mr. Osborn seconded, and the meeting gave a general and hearty assent.

Mr. V. Morgan proposed, and Mr. Manning seconded that Messrs. W. Denning, James Douglas, N. Sherwood, and Jas. H. Veitch be re-elected members of the committee, and Messrs. E. Ranger Johnson and M. Gleeson be chosen members of the same body in place of Messrs. R. Milligan Hogg, and Thos. Glen, who retire.

It was moved by Mr. J. Hudson that Messrs. T. Manning, T. Swift, and J. Willard be elected auditors for the ensuing year.

Mr. W. Denning proposed, and Mr. Melady seconded that Messrs. W. Beste, W. Crane, H. Higgins, W. Johnson, and R. Jack be reappointed arbitrators for the ensuing year. All these proposals were passed unanimously.

The following ten candidates were placed upon the list without going to the poll, on the motion of the chairman:—John Battersby, John Berry, Daniel

Boreham, George Daniels, William Davidson, Thomas Ffoulkes, John Mitchinson, John Perkirs, John Rolfe, and Silas Warr.

BALANCE-SHEET, 1897.

| | |
|--|--------------|
| CR. | |
| By Pensions and gratuities | £2,953 16 8 |
| „ Expenses of election and annual meeting | 16 11 3 |
| „ Secretary's salary | 250 0 0 |
| „ Office assistance | 26 0 0 |
| „ Rent of office | 62 10 0 |
| „ Printing, including annual reports and list of subscribers, appeals, &c. | 110 15 3 |
| „ Stationery | 34 14 6 |
| „ Books of Cheques | 4 3 4 |
| „ Expenses of annual dinner £210 2 3 | |
| „ Less tickets sold | 101 17 0 |
| | <hr/> |
| „ Diamond Jubilee address, &c. .. | 108 5 3 |
| „ Wreath for the late Mr. James Webber | 7 17 6 |
| „ Office repairs | 2 10 0 |
| „ Advertisement | 4 13 0 |
| „ Postages, including reports, voting papers, &c. | 3 3 0 |
| „ Travelling expenses | 56 13 9 |
| „ Carriage, telegrams, and incidental expenses | 2 18 2 |
| „ Bank charges | 19 12 7 |
| „ Investment (in accordance with terms of will), J. W. Thomson legacy, Indian 3½ per cents. .. | 0 5 5 |
| „ Investment of Victorian Era Fund, Great Western Guaranteed 3 per cent. | 457 5 11 |
| „ On deposit | 4,075 0 11 |
| „ Balance with Treasurer | 2,415 0 0 |
| „ „ Secretary | 905 11 2 |
| | <hr/> |
| | £11,519 17 8 |

| | |
|---|--------------|
| DR. | |
| To Balance | £929 13 3 |
| „ Deposit account | 2,015 0 0 |
| „ Annual subscriptions | 1,511 7 0 |
| „ Donations at and in consequence of annual dinner, including collecting cards to general fund .. | 1,485 7 9 |
| „ Victorian Era Fund | 4,075 0 11 |
| „ Legacies—J. W. Thomson | 457 5 11 |
| „ „ Col. Thos. Page | 100 0 0 |
| „ Return of income tax | 23 17 10 |
| „ Advertisement in annual list .. | 49 2 6 |
| „ Dividends and interest on deposit .. | 873 2 6 |
| | <hr/> |
| | £11,519 17 8 |

We have audited the accounts and certify the same to be correct, and are pleased to state that we have found the books well and accurately kept. We have also satisfied ourselves that the securities of the invested funds are in the hands of the Bankers.

(Signed) Jan. 18th, 1898.
THOMAS MANNING.
THOMAS SWIFT.
JESSE WILLARD.

The meeting then became special for the purpose of appointing scrutineers of the ballot. Messrs. A. Outram, T. Manning, and E. G. Munro were the chosen gentlemen. An adjournment was then made to await the

DECLARATION OF POLL.

This took place at 4.50 p.m. The nine candidates who headed the list, and the number of votes received by each were as follows:—Henry Ellis, 4,249; Thos. Bundy, 3,900; Robert Begbie, 3,878; James Baker, 3,868; Wm. Wood, 3,790; David Cornell, 3,663; Geo. Hewitt, 3,651; Thos. Edwin, 3,550; and Lydia Rose, 3,534. Mrs. Elizabeth McCulloch, who received 3,031 votes, came next on the list of widows, and was consequently the lucky candidate for the "Thomson" pensionership.

The poll was stated to have been the heaviest on record, no fewer than 97,951 votes having been registered. It was to be regretted, however, that there were as many as 1,152 spoiled votes. Of these 1,085 were due to the omission of the necessary signatures to the voting papers, and 117 had come from people who had not paid their subscriptions.

A vote of thanks to the scrutineers, proposed by Mr. Melady, seconded by Mr. Hudson, and replied to by Mr. A. Outram, concluded the business.

THE ANNUAL FRIENDLY SUPPER.

A goodly company of members and friends of the institution met at the annual supper, which was laid in an adjoining room for six o'clock. Arthur W. Sutton, Esq., of Reading, occupied the chair. After a substantial repast had been well discussed, the chairman rose to give the loyal toast of "The Queen, the Prince and Princess of Wales, and the other members of the Royal Family," which he did in a few well-chosen and appropriate words. He laid stress

upon the sympathy that existed between Her Majesty and her subjects, and the popularity of the Royal Family as a whole. The accompanying is a portrait of Arthur W. Sutton, Esq. (see p. 348), a member of the famous Reading firm, who presided during the evening.

The toast of the evening, "Continued prosperity to the institution and its Victorian Era Fund," was also given by the chairman. Mr. Sutton said that his association with the society was only a comparatively recent one, but that he was very favourably impressed with the efficient way in which it was organised. He then proceeded to briefly review some of the salient features in the history of the society. It was started in 1838, and Queen Victoria became its patroness, and the Prince Consort its patron in 1851. In 1864, the Prince of Wales succeeded his deceased father as patron. In 1851 the receipts were £743, of which £512 were paid to thirty-five pensioners. Now there were 168 pensioners on the books, for whom a sum of £3,000 was required annually. Last year (1896) the total receipts were £4,739, this year (1897) they amounted to £8,575. This was largely due to the Victorian Era Fund for which over £4,000 had been subscribed. Over £71,000 had been distributed in charity by the society since its inauguration. Mr. Sutton paid a tribute of praise to the energy and ability of their secretary, Mr. G. J. Ingram, and said that it was entirely due to him that Lord Portman has been secured as chairman for the forthcoming annual dinner at the Hotel Metropole. Mr. Ingram had also given another proof of promptness and business capacity in obtaining for the society £250 from the legacy left to charity by the late Mr. Thomas Gibbs. Mr. Sutton regretted that the society could not help even more than it does, and hoped that its sphere of usefulness would increase year by year. He coupled with the toast the name of Mr. H. J. Veitch, whom he described as the keystone of the society. The toast was received with the greatest enthusiasm.

Mr. H. J. Veitch responded at some length, and supplemented the facts showing the progress of the society, given by the chairman and others, in which he drew a comparison between ten years ago and now. Ten years ago they had £21,000 in the funds, with 128 pensioners; now they had £29,000 invested, and 168 pensioners. More of the latter had been elected during the last two years than in any other three. Ten years ago they had no auxiliary societies, now they had several, including a very vigorous one at Worcester. Speaking of the Victorian Era Fund, he said it was for the benefit of candidates who have previously been subscribers. He had made a calculation and had found that sums varying from £10 downwards would be given according to the number of years the candidates had subscribed. He concluded by saying that the Victorian Era Fund was still open for those who would like to contribute, and that he hoped yet to see the £5,000 asked for fully subscribed.

The health of the committee, coupled with the name of Mr. Owen Thomas was proposed by Mr. Geo. Bunyard. Mr. Thomas replied in a practical and able speech in which he stated amongst other things that they were indebted to Mr. H. J. Veitch for the establishment of the Victorian Era Fund.

Mr. H. B. May, in the absence of the Rev. W. Wilks, gave the auxiliary societies, to which Mr. J. R. White, hon. sec. of the Worcester Auxiliary responded.

The toasts were interspersed with vocal and instrumental music. The chairman had very kindly secured the services of Mr. Mel. B. Spurr, of the Egyptian Hall, who delighted the audience with his well-rendered songs, and musical sketches. Capital songs were also given by Mr. Fred Bevan, and Mr. J. R. White, whilst Mr. E. G. Munro upon the cornet and Mr. Harry Turner upon the concertina scored distinct successes.

By the kindness of the chairman a selection of instrumental music was given by the "Red Band."

A vote of thanks to the chairman which was proposed by Mr. N. N. Sherwood brought a very enjoyable evening to a close.

The Maggots of the Rose Chafer have been blamed for doing a great amount of mischief to root crops during the past season; but this must have been of local occurrence.

READING AND DISTRICT GARDENERS.

UNDER the auspices of this successful horticultural association a tea and smoking concert were held in the Abbey Hall, Reading (by kind permission of Messrs. Sutton & Sons), on Monday evening 17th inst. Nearly 100 members sat down to tea, which was presided over by the president, Mr. C. B. Stevens. The tables were decorated with plants and flowers from the gardens of East Thorpe (Mr. Woolford, gardener). Among the company present were: Mr. Leonard G. Sutton, Mr. M. H. F. Sutton, Messrs. T. Turton and Hinton, chairman and vice-chairman respectively of the association for the season 1898, Messrs. J. Pound junr., Martin, Woolford, Smith, Bright, Dockerill, Chamberlain, Jones, Bright, H. G. Cox, Spencer, Parsons, Neve (Sindlesham), Townsend (Wellington College), Barefoot, Thatcher, Castle (Mortimer), Rigg, Pound sen., Farey, Fixter, Hobbs (Caversham), Dearlove (Burghfield), Lacey, Wagstaff (Bearwood), W. H. Cox (Calcot), &c.

After justice had been done to an excellent repast, the chairman proceeded to propose the usual loyal toast, and in so doing said that they as an association were greatly honoured, for on the occasion of their annual outing (which took place in July last) to Windsor, they had not only the pleasure of looking through the gardens and grounds at Windsor and Frogmore, but by Her Majesty's gracious permission they were allowed to inspect also the "private portion" of the gardens at the latter place; a privilege of a very rare character. They were greatly indebted to Mr. Owen Thomas, the Queen's gardener, for having spoken on their behalf. The toast, needless to say, was most loyally received with musical honours, Mr. James Martin rendering the solo in capital style.

The second part was carried out on similar lines to that of last year, viz:—a smoking concert, the programme being contributed by members and a few friends (thereby saving the expense of engaging professional talent), and was even more successful than before, thus showing that gardeners were also a "social and musical body." The "tit bit" of the evening was without doubt the Bones Solo by Mr. Sweetzer. The following contributed to a very large programme:—Messrs. Martin, Woolford, Cox, Sweetzer, Poole, Dell, Gardener, Wren, Bush, Lacey, Heather, Wagstaff, Jacobs, Hobbs, Froud and Blay. Mr. W. Lewis accompanied in his usual excellent style.

IRIS KAEMPFERI.

THERE are more sections of Iris than one, and I fear your correspondent "Nial" (on p. 333) has fallen into the trait of many others, by treating the above as ordinary garden Irises. For the benefit of "Nial" and other readers of THE GARDENING WORLD it may be as well to remind them that the Irises may be divided into three sections, namely, those with thick fleshy roots or the rhizomatous sorts, such as *I. flavescens*, *I. albicans*, *I. florentina*, and the common Blue Flag, generally known as German Irises. Secondly, there are those beautiful bulbous Orchid-like varieties in all possible shades of colour, such as the varieties of *Iris Xiphium* and *I. Xiphoides*, known as English and Spanish Irises, though all really of Spanish origin. Thirdly, we have the varieties of *I. Kaempferi*, (syn. *I. laevigata*) with fibrous roots, commonly known as Japanese or Clematis-flowered Iris, on account of their close resemblance in size and shape to the flowers of Clematis. The two former groups are grown successfully in the garden borders in ordinary garden soil, but by preference a rich light soil suits them best. The latter group of varieties of *I. Kaempferi*, being semi-aquatic, require a very different position, a position situated at the foot of a bank, leading to a ditch, pond, or lake, and planted so that the fibrous rootlets are constantly in water.

If lovers of this beautiful Iris have no lake or pond by which to plant the same, they might easily contrive to arrange a bog garden in the lowest lying part of their garden, planting in a soil composed of rich loam and peat, not so much for nutriment as for its retentive qualities of moisture. In this they will grow and flower luxuriously. Continuous supplies of water must be given judiciously and regularly during hot and dry weather, from the first growing stage until the flowering period, after which they may be left to Nature's own supplies.

As to their not being known to flower in this country this is quite wrong, as a visit to Kew Gardens

GREEN PEAS—JUNE TO NOVEMBER.

C
A
R
T
E
R
S

C
A
R
T
E
R
S

A correspondence was raised in the Daily Press last Autumn upon the shortness of the season when Green Peas are available, both in gardens and on the market. We now offer the following as representing the best collection selected from 1,024 rows we had under trial last season. It would be difficult for us to give precise dates for putting the seed into the ground, as so much depends upon soil and situation. Successional Sowings may be made any time between these dates, and the last sowing not later than the second week in June.

| NAME. | DESCRIPTION. | HEIGHT. | | WHEN TO SOW. | EXPECT READY TO PICK. | CARRIAGE FREE. | |
|--------------------------|-------------------------|---------|-----|-----------------|-----------------------|----------------|------------|
| | | ft. | in. | | | Per pint. | Per quart. |
| Carters' Lightning | First Early White Round | 2½ | .. | In February | May to June | 2s. | 3s. 6d. |
| Carters' Early Morn | First Early Marrowfat | 3 | .. | End of March | During June | 2s. | 3s. 6d. |
| Carters' Daisy | Second Early Marrowfat | 1½ | .. | Middle of April | Early July | 2s. | 3s. 6d. |
| Carters' Danby Stratagem | Mid-season Marrowfat | 3 | .. | End of April | July | 2s. | 3s. 6d. |
| Carters' Model Telephone | Main Crop Marrowfat | 5 | .. | Middle of April | July | 2s. | 3s. 6d. |
| Carters' Model Telegraph | Main Crop Marrowfat | 5 | .. | End of April | July and Aug. | 2s. | 3s. 6d. |
| Carters' Michaelmas | Late Marrowfat | 3 | .. | May to June | Sept. to Nov. | 2s. | 3s. 6d. |

The Collection—1 pint each of 7 varieties, price 12/6; 1 quart each of 7 varieties, price 22/6, Carriage Free.

OFFERED IN SEALED PACKETS ONLY

Barter's THE QUEEN'S SEEDSMEN, 237, 238, & 97, HIGH HOLBORN, LONDON

during June and July will clear that error, or to Messrs. Barter & Sons Nurseries, Long Ditton, Surrey, where they are grown by hundreds in water and on a bank by the side of a stream. They will flower in full exposure to sun or in partial shade; but by preference in full sun. The planting season is autumn and spring, when they should be planted in clumps from 2 ft. to 4 ft. apart, and when established will give a gorgeous range of colours from snowy white to bright blue, deep purple, and crimson, in self and mottled, double and single flowers, many of the blooms measuring from 8 in. to 10 in. across.—*Grower of Iris.*

QUESTIONS AND ANSWERS

* * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

The White Butterfly.—*Enquirer*: There are two white butterflies that attack the members of the Brassica family, while a third one is known as the Green-veined White. The Large White Butterfly (*Pieris Brassicae*) of the Cabbage makes its appearance in April and keeps on till June. This is the first brood, and the females commence to lay their eggs soon after, in clusters of 20 to 30 upon the under sides of Cabbage leaves or allied plants. The eggs hatch out at various rates according to the temperature of the air, and may be found abundantly in June, some earlier and some later. They pass through the egg, caterpillar and pupa stages appearing as perfect butterflies again in July and August. The caterpillars from this brood appear in September and later, according to the weather and the time the eggs were laid. This late brood passes through the winter in the pupa stage, suspended by a band of silk to some wooden fence, wall, or other structure which will keep them dry and sheltered. The perfect insect from these pupae hatches out in April to lay its eggs again. Some authors say that the Large Cabbage Butterfly gives rise to a constant succession of broods all through the summer and autumn, but as the eggs of different individuals are laid at various times, it follows that caterpillars may be found over a considerable time according to the state of the weather. The presence of food and the absence of frost would have a great deal to do with this, and your geographical position would prevent you having anything like the winters usually experienced even about London. There are many caterpillars belonging to butterflies and moths that infest the Cabbage, and the specimens you found in January might have belonged to a moth. The perfect insects of the Large White Cabbage Butterfly die long before winter.

Clubbing of Brussels Sprouts.—*R. Henderson*: There are really two forms of swellings upon the roots, not only of Brussels Sprouts but most other members of the Brassica tribe. Small ones, more or less globular, may be the result of the weevil *Ceuthorrhynchus sulcicollis*. If the excrescences are as large as the fist or thereby it is without doubt the result of a fungus named *Plasmiodiophora Brassicae*. You should dig (not pull) up the roots after the sprouts have been gathered, and carefully burn them to destroy the fungus. Then trench the ground deeply, putting the top spit into the bottom of the trench, so as to bury the spores in it. Turn the

loose earth of the first spit into the trench likewise; and give a good dressing of gas lime on the top. Another dressing on the top of the next spit would do no harm. None of the Cabbage tribe should be planted on this ground for a year or two.

The best white Clematis.—*Omega*: For early flowering one of the best white varieties is Mrs. George Jackman, with satiny white flowers having a creamy bar. Though it is one of the Clematis patens section, it sometimes flowers on the young wood as well as the old. Smith's snow-white Jackmannii is one of the late flowering sorts and a very fine one belonging to the Jackmannii section. Both are perfectly hardy. You ask a question about the best time to plant Clematis something, but we cannot make out what. Please write the name a little plainer and we shall help you.

Matchbox with Grub.—*Enquirer*: The box you mentioned in your letter has not yet arrived, and must have gone astray or been smashed to pieces in coming through the post. If you think it worth while sending another, we shall be pleased to assist you.

Transplanting Rhododendrons.—*J. Wilson*: This could practically be done at any time of the year except during times of too severe frost or severe drought and heat. The principal points to be attended to are lifting the plants with a good ball, transferring them to their new quarters at once, before the soil and roots get dried up, and making sure that you put them in suitable material. Select positions for them where the soil is comparatively cool and moist, otherwise you must improve the staple of the natural soil by removing half or the whole of it and making the amount good by means of peat, which need not be particularly fine, that is, you need not get Orchid peat, nor the fibrous and selected material that is used for Heaths and Azaleas in pots. Peat serves to keep the roots cool in droughty summer weather. Dry sandy soils, and clay require a considerable amount of peat to enable them to be suitable for Rhododendrons in the more southern counties.

Weeping Willows.—*R. G. S.*: By rooting shoots either of the Kilmarnock or the American Weeping Willows you will only have bushes that trail on the ground. You must bud or graft them on upright stems of some other sort. The Goat Willow (*Salix Caprea*), is often used as a stock, and always, we believe, in the case of the Kilmarnock Willow. Stocks of the Goat Willow may be raised from cuttings and grown to the height required before budding the weeping form upon it.

Dendrobium Phalaenopsis schroderianum.—*Len*: The flower you send is a very pretty one and well worth growing. So many varieties have been named, that it would be difficult to distinguish from some that have received names. The clear rose and veiny outer lobe of the lip makes a beautiful contrast with the lemon and white tube, and the nearly white sepals and petals. By way of distinction it might be named someone's variety, or the variety of your place.

Iris Kaempferi.—*Nial*: For a reply to your query in last week's issue see p. 349.

Margillo Apple.—*H. Walker*: We do not know of an Apple named Margillo. It is probably a mistake for Margil, an old and much esteemed variety on account of its excellent flavour, which has been compared to that of Ribston Pippin. The tree, however, is more healthy, less liable to canker, and a free bearer. The fruits are of medium size. You should have no difficulty in procuring it, under the name we have given, from any nurseryman who grows a good collection.

Marguerite Leaves tunnelled.—*Omega*: The galleries in the leaves are the work of a small black

fly named *Phytomyza nigricornis*. As the grubs of this insect burrow between the two skins of the leaves, you cannot apply any insecticide that will destroy them without also killing the leaves. You might pick off and burn the worst of the leaves, and pinch or squeeze the rest between the finger and the thumb. By examining the underside of the leaves you can see where the grub is situated. Syringing the foliage with weak tobacco water at intervals of a week or two would serve to keep the flies from laying their eggs upon the same.

Names of Plants.—*Geo. Haig*: *Cattleya labiata percivaliana* (well-coloured and of good substance)—*T. W.*: 1, *Dendrobium findlayanum*; 2, *Cattleya labiata Trianaei*; 3, *Odontoglossum crispum guttatum*.—*H. Miller*: *Eranthemum nervosum*; 2, *Ruellia Portellae*; 3, *Nepeta Glechoma variegata*; 4, *Yucca filamentosa variegata*; 5, *Sibthorpia europaea variegata*; 6, *Carex brunnea variegata*; 7, *Carex Morovii variegata*.—*J. Andrews*: 1, *Crocus susianus*; 2, *Crocus Imperati*; 3, *Jasminum nudiflorum*; 4, *Asplenium bulbiferum minus*; 5, *Davallia Tjernmanni*.—*T. Cox*: 1, *Retinospora plumosa*; 2, *Retinospora pisifera*; 3, *Cupressus thuyoides*; 4, *Taxus adpressa*.

Communications received.—A. Outram.—J. Carter & Co.—W. Swan.—D. Chisholm.—Len.—S. L. A.—W. B.—R. M.—A. C.—J. M. R.—S. W.—W. H.—P. D.—J. H. Nicholas.—Waban.—R. E.—Ensign.—S. O. L.—G. M.—E. S.—C. Thoms.

TRADE CATALOGUES RECEIVED.

FRED. SMITH & Co., Suffolk Seed Establishment, Church Street, Woodbridge.—Catalogue of Vegetable and Flower Seeds.

JOHN TURNER, North Street, Wetherby, Yorks.—Catalogue of Vegetable, Flower and Farm Seeds, Bedding Plants, &c.; also Select List of Chrysanthemums and Dahlias.

W. P. LAIRD & SINCLAIR, Dundee and Cupar-Fife.—Vegetable, Flower, and Farm Seeds, Seed Potatoes, Tools and Sundries.

W. WELLS, F.R.H.S., M.N.C.S., The Earlswood Nurseries, Ltd., Earlswood, Redhill, Surrey.—Special List or Supplement to Descriptive Catalogue of Chrysanthemums.

VILMORIN-ANDRIEUX & CIE, Seed Merchants, 4, Quai de la Mégisserie, Paris.—General Catalogue of Seeds, Strawberries, Flowering Bulbs, &c.; also Supplement to the Catalogues.—List of Novelties.

JOHN FORBES, Buccleuch Nurseries, Hawick, Scotland.—Seed Catalogue.

THOS. S. WARE, Hale Farm Nurseries, Tottenham, London.—Spring Catalogue of Chrysanthemums, Lilies, Calorchorus, Gloxinias, Begonias, Gladioli, &c.

H. DEVERILL, Banbury, Oxford.—Deverill's Seed and Plant Catalogue and Exhibitors' Guide.

THE SURREY SEED CO., Redhill, Surrey.—Garden Seed Catalogue.

FRANK DICKS & Co., (Late Dobie & Dicks,) 66, Deansgate, Manchester.—Descriptive Price List of Seeds.

HENRY ECKFORD, Wem, Shropshire.—Catalogue of Giant Sweet Peas, Culinary Peas, Vegetable Seeds, Flower Seeds, &c.

JOHN PINCHES 3, Crown Buildings, Crown Street, Camberwell, S.E.—List of Acme Labels, Yeats's Zinc Labels, and Sundry Labels.

ALEXANDER CROSS & SONS, LTD., 19, Hope Street, Glasgow.—Cross's Selected Garden Seeds.

H. CANNELL & SONS, Swanley, Kent.—Illustrated and Complete Descriptive List of Chrysanthemums.

FOTHERINGHAM & KING, Corn Exchange, Dumfries.—Garden Seeds.

WEBB'S

NOVELTIES.

WEBB'S PEA. New Pioneer.

A remarkably handsome blue wrinkled Marrow, growing from 3 to 3½ feet in height; it is hardy in constitution, and very early in coming to maturity. The pods contain from 8 to 10 fine Peas of most excellent quality. **2s. 6d.** per pint, post free.

WEBB'S TOMATO. New Sovereign.

A very handsome golden-yellow variety, of vigorous habit of growth, and an abundant cropper. The fruit is of large size, flattish round in shape, solid, and most delicate in flavour. **1s. 6d.** and **2s. 6d.** per packet, post free.

WEBB'S LETTUCE. New Paragon.

A compact-growing new variety, with smooth, light green leaves. It forms large solid heads, which are remarkably crisp. **1s. 6d.** per packet, post free.

WEBB'S BEET. New Satisfaction.

Root of medium size, long and tapering in shape, of deep blood-red colour, of fine grain, sweet and delicate in flavour. **1s.** per packet, post free.

The Queen's Seedsmen,
WORDSLEY, STOURBRIDGE.

BARR'S SEEDS

OF FINEST SELECTED STRAINS AND TESTED GROWTH

CHOICE FLOWER SEEDS.

BARR'S "PRIZE STRAIN" SINGLE BEGONIA.

Saved from the finest colours and best formed flowers. Per packet, **1s. 6d.**, **2s. 6d.**, and **3s. 6d.**

BARR'S "PRIZE STRAIN" DOUBLE BEGONIA.

Saved from the highest quality flowers. Per packet, **2s. 6d.** and **3s. 6d.**

BARR'S "FIRST PRIZE" CALCEOLARIA.

Saved from the finest selected flowers and richest colours. Per packet, **2s. 6d.** and **3s. 6d.**

BARR'S EXTRA CHOICE MIXTURE OF CARNATIONS AND PICOTEES.

Saved from the finest double flowers of the highest class. Carnations and Picotees, per packet, **2s. 6d.**

BARR'S "FIRST PRIZE" CINERARIA.

A select, comparatively dwarf strain, saved from largest flowers of finest form and best distinct colours. Per packet, **2s. 6d.** and **3s. 6d.**

BARR'S SUPERB MIXTURE GLOXINIA.

Saved from the finest sorts. Per packet, **1s. 6d.**, **2s. 6d.** and **3s. 6d.**

BARR'S "Covent Garden" PRIMULA.

A very select strain, flowers of the finest colours, and of good substance. Per packet, **1s. 6d.** and **2s. 6d.**

BARR'S SEED GUIDE.

Contains a Select List of the best Vegetable Seeds and most beautiful Flower Seeds. It is full of Practical Hints, and will be found of great value to Gardeners, Amateurs and Exhibitors.

Sent free on application.

BARR and SONS,
12 & 13 KING ST., COVENT GARDEN, LONDON.



THE NEW MELON

For 1898.

SUTTON'S

ROYAL JUBILEE.

A new Green-fleshed Seedling Melon, raised at the Royal Gardens, Frogmore, by Mr. Owen Thomas, Gardener to Her Majesty the Queen. This magnificent new Melon is worthy of its origin and its associations. Fruits large, handsomely netted, possessing deep rich green flesh of the most superb flavour. The plant is robust in constitution, and sets freely.

Per Packet, **2s. 6d.** and **3s. 6d.**

POST FREE.

GENUINE ONLY DIRECT FROM

SUTTON & SONS, READING.



"Gardening is the prnest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, FEBRUARY 5th, 1898.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, February 8th.—Royal Horticultural Society; meeting of committees at 12 o'clock; annual general meeting at 3 p.m.

Sale of American shrubs and hardy plants by Messrs. Protheroe and Morris.

WEDNESDAY, February 9th.—Sale of Lilliums, Roses, and hardy perennials by Messrs. Protheroe and Morris.

FRIDAY, February 11th.—Sale of Imported and Established Orchids by Messrs. Protheroe and Morris.

ESSEX FIELD EXPERIMENTS.—During the past two years the Technical Instruction Committee of the Essex County Council has been conducting experiments with manures at a number of places in the county. The experiments were of four kinds, and a report of the same has been compiled by Mr. T. S. Dymond, F.I.C., staff-lecturer in chemistry. The particulars given below relate to the "Manurial trials on Beans followed by wheat." Beans constitute a garden crop, while they are also akin to Peas, French Beans and Scarlet Runners in their manurial requirements. It is the custom in Essex to dress the land with farmyard manure previous to sowing Beans, and reasoning from the fact that leguminous crops can avail themselves of the free nitrogen of the air, it was considered probable

that the farmyard manure could be more economically applied to other crops; while Beans might be stimulated with artificial manures to make a more vigorous growth and thereby store up a greater quantity of atmospheric nitrogen to the advantage of the succeeding crop. It is well known that the stubble of a Clover or other leguminous crop leaves the soil richer in nitrogen than it was before. The experiments were conducted at six centres so as to have the various classes of soil in Essex fairly well represented.

The ground under trial was laid out in seven plots at each of the places, and different manures or mixtures of them were used on each, with the exception of a check plot, which was left unmanured. The wheat that followed the Beans the succeeding year received no manure whatever, so that the results depended entirely upon the single application. The first plot was supplied with farmyard manure at the rate of 12 tons per acre and at a cost of 60s. The results showed no very marked advantage over the plot which was unmanured except in the case of wheat at Gosfield and Tendering. This might have been due to the nature of the soil at the two places named, and the fact that the early part of the season during both years of the experiments was very dry when the crops were making their growth. The second plot received 3 cwt. of superphosphate in addition to the farmyard manure, raising the total cost to 67s. 3d. The increase of crop in almost every case was well marked, and more than repaid the additional cost of the superphosphate. The great increase of the wheat is considered to be due to the enrichment of the land by the vigorous growth of the Bean crop, resulting in a greater storage of nitrogen in the soil. The residue of the superphosphate from the previous season could scarcely have accounted for the results.

Twelve tons of farmyard manure, 3 cwt. of superphosphate and 3 cwt. of kainit per acre were applied to the third plot, and the results we must admit were very puzzling. With one exception the weight of both Beans and wheat has been reduced simply by the addition of the kainit. The total cost of the manures was 73s. 11d. and the value of the increase was only 29s. 9d. above that of the unmanured plot. In plot two the value of increase was 46s. 6d. The only explanation that the report offers is that the kainit may have prevented the fermentation of the manure or promoted "denitrification" and loss of nitrogen. Superphosphate of lime was employed alone, to the extent of 4 cwt. per acre, on plot five, at a cost of 9s. 8d.; and the resulting crop was equal or slightly better in most cases to the harvest produced by the much more expensive application of farmyard manure in the first plot. Basic slag, at the rate of 5 cwt. per acre, was applied to plot six, at a cost of 12s. 1d. The results in this case are of a mixed and uncertain character, though in several instances the crops were better than those produced by farmyard manure. One outcome of this trial is that the lime in the basic slag added materially to the weight of the crop at Tendering, where the soil is naturally but ill supplied with lime, and consists of a heavy loam overlying brickearth. On plot seven 4 cwt. each of superphosphate and kainit produced varying results, but on the whole scarcely superior to the harvest obtained after an application of superphosphate alone. The Beans derived the greater advantage from the kainit, the most important ingredient of which is potash, of leading importance to all leguminous crops.

The most unsatisfactory results, perhaps, in the above trials, were obtained from the use of farmyard manure and kainit. No

estimate, however, as far as we observe, has been made of the quality or otherwise of the farmyard manure employed, nor of the animals that supplied it. The age of the animals, the nature of the food supplied to them, and the making of the manure itself must all be taken into consideration in estimating the actual value of such a fertiliser. We are pleased to note that the experiments are to be continued. Other seasons will, in all probability, give different results; for the weather as to temperature and moisture often nullifies the effects of manuring. If the same ground is to be used again, for the same crops, some plots should be set apart to test the effect of the rotation of crops in husbanding soil fertility.

Seaweed is said to be richer in nitrogenous constituents than Oatmeal or Indian Corn. It should therefore be a very nutritious vegetable food.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, February 8th, in the Drill Hall, James Street, Westminster, 1 to 4 p.m. At 3 o'clock the annual general meeting of the society will be held in the Lindley Library, 117, Victoria Street, S.W.

An Army of Pensioners.—There are on the United States' pension list no fewer than 4,620 survivors of the late war who are either florists, nurserymen, seedsmen, or gardeners. These men seem to have taken the scriptural injunction to heart, and to have turned their swords into ploughshares and their spears into pruning hooks.

Rye Gardeners sat down to their annual dinner at the Cinque Ports' Assembly Room on the 20th ult. The Rev. A. J. W. Cross presided over a large attendance. In replying to the toast of "The Society," proposed by Mr. C. Hayles, the president remarked that the society owed its success to the labours of the officers and the interest displayed by the members. The point money won by the various exhibitors through the year was distributed during the course of the evening.

N.C.S. Smoking Concert.—The second annual smoking concert in connection with the National Chrysanthemum Society will be held at Anderton's Hotel, Fleet Street, E.C., on Monday evening, 14th February, at 7.30 p.m. That the soothing influence of the noble weed may be extended—Oh! no—in order that invitations may be extended to ladies, the annual "Smoker" will, on this occasion, take the form of a cigarette concert. Seeing also that the 14th is St. Valentine's Night there should be a very large attendance. The hon. secretaries and treasurers of the concert are Mr. Richard Dean, V.M.H., Ranelagh Road, Ealing; Mr. H. J. Jones, H.F.N.C.S., Rycroft Nursery, Hither Green, Lewisham; and Mr. A. E. Stubbs, 290, Dashwood House, New Broad Street, London, E.C.

Native Guano.—This is the title of a pamphlet of seventy-two pages, giving an account of the results of the practical application of "Native Guano" to farm and garden crops. The text matter consists almost entirely of testimonials from various people, practical and scientific, throughout the country, the greatest number being in England. The manure has been used for all sorts of garden crops, including representatives of fruits, flowers, and vegetables. An index at the end refers the reader to the pages where each particular crop is mentioned. Most things have of course been mentioned by a great number of people who furnish the results they obtained. As far as we notice the testimonials refer to last year only. Dr. A. B. Griffiths, the great authority on horticultural chemistry, describes it as an excellent manure for a large number of crops, as it contains nitrogen and phosphoric acid, as well as other fertilising substances not recognised in ordinary official analyses. These substances probably render the inert constituents of the soil available as plant foods, and in that respect are valuable. The pamphlet is issued by the Native Guano Company, Limited, 29, New Bridge Street, Blackfriars, London, E.C.

As Orchards Increase in number and extent in Britain, so do their insect enemies multiply.

Sparrows are now singing on the housetops, I see by the papers. Well, leave them there, say I, not because I'm charmed with the song, but the Gooseberry buds will be safe.—*Snaggs*.

A Banffshire gardener lost his watch while digging about three years ago. The lost time-piece turned up again the other week while digging was being carried on, though the same ground had been dug three times in the interval.

M. Anatole Cordonnier was nominated a *Chevalier de la Legion d'Honneur*, on the occasion of the last Chrysanthemum exhibition at Brussels. He is a Vine and Chrysanthemum grower, and the author of a book on *Le Chrysantheme a la Grande Fleur*. M. Cordonnier is in all circumstances a man of progress, so that this new distinction at the hands of the French Republic is well merited.

An Ancient Orchard.—Some time ago during trenching operations in the orchard at Pitfour, Aberdeenshire, the men found three feet of good loam on the surface, below which was a layer of closely placed granite blocks over-lying a layer of sand. Below that, good soil again descended to some depth. This had been the monastery orchard of Pitfour, and must have been made about the year 1218. The custom of paving the site of fruit trees must therefore be a very ancient one, though not much practised now.

Deverill's Seed and Plant Catalogue.—If amateurs do not garden finely in modern times, it is not for lack of material, nor want of instructions how to set about it in the orthodox fashion prescribed by the profession. The usual lists of flower and vegetable seeds and plants are set forth in the catalogue of Mr. H. Deverill, Banbury, Oxon.; but to amateurs the hints on "Growing and Selecting Vegetables for Exhibition" should prove both interesting and useful. The chapter is written by Mr. W. Pope, gardener to the Earl of Carnarvon, Highclere Castle, Newbury, a noted vegetable grower and exhibitor, so that amateurs may feel sure they are following a reliable authority. The subjects dealt with are Beet, Longpod Beans, Carrots, Cauliflowers, Celery, Cucumbers, Onions, Leeks, Potatos, Peas, Parsnips, Dwarf Beans, Tomatos, and other subjects which most amateur gardeners like to cultivate for use as well as exhibition. For the latter purpose the art must always be carried to greater perfection than when the vegetables are merely grown for home use. There is also an article on the cultivation of a few popular flowers, such as amateurs generally may desire to cultivate. Hardy, herbaceous, alpine, and bulbous plants are also described at fair length, giving such information as beginners may require.

Sir John Lubbock, Bart., M.P., on Buds and Stipules.—There was a large attendance at the Royal Institution on the 21st ult., to hear Sir John Lubbock's lecture on "Buds and Stipules." Sir Frederick Bramwell presided. The unwonted earliness of the season enabled him to be better provided with specimens than he could have anticipated. The large number of diagrams, however, with which Sir John is always provided enables him to place the subject-matter before his audience with great clearness at any season of the year. The subject, moreover, is of perennial interest, as leaves, stipules and buds are present in some stage or other during every day of the year, while they are quite as interesting in winter as in summer, the so-called resting buds being particularly instructive to the student of Nature's way of taking care of her subjects. Even the outermost Oak leaf in the bud is protected with forty greatcoats, that is, twenty pairs of stipules. Some Rock Roses have stipules while others have none; but in such cases the leaf is differently formed at the base, thus making up for the deficiency of stipules. Many other cases were cited to show that stipules were of primary importance for protecting the buds in winter; while in other instances they assumed the form and functions of leaves in summer. In conclusion, he stated that if his hearers would examine the buds of our native trees and shrubs in spring, they would be more and more filled with wonder at the varied provisions made by Nature to protect the tender buds in winter.

Amber in enormous quantity has been discovered in British Columbia, sufficient it is said to supply the pipe-makers of the world for the next 100 years.

In Onion there is strength, says *American Gardening*, and in proof thereof quotes the case of a school-mistress who objected to and forbade one of her scholars eating Onions, but who was forced to give way when all the pupils took to the same diet.

Royal Botanic Society.—Fruiting branches of *Euonymus japonicus*, not often seen in this country, were sent from Dawlish, Devon, to the meeting of this society on the 22nd ult. A paper on "Plant Variations" was read by the Rev. G. Henslow, and illustrated by oxyhydrogen views. Papers of botanical interest are to be given at the meetings of the Fellows during spring and summer.

Botany in London Parks.—The London County Council has been recommended by the "Parks and Open Spaces Committee" to give orders for plots to be laid out in Battersea, Ravenscourt, and Finsbury Parks in such a way as to afford instruction to scholars in elementary and secondary schools in the practical study of botany. The plants in these plots are to be labelled with their common as well as their Latin names. It is suggested that the trees in the park should be similarly labelled. This is a step in the right direction and we trust one that will be appreciated, when no doubt similar instructions will be given to those in charge of the other parks and open spaces.

Chrysanthemum "At Home."—This is the title of a small booklet by Mr. C. Orchard, Harbour Gardens, Bembridge, Isle of Wight. In the absence of information we take it for granted that Mr. Orchard, who is a noted Chrysanthemum grower, has written it during his idle hours, or may-haps to kill time while riding on the railway in returning from the shows, as well as to amuse his personal friends. It is a humorous skit on Chrysanthemums, the names of the varieties being interwoven with the language of the 'Mum grower in such a way as to produce an amusing train of ideas, the force of which will be more apparent to growers of the golden flower than to outsiders.

Ealing Gardeners' Society.—The usual weekly meeting of this society was held on the 25th ult., John Hughes, Esq., F.R.H.S., presiding. The attendance was not quite so good as the subject warranted, many being, no doubt, deterred by the term "chemical." However, the very respectable number who did put in an appearance were more than gratified—they were enthusiastic. The occasion was an address on "Chemical Manures," by F. W. E. Shrivell, Esq., F.L.S., of the Tonbridge Experimental Farm. Mr. Shrivell possesses not only a fund of information on this important question, but a very happy knack of rendering it available. This he did partly by the aid of the blackboard and partly by his affable manner and concise demonstration of facts. He stated, at the outset, that he had nothing to sell; he came before them solely in the interests of science and the benefit of horticulture; and that while Dr. Bernard Dyer was the scientific adviser, he, himself, was the practical worker. He did not despise farmyard manure; on the contrary, he called it his "sheet anchor," and said that it not only contained all the elements of plant food, but that it acted mechanically on the soil improving its condition as well as adding to its fertility. He then described dung as consisting principally of straw, ammonia, phosphoric acid, potash, and lime. He recommended fresh or green dung as a base for vegetable culture for the reasons given above, and gave copious statistics to prove his case. Dung, however, was not sufficiently powerful in itself to give the best results, so that lime and kainit were added at the same time, the more soluble chemicals, like nitrate of soda being applied subsequently. Mr. Shrivell gave his experiments with Asparagus, Strawberries, Cauliflowers, Brussels Sprouts, etc., over a series of years, showing some very remarkable results. Strawberries, it seemed, could not be grown satisfactorily without farmyard manure, while Cauliflowers and Brussels Sprouts—indeed the Brassica tribe generally—were enhanced in value by chemical manures alone. Much more invaluable information of this sort was accorded, which was received with a hearty and generous assent.

Woking Horticultural Society.—Mr. J. O. Law presided at the fourth annual meeting of this body which took place at the Railway Hotel, Woking, on the 19th ult. The report of the committee, presented by Mr. Jones, stated that the Diamond Jubilee Year had been a very trying one for them, and that they had reason to congratulate themselves that the deficit on the year's working, which they had to report, was no larger. The statement of accounts showed total receipts of £244 11s. 1d., and an expenditure of £239 15s. 10d., thus leaving a balance in hand of £4 15s. 3d., as against last year's balance of £9 1s. 1d. The balance sheet was adopted on the motion of Mr. Neal, seconded by Mr. Jones. At the election of officers, which followed, Mr. J. O. Law was requested to keep the post of president, and Mr. Taylor, Mr. Robinson, and Mr. Neal were re-elected treasurer, secretary, and chairman of the committee respectively.

Devon and Exeter Gardeners' Association.—At the meeting held on the 26th ult., Mr. George Lee gave a lecture on "Orchid Growing," especially dealing with Cattleyas. In his opening remarks he alluded to the discovery of *C. labiata* by Mr. William Swainson in Brazil, and its introduction to this country. Proceeding to cultural details, he said that in order to grow Cattleyas properly the structure must be suitable, for Cattleyas were difficult to manage if their requirements were not closely looked after. Mr. Lee advised care in potting, and warned his hearers against potting too frequently. All Cattleyas in their growing season required an abundant supply of water at the roots and in the atmosphere, but sometimes damage was done to late growing forms by water lodging and causing the young growths to rot. Mr. Lee gave a list of the most useful species of Orchids for the grower to invest in.

An Association of Working Men Gardeners.—The efforts of the East Suffolk County Council to encourage the cultivation of fruit and vegetables are bearing good fruit. The lectures given by the teachers employed by the council in various local centres have been much appreciated, and the cultivation of garden produce generally has been much improved and stimulated thereby. At one of these centres, where an especially enthusiastic class has been drawn together, the idea of forming an association of working men gardeners has been evolved. The objects of this association are mutual assistance in the way of still further improvements, the purchase of the best seeds and manures at the most reasonable prices, and the disposal of surplus produce to the greatest advantage. These working men gardeners have been greatly impressed by the necessity of obtaining good seeds and manures, both from the lips of the lecturers and from practical experience gained in their own garden plots. However much criticism people may be disposed to bring to bear upon the working of county councils, it is satisfactory to find that, in some directions at least, their efforts to procure a more enlightened state of affairs have not been in vain.

Colchester Rose and Horticultural Society.—The third annual general meeting of this society took place at the Town Hall, Colchester, on the evening of Wednesday, 19th ult. Mr. Claude E. Egerton-Green presided. The report for 1897 was presented by Mr. P. R. Green, and stated that the year lately closed had been one of steady progress, and the only drawback to a successful year was the fearful storm on June 24th, the day of their summer show. The balance sheet showed receipts amounting to £318 14s. 11d., and an expenditure of £311 2s. 9d. A balance of £7 12s. 2d. remains with the secretary. The chairman, in moving the adoption of the report and balance sheet, apologised for the absence through illness of their president. Mr. C. E. Cant seconded, and the motion was duly carried. At the election of officers Mr. P. R. Green announced that Mr. Jas. Paxman, the present Mayor of Colchester, had signified his willingness to accept the office of president. The following officers were then chosen:—Hon. Treasurer, Mr. C. R. Gurney Hoare; Hon. Secretaries, Mr. Claude E. Egerton-Green and Mr. O. G. Orpen; Auditors, Mr. C. H. T. Marshall and Mr. C. E. White. The members of the old committee were asked to serve for the ensuing year, and Mr. J. T. Bailey was added to their number. Some conversation arose anent the visit of the National Rose Society to Colchester during the coming summer. It

was hoped that Colchester would give the "National" a good reception, and that the town would reap considerable advantage from the visit.

Lady-crofters.—The Countess of Warwick proposes to establish a training college for lady-crofters wherein they shall be taught dairying, pig and poultry keeping, horticulture, etc. The crofts are to range in size from one to four acres, and each croft is to be occupied by two lady-crofters—who may be either joint tenants, or head and subordinate—all to be under the control of a lady warden. The objects of Lady Warwick's practical scheme are (1) to open up a new field of work for women; (2) to check the depopulation of rural districts; and (3) to keep at home some of the money annually sent abroad for poultry, dairy, and horticultural produce. Only those ladies who have taken the course at the college, and who, moreover, possess incomes of from £20 to £50 per annum will be recognised as lady-crofters. The woman's movement, inaugurated by the Swanley Horticultural College, seems to be finding zealous supporters, and if this new development proves successful, other undertakings of a similar nature will doubtless be heard of ere long.

CARNATION VEITCH'S EARLY PERPETUAL.

UNDER this name I obtained a packet of seed of this type of Carnation. They were sown in March in a warm frame. When strong enough the seedlings were pricked out into shallow boxes and returned to the frame again. When established they were removed to a cold frame, the lights being drawn off during the day.

In July they were potted, three into 4 in. or 5 in. pots. When the pots were full of roots the plants were potted into 6 in. and 7 in. pots, without disturbing the roots, and placed again in the cold frame. We find it advisable to keep all winter-flowering Carnations under glass in stormy weather, as our situation is low and damp, and this so soon engenders spot on the foliage. When the autumn advanced they were removed to a high shelf in a cool, airy Peach house till the end of October, when they were removed into a house with a night temperature of about 50° and 55° to 60° by day.

They commenced blooming in October, and have given a good lot of bloom through the dark days of winter. Evidently they will continue all through the spring. By potting three plants in a pot it gives a chance of not having a pot without some doubles in it. Being seedlings, there are sure to be some single ones amongst them, but the percentage is very small, and the blooms are of all shades, many sweet-scented ones being amongst them. I am well pleased with them.—*J. C., Chard.*

SCOTTISH NOTES.

VEGETABLES, FLOWERS AND THE WEATHER.

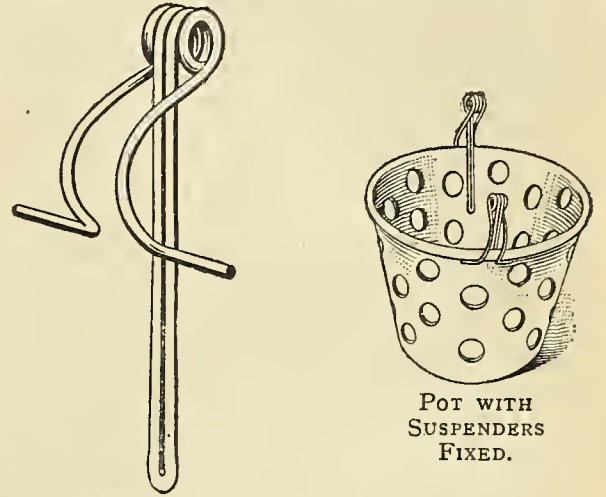
The chief topic in our district in the middle of January, is the weather. Seldom have we had a January so mild, but sunless and foggy. A temperature of 45° to 50° is generally indicated, but often higher in the shade at mid-day. December will be remembered for fogs. The foghorns on the River Forth gave out their gruesome sounds almost continually, and the heavy rains have saturated the land. Vegetables have been very abundant and good—both roots and green crops. Celery planted on the surface of the soil is the best we have had for some years. Trenches formed deeply in this low-lying locality are unsuitable for this popular vegetable. Broccolis are very firm and compact. They were planted by means of a crowbar into very solid ground, as planting in loose, rich soil means failure, especially if weather is severe from frost or damp. One of the most useful winter vegetables is Rosette Colewort. When planted during July and August (first and second crops), a good supply may be had throughout autumn and winter. Veitch's Earliest Cabbage has been of much value during the mild weather—so mild that mowing of lawns has had to be done in January. Pansy Bullion has bloomed throughout the season, and, though in a damp undrained position, it continues to bloom. This is the most useful yellow we have tried for bedding. What a useful shrub is *Garrya elliptica*, which is one of the hardiest which we know. During the terribly severe winter of three years ago this shrub was

uninjured. In a position where water cannot be drained off, it is loaded with Catkins, and in another dry position on gravelly soil the plants in pyramidal form are attractive. I do not understand why so many writers in the South report it as being tender.—*M. Temple, Carron, N.B.*

LAWTON'S PATENT POT SUSPENDER.

PATENT No. 2658.

THIS simple, valuable and unique invention will be found useful to the horticulturist, in a variety of ways, amongst which may be specialised the suspension of plants in pots for conservatory or other decorations, either against a wall or from the roof.



SUSPENDER.

POT WITH SUSPENDERS FIXED.

To the Orchid grower it is invaluable, as by its use a few moments only are required to make any pot or pan ready for suspension, without any of the usual difficulties and unsightliness caused by the binding round of string, wire, etc.

The suspenders can with equal facility be used for suspending cut flowers in vases, &c. (it may even be used for an ordinary tumbler), thus getting over one of the greatest difficulties in floral decorations for walls.

It also makes an excellent substitute for the wire holdfasts used for holding plates, plaque, &c., when wanted to hang against a wall, and has the advantage of being considerably less in cost.

The inventor has had these clips in use for some considerable time and can guarantee their efficacy and durability.—*Sole Agent, J. George, Horticultural Sundriesman, 14, Redgrave Road, Putney, S.W.*

SEASONABLE NOTES.

FRUIT FORCING.—Peaches and Strawberries I class together, as more often than not these two fruits are brought on in the same house, and the temperature given the former suits the latter in every respect. The past month has been very much against these early fruits. Houses which were closed about the second week in December will be in full bloom by this time, especially the Peach. The sun seems to have disappeared from our shores for a time, and I do not think I remember such a sunless month for January. A spell of frosty weather would be acceptable as it generally gives us bright sunny days, which are almost necessary for the free setting of the above named fruits.

In lieu of this we have been obliged to make use of more fire heat than is usually required. A temperature of about 50° at night with an advance of 8° or 10° through the day is necessary to dry the pollen (not too plentiful I find), and a little chink of air should be kept on day and night at the apex of the house. The flowers should be gone over about mid-day with a camel-hair brush, lightly touching each bloom which will help to distribute what pollen there is. This applies to both fruits, though the Strawberries on shelves in this house will scarcely be open yet; at least mine are not; but I have 5½ dozen plants on a shelf in the early vinery fast coming into flower, the variety being Royal Sovereign, which are looking most promising. The Peach house is given a thorough damping with the syringe each morning at 9 a.m. over the border, walks, and stems of the trees, making sure no water reaches the flowers. This suffices for the day during this dull weather. A sharp look out must be kept for green and black fly, and the pest at once dusted with tobacco powder if found.—*Practical.*

HINTS FOR AMATEURS.

THE SEED ORDER.

WITH the advent of the new year the seed catalogues drop in with their long lists of proved varieties of fruits, flowers, and vegetables, and their usual sprinkling of novelties. The amateur of a few years standing will be able to notice a considerable difference in the appearance of these catalogues a few years ago and what they are now. The services of photography have been strongly impressed into the service, and there can be no doubt that the illustrations they give of various subjects are highly satisfactory. The old-time coloured plates which used to be such a source of wonder and delight to children have, to a large extent, disappeared, their places having been taken by the more accurate and aesthetic photogravures.

In making out the seed order for the year the amateur is confronted by a task of no small magnitude for there are such numbers of varieties of all the popular races of flowers and vegetables that it is only with amount of puzzlement that it is possible to make a selection commensurate at one and the same time with the requirements and the purse of the grower. A few hints as to what to order may be of some service to those who are not old hands in the process of selection. Those who have gardened for a few years soon get to know in the school of experience, what varieties do best in their own special locality, and we may say at the outset that information such as this is of the greatest value, and these hints are not meant in any way to supersede them, but to supplement them, if possible.

But a comparatively small number of amateurs can afford the time, trouble, and expense of experimenting with novelties, and hence it is sound practice to pin faith in standard varieties for producing the main crops. The trial of a few novelties is, of course, a most interesting and valuable experiment, and if carried out thoroughly does not often lead to utter failure, although success may be a limited quantity. Seedsmen, nowadays, are exceedingly careful to test each new variety more or less exhaustively before it is catalogued and sent out to the general public, although it is, of course, not possible to give these novelties the severe and ultimate test of culture in all parts of the country prior to its being sent out.

FRUITS.

There are not many fruits that are associated with the lists of vegetables, and of which seed is offered, and thus the task of selection is a fairly easy one.

Melons.—Only those amateurs who have had a little experience should attempt the culture of Melons, for though they are not exactly difficult to grow they must receive close attention, otherwise the venture will be almost sure to prove a failure. Once the seed of any variety is obtained from the seedsman the private establishment may be self-supporting, for seed may be saved each year for the next season from some of the finest and best flavoured fruits. There is a number of varieties from which to pick and choose, representing fruits with scarlet, green, and white flesh. For a scarlet-fleshed sort Sutton's Ar will be found first-class. Not only is the flavour and appearance of the fruit good, but the plants are strong and robust in constitution, and do not readily go off with rot and canker. If a second scarlet-fleshed variety is required, the old Blenheim Orange takes a lot of heating. For a white-fleshed sort the amateur cannot do better than grow Hero of Lockinge, which is also of some years standing. If it is proposed to grow the plants in frames the Hero is especially suitable for cultivation in this way, and this can by no means be said of all Melons. Sutton's Imperial Green is a first-class green-fleshed form of which the fruit will grow to a great size. La Favourite is also good, but the fruits run smaller, although this is often an advantage rather than otherwise, for very big fruits are not of value proportionate to their size in many private establishments.

Cucumbers.—It may seem somewhat strange to place Cucumbers among the fruits, for we generally regard it either as a vegetable or as a salad, and it is almost certain to find a place among exhibition collections of vegetables. Of course, from a botanical point of view, it is, strictly speaking, a fruit, but this,

by the way. It naturally associates itself with the Melon, however, by reason of the fact that the treatment of the two exhibit certain points in common, although there are also points of divergence. The same house, however, may be made to grow both Cucumbers and Melons. The Improved Telegraph is, perhaps, the best all-round form. It may be made to grow well in either house or frame. Lockie's Perfection is also good, and the fruits are distinct in shape from those of Telegraph. The Ridge Cucumbers are not very much grown, but Long Green, which is of unusual length for its class, and is highly recommended for flavour and constitution, is one of the Messrs. Sutton's novelties that is well deserving of a trial.

Alpine Strawberries.—Here we have a section of Strawberries that is of great service. The ordinary large fruited varieties are, of course, propagated from runners each year, but the Alpines come easily from seed, and this is the best way to treat them. Seed may be either sown under glass in January or February to produce a crop in September, or out of doors a little later. Plants from the out-of-door sowing will yield some fruit in the autumn, and a heavier crop the next year. It will thus be seen that for prolonging the Strawberry season the Alpines are of considerable value, apart from the fact that the flavour of the fruit is delicate and good. A packet of seed of each of the Improved Large Red, and the Improved White should be obtained. Belle de Meaux is a third fine variety.

VEGETABLES.

Tomatos.—The Tomato might, with as much justice as the Cucumbers, have been placed amongst the fruits, but while it is popularly regarded as a vegetable or a salad, and finds a place in exhibition collections as such, it is associated with kitchen garden crops generally, or with the cultivation of vegetables under glass. The number of varieties is legion, and each year sees further additions. Many varieties are only distinct with regard to their names, but even if we remove these from the lists there is still left a wide range from which to select. Of the red-fruited varieties the Perfection type is probably the most useful. Select a good form of it from the catalogue of a reliable seedsman, and there will be no fear of the results in anything like an ordinary season. The great value of the Perfection type of Tomato is that it is alike good for underglass or out-door cultivation. Young's Eclipse which was a seedling raised from Conference, a well-known variety, is a medium-sized, free fruiting variety of considerable merit. It is a good cropper. Frogmore Selected is another comparatively new variety of great value. The fruit is of medium size, nearly round in shape, and of smooth outline, while the flesh is solid and of great depth, with but comparatively small part of it occupied by the seeds. Amongst yellow sorts one of the most promising novelties is Golden Jubilee, which was obtained by Mr. Owen Thomas, of the Royal Gardens, Frogmore, by crossing Golden Princess and Frogmore Selected. Sutton's Golden Nugget may form a good second variety, as it will do well either under glass or in the open. A packet of seed should be obtained of each of these varieties. The Red Currant Tomato, too, should not be forgotten. It bears its fruits in long, pendulous trusses (racemes) of twelve or fifteen fruits which are about the size of a large red Currant. The appearance of these fruits is exceedingly ornamental, and the flavour is good. Apart from this the plants have a capital constitution, and set well and freely with fruit. The Miniature Pear-shaped is another very handsome ornamental form with small Pear-shaped fruits that have an agreeable flavour. It may well be grown if room can be found for it, as the small fruits are a distinct novelty to those (and there are many), who are accustomed to see only the large-fruited sorts.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Cherries under Glass.—*E. Morton*: You will find the following varieties all good for cultivation under glass:—Early Rivers' black, very large and handsome, with a small stone; Belle d'Orleans, yellow-

white, flushed with pale red, medium size; May Duke, dark red, large, very fine in flavour; Bigarreau de Mezel, pale rose, striped with deep red, very large; Bigarreau Napoleon, pale yellow, mottled with red, with rich, juicy, and well-flavoured flesh, one of the best of the Bigarreux; and Late Duke, large, bright red, with a pleasant acidity. These six varieties will give a good succession of fruit, the order in which the fruit ripens being in accordance to their place upon the list—thus Early Rivers' is the earliest, and Late Duke the latest.

Bambusa falcata variegata.—*Gracias*: The apparent difference in the young plant and the older ones is, we think, due to the fact that the former is a comparative cripple. If once you can start it growing vigorously it will be almost sure to throw off the peculiarities that it now exhibits.

Bouvardias.—*C. Wilkins*: You may easily get up a stock of young plants from cuttings. Partly prune the old plants by shortening the shoots by nearly half their length.

Old Vines.—*J. Clavrig*: It is evident from what you say that the Vines need to have drastic treatment; spurs nearly a foot in length are preposterous. You may certainly cut these back and try to induce the canes to break out from the base if you like, but we do not at all advise this system. A far better plan is to head the old canes off at a point about 3 ft. from the ground. This should be done at once, and the house started soon, so as to give the Vines a good long season of growth. Keep the stumps well syringed twice or thrice a day. When they break into growth, which they should show signs of doing in a few weeks' time, gradually disbud to one strong shoot, which must be carefully looked after, and induced to grow away freely without a check. Each of these shoots will form a sound cane in the single season. They may be pruned back next year according to their strength, and you will then have the basis of good, new fruiting canes. If you wish for an interesting experiment, leave one of the old canes now at full length, and cut back the spurs in the way you proposed doing. You will then have a good opportunity of comparing the merits of the two systems.

Musa Cavendishii.—*Rob*: This Banana may be fruited in fairly large pots if your house is of good size. Better fruit, however, is invariably produced by plants which are planted out in a prepared bed or border. *Musa Cavendishii* needs plenty of heat and moisture, both in the air and at the roots.

Pot Vines.—*Rob*: Canes which were started the first week in November will furnish ripe Grapes by the end of March or beginning of April, according to the character of the season, whether mild or otherwise. This is an important factor in the getting of early Grapes by a certain time, for it is manifest that growth must be comparatively slow and uncertain when the fires have to be driven hard to keep the temperature up, and snow is lying on the ground outside for weeks together.

Lilies of the Valley.—*H. N.*: Coconut fibre refuse is to be preferred to soil for growing the Lily crowns in. It is cleaner, lighter, and quite as efficacious as soil, for the crowns draw upon their contained stores of nourishment to enable them to flower, root action being exceedingly weak. If you maintain a high temperature you should be able to cut the flowers at the expiration of three weeks from the introduction of the crowns to heat.

Ants on a Peach Tree.—*E. A.*: Tie a band of cotton-wool round the stem of the tree; the ants will not be able to crawl over it.

Soil for Lapagerias.—*G. Anvers*: We have found these pretty climbers to do well in a compost of peat, with plenty of sand, to which a few lumps of sandstone and charcoal have been added.

Herbaceous Border.—*Hardy Plants*: If the soil is fairly dry and in good working condition you may at once set about the making of the border. The width, of course, must vary according to individual requirements, but we may suggest 6 ft. as being a fair width. It will enable you to grow almost any-

thing. Unless the garden is very small, 4 ft. would be too narrow. Bastard trench the site in preference to trenching it, and work the manure well down into the subsoil instead of bringing the latter to the surface. You will thus give the plants something to root down into when they have got a start. This will be a matter of considerable importance if we get a spell of drought in the coming summer.

THE WESTERN HEMLOCK.

(*TSUGA MERTENSIANA*).

UNDER the name of Prince Albert's Fir (*Tsuga albertiana*) this tree is most commonly to be found, but priority of nomenclature causes the present name to be now generally adopted. The tree was introduced in 1857 by the Oregon Association of Edinburgh through their collector Jeffrey, and named in honour of the patron of the association—the late Prince Consort.

Probably no other species of *Tsuga* is better adapted for growth in this country, certainly none grows quicker or sooner forms a sturdy well-branched ornamental specimen than that under notice. The habit of growth is both erect and spreading, the flexible leading shoot keeping well ahead of the long, lithe, and thickly produced branches which are clothed throughout with distinctly pendulous and feathery branchlets. Some difference in the shade of foliage colouring is noticeable on different specimens, but usually this is of a dark green and nearly approaching that of the better known and more commonly cultivated Hemlock Spruce (*L. canadensis*).

The foliage is two-ranked and horizontally arranged, each leaf about $\frac{1}{2}$ inch long; while the cones are an inch in length and of a beautiful russet-brown when fully matured. For afforesting purposes *Tsuga mertensiana* is well worthy of a trial, and experiments in this way instituted a few years back have given general satisfaction. The production of timber is rapid, that of a specimen which I measured in North Wales averaging $1\frac{3}{4}$ feet per annum, or a total of $48\frac{1}{2}$ cubic feet for thirty-five years.

Seldom, indeed, is it that we find a larger or more perfectly developed specimen than that just figured, and which is growing, with lots of other uncommon Conifers, at the Emmetts, Ida Hill, Sevenoaks, the recently acquired and delightfully situated property of F. Lubbock, Esq. The photograph was taken by the nephew of the Right Hon. Sir John Lubbock, Bart., M.P.—*A. D. Webster*.

LEICESTER PUBLIC PARKS AND RECREATION GROUNDS.

THERE is no city or town in the United Kingdom that is better provided with the above than the Borough of Leicester. The corporation seize every opportunity of securing suitable spots for the recreation of the public, and which I am pleased to say is greatly appreciated. They have, in addition to those I am about to mention, purchased 180 acres, which are well timbered or wooded, beautifully situated, easy of access to the town, and about two miles from the Abbey Park. The laying out of this is entrusted to Mr. John Burn, the superintendent of parks and gardens, and in whose hands nothing will be wanting to convert this into a paradise for the people. He has already been entrusted with the laying out of all the parks and gardens, and his work has proclaimed for him a practical monument of his abilities. The corporation did well for themselves and the public, when they secured his services; for no grounds are better and more practically cared for than those of Leicester.

THE ABBEY PARK.

Sixteen years ago this was an unused swamp; look at it to-day with its 70 acres of ground, almost in the centre of the town, and beautifully laid out. Its undulating grounds, its picturesque lake, its ornamental buildings, and its grand conservatory are all alike examples of horticultural skill. It is most astonishing how well the trees and shrubs do. Some large trees have been moved from time to time by Mr. Burn, with great success. Trees and shrubs, 30 ft. high, take some moving, and all, with more or less success, have done remarkably well.

In the Abbey Park the public get a taste of all kinds of ornamental gardening; carpet bedding is

well done; ribbon borders are perfection; sub-tropical work astonishes the public; and succulent gardening they look upon with amazement. For those who wish to study botany a useful officinal and medicinal garden in a secluded spot is everything that can be desired. The roads are perfection, and everything is neat and natty, including the beautiful bowling green with its verdant sward like a carpet, which is a boon to the many players. It is in this park that the annual floral fetes are held, and which have done so much to stimulate a love for gardening, especially in the district. These grand exhibitions increase in popularity every year. Entries are more numerous, and what is better the public increase in numbers. This must be gratifying to the town council as well as the superintendent, Mr. Burn. The grand conservatory here is always full of interest winter and summer, and is especially kept by one whose untiring energies on all occasions never seem to flag. I have heard from those in a position to speak, that is, from my brother judges, who like myself have had

advantage has been taken by the landscape artist to make the most of the situation, and that he has succeeded is quite evident by many of the artistic tit bits that one meets.

BELGRAVE ROAD RECREATION GROUND.

Here we have another fine open space of 12 acres, designed by Mr. Burn and planted about four years ago. It is a most popular resort for the thousands.

THE WELFORD ROAD RECREATION GROUNDS consist of 15 acres beautifully surrounded by trees. The grass, roads, and walks are well suited for the position, and the great advantage of the beautiful open space is greatly appreciated by rich and poor.

ST. MARGARET'S PASTURE AND RECREATION GROUND.

This is close by the Abbey Park, being 10 acres in extent, and beautifully belted by fine trees, planted some twelve years ago. This is used for cricket, football, and other sports; and is what every city and town ought to have for these manly sports. Thousands flock here to enjoy themselves.



THE WESTERN HEMLOCK (*TSUGA MERTENSIANA*).

great experience in various parts of the United Kingdom, that a better place for an exhibition and a better managed one it has not been our lot to find. That is the verdict of all; long may the show continue to prosper.

THE OLD RACECOURSE.

This was converted into a park by Mr. Burn about six years ago. It is 70 acres in extent, and 12 acres are devoted to a cricket ground, which is a model of perfection.

SPINNY HILL PARK.

This is about 32 acres in extent, and was converted into a park about twelve years ago. It claims for itself one of the best kept and prettiest parks in the Midlands.

FOSSE ROAD RECREATION GROUNDS—OR NEW PARK.

This park of some 12 acres to 13 acres is just completed, and will be a great boon to the inhabitants of this district. It is splendidly laid out, and every

THE AYLESTONE ROAD GROUNDS

are just about to be made, and Mr. J. Burn is preparing plants for the 14 acres of which the area consists, and in whose hands nothing will be wanted to secure everything that can be desired.

CORPORATION TREE PLANTING, ROADS, &c.

A vast number of trees has been most successfully planted, and keeps many men employed. No one can grudge any expense, however, when one sees what lovely trees they are and the beautiful effect produced. Every available spot is taken advantage of, and a finer lot of town or city trees cannot be found in the United Kingdom. Those recently planted are doing magnificently. The task of superintending such a number of grounds and parks is very great. No one but a thoroughly practical man could manage it; but to Mr. John Burn it seems to come naturally. We heartily congratulate him upon his sound practical abilities in laying out and managing the numerous departments, which are such a boon

to the vast population. I inquired of Mr. Burn if much damage was done by the frequenters of the parks. "Nothing at all worth speaking of," was his ready reply; "the public protect their property, which is made for their enjoyment, in a manner creditable to themselves.—*Alfred Outram, F.R.H.S., 7, Moore Park Road, Fulham, London.*

ARDARROCH, DUNDEE.

THIS, the town residence of Ex-Provost Ballingall, of Dundee, is situated in a prominent position high above the level of the Tay and the city itself, thus commanding a fine view of the latter as well as a long reach of the Tay and the opposite or Fife side of the river. The Constitution Grounds, a public resort under the care of the Corporation, occupy the steep hill side and a terrace at a lower level than Ardarroch.

Last autumn we passed through the latter place with Mr. William Kennedy, who has championed the cause of the Chrysanthemum in this locality for some years past, particularly by growing and exhibiting trained specimens. The stove contains various fine foliage plants such as Crotons, Dracaenas, Maranta bicolor and other useful subjects. Late in the season as it was, we noted a number of Orchids in bloom, including *Cypripedium lawrenceanum*, with twin flowers; *C. insigne*, in variety; *Miltonia spectabilis*, and *Masdevallia tovarensis*. One variety of *C. insigne* was notable for its curiously ribbed lip. The species proves well adapted for cultivation in a smoky place like Dundee, for Ardarroch is quite within the influence of the sooty atmosphere notwithstanding its elevated site.

One house is occupied with an interesting bit of rockwork in the style executed by Messrs. Pulham & Sons, Broxbourne, Herts, with whose work we are familiar in various parts of the country. Ferns were originally planted amongst other subjects on the rockery, but now the artificial stonework is covered with self sown seedlings everywhere, including fine pieces of *Adiantum Capillus-Veneris* springing from the bare rocks. The benches on one side of the house are chiefly occupied with *A. cuneatum* grown for the sake of cut fronds. There are other *Adiantums*, *Woodwardia radicans*, *Aspleniums*, *Scolopendriums*, *Nephrolepis*, *Ficus repens*, and *F. r. minima*, occupying the pockets, and creeping over the stony surface at random.

The conservatory comes more nearly in line with the front of the mansion, and is a moderately high, cool, airy, structure of neat and ornamental design. Some of the more permanent occupants of this house are large specimens of *Cibotium*, *Dicksonia antarctica*, *Chamaerops Fortunei*, and other subjects to supply the necessary greenery. There were also plants of *Clivia miniata* and *C. cyrtanthiflora*. A large specimen of the latter has been in the same pot for the last eleven years, and flowers regularly twice a year, being in bloom when we saw it. There seemed nothing in the pots but a dense mass of roots. The house was brightened with large specimens of *Chrysanthemums* in full bloom. *Vivian Morel* carried two dozen large blooms on a plant. The incurved *Mrs. Dixon* was equally well flowered, as were *Mrs. George Rundle*, *Mary Anderson*, and other varieties grown and trained with great care, purely for brightening the conservatory and decorative purposes in the mansion itself during the dull days of autumn. We were particularly taken with *Mary Anderson* for this kind of work, the flowers being very numerous, large and of snowy purity. The garden is rather restricted in area on this hillside, and quite inadequate to accommodate the plants requisite to meet the needs of the establishment, consequently there is a range of houses at

ST. MARY'S TERRACE.

Plants of a varied description are grown here for use at Ardarroch. The glass at St. Mary's Terrace is on a lower terrace and more under the influence of smoke, though there is a beautifully wooded park on the north side, and stretching up the hillside. Here again *Chrysanthemums* were in full swing, both as bushes for decorative work and for large exhibition blooms. The pure white flowers of *H. Shoesmith* are very graceful and useful for cutting. Others that prove useful for decorative work are *Mrs. West Harris*, single, crimson and pretty; *Elsie Burden*, silvery-blush; *Snowdrop* and *Mary Anderson*, both very floriferous; *Mrs. E. D. Adams*, valuable for late

decorative work; *Puritan* and *Niveus*, white sorts; *Golden Ring*, *Lord Brooke*, *W. H. Lincoln*, and many other sorts usually grown for exhibition blooms. They have been selected by Mr. Kennedy to keep up a long continued supply of flowers, and many of them were only showing their buds. The latest to bloom here is *Mrs. Langtry*, a single variety with pink flowers. The buds were only beginning to show themselves in November, and are expected to expand in April next.

For exhibition blooms the Japanese varieties are the most popular. Only some of them like the atmospheric conditions here, but all have to be tried to determine which of them will stand the ordeal of being grown into large blooms. For instance, *M. Pankoucke*, *King of Chrysanthemums*, *Niveus*, *Nyanza*, and *Mrs. W. H. Lees* do not give satisfaction, though *Niveus* takes very high rank for decorative work when not disbudded. On the other hand *Surprise*, *Le Verseau*, *Mrs. E. D. Adams*, *Florence Davis*, *Van den Heede*, *G. C. Schwabe*, *Marie Hoste*, *Charles Davis*, *Vivian Morel*, *Miss Maggie Blenkiron*, *Madame Ricoud*, and various others prove quite tractable and grow to large size. It is also interesting to see how they vary in colour, and sometimes even in form in this northern latitude, with its cool and moist atmosphere in summer.

More than one house was filled with *Chrysanthemums*, but as the bulk of them had finished blooming and been taken away, *Tea Roses* in pots for forcing were introduced to their place. Heated frames were filled with *Hippeastrums*, *Dendrobes*, *Cypripediums*, *Coelogynes*, &c. Another set of frames was filled with *Hyacinths*, *Tulips*, *Narcissi*, and other bulbs for forcing; but at that time they were plunged in ashes.

While passing through the frame grounds we noted that *Choisya ternata* and *Deutzia gracilis* prove hardy here; while *Francoa ramosa* and *Agapanthus umbellatus* are almost hardy. Tomatos and Figs are also grown in some quantity at St. Mary's Terrace in summer.

READING AND DISTRICT GARDENERS.

"STRAWBERRIES from seed, or the cultivation of the Alpine Strawberry" was the subject of a paper read by Mr. James Hudson, of Gunnersbury, before the members of the above association on the 24th ult., in the club room, British Workman, when Mr. C. B. Stevens presided over a good attendance of members. The subject was certainly a new one, and perhaps the first time that a paper on this particular fruit has been given before a gardeners' association. In the discussion which followed, all the members taking part had to plead ignorance of the cultivation of the Alpine Strawberry; but after what the lecturer said in its favour, and the fact that a dish of Strawberries during September and October would be a great addition to the dessert, as well as being greatly appreciated by employers, many of the gardeners present will, no doubt, be giving this variety a trial.

Mr. Hudson, in introducing his subject, said:—The Alpine Strawberry is, at the present day, a comparative stranger in many gardens, both large and small, but he was fully persuaded that when it is given a fair trial, a great majority of gardeners will be disposed to extend its cultivation. The culture is of the simplest, and given weight for weight upon the same space of ground, the "Alpines" will not be one whit behind that of the average crop of other Strawberries. The real success of the culture of the Alpine Strawberry is in the raising of one's own seedlings or in the purchasing of seedlings. The French adopt the plan of growing their stock from seed, but it is only within the last few years that English firms have catalogued the seed, although the plants from runners are, as a rule, offered in most of our Strawberry lists in a similar way to the large fruited varieties. This plan of offering the runners instead of the seed did nothing for, but rather acted against, any extended culture.

After dealing fully with the system of cultivation carried out at Gunnersbury, the speaker gave much valuable advice as to soils and their adaptability for growing Alpine Strawberries, also the position most suitable. As to varieties, the Alpine Strawberry, as it was known only a few years back, must not be taken as the present day standard of this fruit. The two varieties best for general cultivation are *Royal Amelore* and *Sutton's Large Red Alpine*. The

former produces fruits 2 in. long, whilst the latter, although not quite so large, is equal to it in every other respect, and with some it would be preferred because of its more handsome shape. Other varieties worth growing are *Belle de Meaux*, colour of the deepest red, and flavour first rate; *Berger Improved*, a variety very highly thought of by French growers; and *Large White Alpine*, which, on account of its colour, makes a pleasing change for the dessert. A hearty vote of thanks was accorded Mr. Hudson for his interesting paper. A box, containing some 120 to 140 spikes of well-grown *Lily of the Valley*, many of the spikes having fourteen or fifteen bells each, was shown by Messrs. Rigg & Fixter, the Nurseries, Caversham, and attracted great attention. Eight new members were elected.

ORCHID NOTES & GLEANINGS.

Odontoglossum crispum norwoodense, *Nov. var.*—The flowers of this variety are of large size, and round in outline, with broad, overlapping segments of a pure white, slightly tinted with rose on the back of some of them. The sepals are broadly elliptic, with a chestnut blotch in the centre. The triangular petals are deeply jagged at the edges, with or without the chestnut blotch. The lip has a large chestnut-red blotch in front of the crest, and numerous small ones scattered over both the white and yellow ground. The variety is flowering for the second time in the collection of Thos. McMeekin, Esq., Falkland Park, South Norwood Hill, and is of great decorative value. The massiveness of the flower, and the pure white ground colour are its most striking characteristics.

Cypripedium Mrs. Caroline Allen, *Nov. hyb. var.*—The flowers of this hybrid variety are of great size, measuring something like 6½ in. across the petals. All parts of the flower look as if varnished, a character derived from the parents, namely, *C. oenanthum superbum* × *C. villosum*. The colour is largely due to the former. The dorsal sepal is roundly oval, and of a dark brownish or blackish-crimson, fading into a prominent network of veins towards the top. The margins are white, but what is more peculiar is a yellowish-green blotch of large size a little below the apex, and in strange contrast to the other rich colours. The long, spreading petals are of a dark shining brown on the upper longitudinal half, and paler on the lower half. The lip is also of large size, and dark brown in front. This fine variety is now flowering with Mr. P. McArthur, The London Nursery, 4, Maida Vale, London, W.

Cypripedium W. A. Allen, *Nov. hyb. var.*—This is the product of *C. harrisianum nigrum*, crossed with the pollen of *C. villosum*, and largely reflects the character of both parents, but particularly the former. The dorsal sepal is of a rich brown, except the margins, which are white, and the base and apex, which are tinted with green. The lower sepal, consisting of the two lateral ones united, constitutes the distinguishing feature of this hybrid variety. The organ is about twice the size we should expect it to be, and is a distinct attempt at peloria. The central portion is nearly white, traversed with bright green veins, but a broad border on either side is coloured like the dorsal sepal on both faces. If it had been separated into two, and wholly coloured like the dorsal sepal, the peloria would have been complete. The upper longitudinal half of the long petals and the front of the lip are dark brown. The whole of the flower has a varnished appearance. The variety has been flowering for some time past with Mr. P. McArthur, 4, Maida Vale, London, W.

Odontoglossum crispum Mendham House var., *Nov. var.*—The top flower of the spike of this handsome variety measured about 4 in. across the petals when we saw it the other day. The broad sepals are beautifully shaded with a soft shade of rose, and the petals are similarly tinted, but differ in being broadly ovate and deeply jagged at the margins. The three colours of the lip make a fine finish to a beautiful flower. It has a large golden disc, a large chestnut blotch in front of this, with a few smaller ones, the ground colour being white. The variety was secured for fifteen guineas at the Sale Rooms of Messrs. Protheroe & Morris by Mr. G. E. Day, gardener to H. J. Simonds, Esq., Mendham House, Park Place, Leyton, Essex. Mr. Day also netted a grand variety of *Odontoglossum triumphans* for the same collection. The golden-yellow sepals and petals are richly banded with chestnut-red. The lower half of the lip is white, and the rest chestnut-red.

The Orchid Grower's Calendar.

EAST INDIA HOUSE OR STOVE.—The deciduous section of *Calanthes* which include *C. Veitchii*, *C. vestita rubro-oculata*, and *C. v. luteo-oculata* will very soon require potting up again. It is a very good plan to place the pseudobulbs thickly together in shallow boxes in an upright position to start them. When the growths are about 2 in. high they may be potted up. Treated this way you can select the most forward with each growth well up.

The potting compost should consist of two parts nice silky loam, and one part cow dung which has been dried (the top of the furnace is a good place to dry it) and rubbed through a $\frac{1}{2}$ -in. sieve. To this add some charcoal or crocks broken up rather fine, and a little silver sand. See that it is not too wet or too dry. The pots may be of various sizes to suit the requirements of the establishment. We have seen good strong spikes of *C. Veitchii* from a medium-sized hulk in a 60-pot, and where a lot of house furnishing has to be done, their usefulness is at once apparent. For general purposes one large pseudobulb will fill a 5-in. pot, whilst three medium-sized ones would make a good show in 6-in. or 7-in. pots. The drainage should be ample, but not so much as when potting *Cattleyas* and the like, as the bulbs do not require to be elevated. Indeed, they should be, if anything, just below the rim of the pot.

WATERING.—Great care must be exercised on the young growths will become spotted and damp off. Too much moisture in the early stages and a low temperature must be avoided.

DENDROBIUMS.—The plants of the early flowering *D. wardianum* are making rapid growths, and should be re-potted at once, using the best peat obtainable, with a few live heads of moss worked in as the work proceeds. See that the peat is not too dry and that the moss is not too wet. When such a state of things exists, the plants very rarely take hold of the compost kindly. Water sparingly for a time, as there is more harm done by over-watering newly potted plants than a great many suppose.

CATLEYA HOUSE.—The mild weather tends to hasten the potting of such things as *Laelia autumnalis atro-rubens*, *L. gouldiana*, the early flowering forms of *L. anceps*, &c. We have always found that to make success doubly sure, it is a good plan to afford the plants some fresh compost to root into each season, although the compost they are in does not appear to be quite exhausted. There is, however, but very little left in it for the plants to feed on. A small quantity of fresh material will induce the new roots to push out in quantity from the newly made-up growths. In a word it acts like magic. Therefore do not try to grow Orchids well without providing them with the necessities of life; for, if you do, you are almost sure to fail.

TEMPERATURES.—Warm division, 65° at night; intermediate, 55° to 58°; cool, 50° at night, with a rise of 5° or 10° by day.—C.

Kitchen Garden Calendar.

The dry open weather of the last month has been a great help to those who had much digging to do, as the ground has been in splendid condition for working. Where any light land has yet to be dug, this should be done as soon as possible, that the soil may settle down again before the dry weather sets in. When light land is worked late in the season, too much moisture is extracted for the benefit of the crops; for this reason, where such vegetables as Onions, Peas, and other moisture-loving crops are intended to be grown, the soil should be somewhat consolidated before sowing or planting takes place. Peas sown in November are looking well, therefore, to prevent any mishap now, it would be a good plan to stake them as soon as possible, and afterwards protect them with some evergreen boughs stuck alongside the rows. Another sowing may be made in the open quarters. When the land is dry choose some of the early Marrow kinds such as *Early Giant*, *Excelsior*, *Empress of India*, *Duke of York*, or *Gradus*.

BROAD BEANS that were sown in the autumn have made splendid progress, and may be now transplanted with little fear of loss, though in cold districts where the plants are not too forward, this

operation may be deferred till a little later on. There are many fine varieties of Broad Beans not in general cultivation, which, if well grown, are sure to give satisfaction. There is the *Green Longpod*, *Masterpiece Longpod*, *Green Giant*, and *White Longpod*, all of which will be found most useful. A sowing of any of these may now be made in the open quarters, taking care to allow plenty of room for them to develop, as there is nothing gained by overcrowding.

CAULIFLOWER, LETTUCE, AND ONIONS that were sown in boxes early in the last month will by this be large enough for pricking off. Where a slight hot-bed can be afforded them they will make far more rapid progress than if put out in boxes; therefore an effort should be made to provide space in such quarters to give them a start. Where, however, this cannot be done, boxes are preferable to pans, as the soil in them does not dry too rapidly. The chief evil in growing these things under glass is caused by not making the soil firm enough for the roots to take hold of. In all cases the soil used should be made firm. A small sowing of both Cauliflower and Lettuce may be made in a cold frame. Those who experience any difficulty in procuring fine heads during the latter part of July and August should make a sowing of *Mammoth*, *Autumn Giant*, and *Early Giant*. If these are planted early they will take hold of the soil before the hot weather sets in, and may then be had in good condition at the time required. Lettuce, too, may be grown in the same way, but the ground must be heavily mulched to prevent evaporation.

THE FORCING DEPARTMENT will need much attention at the present time. See that a succession of French Beans is put in as the spaces become vacant, that there may be no blanks. Any that are in flower should have rather a drier atmosphere for a few days. Though the weather has been mild, there has been an absence of sun to raise the temperature of the forcing house in the daytime. Have small batches of *Endive*, *Chicory*, *Seakale*, and *Rhubarb* put into heat as the others become exhausted. These will blanch much faster now than they would a month or two ago; therefore a less amount should be introduced at one time, while shorter intervals should be allowed between them. The last batch of *Asparagus* may now be taken up for forcing, as the permanent beds may soon be brought into use by covering them with lights, and putting a lining round. If raised beds are planted with this object in view, having a space of 4 ft. between them, there is no difficulty in introducing sufficient fermenting material to maintain the requisite heat to encourage a healthy growth.

During wet weather see that the vegetables stored away are carefully looked over, and all decayed ones removed. Seed Potatoes should be spread out thinly, and exposed to the light, that the growth made may be sturdy.—*Kitchen Gardener*.

THE FLOWER GARDEN.

SURELY there never was such a mild January as that we are now passing through, which has, indeed, nearly come to a close. The days have been quite warm and springlike, and the result is that things generally are getting dangerously forward. The young year, 1898, has indeed signalled its advent in a remarkable manner, but gardeners generally will not be at all thankful for it if March or April bring frosts with them to nip precocious flowers and foliage. The early season must, to some extent, force the gardener's hand; and much as he would like to defer them the advanced state of vegetable life calls for their attention. A spell of frost now would be a real blessing, for it would keep things back in their proper place.

PRUNING CLIMBERS.—In the southern counties, at least, a start should be made with the pruning of these, and tying or nailing will follow immediately after. It is well to get this work forward as soon as it is possible to do so, especially where herbaceous borders run along 'neath the shelter of the wall, for it is not economic of labour to give the borders their spring digging and manuring until the greater part of the necessary treading upon them has been got through. In the northern counties a start should first be made with the hardier subjects, leaving the tenderer plants until the last.

ROSES.—As the soil is now in fairly good working condition, the planting of all Roses, except Teas, should be carried on. Nothing suffers from late planting more than the Rose, and as the middle of March is quite late enough to plant in an ordinary season, and we are weeks earlier this year than is usual the present is a favourable time to inquire into the condition of any Roses that appear to be in a sickly condition. Take them up, and carefully look over the roots, cutting out any that are injured or appear to be unhealthy. Any suckers that show should also be removed. In replanting, take away part of the old soil, and substitute for it some good fresh loam with a little old mortar rubbish mixed. Timely attention, such as this, will often prevent plants from going wrong, or getting so had that they are past recovery. All the newly planted Roses should be mulched with short stable or farmyard manure which, for the sake of appearance, should not be too strawy.

THE ROSE GARDEN.—Any alterations or extensions that it is proposed to make in the Rose garden should not be longer deferred. In making new beds it should be remembered that beds of intricate design are not suitable. The size does not matter, for it may vary from the little circle not more than a foot in diameter, and containing only a single standard to others in which fifty or sixty plants may be accommodated without crowding. Generally speaking, however, it is well to have the beds of good size as they are much more effective, but too large beds do not admit of the flowers being cut without treading on the soil, which should be avoided as far as possible. See to the cutting of the grass edges, and attend to the renewal of the surface of gravel paths if necessary.

NARCISSI.—If any bulbs of *Narcissi* have been kept out of the ground for any reason, they should be planted at once. It is, of course, too late to put them in flower beds, for the bulbs have been greatly weakened by their inability to make roots, and will take some time to recuperate themselves, possibly a full season. If they are employed for planting in the grass, however, failure to bloom, or poor flowers will not so much matter, and next season they will be right enough. Bulbs of this kind may be purchased cheaply enough at this time of year, and they are not at all a bad speculation.

GENERAL WORK.—If by stress of weather outside work should become impossible, there is plenty that may be done under cover. Labels and stakes may be made and painted in readiness for use during the forthcoming season. Seeds collected last year should be looked over, and those ordered from the seedsman run through, and placed in readiness for sowing, for the season will soon be here now. If the frost, of which there is no sign at present, supervenes, the hardness of the ground may be utilised for wheeling or carting manure or soil from the yard to the points at which it is to be employed.

HARDY FRUIT GARDEN.

WALL TREES.—The pruning, and nailing or tying of these should be hurried on, as the buds are swelling rapidly under the influence of the mild weather.

APRICOTS.—As these are among the earliest of the hardy fruits to flower, they should be dealt with before any of the other wall trees are touched. If the trees were properly seen to last summer for pinching there will be comparatively little pruning to be done beyond cutting off any ragged ends of the spurs. Neglect in pinching is sure to result in long ragged spurs that project far out from the wall, and thus neutralise the advantage that should be obtained from the shelter of the latter. The branches of the Apricot have a most reprehensible habit of dying off without any warning, and for no apparent reason; hence it is always desirable that a little young wood should be trained in to fill a possible gap. This must not be overdone, however, for crowding is an evil that must be studiously avoided. Sturdy young shoots of last year's production that may be required for succession should be shortened to about a foot in length, varying this length according to the strength of the shoot; thus it may be longer if exceptionally strong, and shorter if weaker. If any large branches have died during the winter these should be cut clean out at once.

PEACH WALLS.—If insect pests have been trouble-

some amongst the Peaches some steps should be taken to clear them right out. The trees were untied from the wires at the end of last November, and secured by tying them together in loose bunches and fastening them to stout stakes. The wall should now receive a thorough lime washing, taking care to work the wash thoroughly into all the crevices with the brush. This done, pruning and tying may follow. If the old bearing shoots were not cut out last fall after the removal of the fruit, it may now be done, leaving only the old wood that is necessary for the increase of the spread of the tree, and the succession shoots trained in their places. As in the case of the Apricot, so with the Peach—a good deal of the necessary pruning may, and ought to be done during the spring and summer months, with the finger and thumb.—A. S. G.

NOTICES OF BOOKS.

THE CULTURE OF VEGETABLES AND FLOWERS FROM SEEDS AND ROOTS, by Sutton & Sons, Reading. Seventh Edition. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd. 1898. All Rights Reserved. Price 5s.

Here is a large octavo book of some 427 pages, practically a manual, dealing with the whole subject of vegetable and flower culture, and well within the reach of anyone who possesses a garden, and loves it for the sake of what he can make it produce for his table or minister to his delight. It is essentially a book for the beginner, whether amateur or professional, and a handy book of reference for the experienced gardener, as an aid to memory on doubtful points. A comprehensive index will enable him to turn up quickly the subject to which he wishes to refer. The book will be of excellent service to the young man, who, while yet a student, should read and re-read it, until every one of its precepts is thoroughly understood, and then acquire other books that deal more particularly with certain branches or phases of gardening in which he may be interested either from choice or necessity. The seventh edition into which the book has now entered is sufficient guarantee of its continued utility and the demand for it.

In the section devoted to vegetables we open the book at Globe Artichoke and find the details of culture necessary to produce good heads under various systems of treatment, as well as methods for the profitable cropping of the ground, while the Artichoke plants are yet young. Under the same heading comes the word Chards. How many gardeners know that Chards are the leaves of Globe Artichokes blanched in the same way as Cardoons? Asparagus is popular with a much greater number of the community; yet the successful cultivation of it proves troublesome to not a few. While the demand for it is universal, the soil is not universally suitable in every garden; hence a considerable amount of space is devoted to the details of cultural treatment in the book, and the information vouchsafed cannot fail to prove useful. All other garden vegetables are dealt with proportionately to their value, and the complicated nature of their requirements or otherwise. Even the humble Dandelion, though a weed of the vilest character when out of place, under the simplest of requirements may be turned to profitable account as a wholesome and toothsome vegetable.

"A Year's Work in the Vegetable Garden" is practically a vegetable calendar for every month of the year, which everyone should read who fondly imagines there is nothing to be done in the vegetable line during January and February. Independently of outdoor operations, there is practically a vegetable garden under glass, or should be in every well-appointed place. We refer to the raising of various vegetables under glass, as well as the forcing of those things which were grown to maturity in the open ground during the summer months. Much of the forcing that is advocated may, however, be effected by means of beds of fermenting manure in those gardens not well furnished with the necessary hot-water apparatus.

The chapter on "The Rotation of Crops in the Vegetable Garden" should supply the young gardener with many a valuable hint, to be followed up while the years of his career unroll, so that when the time comes he may not only be able to turn his knowledge to practical account, but to add to the general store of information at the service of the profession. The soil is here shown to be a mine or

storehouse of plant food, which is slowly rendered soluble by the action of air, rain, frost and sunshine, and thereby brought into a condition in which plants can appropriate it for their sustenance. That process is constantly in progress, so that the total exhaustion of a soil is a thing unknown. Nature is always restoring the fertility of a soil, but the latter under intense culture, and cropped with a few plants only is being depleted of certain elements of plant food at a greater rate than the same can be restored by the slow and natural process. An observant and diligent study of a proper rotation of crops will enable the cultivator not only to economise the natural fertility of a soil, but to restore those ingredients which have been carried away in the crops, and augment them, and that, too, at a minimum of cost.

Flowers are also dealt with exhaustively under the headings of "The Culture of Flowers from Seeds," "The Culture of Flowering Bulbs," and "Flowers All the Year Round." Then come lawns and tennis grounds, followed by three chapters on the insects and fungi that prey upon living plants, the various pests being represented by woodcuts. The whole of the printing consists of large and clear type, and the bindings leave nothing to be desired.

"THE ADVERTISER'S A B C: THE STANDARD ADVERTISEMENT PRESS DIRECTORY." Published by T. B. Browne, Ltd., 163, Queen Victoria Street, London, E.C. 1898 edition, price 10s. 6d.

The following are the chief contents of the 1898—the twelfth—edition of this work, which has just been issued:—

A complete list of the Newspapers, Magazines, and Periodicals published in the United Kingdom, with the particulars relating to each publication revised up-to-date. In each instance a brief description of the paper is given, and in nearly every case either the full advertisement rates or an extract therefrom.

The particulars of any individual paper now appear on the same page, which is a distinct improvement on previous editions, in which the particulars were split up into different sections of the work. By the new arrangement reference is materially simplified, hence it will, no doubt, be much appreciated by those who are in the habit of consulting the pages of the "A B C." Several facsimile reproductions of the title pages of papers are given, together with much information as to circulations and other items of special value to advertisers, and all having transactions with the Press.

Another section of the book is devoted to the Colonial and Foreign Press, and this also has been thoroughly revised, and may be taken as a reliable index to the Colonial, Indian, and Foreign Press.

The work is interspersed with several articles on the subject of advertising, including one on "Press and Poster Advertising," in which it is claimed that advertising by poster can at best only be regarded as an *adjunct* to Press Advertising, which, it is asserted by the writer, is the only system of advertising giving in itself satisfactory results. An illustrated sketch of T. B. Browne's Advertising Agency is given, together with some sixty or seventy specimens of pictorial advertisements designed and published by this house. There are also several articles in the Colonial section, giving statistical and other information, showing in what direction home manufacturers may cultivate trade with our possessions across the seas.

The general index—also entitled a Directory in Brief—is in itself a concise record of the newspaper and magazine press of this country, and classified lists follow. The new publications and "deaths" of the year are noted, and the London offices and representatives of the provincial papers are given.

The book ends with a geography of the Press. The work is, as usual, handsomely bound in red cloth with gold lettering, and is as bulky as ever.

Fungus on Beech.—At a meeting of the Scientific Committee of the Royal Horticultural Society on the 11th ult., a box of fungi was received from Lady Cave, Cleve Hall, Downend, near Bristol. They were forwarded to Kew, whence it was reported that they were *Pleurotus ostreatus*, *Jacq.*, "one of the best and safest of edible fungi." The specimens were taken from a very old Beech in the gardens of Cleve Hall. They were growing on the wood about 12 feet from the ground.

QUESTIONABLE EXHIBITS.

THE special prizes offered at the October show of the National Chrysanthemum Society are deserving of some attention, when so much is being said about the society's doings. It is bad enough taste to see prizes offered with the conditions attached that the seeds must be obtained from the firm offering the prizes—is this a premium on bad seeds? otherwise, why is it necessary to impose such conditions? If the seeds or plants are the best in their respective classes rest assured exhibitors will soon find it out, and will be pleased to grow them to the exclusion of inferior varieties. It is a further disadvantage to the firm offering the prizes, because there are seldom any means of comparing their produce with others. The N.C.S., however, goes further than this, they give countenance to a system which may be questioned as being honest. Here the intending exhibitor must obtain his seeds from that particular firm direct—or if indirect in his packets, for which he pays the full value. Naturally, one would conclude that the produce would be his own; but no. There is another condition imposed, and that is what I more particularly desire to draw attention to, viz., the exhibits are to become the property of the firm offering the prizes at the close of the exhibition. There is something wrong here, and I would like to ask if it is yet too late for the N.C.S. to withdraw those conditions when they issue their schedule of prizes for the current year.—*A member of the N.C.S.*

LOW PRICED SEEDS—A CHALLENGE.

To all advertisers in THE GARDENING WORLD the article in your issue of the 29th ult., signed "J. C., Chard," will be of interest, varying no doubt according to the prices in their seed lists.

"J. C." may be a lecturer, and as such can doubtless give some excellent advice; but his letter shows either woeful ignorance of the wholesale value of seeds, or an alliance with some house where high prices and large profits rule. We do not attempt to deny that there is much rubbish sold as seeds; this is done as often at high prices as at low. What we do most strongly object to is the wholesale condemnation of all low-priced seeds. Surely "J. C." must have overlooked the number of prizes which in open competition are annually won by the produce of low priced seeds. In these days of keen competition, the man who would extend his business by giving better value for money has enough fair opposition to contend against without being subjected to such unwarrantable abuse of low prices and bolstering up of high prices and large profits as is contained in "J. C.'s" article. But, enough; it is not our intention to show up before the readers of THE GARDENING WORLD the percentage of profits which some retailers require. Since "the proof of the pudding is in the eating" and not in the cook's description, we make the following offer:—To any reader of THE GARDENING WORLD who cares to try for themselves the relative merits of low and high priced seeds by growing them side by side, we will send gratis a packet of any variety of seeds enumerated in our list, the only conditions we impose being that a fair trial be given and the result made known to us with the name of the firm from whom the other seeds were obtained, and the price paid for them.

And with this offer I leave the subject to the common sense of your readers. Before being misled by the views of one man let them try for themselves.—*H. Allen Davies, Redhill, Surrey.*

FLOWER PICTURES BY LADY ARTISTS.

THE forty-third exhibition of pictures under the auspices of the Society of Lady Artists now being held in the Galleries of The Royal Society of British Artists in Suffolk Street, Pall Mall East, is a distinct advance upon the exhibitions of former years. The collection on view comprises no fewer than 473 pictures of various sizes, some of them in oils, and some in water colours, together with exhibits of various handicrafts in the shape of special objects of *virtu*. It follows as a matter of course that in such a collection of pictures some of inferior quality should be found, but, generally speaking, the standard of merit is high, and some of the canvas betrays real genius.

Flowers are so closely, and [even inseparably, associated with the various phases of human life that it is not wonderful that the artist, lady or otherwise, should employ them to a considerable extent. "A Path of Roses," by Ethel Wright, depicts a girl partly clothed in some diaphanous material holding a bunch of Roses in her right hand and strewing Rose petals with the left. This is prettily designed and well executed. An even finer picture called "The Rose," by Mrs. Waller, has for its subject a young girl holding a Rose-bud. The girl's hair is of that rich auburn shade that the gods are said to love, and the whole picture is instinct with life and beauty. "To-day and Yesterday," by E. E. Greatorex, is somewhat gruesome in design, but the subject has been well-handled. It shows a human skull lying on a table side by side with a freshly-plucked Rose.

Tit-bits of scenery seem to have been favourite themes with the ladies, and we noticed some exceedingly pretty pieces of work. "At the Head of Glen Falloch," by Freeman Kempson, shows a mountain glen, with the overhanging peaks and ridges partially shrouded in mist. "Above Loch Lomond" is by the same artist. "In the New Forest," by Edith M. Kemp-Welsh, is a pretty panel picture showing a nook of that historic forest with two patient "neddies" grazing in the foreground. "Sunny September," from the brush of E. Stewart Wood, shows a farm scene in which are all the gorgeous colouring and repose of the first month of autumn. "The end of the Hop Harvest" is from the same artist. "A Peat Marsh, Dartmoor," has been well executed by Annette Elias.

Of the various flowers which the lady artists have portrayed the most successful attempts are "Iris," by Mrs. Minnie S. Beavis; "Japanese Anemones," by Laelia Loddiges; "Chrysanthemums and Autumn Leaves," by Mary T. Fuller; "Orchids," by Helen Thorneycroft; "Azaleas," by Emma Walter; and "Old Man's Beard," by A. Madeline Lewis. "Poppies," by M. C. Bedford represents fairly well the gaudy scarlet of our common field Poppy.

"Autumn Fruit," by Emma Walter, is a fair representation of the drawing master or mistress

MESSRS. JAS. CARTER & CO'S.
PRIMULAS.

THE glass department of the Forest Hill Nurseries of Messrs. Jas. Carter & Co. is just now a blaze of

brilliancy of colouring characterising the flowers. The arrangement, too, has been carried out in such a way that the best characteristics of each form can be seen at a glance, as each of the five varieties is staged in batches of hundreds. Thus, on entering



PRIMULA CARTERS' PRINCESS MAY.

beauty with a splendid collection of the popular Chinese Primulas. No fewer than seven arge and roomy houses are filled with them, and the plants make a grand total of upwards of 7,000, so the extent and variety of the display may be imagined.

the houses, on either hand one sees long glowing vistas of colour until they melt into indistinctness in the distance, for the houses are of great length. The generous reds, the pure whites, and the beautiful blue stand out most prominently from the various intermediate and more subtle shades, which require closer inspection before they can be fully appreciated.

First a word as to the condition of the plants themselves. We found them in the pink of condition, with not a weakly or sickly one amongst them. They were obtained, our guide informed us, from seed sown at the end of July last, and they were not put in their flowering pots (48's), until the first week in December. We found them, therefore, in the first flush of their maiden beauty, the sturdy flower scapes, lifting their grateful burden of bright blooms well above the rich green foliage. The work of pollination, already begun, will be actively carried on for the next few weeks in order that the huge seed warehouses of the firm in Holborn may be kept supplied with seed. The display of bloom will thus be heavily handicapped, for fertilisation shortens considerably the life of the flower, but despite this there will be plenty of colour for some time yet.

Of the numbers of fine single-flowered varieties included in the collection, Princess May is second to none in vigour, floriferousness, and general excellence. The flower trusses are of immense size, and lifted well above the foliage, whilst the delicate blush-pink flowers are of good substance, and perfect form. The accompanying illustration gives a good idea of it.

Elaine is a grand fern-leaved white of surpassing merit, and Holborn Queen, the flowers of which are slightly tinged with pink is equally as good. Holborn Blue represents the latest advance in its colour, which as seen at Forest Hill is rich and vivid. No weakling, either, is it in habit or constitution. Rose, another fern-leaved form has light lilac flowers when they first open, but the hue presently changes to a rose-lilac that is at once rich and delicate. Ruby is much after the same style, but the flowers are a shade or two darker. Vermillion is a handsome crimson-cerise flower that up till the present has been the best of its kind, but a seedling raised from it, of which we saw a few plants, bids fair to surpass it, for the flowers are larger, more open, and several shades darker—a capital thing all round. Holborn Salmon represents a distinct shade of salmon-scarlet, whilst Holborn Scarlet is the nearest approach to true scarlet in the Chinese Primula that we have yet seen. The brilliant effect produced by a batch of plants is easier to imagine than describe.



CARTERS' PRINCE OF WALES PRIMULA.

sort of picture. It shows a group of Grapes, Apples, and Plums, with coloured Vine leaves in the background.

The visitor scarcely knows which to admire the most—the strength and vigour of the plants, their great floriferousness, or the size, beauty, and

Before leaving the singles we must not forget to mention that curiosity, Bouquet, in which the calyx of the flower has become foliaceous. The white flowers are frequently borne singly on the scapes after the fashion of the common Primrose, but usually in umbels in the normal manner. The foliage is of great substance and quite distinct in appearance. Venus is another novelty in which the flowers are prettily mottled and flaked with rose on a white ground.

The doubles constitute a very valuable and charming section. Blue Rosette is the double counterpart of Holhorn Blue. Prince of Wales (for which see illustration), exhibits a delicate shade of rose-pink. The flowers are of good size, and produced with exceptional freedom. Princess of Wales is white, prettily mottled and flaked with rose, after the style of Venus. Aurora is a rich salmon-pink, whilst Snowflake, in accordance with its name is pure white. Vivid, too, is well named, for the blooms are vivid carmine-scarlet, and the plants, whether viewed severally or collectively, very showy. Lilac Queen, which has deep lilac flowers, completes a list of varieties that should be in every up-to-date collection. At Forest Hill, under the skilled cultivation given, they acquit themselves marvellously well.

We are indebted to the Messrs. Carter for this opportunity of figuring the two varieties, Princess May, and Prince of Wales.

PHENOMENAL WEATHER.

SINCE the short spell of frost and fog at Christmas we, in West Middlesex, have experienced nothing but the most phenomenal weather; in fact, the temperature has been more indicative of April than January. Night after night the thermometer has not gone down below 40° to 45°, rising about 10° during the day.

This abnormal state of things is, unfortunately, having its effect in the garden, where herbaceous and other plants are being unduly stimulated. Phloxes, for instance, are quite an inch above the ground, while Roses are covered with shoots of an equal length. *Dicentra spectabilis* is showing its rich young growths too far above the soil, and *Sedum spectabile* is a mass of glaucous leaves. *Narcissus*, *Tulips*, etc., also exhibit too much precocity; while a tour "round the houses" this afternoon (January 23rd) discovered *Snowdrops*, *Winter Aconite*, and even *Crocuses* in a very advanced stage. *Jasminum nudiflorum*, of course, was on the walls in full beauty; *Crataegus Pyracantha* was still in fresh fruit; *Daphne Mezereum* showed much colour; and many other shrubs and sub-shrubs told the same tale; for although plants generally appear to exhibit some sensitiveness, they seem to be totally unable to distinguish between the true season and the false.—*C. B. G., Acton, W.*

PRUNING AND DRESSING VINES.

THE importance of taking these operations in hand in good time cannot be over-estimated; the well-being of the Vines is largely influenced thereby. Should the pruning be delayed till after the sap commences to rise bleeding sets in, and in spite of any and every means taken to prevent it, the prospective crop is more or less jeopardised; for the long continued loss of sap weakens and hinders the growth of the young shoots to such an extent that they are some time before they gain strength sufficient to make healthy progress. However satisfactory this may appear they cannot make good the damage already done. Vines are so generally grown on the spur system that any remarks upon the pruning of them are usually taken, as in this instance, to refer to canes or rods managed in that way. In pruning them one eye only should be left on a spur; for if more are retained they, after a few seasons, get a long way from the parent stem, and assume a gnarled and knotted form, through which the sap cannot flow to the bunches of fruit with that degree of freedom it should do.

Where Vines have, through mismanagement, got into this condition, young rods should be taken up to replace the gnarled and knotty ones, which, as the younger ones come into bearing, may be cut out. Under the term dressing, as respects the winter management of Vines, I include the removal of any

really loose bark, and in this connection must utter a word of protest against that barbarous plan of skinning them to the wood, which is far too prevalent, thus depriving them of their natural protection. A glance at a vinery will soon convince a practised eye whether the Vines have been treated in this unnatural fashion, or the more rational one; for rods thus yearly deprived of much of their natural coating do not swell out as they should do.

The plea urged in defence of the practice is that it is necessary for the destruction of insect pests. In answer to this it may be asked, what pests? If mealy bug, all I have to say is that anyone having it among their Vines to such an extent as to be driven to the extreme measure indicated, is either much to be pitied or highly blamed, it being the only insect which can be successfully banished from our plant houses. What germs of red spider or thrip may be in hiding among the loose bark may be easily dealt with by well-painting the rods with Gishurst Compound, as directed by the makers. I have made different washes with tobacco, sulphur, lime, clay, soot, &c. The Gishurst Compound, an old remedy, is quite as effectual and far more cleanly than either.—*W. B. G.*

GARDENING MISCELLANY.

GALANTHUS IKARIAE.

THIS seems to be more or less intermediate in character between *G. Elwesii* and *G. latifolius*, but has been described by Mr. J. G. Baker, of Kew, as a new species from Nikaria. The strap-shaped leaves are bright green, resembling those of the latter, but differing in being slightly hooded at the apex, and otherwise being almost quite flat without the channel down the centre. The outer segments are oblong-spathulate and narrowed to a broad base that almost completely covers the inner segments. The latter resemble those of *G. Elwesii* in being erect, crisped at the apex and finely ridged and furrowed longitudinally; but they differ in having only one large green blotch round the sinus, outside and inside. *G. Elwesii* has the inner segments green throughout the inner face except at the margins, with a large green blotch at the base externally, and a small one round the sinus. Its outer segments are also narrowed to a claw. Altogether, *Galanthus Ikariae* is a beautiful Snowdrop at a casual glance recalling *G. latifolius* on account of its bright green leaves and large flowers. The species is now flowering on the rockery at Kew.

AN EFFECTIVE COMBINATION.

COLOUR contrasts are always more or less effective, but, as a rule, there is not much colour out-of-doors in our climate in mid-winter. As, however, this climate of ours—like some other things I could mention—is not always strictly congruous, so it happens sometimes that the garden is gay before the normal time. At least I thought so on the 30th January last when I took a stroll through our great hotanical establishment at Kew. But, in addition to the unusual amount of colour for the season there present, I was struck with a very simple but very effective group of the Red Osier Dogwood (*Cornus alba* var. *siberica*) set in a carpet of gold—the Winter Aconite (*Eranthis hyemalis*). The beautiful yellow cup-shaped blossoms, sessile on their deeply-divided leaves, presented such a regular and even carpet of colour that the bright red or red-purple stems of the Dogwood appeared to be reflected as in a mirror. Whether this reflection be fancy or fact matters not much; the combination of colour was there; the effectiveness was also present; while the simplicity of the arrangement recommends itself to all gardens.—*C. B. G., Acton, W.*

* CARNATION JACK FROST.

THIS is a huge white Carnation which is credited in the United States with being the largest white Carnation in existence. Reports are to hand of flowers 4 in. in diameter, that is as large as a fine *Malmaison*. The petals are fringed. It is said to be an exceptionally strong grower, and to be immune from attacks of rust. If it does as well this side of the water it will receive a warm welcome, and will be largely grown.

OBITUARY.

MR. FREDERICK E. WILLEY.

IT is with sincere sorrow and regret that we hear of the untimely death of our old friend and comrade Mr. F. E. Willey, who has succumbed to the unhealthy climate of Sierra Leone, Western Tropical Africa, after a residence there of only two years, during which he held the post of Curator of the Botanic Gardens. Mr. Willey entered as a young gardener at Kew in 1892, and after a year's service was chosen as relief man for the Botanic Station at Ahuri, Gold Coast, during the absence on holiday of Mr. W. Crowther, also since deceased. Upon his return he remained awhile at Kew, but was appointed in October, 1895, to take charge of the new station at Sierra Leone. Those who knew Willey, and the grit and determination that lay beneath his genial and prepossessing manners, need not be told that he did his duty well and reaped no small measure of success upon this fever-swept outpost of the empire. In his capable hands the economic resources of the colony were being developed apace, and his friends were all hoping that a long and prosperous career lay before him. But it was not to be, for the great reaper Death had marked him for his own, and on the 22nd ult. removed him to that place where "the wicked cease from troubling and the weary are at rest." *Requiescat in Pace.* Kew mourns a worthy son, and not a few of us a friend.

MR. THOMAS SHEASBY.

We regret to announce the death of Mr. Thomas Sheasby, gardener to Lord Dunleath, Ballywalter Park, Newtownards, Co. Down, on the 21st ult.

QUESTIONS AND ANSWERS

* * * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Grub in Box.—*Enquirer*: The box you sent containing an insect came to hand last week after we had gone to press, and must have been delayed, as the letter posted on the same date arrived three days earlier. The specimen was alive and well. It is the pupa or chrysalis stage of the Cabbage Butterfly (*Pieris Brassicae*). The caterpillars after being full fed last autumn must have crawled into your vinery and lain up there. It is the resting or rather the hibernating form of the insect, and would have hatched out in April.

Strawberries and Soot.—*F. G. Brewer*: We have very little doubt that the conclusion you have come to is the right one. In all probability more than sufficient soot was used, mixed with the soil, so that an additional supply over the crocks in the pots has injured the young roots as soon as they pushed through the soil. We have witnessed an entire absence of Carrots, and even weeds on a piece of ground that was overdressed with soot to destroy the Carrot grub. The only thing you can do is to turn the ball of soil out of the pots, and take off as much of the soot as you can without disturbing the roots more than you can help. Crock the pots with clean pot sherds after wiping out the pot itself. Repot firmly and give the plants a further trial. Use only those that have not yet started into growth. If you have any good Strawberry runners in the open ground you might pot up a batch or two of them with the view of getting a few dishes of fruit this year by forcing. This has been successfully done, so that you might very well try it. The lack of sunshine for months past has been very detrimental to the forcing of Strawberries and other fruits.

Natural breaks of Chrysanthemum.—*Cupidus Scientiae*: You stop your plants twice with the object of getting a sufficient number of shoots to produce the desired number of flowers. This we speak of as the bush form, and we do not know any other way of obtaining the requisite number of shoots. You desire to take some on the first and some on the second crown bud. That is evidently what you have been doing when you speak of being careful to remove all side growths after taking the buds at the proper time. Some varieties produce several crown buds in succession, and these buds may be known by their being surrounded by leafy huds which grow into shoots. Terminal buds are surrounded by flower huds, but not leafy ones. This is the only distinction, no matter at what time the buds are taken. If you take the first bud that makes its appearance, it must be the crown bud. If you remove this for any particular reason, and take the next that comes on the natural break, it must be the

GREEN PEAS—JUNE TO NOVEMBER.

C
A
R
T
E
R
S

C
A
R
T
E
R
S

A correspondence was raised in the Daily Press last Autumn upon the shortness of the season when Green Peas are available, both in gardens and on the market. We now offer the following as representing the best collection selected from 1,024 rows we had under trial last season. It would be difficult for us to give precise dates for putting the seed into the ground, as so much depends upon soil and situation. Successional Sowings may be made any time between these dates, and the last sowing not later than the second week in June.

| NAME. | DESCRIPTION. | HEIGHT. ft. | WHEN TO SOW. | EXPECT READY TO PICK. | CARRIAGE FREE. Per pint. Per quart. |
|--------------------------|-------------------------|----------------|-----------------|--------------------------|--|
| Carters' Lightning | First Early White Round | 2½ | In February | May to June | 2s. 3s. 6d. |
| Carters' Early Morn | First Early Marrowfat | 3 | End of March | During June | 2s. 3s. 6d. |
| Carters' Daisy | Second Early Marrowfat | 1½ | Middle of April | Early July | 2s. 3s. 6d. |
| Carters' Danby Stratagem | Mid-season Marrowfat | 3 | End of April | July | 2s. 3s. 6d. |
| Carters' Model Telephone | Main Crop Marrowfat | 5 | Middle of April | July | 2s. 3s. 6d. |
| Carters' Model Telegraph | Main Crop Marrowfat | 5 | End of April | July and Aug. | 2s. 3s. 6d. |
| Carters' Michaelmas | Late Marrowfat | 3 | May to June | Sept. to Nov. | 2s. 3s. 6d. |

The Collection—1 pint each of 7 varieties, price 12/6; 1 quart each of 7 varieties, price 22/6, Carriage Free.

OFFERED IN SEALED PACKETS ONLY

Carters THE QUEEN'S SEEDSMEN, 237, 238, & 97, HIGH HOLBORN, LONDON

second crown bud. To get these in time your plants must be rooted early, and the stopping done correspondingly early. We are not quite sure if this is exactly what you mean, but we can help you if you give further explanations. You must, however, stop the plant more than once to get the requisite number of shoots. Growers for exhibition stop their plants only once, and do it early or late according to the variety, simply to time the appearance of the first bud, the others being timed by the latter. Edith Tabor for exhibition comes best on the early crown bud, being a late variety; Duke of Wellington on the second crown bud, stopping it in April; Elsie Teichman, on the first crown, stopping it in April; Lady Ridgway, on the terminal bud, stopping it in April; Globe d'Or, on the crown bud; and Perle Dauphinoise, on the crown bud.

Best Scarlet Border Carnation.—*Omega*: The best Carnation of this class for border work is Hayes Scarlet, which is of excellent colour and form, flowering with tolerable freedom.

Single Yellow Chrysanthemum.—*Omega*: The most refined yellow we know is Miss Annie Holden, a canary-yellow sport from Mary Anderson. Buttercup is a richer yellow, with incurving florets, and useful for decorative work. Both are free flowering.

Worms on Lawn.—*H.*: Unslaked stone-lime is the best material to use for making a solution of lime water. Sprinkling lime upon a lawn has no effect whatever in bringing out the worms, except it were followed soon after by a heavy shower of rain, which might occur during the night. Even then if the worms did come out, they would enter the soil again before you might have an opportunity of collecting them. Water can only take up a certain amount of lime in solution, so that there would be little chance of overdoing it. You may put about a peck of lime in a bag, tying the mouth of the latter and sinking it in a cask containing 30 gallons of water. After it has stood for some hours, and the water is quite clear you may take a three-gallon watering pot and fill it two-thirds with clean water. Then take a small watering pot and fill up the remaining third of the big one with the prepared lime water so as to dilute the solution. Put arse on the big pot and give the lawn a good sprinkling. When the worms have had time to rise to the surface, get a broom and sweep them up. Roll the grass so as to level down the worm casts. You may repeat the operation in the course of a few weeks if you think there is any need for doing it.

Propagating Poinsettia.—*Poinsettia*: You must have grown them strongly if the 5 ft. or 6 ft. stems were all grown last year. We rather suspect they are old plants, however, of more than one season's growth. You should have no difficulty in propagating them by cuttings in spring and the early part of summer. At present you may allow the plants to get dry, keeping them in a house with a night temperature of 45°. Some time next month you may place them in heat, and syringe them to start them into growth. Give them water as they commence growing. When the young shoots are 2½ in., or 3 in. long you may take them off with a small heel of the old wood. Allow the cut to dry a little, then insert the cuttings singly in sandy loam in thumb pots. Plunge the latter in a hotbed having a bottom heat of 60° to 65°. Be careful not to over-water them while roots are being formed. Later buds will be produced by the same old plants, thus giving you a succession that will continue the flowering season till a late period. You may also keep the old plants, if you care to, because each will furnish a number of heads according to the number of shoots. As soon as the cuttings are rooted you may repot them into pots a size larger, repeating the operation as required till the plants are in 48 or 32-size pots according to their strength. Use a compost consisting of sandy loam, with a little peat and leaf soil. Pot firmly, so that the wood may be short-jointed. When the weather outside becomes warm

with plenty of sunshine the Poinsettias may be transferred to cold frames where they will be close to the glass and get plenty of sunshine.

Planting Clematis Outside.—*Omega*: The best time to plant out Clematis is in March, earlier or later, according to the state of the weather, but before growth has made much headway. Mrs. George Jackman would be the best of the two white varieties you mention to grow alongside of the old Clematis Jackmanni, because the other flowers too early.

Late Vinery.—*Omega*: Gros Colman and Alicante Grapes are often grown in the same vinery as Black Hamburg, with very fair, but we should not say the best results. Hamburg is early, and would require a shorter season to come to maturity, and more abundant ventilation before the others are ready for it. By careful attention you might grow them together with fair success, but we think you would do better to grow Black Hamburg in a separate house.

Maids of the Village.—*Sigma*: We fail to find any record of this as a name for a plant in the books; but if we yet discover it we shall let you know. A specimen of it would insure the name; and a good description might. *Ranunculus aconitifolius flore pleno* is sometimes called Fair Maids of France.

Names of Plants.—*R. M.*: 1, *Galanthus nivalis*; 2, *Galanthus Elwesii*; 3, *Asplenium Trichomanes*; 4, *Asplenium marinum*.—*T. Wilson*: 1, *Eupatorium weinmannianum*; 2, *Primula floribunda*; 3, *Aralia Veitchii*; 4, *Sempervivum canariense*; 5, *Sempervivum Haworthii*.—*E. S.*: *Dendrobium aureum*; 2, *Dendrobium nobile* var.; 3, *Odontoglossum luteo-purpureum*; 4, *Odontoglossum crispum andersonianum*.—*T. B.*: 1, *Davallia elegans*; 2, *Blechnum occidentale*; 3, *Selaginella Martensii variegata*; 4, *Selaginella caulescens minor*; 5, *Lomaria gibba*.—*G. W.*: The shrub is *Cornus mas*; the *Dendrobium* is a variety of *D. wardianum*, differing only from *D. w. candidum* in having purple tips to the segments (we should have liked to see the stems); for the *Cypripedium*, see next week.

Communications Received.—*J. Mayne*.—*W. B. G.*.—*Diosma*.—*New Park Road*.—*J. S.*.—*Robert G. Mann*.—*D. Chisholm*.—*M.*.—*A. R.*.—*W. B.*.—*A. H.*.—*West*.—*T. R.*.—*A. L.*.—*T.*.—*Horsham*.—*E. N.*.—*Reader*.—*C. Johns*.—*P.*.—*Oswald S.*.—*Era*.

TRADE CATALOGUES RECEIVED.

RICHARD SMITH & Co., Worcester.—Catalogue of Seeds.

JOHN RUSSELL, The Richmond Nursery, Richmond, Surrey.—Descriptive Catalogue of Roses; also Catalogue of Choice Garden Seeds.

G. PHIPPEN, Reading.—Phippen's Seed Catalogue.

W. W. JOHNSON & SON, Ltd., Boston, Lincolnshire.—Select Vegetable and Flower Seeds, Seed Potatoes and Garden Requisites.

WILHELM MUHLE, k.u.k. Hoflieferant in Temesvar.—Catalogue of Vegetable and Flower Seeds, Plants, Palms, Conifers, &c.

H. CANNELL & SONS, Swanley, Kent.—Allotment Holders' Guide, and Seed and Tree List.

LONDON SEED TRADE.

February 1st, 1898.

MESSRS. HURST & SON, 152, Houndsditch, London, and 27, Seed Market, Mark Lane, report a moderate enquiry for Clover and Grass seeds. Medium grades of English Red Clover are cheaper. Foreign Red Clover steady with full supplies. Alsike and Trefoil firm. Ryegrasses dull.

COVENT GARDEN MARKET.

February 2nd, 1898.

FRUIT.—AVERAGE WHOLESALE PRICES.

| | s. d. s. d. | | s. d. s. d. |
|-----------------------|-------------|---------------------|-------------|
| Apples ... per bushel | 4 0 13 0 | Grapes, per lb. | 2 0 3 0 |
| Cobbs | 20 0 21 0 | Pine-apples | |
| per rootlbs. | | —St. Michael's each | 2 6 7 6 |

VEGETABLES.—AVERAGE WHOLESALE PRICES

| | s. d. s. d. | | s. d. s. d. |
|------------------------|-------------|------------------------|-------------|
| Artichokes Globe doz. | 2 0 3 0 | Herbs per bunch | 0 2 |
| Asparagus, per bundle | | Horse Radish, bundle | 1 0 2 0 |
| Beans, French, per | | Lettnces ... per dozen | 1 3 1 6 |
| per lb. | 0 9 1 0 | Mushrooms, p. basket | 1 0 1 6 |
| Beet..... per dozen | 2 0 | Onions..... per bunch | 0 4 0 6 |
| Brussel Sprouts, | | Parsley ... per bunch | 0 3 |
| per half sieve | 1 0 1 6 | Radishes... per dozen | 1 0 1 3 |
| Cabbages ... per doz. | 1 0 1 3 | Seakale... per basket | 1 6 2 0 |
| Carrots ... per bunch | 0 3 | Small salad, punnet | 0 4 |
| Caullflowers..... doz. | 1 6 3 0 | Spinach per bushel | 2 0 3 0 |
| Celery..... per bundle | 1 0 1 6 | Tomatos..... per lb. | 0 6 1 0 |
| Cucumbers per doz. | 6 0 10 0 | Turnip? ... per bnn. | 0 3 |
| Endive, French, doz. | 1 6 2 0 | | |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| | s. d. s. d. | | s. d. s. d. |
|--------------------------|-------------|-----------------------|-------------|
| Alum Lilies, 12 blms. | 2 0 3 0 | Mimosa, French, | |
| Asparagus Fern, bun. | 1 6 3 0 | bunch | 9 1 0 |
| Azaleas, doz. sprays | 0 6 0 9 | Narcissus, white, | |
| Bouvardias, per bun. | 0 6 0 8 | French, doz. buns. | 2 0 4 0 |
| Carnations doz. blms. | 1 6 3 0 | Orohids, doz. blooms | 1 6 9 0 |
| C. brysa ut bemums | | Pelargoniums, 12 bun. | 6 0 8 0 |
| bunches | 6 0 15 0 | Pyrethrum doz. bun. | 1 6 3 0 |
| Daffodils, per dozen | 0 6 1 3 | Roses (Indoor), doz. | 6 1 0 |
| Euotaris ... per doz. | 4 0 6 0 | Tea, white, doz. | 1 0 2 0 |
| Gardenias ... per doz. | 6 0 9 0 | Perle doz. | 1 6 4 0 |
| Geranium, scarlet, | | Safrano doz. | 1 0 2 0 |
| doz. bunches | 4 0 6 0 | (English), | |
| Lilium longiflorum | | Pink Roses, doz. | 2 0 4 0 |
| per doz. | 4 0 6 0 | Smilax, per bunch ... | 1 6 3 0 |
| Lilly of the Valley doz. | | Tuberose, doz. | |
| sprays | 0 6 1 3 | blooms ... | 0 6 0 8 |
| Lilac (French) per | | Tulips, various, doz. | 0 6 1 3 |
| bunch | 3 0 4 6 | Violets (Parma), per | |
| Marguerites, 12 bun. | 2 0 4 0 | bouch | 3 0 4 0 |
| Marienthal Fern, 12bs. | 4 0 8 0 | ,, ,, doz. bun. | 0 9 2 0 |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

| | s. d. s. d. | | s. d. s. d. |
|--------------------------|-------------|-------------------------|-------------|
| Arbor Vitae, per doz. | 12 0 36 0 | Ferns, invar., per doz. | 4 0 12 0 |
| Aspidistra, doz..... | 18 0 36 0 | Feras, small, per 100 | 4 0 6 0 |
| speolmen | 5 0 10 0 | Ficus elastica, each | 1 0 5 0 |
| Azalea, per doz. | 30 0 42 0 | Foliage Plants, var., | |
| Chrysanthemums, doz. | 6 0 12 0 | each | 1 0 5 0 |
| Cineraria, per doz. | 9 0 12 0 | Lilium Harrlssii, | |
| Cyclamens, per doz. | 12 0 18 0 | per pot | 2 0 4 0 |
| Dracaena, various, | | Lycopodiums, doz. | 3 0 4 0 |
| per doz. | 12 0 30 0 | Marguerite Daisy doz. | 6 0 9 0 |
| Dracaena viridis, doz. | 9 0 18 0 | Myrtles, doz. | 6 0 9 0 |
| Euonymus, var. doz. | 6 0 18 0 | Palms in variety, each | 1 0 15 0 |
| Evergreens, luv. doz. | 6 0 24 0 | Palms, Specimen ... | 21 0 63 0 |
| Erica Hyemalis, doz. | 9 0 15 0 | Pelargoniums | |
| Erica Gracilis, per doz. | 6 0 9 0 | Scarlets per doz. | 2 6 6 0 |
| Erica, various, per doz. | 8 0 12 0 | Tulips, various, doz. | 1 0 1 6 |

AMATEURS

Who follow the instructions given in

'The Amateur Orchid Cultivators' Guide Book.'

By H. A. BURBERRY, F.R.H.S.,
ORCHID GROWER TO

The Right Hon. JOS. CHAMBERLAIN, M.P.,

CAN GROW ORCHIDS

In Cool, Intermediate, or Warm Houses,

SUCCESSFULLY

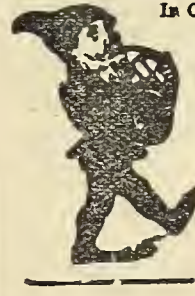
There is a Calendar of Operations for each month, and full information as to the treatment required by all Orchids mentioned in the book.

With some fine coloured illustrations

Second Edition.

5s. od.; post free, 5s. 3d.

"GARDENING WORLD" Office,
1, Clement's Inn, Strand London.



DIRECT FROM COLLIERY. PATRONISED BY HIS GRACE EARL WINCHILSEA.
 GUARANTEED 25 PER CENT. MORE DURABLE THAN CHEAPER SORTS.
 Used at the Mansions and Gardens of the NOBILITY and GENTRY, and at the principal Maltings in United Kingdom.
 (DOWSON'S PLANT) AND WATER GAS FOR STEAM. HOP AND ORCHID GROWERS AND NURSERYMEN.

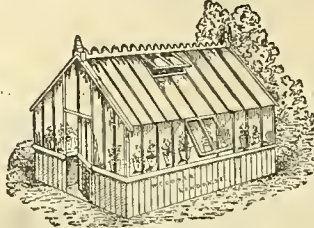
ESSERY'S ORIGINAL ANTHRACITE.

Machine Cut. Three sizes ready for use. Hard and Large, entirely without Smoke, superseding Coke in every respect. Effecting a very important Saving by constant combustion. Much greater Heat, Durability, Cleanliness, and Diminution of Labour. Autograph Certificates.
 References—First Cost Prices.

Can be had only from **WILLIAM H. ESSERY, Pantyffynon Collieries, SWANSEA.**
 Established 1848. *N.B.—Not my Coal unless delivered in trucks painted "William H. Essery."*

W. COOPER, Ltd., Horticultural Providers, 755, OLD KENT ROAD, LONDON, S.E.

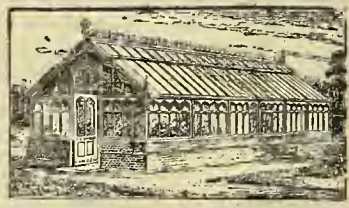
Amateur
 Span-Roof Greenhouse.
 Everything Complete, and Ready for erecting.
 From £2 16s.





"Cooper" Cycles.
 Latest design frame, large weldless steel tubes, ball bearings, tangent wheels, and break and mud guards. Gent's from £5 10s; Ladies', with dress and gear guards, from £6.
 Twelve Months' Warranty. AGENTS WANTED.



Span-Roof Conservatory.
 Substantially and Handsomely Built.
 See No. 19 in List.



Improved Poultry House. Span-Roof Poultry House.


| | | | |
|---|------|-------------------|------|
| 5 ft. x 4 ft. ... | 35/- | 5 ft. x 4 ft. ... | 20/- |
| 6 ft. x 4 ft. ... | 40/- | 6 ft. x 4 ft. ... | 24/- |
| <i>For other Sizes see List, Post Free.</i> | | | |
| 7 ft. x 5 ft. ... | 27/- | 7 ft. x 5 ft. ... | 27/- |
| 9 ft. x 6 ft. ... | 32/- | 9 ft. x 6 ft. ... | 32/- |

Estimate for every description of Horticultural Work Free on Application.





Cucumber Frames.
 One Light.
 4 ft. x 3 ft., 17/-
 6 ft. x 4 ft., 28/-
 Two Lights.
 6 ft. x 4 ft., 30/-
 8 ft. x 6 ft., 50/-

Safety Chicken Coop.
 Coop only, 3/9 each.
 6 for 21/-; 12 for 38/-.
 3 ft. Movable Wire Run, 2/3 each extra.

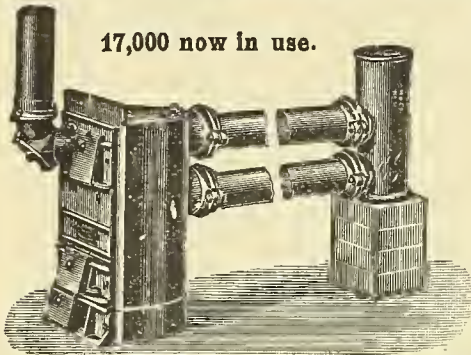


Latest Designs in Rustic Work.
 Made in Sections complete, £3 5s.
 Large Variety in Stock.
 This House £4, Complete.

Illustrated Catalogue, containing 364 Pages and 1,200 Illustrations, post free on application.

THE "LOUGHBOROUGH" PATENT GREENHOUSE BOILER.



17,000 now in use.
 The most economical, cheapest, and easiest to manage.
 NOTE.—Owing to the continued increase in cost of materials the prices named in this advertisement are advanced 10 per cent. until further notice.
 No. 1, £2 12s.; No. 2, £3 15s.; No. 3, £5.
 Also made in larger sizes.
 Complete Apparatus from £4 8s.
MESSENGER & COMPANY,
 LOUGHBOROUGH, LEICESTERSHIRE.
 Notice Change of London Address.
 LONDON OFFICE: 96a, Victoria St, Westminster, S.W.

RICHARDSON'S



HORTICULTURAL BUILDINGS,
 Conservatories, Greenhouses, Vineries, Peach Houses, Stove and Orchid Houses, &c., Heating Apparatus for Glass Houses, Dwelling Houses, & Public Buildings.
 Quality of work unsurpassed. Lowest prices possible.
W. RICHARDSON & CO.,
 DARLINGTON.

NEW CATALOGUE FREE.

SANKEY'S famous GARDEN POTS
 Bulwell Potteries, Nottingham.

Messrs. Dicksons, Limited, Chester, write: "The Flower Pots you have so largely supplied us with are light strong, and well made, and in every respect highly satisfactory."
 Messrs. Richard Smith & Co, Worcester, write: "We beg to say that we are highly satisfied with your Garden Pots. They are well made, light, yet strong, and we like them better than any other we have ever used."
 Messrs. Fisher, Son & Sibray, Ltd., Handsworth Nurseries, Sheffield, write: "We have pleasure in testifying that after having used your pots for the past twenty-five years we have found them all that could be desired."

OUTRAM'S Carnation Disease Antidote.

A sure cure, preventative, and plant stimulant.
 It may be used for Diseases affecting Roses, Violets, Tomatos, &c.

FULL DIRECTIONS FOR USE ON EACH BOTTLE.

Pint Bottles, 3/6. Quarts, 6/-. Half-Gallon, 10/6. Gallon, 20/-.

Quantities of testimonials from the leading growers.

THE ORCHID FLOWER HOLDER

(PATENTED).
 A useful invention for Orchid Growers and Floral Decorators
 Price, per dozen, 3s. 9d., post paid.

USUAL DISCOUNT TO THE TRADE.
 A Remittance respectfully requested with all Orders.
 Postal and Money Orders to be made payable at Stanley Bridge, S.W.

ALFRED OUTRAM, F.R.H.S.
 7, Moore Park Road, Fulham, LONDON, S.W.

THE MOST NUTRITIOUS.
EPPS'S
 GRATEFUL-COMFORTING.
C O C O A
 BREAKFAST AND SUPPER.

STANDEN'S MANURE.



ESTABLISHED OVER 30 YEARS.
 Exceeds all others in General Fertilising Properties and Staying Powers.

Promoting a rapid, healthy, and robust growth to plants generally.
 It is a clean and dry powder, with very little smell. Its highly-fertilising properties render its money value, in comparison with other Manures, at least double; very small quantities will produce favourable and lasting results.

ANALYSIS ON APPLICATION.
 Sold in Tins, 1s., 2s. 6d., 5s. 6d., and 8s. each; and in Kegs, well secured, to prevent loss through exposure, 28 lb., 10s. 6d.; 56 lb., 18s.; 112 lb., 32s.

To be had from all Seedsmen and Florists.
MANUFACTURERS—
CORRY & Co., Ltd., London.

JUNO CYCLES ARE THE VERY BEST.
 Easy Terms from 10s. per Month.
 LARGE DISCOUNT. CARRIAGE PAID.



Race, 22 lbs.; Roadsters, 28 lbs. JUNO Lady's, and Youths' Safeties. JUNO Tricycles. Write at once for new Illustrated Juno List, Machines, Fittings, and Sundries, sent Post Free. Interesting to all, and all should have a copy.
Metropolitan Machine Co., Ltd.
 Steam Works, Show Rooms, Riding School, Offices—
 75, 76, Bishopsgate Without, LONDON, E.C.
 JUNO Lady or Gent. Safeties £12 12s. payable 21/- monthly.
 JUNO Diamonds £10, payable 16s. 8d. monthly; £11, payable 18s. 4d. monthly.
 Our new large JUNO Cycle Riding School for Ladies and Gentlemen now open, 1,700 ft. Single lesson, 1/6; come till perfect, 10/6, or free to buyers of the Juno.

Liberal in Quantity.
Excellent in Quality.



FOR
ONE
YEAR'S
SUPPLY



WEBBS' 21s. BOX contains

| | |
|----------------------------------|------------------------|
| 6 qts. Peas, for succession. | 3 ozs. & 1 pkt. Cress. |
| 4 pints Beans, Broad. | 2 pkts. Cucumber. |
| 3 pint Beans, Dwarf. | 1 pkt. Endive, best. |
| 1 pint Beans, Runner. | 3 pkts. Herbs. |
| 1 pkt. Beet. | 1 pkt. Leek. |
| 1 pkt. Borecole. | 3 pkts. Lettuce. |
| 3 pkts. Broccoli, succession. | 1 pkt. Melon. |
| 1 pkt. Brussels Sprouts, best. | 4 ozs. Mustard. |
| 3 pkts. Cabbage, for succession. | 4 ozs. Onion, best. |
| 2 ozs. Carrot, for succession. | 1 pkt. Parsley. |
| 1 pkt. Cauliflower. | 1 oz. Parsnip. |
| 2 pkts. Celery, best. | 3 ozs. Radish. |
| 1 pkt. Corn Salad. | 4 ozs. Spinach. |
| 1 pkt. Couve Tranchuda. | 1 pkt. Salsafy. |
| | 1 pkt. Savoy, best. |
| | 1 pkt. Scorzonera. |
| | 1 pkt. Tomato, choice. |
| | 3 ozs. Turnips, best. |
| | 1 pkt. Veg. Marrow. |

Other Boxes at 5/-, 7/6, 12/6, 15/-, 31/6, 42/-, 63/-, 105/- each.

ALL CARRIAGE FREE.

See Webb's Spring Catalogue, post free, 1s.

WEBBS, Wordsley, Stourbridge.

FIDLERS' SEEDS

GAINED IN 1896

IN OPEN COMPETITION, NEARLY

1,000 FIRST PRIZES.

If you want to

Win Prizes, be first in the market, and have the Best Selection of Vegetables and Flowers.

BUY FIDLERS' SEEDS

Only One Quality
THE BEST.

And Prices Lower than other Houses in the Trade.

Fidlers' give value in Seeds, not in Paper.

FULL DESCRIPTIVE LIST

Free to all upon application to

FIDLER & SONS, SEED GROWERS, READING.

1898. **FORBES' CATALOGUE** 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and price of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other Valuable Information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,

ESTABLISHED 1870.

Nurseryman, Hawick, Scotland.

BARR'S SEEDS
OF FINEST SELECTED STRAINS
AND TESTED GROWTH

BARR'S Special List of PEAS.
the Best

LIGHTNING, the best first early round seeded Pea; pods well filled with good-sized peas of fine flavour; free cropper. Per quart, 1s. 9d.

PRIDE OF THE MARKET, a fine second early, round-seeded Pea; a great cropper, covered with large well-filled pods of deep green peas. Per quart, 2s.

TELEGRAPH, a fine second early round-seeded Pea; immense cropper, pods long, broad, and abundant; peas large and fine-flavoured. Per quart, 1s. 6d.

GRADUS, the best early MARROWFAT; pods large and handsome; peas of rich flavour. Per quart, 3s. 6d.

TELEPHONE, a grand exhibition MARROWFAT, bearing in great abundance long, handsome, broad pods well-filled with large peas of delicate flavour. Per quart, 1s. 6d.

DUKE OF ALBANY, a fine maincrop MARROWFAT; large, handsome, and of rich, delicate flavour; a grand exhibition Pea, Per quart, 2s. 6d.

NE PLUS ULTRA, selected stock, a grand late Pea, unsurpassed for flavour, pods large and abundantly produced, an extra fine stock. Per quart, 1s. 9d.

BARR'S SEED GUIDE contains a Select List of the best Vegetable Seeds and most beautiful Flower Seeds. It is full of practical Hints, and will be found of great value to Gardeners, Amateurs and Exhibitors. Sent free on application.

BARR and SONS,
12 & 13 KING ST., COVENT GARDEN, LONDON.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, FEBRUARY 12th, 1898.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, February 14th.—Smoking Concert at Anderton's Hotel, Fleet Street, E.C., on behalf of the N.C.S. reserve fund.

TUESDAY, February 15th.—Sale of American shrubs and hardy plants by Messrs. Protheroe and Morris.

WEDNESDAY, February 16th.—Sale of Lilies, Palms, and Roses, etc., by Messrs. Protheroe and Morris.

THURSDAY, February 17th.—Sale of Roses, Fruit Trees and hardy plants by Messrs. Protheroe and Morris.

FRIDAY, February 18th.—Sale of Imported and Established Orchids by Messrs. Protheroe and Morris.

Annual general meeting of subscribers to the Royal Gardeners' Orphan Fund at Anderton's Hotel at 2 p.m.

CHOICE HARDY AND OTHER FLOWERS AT POOLEWE.—Enthusiastic plant lovers about London and the south coast of England, often speak in glowing terms of what they are able to accomplish with choice flowers whose hardiness is largely determined by the favourable character of the climate of the locality in which they are planted.

We are also apt to forget that the influence of the Gulf stream and deep water generally influences climate in a remarkable degree all along the west coast of Britain to the extreme north of Scotland, as well as some distance down the eastern coasts, of Caithness, Sutherland, Ross and some other counties. Mr. O. H. Mackenzie of Inverewe, Poolewe, is an enthusiastic plant lover, who finds the climate at the mouth of the River Ewe and at the

south end of Loch Ewe on the west coast of Ross-shire particularly favourable to the gratification of his taste in the cultivation of choice and interesting flowers. He supplied an account of his doings to the Scotsman last month, and an Inverness correspondent calls our attention to this communication in the Northern Chronicle. Mr. Mackenzie's most striking success in 1896 was the flowering of Liliun giganteum and Michauxia campanuloides. The former was a good 9 ft. high and carried seventeen blooms, which beats the record at Kew so far as he has been able to ascertain by inquiry. We figured two plants flowered by a correspondent near Aberdeen in our issue for the 6th November, 1897, p. 153. These plants were 9 ft. 9 in. and 9 ft. respectively, and carried 23 and 21 blooms. What is more the plants were raised from seeds and developed to the flowering stage.

Mr. Mackenzie has bloomed two species of Watsonia including W. marginata. He also travels and has been collecting some of the wild plants of Corsica, including a lemon-coloured Orchis which has flowered regularly with him ever since. Pan-cratiun illyricum from the same island took some years to recover, but flowered in 1896 and even better last year. In its native home it grows on the seashore almost within reach of the waves as well as in the clefts of limestone rocks, thousands of feet above the level of the Mediterranean. He would like to know whether this species has ever before been bloomed in the north. What gave him peculiar satisfaction was an effective combination consisting of a large mass of a white variety of Iris Kaempferi beneath which was a mixed mass of Tigridia aurea and T. lilacina grandiflora, with the brilliant blue Commelina coelestis—a striking mixture indeed. Another combination consisted of Michauxia, surrounded by varieties of Platycodon grandiflorum (Japanese balloon plants) and Swainsonia galegifolia alba in mixture. A collection of Mariposa Lilies (Calochorti) obtained from the south gave him unbounded pleasure and satisfaction last year, and were the envy and admiration of all who saw them. He had a narrow border on a sunny terrace, filled with the best soil he could procure, and in this the bulbs were planted in November 1896. They began to bloom on the 25th June last year, and he does not think they could have done better in their native Californian forests. There were seven varieties and the owner thinks that nothing more fascinating and artistic for vases could be grown in a British garden. They last a long time in water. Butterfly Tulips is an epithet he applies to them, and has not only increased his collection of them, but added a whole collection of Brodiaeas to which he lost his heart at the Temple Show last year. The rarest and most recent introductions of Erythronium have also been added to his collection, as well as Montbretias, Crinums, bearded Irises, Trilliums, and similarly choice subjects. Amongst Tulips, Tulipa Kaufmanni and T. Greigi are favourites. Ixias grow like weeds, and a bed of them last year came next in importance to the Mariposa Lilies. They were so brilliant on sunny days as to dazzle the eyes, and were almost as good as ever he has seen them in Italian gardens. The only fault applicable to Ixias at this place is that they refuse to go to rest in the autumn, but commence throwing up their leaves in October, to get punished by black frosts in spring. Left to their own resources they, nevertheless, do well. Further to the south Liliun auratum does splendidly at Torridon, as well as Alstroemia psittacina, with which he was very much taken, but they do not give satisfaction with him. Liliun Martagon album, L. testaceum and L. washing-

tonianum do well, however, at Poolewe. With slight protection in winter the evergreen Chilian shrub, *Mitraria coccinea* produced a wealth of its curved, orange-scarlet flowers. He has not yet got the blue sheen of *Gentiana cruciata* out of his eyes. We should advise him to try *G. verna* and *G. acaulis*, the former being particularly brilliant. The cool, moist atmosphere of the west should suit them admirably. The Penzance Sweet Briers have found their way here, the variety *Lady Penzance* having met with great favour. *Orchis foliosa* from Madeira was particularly vigorous last year, one large clump consisting of twenty-five strong spikes. The perennial *Silver Queen Poppy* and the silvery-leaved *Salvia argentea* are much admired favourites. For some years *Sparaxis pulcherrima* had been anything but a success till a specimen supposed to have come direct from South Africa was sent him, and this flowered as freely as the native heather on the hills, quite indifferent to the gales of the West Coast. *Barnardia*, more correctly described as *Scilla chinensis* and figured as such in the *Botanical Magazine*, t. 3,788 rewarded him by flowering freely after a number of years and he was able to supply the Botanic Gardens, Edinburgh, with bulbs, as well as plants of *Fabiana imbricata*, an evergreen, heath-like shrub from Chili, but which he obtained in the form of cuttings by parcel post from Ajaccio, Corsica. It flowered in his garden without protection during last winter.

The same collection speaks in glowing terms of the improvements that have been worked amongst modern as compared with the old named varieties of Pentstemons. He was highly pleased with the results from a packet of seed, but was lost in wonderment over the large flowers that turned up in another batch of seedlings also raised from seed. Though he gives no name of the place nor the horticulturist from whom he obtained the seed, we can, through the mind's eye, perceive the Surrey garden in which the Pentstemons and Lobelias, he mentions, are growing. He describes the individual blooms as positively as big as small *Gloxinias*. We were amongst the first to find any merit in single *Cactus Dahlias*; but amongst others they now find a warm advocate in this enthusiastic plant grower. He admits that the taste is an acquired one after being accustomed to the ordinary single sorts having blooms about as round as the compass can make them. Since he first saw them they have been greatly improved, and his people have taken a great fancy for them. From an artistic point of view he considers them by far the more beautiful of the two types, and they look well in vases without any special arrangement. From the 18th October to the 11th November last, there was neither rain, fog, frost nor wind at Poolewe, and during his thirty years' experience he has never had such a wealth of perfect Tea Roses, even in the best June weather, as during that period. Some clumps of *Oxalis bowiana* commenced flowering in June, and continued without intermission till November, when they were masses of crimson. Though there is a slight difference in colour between the flowers of *Schizostylis coccinea*, *Rhododendron nobleanum* and *Gloire de Margot* in Roses, there seemed very little either when under the influence of lamp light or bright sunshine. These scarlet flowers adorned his dining-room table on the 3rd December. Again on the 5th ult. he was charmed with the lilac and gold flowers of the Algerian Iris (*I. stylosa*), which he considers one of the most charming of winter flowers.

Camphor comes mostly from Japan and Formosa.

A Cinematograph registers slow as well as rapid motion, and it is reported that a camera has been invented to register the growth of plants.

Birmingham Amateur Gardeners' Association.—The first meeting of this society's 1898 session took place on the 2nd inst., when Mr. W. Walker gave an address on Tomatos. Details of cultivation were dealt with, and a list of suitable varieties was given.

A Record for Gardeners.—How is this for a record? A gardener from East Lothian told me the other day that he had been thirty-eight years in his present place; his predecessor was forty-five years; and the man before him fifty-five years. The present man looks fit to beat his predecessors.—R. L.

Spring Flowers in January.—A correspondent from the neighbourhood of Leeds writes to the effect that seventy-six species and varieties of plants were in flower in a garden in Leeds at the end of January, and comments upon this unusual feature. The list includes, besides a number of Hellebores, five varieties of *Anemone Hepatica*, ten Snowdrops, *Leucojum vernalis*, *Cyclamen Coum*, six Primroses of various colours, *Erica carnea*, *Eranthis hyemalis*, *Saxifraga Boydii*, *Tussilago fragrans*, *Adonis amurensis*, five *Crocus* species, *Cardamine trifolia*, *Hacquetia (Dondia) Epipactis*, a Wallflower, and *Rhododendron praecox*.

Practical Botany at Glasnevin.—The young gardeners at the Royal Botanic Gardens, Glasnevin, are to have the advantage of scientific training such as exists at the Kew and Edinburgh establishments. Dr. T. Johnson, Professor of Botany in the Royal College of Science, will lecture on botany. The curator of the gardens, Mr. F. W. Moore, will lecture on horticulture and floriculture, explaining the scientific classification of the plants in the beds and houses in the gardens. We understand that the Department of Science and Art has made the arrangement, but the instruction will be modelled on the same lines as at the two botanical establishments above-mentioned. We congratulate the Sister Isle on this evidence of progress with the times.

Cheltenham Bachelors' Fancy Dress Ball.—Mr. W. F. James (of Messrs. Shirer & Haddon) and Mr. Cypher, both of Cheltenham, gave a splendid manifestation of their skill as decorators at this annual function, which was the excitement at Cheltenham on the 2nd inst. One special feature was a trellised archway which led the way from the refreshment-room. This archway was prettily wreathed with trails of Ivy and other climbers, and ornamented with flowers. Against the drapery which concealed the balconies were arranged groups of choice plants which produced an excellent effect. In the gallery itself was a pretty representation of the front of an eastern residence which was elegantly decorated with curtains and hanging baskets of flowers. It was in the chief supper-room, however, that Mr. Cypher's efforts were most evident. The centre diamond table was adorned by two three-span arches, upon which Orchids, Lilies, and Camellias, displayed their charms in conjunction with suitable greenery.

Kew and Chiswick Gardeners Fraternizing.—Dr. D. H. Scott, the honorary keeper, Jodrell Laboratory, Kew, is to deliver a lecture on "The Construction of Plants" at a meeting of the Kew Gardeners' Mutual Improvement Society on the 14th inst., at 8 p.m., to which the members of the Chiswick Gardeners' Mutual Improvement Association have been invited, with the consent of the director, Mr. W. T. Thiselton-Dyer. For many years past we have been pleased to meet and associate with many of the young gardeners from Kew at the meetings of the Chiswick society. We have also attended some of the meetings at Kew as an old member, but this is the first occasion on which the Chiswick society has had a general invitation from the authorities at Kew, and the innovation meets with our cordial sympathy. This form of fraternizing has much to recommend it, and is an example that might well be adopted by other societies throughout the country. We hope the Chiswick gardeners will attend in strong force to mark their appreciation of this invitation. The entrance is by the Melon Ground gate at the north end of the Richmond Road, Kew, and the gate will be open a few minutes before 8 p.m.

Mr. James Ogston, for the past four years gardener to John White, Esq., Dalhobby, Cults, Aberdeenshire, has been appointed superintendent of the new Grove Cemetery, Woodside, Aberdeen. Mr. Ogston enters his new duties on the first of March.—D. A.

National Chrysanthemum Society.—We understand that James Herbert Veitch, Esq., F.L.S., of the Royal Exotic Nursery, King's Road, Chelsea, is to take the chair on the occasion of the annual "smoker" of the National Chrysanthemum Society at Anderton's Hotel, Fleet Street, London, on the 14th inst. The meeting was a success last year, but it should even be more strongly supported on this occasion by the members and others.

The Scent of Roses.—In giving awards to meritorious Roses, the National Rose Society has decided that in the future judges shall consider more carefully the scent than hitherto. Had this rule always been observed some existing varieties would not have ranked so highly as they have done. Her Majesty, one of the earliest of the late Mr. Bennett's pedigree Roses is scentless. So also are *Baroness Merveille des Blanchés*, and *Merveille de Lyons*. The hybrid Sweetbriers raised by Lord Penzance should satisfy those people who wish for fragrance in both leaf and bloom.

Symmetry in a Garden.—A Scotch gardener—one of the old school—was so fond of symmetry in the garden that every bed, border, bush, and tree had its counterpart in some other corresponding part of the garden. One summer-house was not sufficient; it had to be matched in another portion of the grounds by another precisely similar in all its details. The laird was passing through the garden one day accompanied by the gardener, and espied a boy imprisoned in one of the summer-houses. "Why is the boy locked in there?" he enquired. "I caught him stealin' yer lairdship's fruit," replied the gardener. This was sufficient answer, but presently he came upon the other house and exclaimed, "Losh me! gardener, has your son been stealing fruit, too?" "Na, na, your lairdship; I only put him in for the sake of seemmetry."

Scottish Horticultural Association.—The opening meeting of the session of the Scottish Horticultural Association was held on the 1st inst. at 5, St. Andrew Square, Edinburgh—Mr. M. Todd presiding over a large attendance. The lecturer of the evening was Mr. H. J. Jones, of Lewisham, who spoke on "Chrysanthemums and their Culture." In introducing the lecturer the Chairman said that to think of Chrysanthemums was to think of Mr. Jones, who, perhaps more than any one living, had done much to popularise and improve the cultivation of that flower. In the course of his lecture Mr. Jones said that no greater mistake was made in the cultivation of the Chrysanthemum than in making the first shift before the plant pressed its claims for that treatment upon the grower. After mentioning several methods to be adopted in testing whether the plant was ready for shifting, he cautioned growers to see that the plant had proper atmospheric conditions, and advised them against overcrowding. He strongly recommended that the ash of the old Chrysanthemum stems be used as part of the food of the plant; emphasised the importance of the soil being in the right condition; and recommended the growth of two weak plants in one pot. It sometimes happened, he said, that too much water was put into one pot, and if one of the plants was in a healthy condition, it absorbed the extra moisture, and thus helped its weaker brother. Shading he condemned, and suggested that cuttings should be put in boxes or frames in preference to small pots. The lecturer next described the course to be followed in the various pottings, gave details of the compost to be used, and said that in shifting to the flowering pot it was safe to err on the side of having small rather than large pots, it being necessary that the pots should be filled with roots. Mr. Jones also emphasised the necessity of potting firmly, and said that, though the flowers should be watered thoroughly, too much water was often more injurious than too little. It was a mistake to assume that because the plant had got rain, and the earth appeared moist on the top, that it had had sufficient water, and he therefore suggested sounding at the bottom rather than at the top of the pot. Mr. Jones was accorded a hearty vote of thanks for his address. In the course of the evening a number of new members were admitted.

Tobacco Culture occupies about 1,500,000 acres of the earth's surface.

Potatoes are prepared for table in 100 different ways; but how many of them are bad is not stated.

A Fact.—Overheard at a recent horticultural exhibition at Exeter.—Prominent tradesman, to a leading horticulturist of the district: "Oh, are you one of the judges to-day?" Horticulturist: "Oh no; I am an inspector." P. T.: "Ah! I see. I am a surveyor."—*Snaggs.*

Coming of Age Celebration.—The Scottish Horticultural Association is to celebrate its majority or "coming of age" on the 8th March next, by a supper and social gathering of the members and their friends. The association was founded in 1877, as a mutual improvement organisation amongst the gardeners of Edinburgh and the surrounding district. Its beginnings were very small, but like the thrifty acorn, it has grown to great proportions, with a healthy and vigorous constitution, which will carry the association to a hale old age. We wish it long health and prosperity, and sympathise with every wholesome endeavour it makes for the benefit of gardeners and gardening.

Sevenoaks Horticultural Society.—Mr. F. S. Paine presided at the annual meeting of this society, which took place recently at the Royal Crown Hotel, Sevenoaks. The statement of accounts for the year was presented, and showed a balance in hand of £4 19s. 11d., the income for the year having been £305 1s. 4d., and the expenses £290 1s. 5d. It was decided that the annual flower show should take place on the 10th August next, subject to the approval of Lord Sackville. His lordship was again appointed president, and the vice-president and committeemen, with the exception of one member of the latter body, who had left the neighbourhood, were also re-elected. Mr. C. Essenhigh Corke was asked to continue the office of auditor, and Mr. Stanford J. Young was chosen as his colleague *vice* Mr. S. Young, deceased.

Study of Mosses.—The *Fern Bulletin* has extended its sphere of influence so as to include mosses. This new departure has been made with the object of enabling amateurs who may be interested in mosses to get some knowledge of the bryophytes without excessive labour or expense. The books recommended as part of the young collector's outfit for this particular study must constitute a serious item for the pockets of any but the well-to-do amateur. No hobby can, however, be indulged in without some initial outlay, whether the would-be student is a gardener, bricklayer or millionaire. The quarterly just mentioned is to assist by means of illustrations in each number, accompanied by descriptive text; by the naming of specimens; by distributing dried and mounted ones; and in other ways. In the winter number the Common Hair Moss (*Polytrichum commune*) is well illustrated and in detail. Like many other British plants, this moss occurs in the United States, being, indeed, so common, that scarcely any meadow or roadside is free from it. In many parts of New England it is a great nuisance by killing the grass in old meadows.

The Liverpool Horticultural Association.—The annual meeting of this society was held in the Free Library, Liverpool, on the 29th ult., Mr. Thomas Foster presiding. The accounts show an income of £130 16s. 9d. from the summer show; £175 11s. 2d. autumn show; subscriptions, £403 7s. 4.; Advertisements and bank interest, £11 11s.; with a balance brought forward of £101 9s. 5d., making a total of £827 15s. 8d. The expenditure includes for summer show, £380 1s. 5d.; autumn, £283 19s. 9d.; general, £84 2s. 8d.; total expenditure, £748 3s. 10d., leaving a balance in favour of the society of £79 11s. 10d., or a loss on the year's working of £21 17s. 7d. The statement of accounts and the report as read by the secretary were adopted. The sub-treasurer, Mr. G. Blackmore, the auditors, Messrs. Peers and Waterman, and Mr. W. Dickson, the secretary, were re-elected. Arrangements were made to hold two shows, spring and autumn, during the ensuing year. The subscriptions of £3 3s. and £2 2s. to the Gardeners' Royal Benevolent Institution and to the Royal Gardeners' Orphan Fund were unanimously voted. Some five changes were made in the committee. A vote of thanks to the chairman concluded the business.

Lignum Vitae and Pomegranate woods are the heaviest, while cork is the lightest. Some may, however, object to cork being considered wood.

Iron Tonics.—A French chemist proposes to feed plants judiciously with iron fertilisers in order to obtain easily assimilable iron tonics from vegetables.

Popping in Acorns.—As Collingwood never saw a vacant place in his estate but he took an acorn out of his pocket and popped it in; so deal with your compliments through life. An acorn costs nothing, but it may sprout into a prodigious bit of timber.—*Thackeray.*

Golden Gate Park, San Francisco.—A few years ago the site now occupied by this grand park was a wild waste of sand running in places to a depth of 200 ft., but a liberal expenditure of money and talent has made it what it is to-day—one of the special features of the Golden City of the West. It has an extreme length of four miles and slopes right down to the Pacific Ocean. All Australian and Japanese plants do well in the kindly climate. No fewer than thirty forms of Acacias are represented by healthy and vigorous specimens, also Conifers of various kinds, notably *Sequoia gigantea*, *Cedrus atlantica*, and *C. Deodara*. The main roads in the park are 75 ft. in width, and no trouble or expense is spared in keeping them in condition. The glass department is well found, and accommodates some excellent collections of Orchids and foliage plants. The *Victoria regia* is also well done, and blooms very freely.

Moles and their Food.—The generally prevalent opinion about the gentleman in black velvet is that he lives on an animal diet chiefly. Every now and again this gets controverted, and recently so by a writer in the *Rural World*. This penman says that moles live on seed corn, Carrots, Potatoes, Turnips, Asparagus, and similar dainties, but chiefly those. From such a statement it would seem as if the mole had been specially created for the annoyance of man. Surely it ought not to be difficult to settle by properly authenticated and reliable examination of the contents of the stomach by scientific men, or in other words well-qualified naturalists. Moles no doubt existed in Britain long before any of the above named plants existed in sufficient quantity, and in various parts of the country, to supply the moles with food. Whether they are animal or vegetable feeders, or both, should be placed beyond the bounds of uncertainty. According to our experience they are most abundant in meadows where the soil is relatively soft, moist, rich, and capable of supporting plenty of animal life, but from which all of the above crops may have been absent for many years.

Woolton Gardeners' Mutual Improvement Society.—The usual meeting was held on Thursday, the 2nd inst., at the Mechanics' Institute, Mr. W. W. Gamble in the chair. The subject for consideration was "Economy in Chrysanthemums," by Mr. J. Devaney, Botanic Gardens, Liverpool. The chief points reviewed were the season, cleanliness, quantity of bloom and the system of grouping. The speaker was especially strong on the best means of staging, and continually varying the same. One week he would arrange the groups or banks with Palms and other foliage plants; in the next he would show the beauties of the flowers without the aid of outside helps; at other times he would group in distinct colours or kinds. These changes of systems gave a stronger interest to the general public. The speaker in answer to the position of the "Mum" as a popular flower in Liverpool stated that last season the number of visitors far exceeded those of previous years, and, although the doors were opened an hour earlier than usual, the crush was so great that many were unable to gain admission. There had been on some occasions 4,000 visitors, 600 being unable to obtain admission. Mr. J. Hogan contributed some 9 or 10 bunches of cut Chrysanthemums in splendid perfection, for which a Certificate of Merit was awarded. Mr. R. Todd also received a Certificate of Merit for forty-three varieties of cut Orchids shown at the previous meeting. The secretary was instructed to write and thank Mr. R. J. Harvey Gibson, M.A., for the loan of half-a-dozen microscopes. Votes of thanks to the lecturer and chairman concluded the business.

ORCHID NOTES & GLEANINGS.

Laelia anceps schroderiana Rosslyn var. *Nov. var.*—Amongst the numerous white varieties of *Laelia anceps*, the form known as *L. a. schroderiana* must take a prominent position on account of the great breadth of the lamina of the lip, this, we consider, being its primary distinguishing feature. Amongst hundreds of plants that may be seen during the flowering period of the species, it will be noted that the lip is relatively narrow even while the petals are broad. The whole flower of the Rosslyn var. is of splendid dimensions and the plant of vigorous growth. The sepals and long, elliptic petals are pure white. The same may be said of the lip with the exception of the disc and the radiating lines on the interior of the side lobes. The latter are of a rich purple deepening to carmine-crimson at the opening of the tube. The raised golden disc is striped with dark purple lines on its lower half only. The lamina of the lip measures $1\frac{1}{2}$ in. in length, and $1\frac{1}{8}$ in. in breadth. The flower measures $4\frac{1}{2}$ in. across the petals without flattening them; and $5\frac{1}{2}$ in. vertically. The side lobes spread wide open. This grand variety was secured for twelve guineas at the Sale Rooms of Messrs. Protheroe & Morris, on the 4th inst., by H. T. Pitt, Esq., Rosslyn, Stamford Hill, who is to be congratulated on being the possessor of the best form of *L. a. schroderiana* in cultivation

QUESTIONABLE EXHIBITS.

To most people it will come as a surprise that the National Chrysanthemum Society has fallen so low as to accept prizes with such conditions as those mentioned in last week's issue by "A Member of the N.C.S." In small local shows such a thing might be tolerated, but should not be encouraged; but in a society like the N.C.S. it is surely unnecessary. I believe the offering of these prizes leads to a great deal of dishonesty, and should not be encouraged.

As secretary of a Chrysanthemum show I have frequently had to decline similar offers from firms, who evidently think this a cheap way of advertising.

I would call upon the N.C.S. and all horticultural societies to purge their prize lists of such "liberal" donors, and feel certain they will not lose by it—in reputation at least.—*Secretary.*

LOW-PRICED SEEDS.

My attention has just been called to a communication in your paper of January 29th, in which your correspondent attacks, without any exequation, the sale of what he terms "low-priced seeds." Under some circumstances, no doubt, his opinion may, to some extent, be endorsed, but it does not follow that his version is absolutely correct. As senior member of my own firm, I venture to submit to you that we supply seeds of unquestionable value—no better is it possible to procure—yet our prices are fully 50 per cent below some houses for the same class of goods. How can we do this? Simply because our catalogue prices are the net prices to us. We sell our seeds entirely upon their merits and at a fair remunerative profit, which, as I said before, is net to ourselves. I should not have troubled you with this explanation but that your correspondent seemed to infer that it was impossible to offer a good article in this particular business without charging an exorbitant price, but when the expenditure comes to be analysed a little it will fully explain itself.

That we are doing the thing that is right, and giving the public satisfaction is evident from the numerous testimonials we are daily receiving and the very rapid extension of our business.—*C. Fidler.*

I AM obliged to your correspondent at p. 364 for his reply to my previous note on this subject. I may say here that, after thirty-five years' careful observation and comparison over a wide area as to prices, quality, &c., I maintain all I said, and this without prejudice to any one or class. May I ask your correspondent to note that there is a wide difference between *low and high prices*, as he puts it, just as there is a middle between two ends; but it can answer no good purpose to discuss this question further, as I am quite prepared to leave the matter with the common sense of the readers of THE GARDENING WORLD. Now I have had my say in the matter.—*J. C., Chard.*

HINTS FOR AMATEURS.

THE SEED ORDER.

Potatos.—Nobody will deny the important position that the Potato holds amongst the list of vegetables. In the garden of the cottager it occupies an almost pre-eminent position, and this by reason of its economic value as a cheap and wholesome food, or at least as an important addition to the foods, available for the cottager. In the smaller gardens, however, the Potato is looked upon as a rather coarse vegetable, and the space devoted to it is accordingly but comparatively small. People are inclined to think that it is cheaper to buy Potatos from the greengrocer than to grow them, and they take action accordingly. Of course, there is something in the argument, but not so much as these people imagine. Potatos of a kind can be easily purchased cheaply enough it is true, but the quality is usually very inferior, and although there is nothing nicer than a really good Potato, there is nothing nastier than a bad one. If only for the sake of procuring an article of good quality, some Potatos should be grown, but a selection should be made of good varieties, and the stock should be occasionally changed. Most cottagers make the mistake of keeping the same stock year after year without a change until it gets, to use a technical phrase, thoroughly "soil-sick," and the result is to be seen in decreasing crops, and deterioration in the quality of the tubers. It is absolute folly, then, to attempt to grow on old varieties year after year without a change. On the other hand, it is remarkable what excellent results follow a change of "seed," and therefore an effort should be made to effect a change every second or third year.

With regard to varieties, it is evident that not many are required, for two or three good ones will keep an ordinary establishment going, although where the time and money can be spared, a little experimenting is always of value. For an early crop there is nothing to beat Sutton's A 1. The tubers are round in shape, of medium size, and the flesh is firm and good—not mashy, as the old style of early Potato used to be. The haulm is dwarf and sturdy, and the variety is thus as suitable for cultivation in frames as in the open ground. Sutton's Ringleader is in all respects first-class as an early kidney-shaped variety, and is much to be preferred to the Ashleaf sorts. The various stocks of Ashleaf have been and still are largely grown in gardens. The best of them, as far as our experience goes, is Myatt's Ashleaf, when it can be got true to name; still we would give preference to both A 1 and Ringleader.

Sutton's Windsor Castle is a splendid second-early variety, although, as the tubers keep well, it may be regarded as a suitable main cropper. The tubers are of an elongated pebble shape, with very shallow eyes, and of capital cooking quality. They are, moreover, produced in great abundance in almost any soil.

The Sutton Flourball, which was first sent out by the Reading firm in 1895, and may therefore be regarded as a comparatively new variety, has won golden opinions from all parts of the country as a fine Potato of good cooking quality, and a grand cropper. It resists the disease wonderfully well, and is especially worthy of notice on that account. Being a strong grower it is suitable for field culture.

Satisfaction is remarkable for the uniform size of its tubers which are of a thick pebble shape. The skin is rough, and the eyes shallow. This is a capital exhibition Potato, and a free and certain cropper.

The Bruce is a heavy cropping late variety of great merit, that is grown very largely in the north of England and Scotland. It is, however, most suitable for field culture, the richer soil of the more highly cultivated garden plot not being so much to its liking. It has been in cultivation since 1885, so that it is a fairly old variety.

White Elephant is a favourite in some gardens, more particularly in the south of England, but chiefly on account of its heavy cropping qualities. The tubers often grow to a tremendous size, but although they cook fairly well, the quality is rather coarse. Where mere size is more desired than quality, White Elephant generally gives satisfaction.

Beet.—Year by year Beetroot seems to become a

more popular vegetable if we may judge from the large quantities of cooked roots exposed for sale on the costers' barrows in our towns and cities. There seems very little, or at best only a half-hearted attempt made, however, to induce the cottager to take up its cultivation. It is a tasty vegetable, and its food value must at least be greater than that of the Carrot, which finds a place in most cottage gardens.

In no vegetable is good, reliable seed of more vital importance than it is with Beetroot. Where the seedsman has been careless in growing his stock, the seed produces a weedy lot of plants that yield roots big enough, it is true, but coarse and stringy, no matter how much or how well they are cooked. Big roots are not required, but medium-sized ones, free, as far as possible from side roots. We have found Pragnell's Exhibition one of the very best for general purposes. The roots are of medium size, and almost perfect shape, while the colour and flavour is all that could be desired. Those who like a very dark variety will find what they want in Dell's Crimson, which is everything that could be desired.

Carrots.—For a main crop there is nothing to beat a good strain of the Intermediate type. James' Intermediate is a well known variety that has been much cultivated, and which can generally be relied on to turn out a lot of clean shapely roots. Sutton's New Red Intermediate illustrates a still further advance, for the roots are brighter in colour, cleaner, and more weighty. Long Red Surrey is also much grown in gardens, but the roots grow to an enormous length, and are not so suitable for shallow soils. Besides a late or main crop it is necessary to have a bed from which early Carrots can be pulled. For this early work, one of the stump-rooted varieties should be chosen. Early Nantes is one of the very best of these. The roots have but very small core, and if the seed be sown on a warm south border, they will be ready for pulling at an early date. When full-grown, the roots are of medium size, and the flavour is good from the earliest stages, i.e., as soon as they are big enough to pull.

Parsnips.—In most cottage gardens, Parsnips are one of the chosen vegetables, and some very creditable produce may be seen turned out of these gardens. The old Hollow Crown is the variety chiefly to be met with, and it generally gives satisfaction. Veitch's Improved Hollow Crown is, however, a distinct improvement on the older variety. Student may be sown as a second variety, if one is required. It produces medium-sized roots of first-class quality, and capital shape.

Onions.—These are almost as indispensable as Potatos, and a most profitable vegetable to boot. The varieties required will depend upon the purpose for which they are to be employed. If for exhibition Ailsa Craig, Cranston's Excelsior, and Rousham Park Hero are the stamp of stuff that is required. They all grow to large size, and great weight, and are thus suitable for the exhibition table. For general purposes, however, there is a prejudice against these big Onions, medium-sized hulbs being in greater favour. Of these, Veitch's Main Crop is almost an ideal Onion. The hulbs exhibit a striking uniformity in size, and the flavour is good. They also keep well to a fairly advanced season. For a late variety, there is nothing to surpass James' Keeping, an old and approved variety which can scarcely be too highly praised for its long keeping qualities. It has, moreover, great weight and depth of bulb, well developed specimens being so filled up at both top and bottom as to be nearly round.

For autumn sowing, some of the Tripoli varieties, such as Early White Naples, and Giant Rocca are the best. It is always advisable to have a bed, if only a small one, of autumn-sown Onions, for they fill up a gap between the time when the last of the old crop has been used, and the date at which it is possible to pull from the spring-sown bed of the current year. Besides this, they afford a supply of green Onions for salading all through the autumn and winter, and this in itself is worth consideration.

Celery.—As a winter vegetable, the value of Celery is well known to every gardener, and thus it is a common sight to find large plots of land set aside for its accommodation. Two or three varieties should be grown. Early Rose is valuable on account of its earliness, but the heads remain for some time in condition. The main-crop red variety, Major Clarke's Fine Solid Red will form a good succession to it. It is of exceedingly sweet flavour, and of hardy

and vigorous constitution. Sandringham Dwarf White is one of the best of the white sorts. It is dwarf and sturdy, and although the heads are not so large as those of the two red varieties mentioned, they will be found of a very useful size.

The Turnip-rooted Celery, or Celeriac, is a great favourite upon the Continent for flavouring soups, stews, &c., but it is not so much in demand on this side of the Channel, chiefly because no serious attempt has been made to push it. As an adjunct to, but not a substitute for, the ordinary Celery, it is well worth growing, and it will be advisable, therefore, to include a packet of seed in the order.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Protecting Hyacinths.—Owing to the very mild winter some Hyacinths that I planted in a bed out of doors are through the ground already, and have made quite long growths. How can I best protect them in case of cold weather? I see that a neighbour of mine has been covering his with a layer of cocoa-nut fibre. Will this answer the purpose.—*Eva.*

The cocoanut fibre will answer the purpose of protection well enough as long as it is dry, but should it become wet, which is not at all unlikely, it would be of very little good. A better plan will be to cover the plants with branches of evergreens, should it turn cold, or insert several wooden hoops in the bed by bending down the two ends of straight sticks and pushing them in the soil, afterwards covering these hoops, should occasion arise, with mats or other protective material.

Ixias.—*Oswald S.*: It is certainly rather late for planting Ixias, but the past January has been so uncommonly mild that they were probably better out of the ground than in it. Had they been planted in autumn they would have started to grow, and a frost or two now would have sadly crippled them. In planting, choose a warm, sunny corner of the border, as the plants do not do well in a cold, sunless position. The soil should be rather sandy, and if it is not so naturally a little sand or road scrapings should be mixed with the soil. Ixias are well worth taking a little trouble over.

Araucaria excelsa.—*P.*: This pretty plant is usually propagated from cuttings obtained in the following way; Plants that have grown too tall are headed back, their tops being put in as cuttings. After a while the headed back plants commence to push young shoots or leaders, and these, as fast as they become large enough are also taken off and put in for cuttings. Use sandy soil, and give a warm greenhouse temperature, and roots will soon be made. Plants may certainly be raised from seed, but the seedlings are leggy, ragged-looking things that never make well-clothed, neat pot plants like the cuttings.

Iris stylosa.—*C. Johns*: This is the pretty Iris that you refer to. It is generally in flower by the end of January or the beginning of February, but this season it commenced to bloom early in January. It should be given a sheltered position if possible so that its flowers may not have to put up with the full effect of cold biting winds. There is a white form, I. s. alba, and a deep blue one, I. s. speciosa, that are both equally as beautiful as the type, and well worth growing.

Forcing French Beans.—*T., Horsham*: You may either sow the Beans straight away in the pots in which they are to fruit or sow in small pots (thumbs) and repot the young plants. Both methods have their advantages. If you adopt the former it saves a certain amount of trouble, but not so much as appears at first sight, and the large seed pots should only be filled about half full of soil, a top dressing being subsequently given when the plants are a few inches in height. For soil, use three parts of good loam to one of leaf soil, with a little sand added just to keep the soil from getting pasty. You will need a temperature of not less than 60° Fahr. to insure speedy germination, and a good rise in temperature may be given during the day. Keep the syringe briskly at work upon the plants twice a day to keep

down red spider, which is very partial to them. A sowing made every ten days will insure a succession, for the plants do not last long in bearing. You will find Osborne's Forcing and Ne Plus Ultra two first-class varieties for forcing.

Saddle Boiler.—*Rob*: There is no way of patching up a worn-out boiler. You must have a new one in. Of course it is unfortunate that it should give out just now, but that is a mean way that boilers have—they always strike work when they are most wanted.

Tuberous Begonia Seed.—*O. T.*: If you can place the seed pans in a temperature of 60° Fahr. you may sow the seed as soon as you like. The young plants will reap the benefit by having a longer season of growth, and should then come into flower early. Cover the seed pans with a sheet of glass. It will help to keep the atmosphere in direct contact with the seed moist.

Tuberose.—*F. Ayres*: After they have once flowered the bulbs are of little further use, and may be thrown away. The results obtained by keeping them for another season are very poor indeed, and would not repay your trouble. A fresh batch should be bought in each year.

DENDROBIUM FORMOSUM GIGANTEUM.

NEXT, perhaps, to the delight of adding new plants to a collection of Orchids is the pleasure and satisfaction of seeing them succeed under one's care. Both of these forms of enjoyment apply to Mr. W. Angus, gr. to J. Ogston, Esq., Norwood Hall, Cults, Aberdeen. He is an enthusiastic grower of Orchids, and we are familiar with the quality and rich colours of the flowers he grows in the pure atmosphere of Deeside.

The accompanying photograph represents *Dendrobium formosum giganteum*, an old and popular species, which, however, is more often seen in the form of small and comparatively recently imported specimens rather than otherwise. The specimen was purchased at a sale a few years ago, for the matter of a few shillings, and is now growing in a 7-inch pot. Under the care of Mr. Angus it has made a vigorous growth annually. The plant carried sixty-two flowers of large size, forty-one of them being fully expanded when the photograph was taken. The leads were fairly numerous for a plant of moderate size, and one stem alone carried as many as fifteen flowers, an unusual number for this species. When in bloom it stands a low temperature for sometime with impunity, and the illustration suggests a purpose to which it may with great advantage be put. The compact habit of growth possessed by the plant and the great size of its flowers, render it a beautiful and useful subject for table decoration. The large, rich yellow blotch in the throat throws the pure white flowers into strong relief.

LISMORE, BROUGHTY FERRY.

LISMORE is one of the many residences crowning the ridge of the high banks of the Firth of Tay, and though subject to the gales that occasionally sweep the valley, it is more or less sheltered by trees, and has a sunny, southern exposure. It is the residence of J. Leadbetter, Esq., who encourages gardening in its various phases, amongst which Chrysanthemums constitute a prominent speciality, rendering several of the houses gay during the autumn in proximity to the mansion itself.

The Chrysanthemums were in their glory on the occasion of our visit, and, looking out upon the shrubbery, the lawns, and the approach to the mansion, presented a cheerful appearance. Most of them were grown in exhibition form, though some large bushes were fine on another part of the property. Many of the exhibition blooms were notable for their rich colour, notable in this respect being E. Molyneux, Lord Brooke, Henry Jacotot fils, Dorothy Shea, Modesto, Georges Biron, and many others. The last-named is much appreciated, on account of its rich crimson-red, with old gold reverse. Mrs. C. Harman Payne, and G. C. Schwabe attain magnificent proportions here. Other

varieties that do well here are Miss Florence Davis, Miss Rita Schroeter, Madame Ad. Chatin, Souvenir d'une Petite Amie, Louise, Le Verseau, M. Demay Tillandier, Jules Chretien, Niveus, &c. Mrs. Bruce Findlay is a blush-white variety, which behaved in rather a strange way last autumn in the production of numerous miniature heads beneath the large one, hen-and-chicken fashion. The broad yellow florets of Sir E. T. Smith presented a very handsome appearance. The clear soft pink shade assumed by Louise in this northern latitude was both delicate and pleasing.

Amongst hirsute varieties Dr. Ward was rather curious in having its yellow florets margined with red. Madame M. Ricoud, with amaranth flowers and a silvery-pink reverse, also does well, and Charles Shrimpton seems to succeed everywhere. Wilfred Marshall had built up huge blooms of long, incurved, fluted, deep canary-yellow florets. The blush-white, quilled florets of Mrs. Armitstead make a bloom somewhat in the way of Shasta. Mrs. G. J.

Late grapes were still hanging in a late vinery, including samples of good cultivation in Gros Colman, Lady Downes, and Muscat of Alexandria under the name of Tynningham Muscat, the berries of which were large and of a rich yellow hue. Some large bushes of Chrysanthemums were quartered here, including Vivand Morel, which, though disbudded, carried a large number of blooms of many shades of colour, and useful for decorative purposes. Madame Cambon and Wm. Holmes were also grown in the form of large bushes, the latter being particularly bright and floriferous. Margot, as a bush plant, is sometimes disbudded, but is much more effective when not subjected to this operation.

Greenhouse Rhododendrons and other plants that delight in a cool, airy house are also well grown at Lismore. We noted fine specimens of Rhododendron fragrantissimum, R. Lady Mary Fitzwilliam, and R. Princess Royal. A large Orange tree was laden with fruits in the mature stage. A grand piece of the dark orange *Clivia miniata superba* pro-



DENDROBIUM FORMOSUM GIGANTEUM

Beer has pink and purple blooms. Charles Davis also develops grand blooms here. The silvery-lilac M. Edouard Rey proves very early compared with other varieties at Lismore. Several varieties grown for late work were housed in a cool, airy structure. Mr. R. W. Saunders, the gardener, is an enthusiastic Chrysanthemum grower, and attains success with a large number of varieties. New sorts are well tried, and those which do not come up to the requirements of size and colour are discarded to make room for others.

In passing through the stove we noted some huge plants of *Asparagus plumosus nanus* grown in tubs for exhibition purposes. *Rhapis flabelliformis* is also grown to large size, the pot plants consisting of many stems well furnished with foliage. Other Palms were well represented, as well as Crotons, *Davallia fijiensis plumosa*, and other Ferns of large size. The greenhouse also contained some fine exhibition plants, including large specimens of *Lapageria rosea* and *L. r. alba*.

duces about twenty spikes of bloom every spring when it is highly effective. Marguerite Carnations and Cinerarias are also appreciated and grown in batches. Tuberous Begonias are favourite subjects in summer, being grown in considerable quantity.

The kitchen garden is separated from the rest of the grounds by a public thoroughfare. Some more glasshouses are located here, including the Orchid houses, in one of which *Oncidium incurvum*, *O. ornithorhynchium*, and various *Cypripediums* were flowering. Amongst Cattleys we noted *C. Mossiae*, *C. Trianaei*, *C. lawrenceana*, *C. guttata*, and *C. pericaliana*, which had made good growth. *Laelias* were likewise represented by such useful sorts as *L. purpurata*, *L. crispa*, *L. anceps*, and *L. Perrinii*.

Stove plants also get a considerable amount of attention, and well repay it. *Eucharis grandiflora* in pots and tubs grows like weeds, and occasions no trouble at all to the cultivator. Two large tubs produced twenty spikes of flowers each in September last, and a similar quantity at their best in the third

week of November. *Pancreatium fragrans* also does well here, for we measured bulbs from 3 in. to 4 in. in diameter. *Croton Weismanni* Improved is a highly decorative subject, producing long and richly-coloured leaves. *Dracaena goldieana*, *D. Fredericki*, *Schizocasia sanderiana* and *Davallia mooreana* were also in fine form.

Even at that late period of the year a number of Orchids were flowering in the cool house, including *Odontoglossum crispum*, *O. maculatum*, a beautifully spotted form of *O. nebulosum*, and several *Masdevallias*. After producing excellent crops in pits, the Tomatos were cleared out to make way for Chinese Primulas, which were rapidly advancing to the flowering stage. A fine lot of zonal Pelargoniums was also housed here. The Peach house is well occupied with trees trained against the front glass, while the back wall is usefully occupied with Camellias. Mr. Saunders is as enthusiastic over hardy subjects as well as those under glass, and as the shades of eve were falling he pointed to the old flower stems of *Yucca filamentosa*, which flowers finely in the open border even in this northern latitude.

BRUSSELS SPROUT, VEITCH'S MARKET FAVOURITE.

I KNOW of no crop in the garden during the winter of so much importance as a good patch of Brussels Sprouts, and this the more so if the strain is a good one. It makes all the difference what the strain is, as is clear to all those who move freely about in gardens; and there are good, bad, and indifferent strains (or selections) in Brussels Sprouts. Rather than sow some seed, if given to me, I would go to a good firm and pay a good price, and sow a kind that would give pleasure and profit. By obtaining the best article you get the cheapest. In a good selected strain well rogued when the sprouts are on them, and the best kept for seed, you can rely on every plant being a counterpart of its neighbour, and this may be had from any really good seed house.

The value of a close selection was strongly impressed on me in December, when visiting Didlington Hall, Norfolk, as I walked through the kitchen garden and saw a large breadth of Sprouts under the above name. It was astonishing to observe the uniformity of the whole lot. They were equal in height, which was of medium proportions; and every plant appeared to be a counterpart of its neighbour. They were covered the whole length of the stem (except a few inches at the bottom) with sprouts of medium size and very closely packed, which is a great accommodation in two ways, viz: better to eat and very much more frost proof.—*J.C., Chard.*

STANSTEAD PARK NURSERIES, FOREST HILL.

IN the well equipped and managed glass department of the Stanstead Park Nurseries of Messrs. John Laing & Sons, at Forest Hill, there is always something of interest, and in the busy seasons of the year a little more than something. Just now things are beginning to move apace after the comparative stagnation of winter. The Forest Hill Clivias are celebrated the country over as among the best of their kind. At the time of our visit they were looking remarkably well, and bidding fair, if strength and apparent healthiness count for anything, to give a capital account of themselves. Some of the earlier plants were throwing up a truss of bloom here and there, but we were informed the plants would not be in full flower until at least the beginning of March, when they will well repay a visit. On the side stages of the house they occupied we found a miscellaneous collection of flowering plants that included Ericas, Epacrises, Tulips, *Acacia Drummondii*, and Roman Hyacinths, all of which appeared to great advantage by reason of the contrast afforded by their bright colours and the deep, almost black-green of the Clivias.

In another house devoted to flowering plants we found the supporting pillars prettily wreathed with the twining growths of *Cobaea scandens variegata*. Here were batches of the Otahete Orange—clean, shapely plants with heavy loads of fruit—Azaleas, Chinese Primulas, and Cyclamen were all gay and full of flower.

Stove foliage plants are a speciality with the

Messrs. Laing, their collection being a very comprehensive one. Palms, of course, form a staple in this direction, evidence being observable on all hands of the popularity of such subjects as *Cocos weddelliana*, *Areca lutescens*, and the Kentias. *Geonoma gracilis* is a highly decorative Palm that is not so much grown as it might be, for it is very handsome in build and general appearance. *G. imperialis* resembles it somewhat, but the pinnae are broader and more drooping. In the young state especially it is exceedingly graceful, as was well evidenced by the fine stock of plants we saw of it.

Of Dracaenas we noted all the best and most useful types. *D. sanderiana* is both handsome and distinct, but it needs to be continually propagated, for it is only in the young state that it is to be seen to the best advantage, the old plants having a great tendency to become "leggy" and bare of leaves at the bases of the stems. Three young plants in a forty-eight pot is a capital way to grow it, and when the variegation is well marked, as it was in the cases before us nothing prettier could be desired. *D. godseffiana* scarcely looks like a *Dracaena* at all upon first sight, the elliptic-shaped leaves thickly dotted with variegated areas, and the small wiry-like stems serving to give it a unique character in the genus. It is a vastly pretty plant, however, and will become popular when it becomes more widely known. *D. goldieana*, *D. rubra*, *D. pendula*, and *D. Doucettii* are all well-known forms. Of the latter particularly there is a good stock at Forest Hill, some of the plants being real models of symmetry. Distinction is a novelty that has been appropriately named. The leaves are narrow, pendulous in habit, and bright green in colour with a rose or rose-white margin. It makes a splendid table plant. Excellent has rather wider, more erect green leaves with a broad white marginal band. These two forms constitute a pair of highly promising subjects.

On all sides the Crotons were displaying exceptionally brilliant colouration, the winter having apparently had little or no prejudicial effect upon them. *Chelsoni*, *Queen Victoria*, *Thompsoni*, and *Reedii* were all in grand condition. A very handsome form called *Davisi* caught our eye. It bears a certain resemblance to *Weismanni* in build, but the leaves are relatively shorter and broader, but not sufficiently so to rob it of the elegance that characterises *Weismanni*. The colours in the two varieties are the same, but the distribution is different, both green and gold being present in larger areas.

Lea amabilis splendens is a subject that should be in every collection of stove plants. The bronze, green, and white of its leaves are not easy to beat, and the habit is distinct from that of anything else. The foliage of this variety is finer and more handsomely marked than that of the type.

Speaking of plants that are not too commonly met with, we may make mention of *Centradenia rosea*, with its fine bushy habit, and general beauty and usefulness. No matter whether in or out of flower, it is always attractive, for the bright rosy hue developed upon the under surface of the leaves contrasts agreeably with the olive-green of the upper surface. We noticed some fine plants of it, just bursting into flower, which will be a perfect picture in another week or so. The flowers are bright pink, and produced in sub-corymbose racemes.

Than *Begonia Arthur Malet* it would be exceedingly difficult to find a brighter plant for the winter decoration of the warmer houses. The leaves are of noble dimensions, and exhibit a peculiar shade of bronze purple that is at once striking and beautiful. A nice batch of plants in one of the stoves was a special feature of the establishment. *Begonia Gloire de Lorraine* was giving evidence in several places of its beauty and free flowering qualities. *Acokanthera*, better known in gardens as *Toxicophloea spectabilis*, was flowering very freely, and the fragrance of its pure white blossoms was much in evidence.

The *Darlingtonias* constitute a most interesting and rather curious section of plants. We noticed three forms in excellent condition, viz., *S. Courtii*, *S. Drummondii*, and *S. D. alba*. With these were associated other bog and aquatic plants, such as the curious *Pontederia crassipes*, with its swollen bladder-like stems or rhizomes filled with air for the apparent purpose of keeping the plant, with its heavy succulent leaves, afloat. Here, too, were noticed the curious lace-leaf or lattice-leaf plant, *Ouvirandra fenestralis*. *Caladiums*, not long potted up, were

growing away finely, and throwing up strong handsomely sized leaves. In another house hybrid *Streptocarpuses* were just starting into new growth, after an early potting.

Ferns are grown to a considerable extent at Forest Hill, for there is always a demand for them. *Pteris Wimsettii* is an especially prime favourite, and such forms as *P. tremula*, and *P. argyrea* also take well. The genera *Nephrolepis*, *Adiantum*, and *Asplenium* are also well represented.

There is a large number of pits attached to the larger houses, and serve as feeders for the larger houses. We observed, amongst other things, fine collections of border Carnations and Pentstemons, both of which popular plants have been assiduously cultivated and improved by the Messrs. Laing. The plants appeared to be in perfect health, and like other things were showing the effects of the very early season.

RETINOSPORAS.

NOTWITHSTANDING that the authorities at Kew have placed the above Conifers under "*Cupressus*," we still cling to the first name, and catalogue our collection under it. That the majority of them are well suited for planting in suburban gardens or small lawns most arboriculturists will admit, on account of their finely divided and feathery branches and the compact habit of most of the varieties. They enjoy a fairly moist soil, and thrive better, I consider, where they are slightly protected from the wind.

I append the names of a few, with remarks thereon, that we have thriving in the arboretum here. *R. obtusa* makes a grand specimen of compact growth and pretty foliage, and is at present nearly covered with its brown cones, which make it look very conspicuous. This tree stands over 30 ft. high, and is said to reach nearly 100 ft., so should not be planted unless a good space can be given for the plant to develop. *R. o. gracilis aurea* is a very pretty shrub of rather spreading nature, though graceful. Ours is only a young tree, about 4 ft. high. *R. o. tetragona aurea* is represented in a young state, standing 5 ft. high, with a horizontal growth. *R. pisifera* is a strong grower, and of compact habit in a young state; but our largest tree is of irregular growth, and reaches a height of 30 ft. *R. p. aurea* in our soil strongly resembles *Cupressus lawsoniana* at present in a small plant. *R. p. plumosa* makes a splendid specimen, is very compact, has feathery foliage, and is altogether a very pleasing Conifer, about 13 ft. in height. *R. lycopodioides* is another pretty one, with beautiful dark green foliage, especially in our tree, which stands 12 ft. high. *R. leptoclada* is an erect and slender growing species, with light green foliage, and reaches 8 ft. in height. *R. squarrosa* I consider one of the prettiest; it makes a good specimen, and is at all times attractive on account of its feathery-like foliage of a glaucous green, sometimes almost of a pale blue colour, which greatly adds to its beauty.—*J. Mayne, Bickton.*

EXTRAORDINARY OAK.

ORIGIN OF *QUERCUS CERRIS LUCOMBEANA*.

UNDER the heading "A New and Singular Species of Oak" a letter appears in the *Scotts' Magazine*, dated February 24th, 1773, at Exeter, from John Zephaniah Holwell, Esq., F.R.S. In the letter he describes a visit to the nursery of Mr. Lucombe, of St. Thomas, and to which place he was evidently attracted by a report of the discovery of a new species of Oak, "discovered and propagated by that ingenious gardener." Mr. Zephaniah goes on to relate how the "ingenious gardener" happened to discover the Oak, which was, to all appearance, at that time destined to revolutionise Oak growing in the future. "A parcel of Acorns," says the writer, "saved from a tree of his own growth of the Iron or Wainscot species," produced the new Oak which had the peculiarity of retaining its leaves all the winter. This feature of the plant was considered phenomenal, and caused Mr. Lucombe to propagate the species by grafting to the extent of "some thousands" in the short time of seven years.

"I," says the writer, "had the pleasure of seeing these eight days ago in high flourishing beauty and verdure, notwithstanding the severity of the past winter. The various qualities which it possessed or

promised to evolve were evidently of an excellent character—straight and handsome as a Fir. Its leaves are evergreen, and its wood is thought, by the best judges, in hardness and strength, to excel all other Oaks. It makes but one shoot in the year, viz., in May, and continues growing without interruption, whereas other Oaks shoot twice, viz., May and August." He goes on then to speak of its rapid growth, which in part he attributes to its production of one shoot a year. He gives the dimensions of the parent tree of seven years and a grafted one of four years respectively as 21 ft. high, 20 in. in girth, and 16 ft. high and 14 in. in girth.

"The first grafted is six years old, and has out-shot his parent by 2 ft. in height." The tree in question was, the writer says, called the Lucombe Oak, which made shoots 4 ft. to 5 ft. yearly, and he inferred from that feature in forty years it would out-grow the other Oaks of a hundred years. He adds, in conclusion, that, except the leaves, it is quite distinct in every way from the Iron or Wainscot Oak, and that many gentlemen in Cornwall and Somerset planted young trees, which are doing well. It would be interesting to know how these have turned out after a growth of 125 years.—*D. Chisholm.*

THE PLANT HOUSES.

The Stove.

WITH the month of February it is to be expected that things will move a bit, and therefore it will be well to increase the temperature of the stove by a few degrees. It should not be allowed to drop below 62° Fahr. by night. It is rather early to start the regular morning and afternoon syringings yet, but advantage may be taken of fine days to give the plants an occasional shower bath. This, however, must in every case be seen to early enough in the day to admit of the foliage becoming dry before night. Prosecute vigorously the war against all insect pests, and supplement the occasional use of the syringe by the sponge.

POTTING.—It is advisable to make an early start with this, for by getting the work forward now it will lessen the pressure a month or six weeks hence, when things begin to hum, and one does not know which job to turn to first. Once a year at least all the occupants of the stove should have a thorough overhauling. Some of them will not require to be potted so often as this, but if a shift is not needed a top dressing may be of service, and it is of the greatest importance to see that the drainage is in proper working order, and likely to remain so for a time. Vigorous plants need a lot of water during the summer months, and thus anything like a choked-up drainage system is inimical to their interests. Keep a sharp look-out for plants that were over-potted last year, or of which the roots have died to some extent. It pays to reduce these subjects pretty heavily, for it is only courting failure to attempt to put a plant with two or three roots in a big pot, even although it may be a veteran, and the size of the head seems to warrant it. Try and keep such things as Crotons, *Dracaenas*, *Dieffenbachias*, and some Palms in as small pots as possible, for their value for house furnishing will thereby be much enhanced. All this class of subjects will need to be potted firmly, and if the compost is in a proper condition, *i.e.*, neither too wet nor too dry, the rammer may be freely used without fear. The result will be seen in close jointed sturdy growth that will stand knocking about a lot better than the more sappy stuff. Any plants that it is found will have to be disturbed a good deal should be taken out of the large stove subsequent to potting and placed in a close pit where a temperature of from 65° to 70° Fahr. can be easily maintained, and where the syringe can be set to work amongst them daily. Above all, use clean sound pots. Any cracked ones might as well be broken up at once, or in shifting about presently these will be likely to lead to falls and further breakages. If the cracked pots are retained, see that they are secured with wire.

NYMPHAEAS.—If these charming aquatics have not been already potted up no time should be lost in seeing to it. In accordance with instructions given previously the water should have been nearly drawn off, and the plants allowed to go completely to rest. In turning them out of their old pots be careful with the tubers for some have a knack of getting down close to the bottom, even although the plants were

not deeply covered with soil last year. Good loam mixed with cowdung in the proportions of four to one makes the best compost for the *Nymphaeas*. Where many are grown it is a capital plan to stack the loam with the cowdung about six months before it is wanted, therefore, giving the two time to incorporate with each other thoroughly. The difficulty of mixing the two fresh ingredients is thus avoided. After potting return the water to the tank, allowing it to reach about two-thirds of the way up the pots. Keep it at a temperature of 65° and increase it in depth week by week, until the depth is normal.

CALADIUMS.—The tubers which were started about the middle of last month have now a leaf or two, and will soon be ready for potting up. Another batch of tubers should be started in shallow boxes, covering the tubers with cocoanut fibre. The rarer sorts will be best in small pots by themselves in order that they may be kept separate from the commoner ones, and given special attention. A temperature of not less than 65° should be given. Do not keep them too wet for the first few weeks or the tubers will be in danger of rotting off.

Pits and Frames.

TUBEROUS BEGONIAS.—If seed of these popular and useful plants has not been sown during the past month no time should be lost in doing it. Drain the seed pots thoroughly, and fill them to within an inch of the top of the rim with fine, sandy soil. Press this fairly firm, and smooth the surface by means of a small piece of board or other flat article. Give the soil a light watering prior to sowing the seed. Sow thinly and cover with very fine soil or sand. Cover each seed pot with a sheet of glass, and place it on a shelf in a light position in a house having an equable temperature of 65°. Plants from this sowing will, if generously treated, commence to flower in June and July.

CANNAS.—Seed should be sown at once, and in a temperature of not less than 75° to ensure speedy germination. As the testa of the seed is exceedingly hard, so hard indeed that the embryo plant finds a difficulty in breaking through it, some means must be taken to weaken or reduce it in places. Various devices are resorted to to accomplish this end. Some growers file the testa through, others cut away pieces with a sharp knife, but both methods must be employed with caution, and both are tedious to accomplish. A better plan than either is to soak the seed in tepid water for not less than twenty-four hours immediately previous to sowing. The root-stocks of the old plants may be introduced into heat—a warm house with a temperature of from 60° to 65° will suit—in order to induce them to break into growth when they may be potted up. Propagation of desirable varieties by division of the crowns may be carried on as required, as the pieces will start into growth as quickly and as well as the whole root-stock.

COLEUSES.—Make a start in working up an early batch of these handsome foliage plants by putting in as many cuttings as can be obtained. The cuttings struck last autumn to preserve the stock, and which have remained in their cutting pots all the winter, will furnish the material. Take off two or three inches of the tops, and insert in a brisk heat. The beheaded plants will soon break into growth, and more cuttings can then be had. Successional batches of dimensions to suit the needs of the establishment must be put in for the next four or five months, as the old plants quickly get shabby.

FUCHSIAS.—Continue to insert cuttings of these as fast as they can be obtained. The earliest batch will by this time have made sufficient roots to warrant potting off. Pot loosely in light soil, using only small pots. Be very careful with the watering, for indiscretion in this respect will be attended with fatal results thus early in the year. If any seed of desirable varieties has been saved from last year it should be sown now. Give it a temperature of about 70° to obtain quick germination. Seedling Fuchsias, if properly treated, will flower within six or seven months from the date of sowing. These plants may, therefore, come in very handily for filling up a gap towards the end of the summer.

GENERAL WORK.—Make a sowing of *Petunias* for pot work. A pinch of seed of *Cockscombs* and *Celosia pyramidalis plumosa* should also be sown to furnish early plants. Introduce *Lilacs*, *Deutzias*, and bulbs of all sorts to heat as required for succession. Combat greenfly on its first appearance amongst *Pelargoniums* and herbaceous *Calceolarias*

by means of XL All or McDougall's new fumer, both of which are exceedingly effective and safe contrivances. Border Carnations in frames will now be needing a little water, but do not overdo it, and avoid wetting the foliage. Air all cold frames as freely as possible. Such subjects as *Violets* and *Carnations* are better with the lights pulled off them during such fine weather as we have been having lately.—*A. S. G.*

JUDGING AT HORTICULTURAL EXHIBITIONS.

WE have listened to a deal of discussion of late on judging at horticultural exhibitions (much of which is the usual twaddle), but we read of something fresh, for which, I fear, one of the combatants in the strife will not find much sympathy from the majority of judges. He has adduced that it is an error to award equal first prizes in cases where the points are the same in every respect. It is also questioned if two lots can be equal, either in single exhibits or in collections. Plants and cut flowers, where there are distinct species tabled, seldom can be made equal in points, but in such cases the decision is left very much to the caprice or taste of the judges. When there are, say, a score each of *Roses*, *Dahlias*, *Carnations*, or *Chrysanthemums* the counting of the points is all that a *skilful* judge has to do, and if two lots are in every way equal and of first-class merit it would be unjust to give awards other than first prizes to each. The judging of fruits and vegetables comes under the same rules; but when there is great divergence in collections, distinct in variety, and the most of them in species, the most correct "pointing" may fix a wide opinion between judges and exhibitors, and this we have witnessed at exhibitions hundreds of miles apart. At the late largest shows held in the north recrimination has not been absent; which, in the majority of cases is by green hands, whose exhibits are seen by themselves as others *do not* see them. To err thus is only human, and was clearly illustrated in *Punch* over a political matter by two Hindoo ladies with babies, each asserting that her own blessed one was fairest, while both were nearly of ebony hue. Illustrations from one's own experience may give some force to the necessity of equality in rare cases.

A few years ago, when judging at a large exhibition, I was armed to another class, where I was not engaged, by a friend who had been a leading exhibitor for years, and a strong opponent was against him in a class of, I think, twelve sorts of vegetables. I was asked my opinion. After carefully turning over his *Parsnips*, *Carrots*, &c., searching for the weak points, I soon decided that my friend's would be in the position of ex-champion, and pointed also that it would be a struggle to gain the second prize—more likely the position would be equal second. There were 10 other exhibits in this class, and my friend was equal second, and second for a collection of eight sorts. In each case cleanness and quality had highest honours. The judges were "old hands" at their work, and, I think, did it well. I have often been placed "equal" first, and more than once or twice have been placed first when I should not have been. The "dishing-up" should always be done as skilfully as possible, but the searching for weak points is also a legitimate duty (in fact, imperative) of the judges. The placing of two exhibits *equal* when they are so is also in every respect the duty of censors.—*M. Temple, Carron, N.B.*

Dwarf Oaks.—In this country we are accustomed to associate with the Oak immense size, stateliness, and strength, but in parts of New Jersey, U.S.A., there are woods where numbers of diminutive specimens not exceeding 2 ft. in height of *Quercus nigra* can be seen. That these little trees have reached maturity is, moreover, apparent from the way in which they bear, for them, heavy crops of acorns. In the face of this it is rather surprising to find that in other parts of the American continent, notably Pennsylvania, this species assumes the form of a sturdy tree 30 ft. or 40 ft. in height. It would be interesting to discover the reason for this curious dwarfing, which is all the more notable because, in the same wood, all sizes of trees between the two extremes may be seen.

NOTICES OF BOOKS.

GARDENING ABROAD.

GARDEN NOTES FOR THE COLONIES AND ABROAD. Second Edition, 1898. James Carter & Co., Royal Seedsmen by Special Warrants to H.M. the Queen and H.R.H. the Prince of Wales: High Holborn, London, England.

This is a small book of some fifty pages, the latter being large, however, so that a considerable amount of information is given relating to various parts of the globe, wherever there is a British possession, colony, island or inhabited rock. Other countries are also mentioned, where British settlers, or those in an official capacity may find themselves. In any case a Briton is almost certain to grow or try to grow the flowers and vegetables with which he has been familiar in the old country; and will struggle under the most adverse conditions to obtain fresh vegetable food from the soil of his new home, or find delight in the flowers he can raise.

The book aims at stating the facts pertaining to the physical and climatic conditions of the countries or stations mentioned; and furnishes hints as to some of the means adopted to assure success to the cultivator. In tropical and sub-tropical countries advantage is taken of high altitudes where possible, and of the winter season. Many countries or portions of them are sandy, sun-burnt deserts, but that is no indication that they are barren. Irrigation, even by artificial means often enables them to blossom as the Rose.

In spite of the disparaging statements that have been made regarding Rhodesia, it is evidently not all barren. In the neighbourhood of Salisbury the soil is black, rich, and grows vegetables luxuriantly. We have no doubt that many of the flowers grown here would succeed in Rhodesia under those conditions; and where water is plentiful almost anything could be brought to perfection that requires the shelter of glasshouses in Britain. India covers a vast range of latitude, longitude, and altitude, and its gardening capabilities being well known, a considerable amount of space is devoted to it. A calendar outlines the work that may be done during every month of the year. In Bengal, the plants that grow here will only succeed there during the four months from November to February. We have on former occasions given lists of plants that succeed admirably at Calcutta during the winter months. Very interesting information is given regarding Chile owing to the great diversity of its climate. This is due to the length of the country from north to south, and the proximity of the Andes to the whole length and breadth of the country, from whence innumerable streams descend and water the fertile soil. Three successive crops can be raised off the same patches of land during the year on the rocky island of St. Helena.

Short chapters towards the end of the book describe the vegetables and flowers that may be grown in foreign parts. The Rose, grass lawns, bulbous plants, fruits, seed Potatos, and other subjects are dealt with in a general way. The book cannot fail to be of service to those contemplating going abroad, as well as to those already there. We congratulate the Messrs. Carter for their enterprise and service to the community in thus directing attention to gardening beyond the narrow confines of this island.

THE CHRYSANTHEMUM.

MODERN CHRYSANTHEMUM CULTURE FOR THE MILLION. A Handbook for the Amateur and Cottage Gardener. By George Garner, Silver Medallist, &c., Liverpool: Blake & Mackenzie, Printers and Publishers, 1897. Price 6d.

Some sixty-four pages are devoted to elucidating the various details connected with the cultivation of the golden flower by amateurs, and the general body of cultivators who grow their own flowers. The subject is dealt with by a gardener who is also a prize winner at competitions. The author, Mr. G. Garner, gardener to A. C. Drummond, Esq., Cadland Park, Southampton, commences with propagation, and from thence proceeds through the various stages of growth till the flowers are fit for exhibition. He also gives directions for preserving the flowers if they have reached their full development before they are wanted. The vexed questions of timing and taking the various buds are fully but simply described; and the would-be cultivator is assisted by photographic illustrations, so that he should have no difficulty in

following the directions given, if he is sufficiently enthusiastic as to observe closely. Short chapters are devoted to the various pottings required, the composts employed, and other cultural items. Chrysanthemums in bush form, as well as for the exhibition table, are taken into consideration. Select lists of suitable varieties belonging to the various sections are given towards the end of the book, which is well within reach of the amateur's means. Printing and paper are both excellent, and quite equal the quality of more expensive books.

VISIT TO A FAMOUS ROSE NURSERY.

HAVING a few hours at my disposal I thought I could not do better than give the famous Rose nursery of the Messrs. A. Dickson & Sons, Newtonards, a visit. I had what a Scotchman would call "a sicht for sair een."

Entering the nursery by a side gate the first item to call attention is a splendid border of young Apple trees, all in the pink of condition. Mr. Dickson's method is to grow his cordons upright for two years, then lay them diagonally. By this method he claims to have superior fruit to that grown in the ordinary way.

Passing on to the Roses—the extent of ground under this noble flower is between thirty and forty acres. There were a good many varieties in flower during my visit (January 13th), which says a good deal for the climate of Ireland. After visiting this nursery one can quite understand how the fine plants with the mass of fibrous roots are grown. As Mr. Dickson is the owner of a large farm, his method is to take his oldest pasture and trench it about 2½ ft. deep, with the turfy part or "Scran" just under the Rose roots, with a liberal allowance of manure from the cowshed. I may mention that the firm buys about 1,000 tons of manure annually.

To visitors from England and Scotland, where the spade is universally used, it comes as a surprise to learn that a spade is never used in the preparation of the ground. It is all done with digging forks. Mr. Dickson says the spade does not pulverise the ground enough, and if good stock and healthy plants count for anything his theory is a sound one. There are about six acres under seedling Roses, all "standing their trials," and I have no doubt many of them will come through them well. There is a fine lot of the famous "Ulster," which has not been sent out yet.

Leaving the Rose we come to the Coniferae department, and here the same skill is shown as among the Roses. The plants are grown in the open, there being no sheltering hedges to nurse them as seen in so many nurseries. This method makes the plants very hardy, and gives them a double chance when removed to sheltered positions. There was a fine batch of *Pittosporum Mayii*, which gave this department a bright appearance. It is a wonder that this beautiful tree is not grown more generally than it is.

Passing again into the fruit tree department the visitor is surprised to see the amount of room allowed to each tree. This insures a short, sturdy growth, which is a great consideration to the fruit-grower. By allowing the trees plenty of air and light, there is none of the long sickly growths so often met with to be seen here. In the herbaceous department, Mr. Dickson is equally as successful as he is in other branches of the profession. There is a splendid specimen of the Cork tree (*Quercus suber*) which was planted by Mr. Dickson's father.

We next come to the glass department, which is kept in excellent order. The first house entered contained a magnificent collection of Palms, including a freak of nature in the shape of a variegated *Latania borbonica*, which has a very pleasing appearance. The next house was devoted to *Pteris tremula*; and I can safely say I never saw a healthier lot of plants. The next house is perhaps the most interesting in a Rose nursery, for here thousands of roses are being worked on to their stocks, chiefly the Brier and Polyantha Rose. In another house the Chrysanthemums were being cleared out preparatory to their place being filled with young Vines. I may mention that all stages and plant cases in this nursery are so constructed that they can be removed and packed into small space when the class of stuff grown requires more headroom. Under the stages, Tulips, &c., were

being forced by the thousand, all being wanted to supply Messrs. Dicksons' florist establishment at 55, Royal Avenue, Belfast. After partaking of Mr. Dickson's hospitality I took my leave and like the "Twa Dougs" in Robbie's poem, "Resolved tae meet some ither day."—*Diosma*.

EARLY FLOWERS AT KEW.

ON account of the large number of species and varieties of plants grown at Kew, that famous establishment is, consequently, a faithful reflex of weather conditions, for no part of nature, I suppose, responds more freely to the stimulus of heat, or is retarded more surely by excessive cold, than the vegetation of our globe.

As, therefore, indicating in some degree the former conditions, I herewith append a short list of plants in flower in the open-air at Kew on January 30th last, merely premising that the said list does not pretend to be complete, and that, moreover, many of the subjects named had been in bloom for some time. The Snowdrop, which Mr. Burbidge calls the "pearl of the opening year," was very much in evidence, while the genus *Crocus* gave the gardens quite a gay effect. Of the latter the following species, which are grown in circular beds in the grass, made a grand display:—

| | |
|------------------------|---------------------------|
| <i>Crocus vernus</i> , | <i>C. tommasinianus</i> , |
| <i>C. biflorus</i> , | <i>C. etruscus</i> , |
| <i>C. Sieberi</i> , | <i>C. Imperati</i> . |

On the walls:—*Chimonanthus fragrans* var *grandiflorus*, *Umbellularia californica* (flowers developing), *Pyrus japonica*, *Lonicera Standishii*, *Sarcococca hookeriana* (flowers developing), *Eccecremocarpos scaber* (strong, new growth), *Jasminum nudiflorum*.

Shrubs:—*Daphne Mezereum*, *Berberis Aquifolium*, *Cornus mas*, *Viburnum Tinus*.

Rockery:—*Galanthus nivalis*, *G. Elwesii*, *G. caucasicus*, *G. Icaria*, *Crocus* species, *Saxifraga ligulata*, *S. apiculata* and *S. sancta* (developing), *Scilla bifolia*, *S. sibirica*, *Cibonodoxa Luciliae*, *Anemone apennina* var. *blanda*, *A. Hepatica*, *Arabis procurrens*, *Corydalis solida* var. *densiflora*, *Erica carnea* and *E. c. alba*, *Daphne Mezereum* and *D. M. alba*, *D. blagayana* (fat buds), *Helleborus* in variety, *Narcissus minor* var. *minimus*, *Erantibus hyemalis*, *Iberis gibraltarica*, *I. sempervirens* var. *garreuxiana*, *Leucojum vernum*, *Lonicera fragrantissima*, *Cyclamen Coum*, *Merendera caucasica* (*Colchicum* like), *Primula denticulata*, *P. vulgaris*, and Wilson's Blue Primrose in variety.—*C. B. G., Acton, W.*

GARDENING MISCELLANY.

THE GRAPE ROOM.

THIS season is certainly by far the worst that I have had for keeping the fruit. Instead of only looking over the bunches once a week as formerly, I have been obliged to give them attention about every other day. There must be a cause for this, but whether I attribute the right one or not remains an open question. I think the mild, damp, and, I may say, almost sunless weather we have had for the past few weeks must have had some effect upon them. Not only do the berries decay, but the stem of the bunch sometimes in the centre has decayed or gone mouldy, if I may use that term. Perhaps some of your many readers can throw a light upon this subject; at any rate it would be interesting to know how other gardeners, who may have some grapes bottled, are faring in this respect.—*Perplexed*.

CHRYSANTHEMUM MRS. CHAS. CAREY.

AMONGST the many new kinds that are continually coming before the public one is apt to overlook some old favourites, and amongst them is this Chrysanthemum. It was put into commerce a long time ago, but I cannot give it up for late work. Up to the present I cannot find a white kind so good. I am aware it is not a full flower, but a semi-double. All the same, it is none the worse for decoration, seeing its lightness is a recommendation to it. It is a strong grower, and the buds do not go blind as in some kinds. We have several plants, and these will give us material to cut for filling tall vases till February.—*J. C., Chard*.

RIVINA HUMILIS.

THIS old inhabitant of our stoves I have always considered to be one of if not the most beautiful berry-bearing plants we have. Some will object that it is very apt to get leggy. This may be remedied to some extent by judicious stopping and keeping the plants near the light. When once allowed to shed its berries about the house there will always be a plentiful supply of young plants, so that leggy specimens may be cast away without the least compunction. The greatest drawback in connection with it is the ease with which the berries when ripe drop. This precludes the plants being used for general decorative purposes, if they have to be sent long distances. Could they be taken or sent to market as well berried plants in 4-in. pots, a ready sale would be found for them, but unfortunately, for the above reason, the case is hopeless. I have used them grown in pots for house decoration, and in a cut state among flowers for table adornment, when it has always been much admired. The racemes of small shining berries, some 4 ins. in length, have a brightness and beauty about them, unique in their way.—W. B. G.

PRIMULA SINENSIS ALBA PLENA.

I AM sure most gardeners will agree with Mr. J. Mayne in all he has said in favour of the above Primula in a recent issue. It is in the vicinity of large towns affected with fogs that one can with some pleasure look upon this plant as a special boon, in addition to its otherwise useful character. I noticed a fine batch a few weeks ago in the gardens of Miss Behrens, The Avenue, Regent's Park, W., that would have been a credit to any gardener had they been flowering in a pure country atmosphere; but the most noticeable feature was that they evidently kept flowering away in spite of the fog (which has been of an exceptionally severe character in London this winter), while other subjects were injured even before they had reached the flowering stage. Mr. J. Addison, the gardener, had previously noticed the value of this Primula for town work, and had worked up an exceptionally fine stock of it. A batch of single varieties at the same place was rendered almost worthless by the fog.—James Gibson, Devonhurst, Chiswick.

THE COLT'S-FOOT.

TUSSILAGO FARFARA, the technical name for our common Colt's-foot, is said to be one of the most pernicious weeds. True, it is not one that possesses much merit in the leafy month of June; but in mid-winter its bright, orange-coloured, wheel-shaped flowers, refresh the eye with their beauty, inasmuch as these are produced amidst the most grotesque surroundings and in the roughest and sootiest of places. On the last day in January of this year I was, therefore, pleased to spy its cheerful blossoms on the embankment of the railway at Willesden Junction, where the sunshine, combined with the late high temperature, had induced them to come forth thus early. Is not this a record date for the common Colt's-foot?—C. B. G., Acton, W.

DICTAMNUS FRAXINELLA.

THIS fine old border plant, one with which many among us have been familiar for many years, is one of the most attractive and beautiful of our hardy perennials, growing from 2 ft. to 3 ft. in height. Its spikes of flowers, which are of a peculiar reddish tint, are very fragrant. There is a white variety the counterpart of the type in everything save colour. It is a favourite plant with all who know it, yet comparatively scarce, for the two following reasons:—First, it does not readily admit of division. This, in fact, should never be attempted, on account of the risk run in losing the parent stool. The second reason is that unless the seed is sown at once when ripened it rarely germinates. Seed can always be bought, but, if success in raising it is to be assured, it must be procured from those having plants, and at the proper time.—W. B. G.

THE WITCH-HAZEL.

HAMAMELIS arborea, the tree-like and winter-flowering Witch-hazel, is now (January 30th) a mass of bloom. It is, in fact, a sight worth seeing, for at Kew, where several strong plants have been grouped together, the *tout ensemble* is unique. At a little distance from the group the plants or trees appear

to be in full summer dress, but a closer inspection reveals nothing but the flowers. These flowers, however, are very curious and, consequently very interesting. They are lavishly produced, and are of a bright rich yellow, the calyxes being of a deep purple or claret colour. They are, moreover, somewhat spicy in their fragrance, and appearing so early in the season, and so profusely, are well worth attention in gardens of limited dimensions. This particular group is carpeted with the pretty little creeping Wintergreen (*Gaultheria procumbens*), whose edible red berries, although they crop up above the foliage, do not seem to be readily accepted by the avis tribe.—C. B. G., Acton, W.

DAHLIA CULTURE.

THE cultivation of the Dahlia is not so well understood as it might be, says Professor Harshberger, of The University, Pennsylvania. The professor thinks that the gardener does not follow Nature closely enough, and advises him to alter his tactics in this respect. In the Mexican valley the dry season lasts from October to June, the rains returning at the latter date. The tubers lie dormant during the drought, but when the rains come they start to grow, and commence to flower about the end of August. The rainy season has cool mornings, thundery afternoons, and rainy evenings. It would be impossible to treat our cultivated plants exactly as Nature in Mexico does, but after all the difference is not great seeing that we only give the plant a longer growing season, say from May till October, and a shorter resting period. Professor Harshberger comments upon the great variability of the Dahlia in its wild state, which he says is as marked as when the plants are under cultivation.

SOCIETIES.

ROYAL HORTICULTURAL.—Feb. 8th.

THE stronger features of the meeting on Tuesday last were Orchids, Chinese Primulas, Freesias, Hellebores and other hardy plants, flowering bulbs, flowering shrubs and fruit.

Messrs. J. Veitch & Sons, Ltd., Cbelsea, exhibited a large group of Orchids, including many choice hybrid Dendrobiums, such as *D. schneiderianum*, *D. endocharis*, *D. Cordelia flavescens*, *D. Dulce*, *D. euosmum*, *D. Domini*, *D. splendidissimum*, *D. s. grandiflorum* and others. Very pretty were the hybrid Epidendrums, such as *E. elegantulum*, and *E. Endresio-Wallisii*. *Oncidium spilopterum* is a handsome yellow-lipped species having a rich purple disc.

Sir F. Wigan (grower, Mr. W. H. Young), Clare Lawn, East Sheen, exhibited *Laelia pumila praestans* in fine form, and *Odontoglossum schillerianum*.

Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking, exhibited an interesting group of well-grown Orchids, including a large and floriferous piece of *D. burfordiense*, a massive pan of *Sophranites grandiflora*, in the collection since 1889; also fine pieces of *Odontoglossum andersonianum*, *Angraecum eburneum*, *Masdevallia polysticta*, *Epidendrum polybulbon* and many other fine things (Silver Gilt Banksian Medal).

Messrs. Hugh Low & Co., Clapton, exhibited a group of Orchids, amongst which we noted *Dendrobium Venus*, *D. ballianum*, *D. Luna*, *D. crassinode* and various other hybrids and species. *Oncidium*s, *Odontoglossum*s, and *Cypripedium*s were freely interspersed in the group (Bronze Banksian Medal).

Messrs. B. S. Williams & Son, Upper Holloway, staged a group of Orchids, a conspicuous feature of which was various varieties of *Coelogyne cristata*. *Laelia anceps williamsiana* was plentiful and freely flowered. Other things included *Odontoglossum*s, *Cypripedium*s, *Dendrobium*s, &c.

Lord Folley (gardener, Mr. Miller), Ruxley Lodge, Esher, Surrey, set up a large and well-flowered group of *Cypripedium insigne* in pots. The plants were set up with Palms, Crotons, and Ferns.

Phaiocalanthe grande, *Cypripedium Ceris*, *Calanthe splendens*, *Laeliocattleya Doris*, *Cypripedium Morganiae*, and a grand hybrid *C. sander-superbiens*, were exhibited by M. C. Cookson, Esq. (gardener, Mr. William Murray), Oakwood, Wylam-on-Tyne. *Dendrobium nobile* Mrs. Wingfield's var. was exhibited by Mrs. Wingfield (gardener, Mr. W. Empson), Ampthill House, Ampthill. Philip Crowley, Esq. (gardener, Mr. J. Harris), Waddon House,

Croydon, exhibited a choice and very handsome *Laelia* named *Laelia anceps waddoniensis*.

Messrs. F. Sander & Co., St. Albans, staged *Lycaste Skinneri alba*, *Cattleya Trianaei* var. *Calanthe rubens alba*, and some others. *Cypripedium villosum* Doncaster's var. was shown by S. G. Lutwyche, Esq. (gardener, Mr. T. Paterson), Eden Park, Beckenham. W. Thompson, Esq. (gardener, Mr. W. Stevens), Walton Grange, Stone, Staffs., exhibited *Odontoglossum excelens spectabile*, a very fine variety, indeed. He also had *O. hystrix grandis*. *Cypripedium Chapmani* Chard's var. was exhibited by C. W. Chard, Esq., 15, The Pavement, Clapham Common.

A splendid array of Exotic Ferns came from Messrs. J. Hill & Son, Lower Edmonton. It included some large fine plants of such kinds as *Davallia Tyermanni*, *D. bullata*, *Nephrolepis davallioides furcans*, *N. exaltata*, and *Adiantum elegans*. These were staged in the background. In the foreground was a number of shallow, oblong baskets filled with healthy young plants of *Asplenium Nidus*, *A. Colensoi*, *Aspidium caryotideum*, *Pteris palmata*, *P. Mayii*, *Cheilanthes elegans*, *C. ellisiana*, and *Adiantum farleyense*. A Silver Gilt Banksian Medal was awarded.

A showy collection of miscellaneous flowering plants put up by Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., received a Bronze Banksian Medal. The display included *Lilacs*, *Lily of the Valley*, *Cyclamen*, *Saintpaulia ionantha*, and *Begonia Gloire de Lorraine*, with a backing of *Aspidistras* and *Palms*.

On the left-hand side of the entrance to the hall, Messrs. W. Paul & Son, Waltham Cross, Herts., put up a grand group of *Camellias*. There were fourteen large, well-flowered plants, of such varieties as *Double White*, *Corallina*, *Madame A. Verschaffelt*, and *Exquisite*. A row of boxes filled with beautiful cut blooms formed the front rank (Silver Gilt Flora Medal.)

On the opposite side of the doorway was a very meritorious exhibit from Mr. John Russell, Richmond, Surrey. It consisted of a large and comprehensive collection of *Euonymuses*, both standard and bush plants being shown. *E. japonicus ovatus aureus*, *E. j. o. albus*, *E. j. radicans variegatus*, *E. microphyllus*, and *E. m. argenteo-variegatus* were some of the best forms shown; all of them were highly decorative. From the same exhibitor came baskets of splendidly-flowered plants of *Daphne Mezereum*, *D. M. flore albo*, and *D. M. atro-rubra*; also *Andromeda Catesbaei*, with its highly-coloured foliage.

Hardy flowers in variety came from Messrs. Barr & Sons, Covent Garden. *Crocuses*, *Cyclamen ibericum lilacinum*, *Iris reticulata bulboides*, *Narcissus minimus*, and *Scilla bifolia* were all represented, whilst *Lenten Roses* formed a major part of the display. *Helleborus punctatus*, *H. guttatus superbus*, *H. antiquorum roseus*, *H. a. James Atkins*, and *H. viridis graveolens* were some of the most notable forms shown (Bronze Banksian Medal.)

Mr. J. G. Mowbray, gardener to Major Hon. H. C. Legge, Fulmer, Slough, received a Silver Banksian Medal for a splendid display of *Freesias*. The plants were exceptionally well flowered, but the flowers were not so strongly scented as usual.

Messrs. H. Cannell & Sons, Swanley, Kent, had a long table filled with various types of their renowned strain of *Primulas*. One of the finest varieties was an improved form of *The Lady*, named *Lady Whitehead*, which has much larger flowers. Mrs. R. W. Cannell has also "*The Lady*" blood in it and is a capital thing. Of the other varieties *Swanley Blue*, *Cannell's White*, and *Her Majesty* were of the best. The plants were well-flowered throughout, and bore unmistakable evidence of high class culture. (Silver Flora Medal.)

Messrs. Paul & Son, The Old Nurseries, Cheshunt, had a nice group of hardy flowers, chiefly *Lenten Roses*, which were in capital condition.

A very bright and comprehensive display of hardy flowers came from Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., for which a Medal was voted. *Iris reticulata*, *Anemone Pulsatilla*, *Saxifraga crassifolia*, and *Narcissus Golden Spur* were especially good.

Messrs. Jas. Veitch & Sons, Ltd., showed *Amygdalus davidiana alba* in flower. From the same firm came a capital collection of Chinese *Primulas*, including such valuable types as *Stellata*,

Cbelsea Blue, and the "gigantic" strain in shades of blue, rose, and white. The plants were all well-flowered and in first-class condition (Silver Flora Medal).

Messrs. R. & G. Cuthbert, Southgate, sent a nice collection of early bulbs. The straw-coloured (so-called) Roman Hyacinths were very noticeable here; so also were the Crocuses which were shown in pots of named varieties.

Mr. W. Camm, gardener to Her Grace the Duchess of Cleveland, Battle Abbey, showed some magnificent sprays of flowers of *Bougainvillea spectabilis*, and some handsome trusses of the rich orange-yellow *Bignonia venusta*.

Mr. George Mount, Canterbury, showed a box of two dozen cut Catherine Mermet Roses in excellent condition.

Mr. J. George, 14, Redgrave Street, Putney, showed samples of his new suspending clip for pots or pans.

At a meeting of the fruit and vegetable committee, a Silver Banksian Medal went to Mr. George Mount for a collection of Apples in fine preservation. *Mère de Menage*, Cox's Orange Pippin, Wellington, Court Pendu Plat, and Cox's Pomona were in especially good condition.

Twenty-five dishes of Apples were shown in competition for the Veitch flavour prizes. Mr. W. H. Divers, gardener to His Grace the Duke of Rutland, Belvoir Castle, Grantham, was placed first with Cox's Orange; and Mr. G. Woodward, gardener to Roger Leigh, Esq., Barham Court, Maidstone, second with Calville Blanche.

Of the ten dishes of Pears shown, the first award went to *Passé Crassane*, shown by Mr. G. Woodward; and the second to *Olivier de Serres*, shown by Mr. Divers.

Messrs. Sutton & Sons, Reading, showed two magnificent baskets of Sutton's Superb Early White Broccoli, the individual heads being of immense size; also a basket of the early Pea Sutton's Bountiful.

Mr. Owen Thomas, The Royal Gardens, Frogmore, sent half a dozen fruits of the new Cucumber Every Day. Mr. J. Clarke, gardener to S. W. Keene, Esq., Mill Lodge, Barnes, received a cultural commendation for a basket of splendid Mushrooms. Mr. Miller, gardener to Lord Foley, Ruxley Lodge, Esher, sent a collection of Apples and Mushrooms. (Bronze Banksian Medal).

ANNUAL GENERAL MEETING.

The annual general meeting was held in the Lindley Library, 117, Victoria Street, at 3 p.m. Sir Trevor Lawrence, Bart., in the chair. After the secretary had read the notice convening the meeting and the minutes of the last general meeting, the election of fellows was proceeded with. It transpired that 113 new fellows had already applied for membership in the new year. Mr. Harry Turner and Mr. Geo. Bunyard were appointed scrutineers of the ballot. Mr. Pearson proposed, and Mr. G. Gordon seconded that a vote of thanks be given to the retiring member of the council. The services of Mr. Douglas were specially eulogised by the president.

The report commented upon the fact that the year 1897 had been a very noteworthy one in the history of the society from the fact that it had seen the establishment of the Victoria Medal of Honour, which had been conferred on sixty recipients who had distinguished themselves in various ways in the art and science of horticulture. The medal was awarded for personal merit only, and was in no way connected with prize winning.

Summarising the work accomplished by the society during the year it was stated that twenty fruit and floral meetings had been held at Westminster during the year, and fifteen committee meetings at Chiswick, besides the larger shows in the Temple Gardens, on May 26th, 27th, and 28th, and at the Crystal Palace, on September 30th, October 1st and 2nd. Lectures had been delivered at seventeen of the meetings, exclusive of those at the Crystal Palace. A total of 1,008 awards had been made including Certificates and Medals of all grades.

On Wednesday, July 14th, the council invited all the members of committees to lunch at Chiswick, and to examine the gardens. After luncheon an address on the possibilities of the extended use of the gardens was given by Dr. M. T. Masters, F.R.S. Dr. J. Augustus Voelcker, M.A., had been recently

appointed consulting chemist to the society, and an arrangement had been made with him whereby all fellows desiring analyses of soils or manures, or advice as to either might receive information at a very small cost.

The attention of the fellows was drawn to the advantages they might derive from the services of the Scientific Committee which was composed of gentleman well qualified to advise on all matters relating to plants and plant life. The council also wished to express thanks to the Director of the Royal Gardens, Kew, for allowing Mr. George Massee, F.L.S., to give the society the benefit of his knowledge and advice on the matter of fungoid diseases.

With reference to the principal shows held it was stated that both the Temple Show and the Exhibition of British Fruit at the Crystal Palace had been attended with great success. It was pointed out, however, that the annual continuance of the latter show depended upon the subscription of £100 towards the prize fund. The show involved the society in a deal of expense without the possibility of a return, and thus it was necessary that some such rule should be made. Subscriptions should now be sent to the Secretary, 117, Victoria Street, Westminster, and if the list proved satisfactory, the schedule would then be issued in April, and the show for 1898 held on September 29th, 30th, and October 1st.

A deputation was sent by the Council in August last to the great horticultural gathering at Shrewsbury, as a result of the courteous invitation of the local authorities. Congratulations were expressed for the grand display forthcoming at Shrewsbury. An invitation for a similar deputation to be sent to the Newcastle Show on July 13th, 14th, and 15th, 1898, had been accepted from the Botanical and Horticultural Society of Northumberland, Durham, and Newcastle-on-Tyne.

An examination in the principles and practice of horticulture was held on April 6th currently in various parts of the kingdom, wherever a responsible person could be found to superintend. One hundred and eighty-one candidates presented themselves for examination. It was proposed to hold a similar examination in 1898 on Tuesday, April 5th. Candidates who wished to sit should make application at once.

The best thanks of the society were due to all the members of committees, and also to those who, like Mr. N. N. Sherwood and Mr. C. J. Graham, had offered special prizes for competition; likewise to those who had contributed either by the reading of papers or exhibits of fruits, plants, or flowers to the success of the Drill Hall fortnightly meetings.

It was announced that G. W. Burrows, Esq., of the Worshipful Company of Gardeners, had offered a scholarship of £25 a year for two years at the forthcoming examinations. A similar scholarship had also been promised by Lord Amherst, of Hackney.

It was also announced that the Rev. George Henslow, M.A., had been appointed Professor of Botany to the society, and that he would give addresses during the year at several of the meetings.

The number of deaths in the past year had been heavy, totalling 53; they included many staunch and energetic supporters of the society.

Under the head of ordinary expenditure at Chiswick £1,850 had been spent on the general work and maintenance of the gardens. Several houses had been under repairs, and one entirely rebuilt. The receipts for sale of surplus produce amounted to £357, making the net cost of the gardens £1,493.

The statement of accounts for the year was also submitted. It showed a totality of receipts amounting to £6,303 13s. 7d., and expenses £5,481 6s. 3d., thus leaving a balance in hand of £822 7s. 4d.

In rising to move the formal adoption of the report, Sir Trevor Lawrence said that he was glad to see the interest taken by the members in the society show itself in a large meeting. In commenting with the information laid before them in the printed report, he hoped that the gardens at Chiswick would become more and more a credit to the society and horticulture generally. The fortnightly shows were fully maintained, and they could easily be doubled in extent if space permitted. It was necessary for London to have a Home of Horticulture, but it was largely a question of money.

The lunch given at Chiswick to the members of Fringed White, Double White, Chelsea Rose,

committees would, be hoped, be repeated in the current and ensuing years. He reminded his audience of the many advantages which Fellows obtained for their guinea. The increase in membership amounted to 325 during the last year. Sir Trevor alluded to an unfortunate mistake in the journal of the society, whereby the paper on "market gardening of the Queen's reign" was attributed to Mr. John Moore instead of to Mr. Assbee as it ought to have been. In conclusion, the Chairman eulogised the work of the treasurer and secretary, both of whom were ideal. Dr. Maxwell T. Masters seconded. The motion was passed unanimously. Mr. Alex. Dean objected on the part of the fruit committee upon the new rule which caused the formation of a composite committee for the making of the awards to groups of exhibited plants. Mr. R. Dean also spoke on the same matter. Mr. John Ince made a very amusing remark in which he stated that Chiswick was a white elephant. A vote of thanks to the president, moved by Dr. Ince, brought the proceedings to a close.

QUESTIONS AND ANSWERS

* * * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Boiler and Two Houses.—*Avon*: One boiler will heat the two houses you mention without any difficulty as far as power is concerned, but the house which is situated on a terrace, 8 ft. above the level of the lower one will have a tendency to get overheated unless the valves are in proper working order and can turn off the water pretty closely when required. It would be advisable to give the flow pipe in the vinery a distinct rise all the way to the far end of the house. On the contrary the pipes in the greenhouse on the terrace would be inclined to get overheated by reason of their height above the boiler. They might, therefore, be fixed almost level in the house, and furnished near the boiler with a good stop valve by which you could check and regulate the flow of water, or stop it altogether at pleasure. If you could arrange to place the flow and return pipes for the greenhouse entirely outside the vinery you could heat the greenhouse without affecting the vinery when you wish it to be perfectly cool. There should also be a stop-valve by which you could turn off the water from the vinery at will.

Parasites on plant roots.—*J. S.*: The long, slender creature is a worm of the lower order, and often breeds in enormous numbers amongst leaf soil and other decaying vegetable matter, but we never discovered that they did any particular harm, though they must have got into the potting compost often. These low organisms breed by means of eggs which they produce in enormous numbers. We are more inclined to suspect the short grub, which is the larva of a two-winged fly belonging to the same group as the Cabbage Fly (*Anthomyia Brassicae*) and the Root-eating Fly (*A. radicum*), being constructed precisely on the same plan and about the same size. All of them coming under our notice are parasites, living on fresh vegetation. The perfect flies lay eggs, which hatch out giving rise to the grubs you sent, the larger one of which was full grown and about ready to pass into the pupa stage. The latter after its transformation gives rise to the perfect fly again. We also discovered the mite you mention, but we think it was too lively to be a vegetable feeder. With regard to remedies we consider you adopted the best plan by shaking out the Asparagus plants and washing the roots previous to repotting them. We believe the worms, and possibly the grubs as well, were introduced by the compost, and we take it for granted that you were careful to get clean soil as far as you could see, and that any leaf soil and dung used were free from the vermin. There is another grub that sometimes gets introduced to pot plants, by the compost containing eggs. We refer to the weevils known as *Otiorhynchus* of which there are three, very often too common in gardens and plant houses. The grubs are fatter and more curved than those you sent us. You might lay about some pieces of wood in the houses over night to act as traps, to see whether you can catch any of the long-snouted beetles known as weevils. They are often very destructive to pot plants and other subjects.

Clematis or Banksia?—*Sigma*: The principal climbers on the house you mention are Roses, Clematis, Jasminum, Virginian Creeper, and Ivy. The most likely of these to litter the ground with their fallen leaves would be Roses, probably Tea or Noisette varieties, and very likely a free flowering

CARTERS' GREEN PEAS—JUNE TO NOVEMBER.

A correspondence was raised in the Daily Press last Autumn upon the shortness of the season when Green Peas are available, both in gardens and on the market. We now offer the following as representing the best collection selected from 1,024 rows we had under trial last season. It would be difficult for us to give precise dates for putting the seed into the ground, as so much depends upon soil and situation. Successional Sowings may be made any time between these dates, and the last sowing not later than the second week in June.

| NAME. | DESCRIPTION. | HEIGHT. | WHEN TO SOW. | EXPECT READY TO PICK. | CARRIAGE FREE. |
|--------------------------|-------------------------|---------|-----------------|-----------------------|-------------------|
| | | ft. | | | Per pint. Per qt. |
| Carters' Lightning | First Early White Round | 2½ | In February | May to June | 2s. 3s. 6d. |
| Carters' Early Morn | First Early Marrowfat | 3 | End of March | During June | 2s. 3s. 6d. |
| Carters' Daisy | Second Early Marrowfat | 1½ | Middle of April | Early July | 2s. 3s. 6d. |
| Carters' Danby Stratagem | Mid-season Marrowfat | 3 | End of April | July | 2s. 3s. 6d. |
| Carters' Model Telephone | Main Crop Marrowfat | 5 | Middle of April | July | 2s. 3s. 6d. |
| Carters' Model Telegraph | Main Crop Marrowfat | 5 | End of April | July and Aug. | 2s. 3s. 6d. |
| Carters' Michaelmas | Late Marrowfat | 3 | May to June | Sept. to Nov. | 2s. 3s. 6d. |

The Collection—1 pint each of 7 varieties, price 12/6; 1 quart each of 7 varieties, price 22/6, Carriage Free.

OFFERED IN SEALED PACKETS ONLY

Carters THE QUEEN'S SEEDSMEN, 237, 238, & 97, HIGH HOLBORN, LONDON

and white sort belonging to the latter, which is very common in country villages. The Banksian Roses are too small and insignificant to litter the ground to any great extent. There is an evergreen Rose of the name of Félicité Perpétué, with flesh-coloured flowers, so that possibly this is the plant you refer to.

Retarding Bulbs in Pots.—W. S.: The unusually mild season must be held accountable for the advanced state of the bulbs plunged in cocoanut fibre. It would be no advantage to place them in frames or houses, unless the frames face the north. The best plan, probably, would be to transfer the pots to a northern aspect, under a wall, so as to prevent them getting direct sunshine. In case of frost, they would also be safer here, because they would thaw gradually instead of quickly, if in direct sunlight. To save the foliage in case of sudden frost, you could spread a dry mat over them at sundown.

Propagating Golden Privet.—A. C.: Take cuttings of the young wood, that is, last year's shoots and cut them into lengths of 6 ins. to 9 ins. Spread some sandy soil from beneath the benches, and some leaf soil on the ground you wish to be occupied with the cuttings. This may be on a half shady border, or, if you care to, you can fill a frame with them. Dig the soil over, mixing the fresh material with it. Make straight-edged trenches as you proceed, insert the cuttings as you would those of a Gooseberry, and tread the soil firmly about the cuttings. Water later on, if necessary, during dry weather. Smaller cuttings may be used, if you insert them in sandy soil in pots. By placing the latter on a gentle hot bed, roots will be produced more quickly.

Name of Fruit.—New Park Road: The Apple has not been recognised, and is getting out of season.

Names of Plants.—G. W.: The Cypripedium is a hybrid of which the parents are evidently C. javanicum and C. lawrenceanum.—R. M.: 1, Cornus mas; 2, Pyrus japonica; 3, Cupressus nutkaensis (Thujaopsis borealis is only a synonym); 4, Pelargonium radula.—A. C.: 1, Crocus biflorus; 2, Crocus susianus; 3, Helleborus colchicus; 4, Sparmannia africana; 5, Erica carnea; 6, Senecio Kaempferi aureo-maculatus.—S. H.: 1, Begonia haageana; 2, Begonia Gloire de Sceaux.—E. K.: Viburnum Tinus, the Laurustinus, which has been flowered under glass.

Communications Received.—J. Mayne.—Geo. Russell.—Thos. C. Steel.—Eyre & Spottiswoode.—W. Swan.—H. D. (next week).—D. Stewart.—A. L.—C. D.—W. H.—A. C.—D. W.—E. A.—Oral.—Herbs.—S., Shipston-on Stour.—C. Bent.—Shrubs.—P. L.

TRADE CATALOGUES RECEIVED.

EDWARD WEBB & SONS, Wordsley, Stourbridge.—Annual Catalogue of Farm Seeds, Manures, &c.

THE LEEDS ORCHID COMPANY, Roundhay, Leeds.—Catalogue of Orchids; also the West Patent Orchid, Fern and Wall Baskets.

DICKSON, BROWN, & TAIT, 43 and 45, Corporation Street, Manchester.—Catalogue of New Farm Seeds.

VILMORIN-ANDRIEUX & CIE., 4, Quai de la Mégisserie, Paris.—Catalogue of Chrysanthemums of Autumn; also Catalogue of Dahlias and Cannas.

LONDON SEED TRADE.

February 8th, 1898.

MESSRS. HURST & SON, 152, Houndsditch, London, and 27, Seed Market, Mark Lane, report a slow demand for Agricultural seeds. English Red Clover is in larger supply and medium grades offer on easier terms. Alsike firm. White Clover and Trefoil steady. Ryegrasses neglected.

INDEX TO ADVERTISEMENTS.

| | |
|---------------------------------|-----------------------------|
| Auction Sales. | Manures. |
| Protheroe & Morris370 | Chemical Unlon369 |
| Catalogues. | Clay & Son384 |
| Barr & Sons373 | W. Colchester369 |
| Bunyard & Co.369 | Homco369 |
| Carter's383 | Native Guano Co.370 |
| Dobbie & Co.372 | Ohlendorff's369 |
| J. Forbes373 | H. G. Smyth384 |
| Kelway & Son369 | W. Thomsson & Sons...371 |
| McArthur & Co.371 | Webb & Sons370 |
| F. Roemer369 | W. Wood & Son, Ltd....384 |
| C. Sharpe & Co.371 | Miscellaneous. |
| Simpson & Son369 | Canadian Emigration...370 |
| R. Smith & Co.370 | Epps's Cocoa370 |
| Sutton & Sons369 | Gishurstine369 |
| J. J. Thoolen369 | Juno Cycles383 |
| Chrysanthemums. | Smyth's Baskets369 |
| Church Bros.369 | Netting. |
| J. W. Cole369 | Rigby, Wainwright & Co. 369 |
| Devon Nursery369 | H. Robinson369 |
| R. Owen369 | Orchids. |
| W. Wells369 | J. Cypher372 |
| Florists' Flowers. | Leeds Orchid Co.369 |
| J. Douglas369 | W. L. Lewis & Co.369 |
| J. D. Hamon371 | P. McArthur371 |
| W. Hardy & Sons369 | F. Sander & Co369 |
| Kelway & Son369 | Publications. |
| J. Laing & Sons371 | GARDENING WORLD.....370 |
| J. Stevenson369 | Ogilvie383 |
| J. Wells369 | Roses. |
| Flower Pots. | G. Bunyard & Co.370 |
| Sankey & Sons, Ltd.384 | B. R. Cant371 |
| Fruit Trees. | J. Cocker & Sons369 |
| G. Bunyard & Co.372 | R. Smith & Co.371 |
| R. Smith & Co.371 | J. Walters371 |
| Garden Sundries, &c. | Seeds. |
| J. Arnold369 | Barr & Sons373 |
| Hirst, Brooke & Hirst...359 | J. R. Box369 |
| A. Outram370 | Carter's383 |
| Pinches' Labels370 | H. A. Davies369 |
| H. G. Smyth369 | H. Eckford371 |
| W. Wood & Son, Ltd....384 | Fidler & Sons373 |
| Heating Apparatus. | Hurst & Son372 |
| W. Cooper, Limited384 | McArthur & Co.371 |
| Thames Bank Iron Co ...369 | Rudland372 |
| Horticultural Builders. | Simpson & Son369 |
| J. Boyd & Sons369 | R. Smith & Co.371 |
| W. Cooper, Ltd.384 | Sutton & Sons369 |
| J. Gray369 | R. Sydenham369 |
| W. Richardson & Co ...369 | T. S. Ware372 |
| J. Weeks & Co., Ltd.369 | Webbs'373 |
| Insecticides. | Situations, &c. |
| Gishurst Compound369 | 370 |
| | Societies |
| | 370 |

EPPS'S COCOA.

EXTRACT FROM A LECTURE ON "FOODS AND THEIR VALUES," BY DR. ANDREW WILSON, F.R.S.E., etc.—"If any motives—first, of due regard for health, and second, of getting full food-value for money expended—can be said to weigh with us in choosing our foods, then I say that Cocoa (Epps's being the most nutritious) should be made to replace tea and coffee without hesitation. Cocoa is a food; tea and coffee are not foods. This is the whole science of the matter in a nutshell, and he who runs may read the obvious moral of the story."

JUNO CYCLES ARE THE VERY BEST.

Easy Terms from 10s. per Month. LARGE DISCOUNT. CARRIAGE PAID.



Price, 22 lbs.; Roadsters, 28 lbs. JUNO Lady's, and Youth's Safeties. JUNO Tricycles. Write at once for new illustrated Juno List, Machines, Fittings, and Sundries, sent Post Free. Interesting to all, and all should have a copy. Metropolitan Machinists' Co., Ltd. Steam Works, Show Rooms, Riding School, Offices—75, 76, Bishopsgate Without, LONDON, E.C. Our new large JUNO Cycle Riding School for Ladies and Gentlemen now open, 1,700 ft. Single lesson, 1/6; come till perfect, 10/6, or free to buyers of the Juno.

COVENT GARDEN MARKET.

February 9th, 1898.

FRUIT.—AVERAGE WHOLESALE PRICES.

| | | | |
|----------------------|-----------|-----------------|---------------------|
| Apples ...per bushel | 4 0 10 0 | Grapes, per lb. | 2 0 3 6 |
| Cobbs | 22 6 25 0 | Pine-apples | |
| | | per 100lbs. | —St. Michael's each |
| | | | 2 6 7 6 |

VEGETABLES.—AVERAGE WHOLESALE PRICES

| | | | |
|-----------------------|----------|-----------------------|---------|
| Artichokes Globe doz. | 2 0 1 0 | Herbsper bunch | 0 2 |
| Asparagus, per bundle | 3 0 8 0 | Horse Radish, bundle | 1 0 2 0 |
| Beans, French, per | | Lettuces ...per dozen | 1 3 1 6 |
| per lb. | 0 9 1 6 | Mushrooms, p. basket | 1 0 1 6 |
| Beet..... | 1 0 | Oulons.....per bunch | 0 4 0 6 |
| Brussels Sprouts | | Parsley ... per bunch | 0 3 |
| per half sieve | 1 0 1 6 | Radishes... per dozen | 1 0 1 3 |
| Cabbages ... per doz. | 1 0 1 3 | Seakale...per basket | 1 6 2 0 |
| Carrots ... per bunch | 0 3 | Small salad, punnet | 0 4 |
| Cauliflowers.....doz. | 2 0 3 0 | Splnach per bushel | 2 0 3 0 |
| Celery.....per bundle | 1 0 1 6 | Tomatos..... per lb. | 0 6 1 0 |
| Cucumbers per doz. | 6 0 12 0 | Turnips per bun. | 0 3 |
| Endive, French, doz. | 1 6 2 0 | | |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| | | | |
|-------------------------|----------|------------------------|---------|
| Ann Lilies, 12 blms. | 2 0 3 0 | Narcissus, white, | |
| Asparagus Fern, bun. | 1 6 3 0 | French, doz. buns. | 2 0 4 0 |
| Azaleas, doz. sprays | 0 6 0 9 | Orchids, doz. blooms | 1 6 9 0 |
| Bonvardias, per bun. | 0 6 0 8 | Pelargoniums, 12 bun. | 6 0 8 0 |
| Carnations doz. blms. | 1 6 3 0 | Roses (Indoor), doz. | 6 1 0 |
| Chrysanthemums | | Tea, white, doz. | 1 0 2 0 |
| bunches | 6 0 15 0 | Perle 1 6 4 0 | |
| Daffodils, per dozen | 0 6 1 3 | Safrano 1 0 2 0 | |
| Euoharts ...per doz. | 3 0 6 0 | (English), | |
| Gardenias ...per doz. | 6 0 9 0 | Pink Roses, doz. | 2 0 4 0 |
| Geranium, scarlet, | | Primroses, doz. bun. | 1 0 1 6 |
| doz. bunches | 4 0 6 0 | Smllax, per bunch | 1 6 2 6 |
| Lilium longiflorum | | Snowdrops, 10z. bun. | 0 9 1 6 |
| per doz. | 4 0 6 0 | Tuberoses, doz. | |
| Lily of the Valley doz. | | blooms ... | 0 6 0 8 |
| sprays | 0 6 1 3 | Tulips, various, doz. | 0 6 1 3 |
| Lilac (French) per | | Violets (Parma), per | |
| bunch | 3 0 4 6 | bunch | 3 0 4 0 |
| Marguerites, 12 bun. | 2 0 4 0 | doz. bun. | 0 9 2 0 |
| Marienhair Fern, 12bs. | 4 0 8 0 | Wallflowers, doz. bun. | 4 0 6 0 |
| Mimosa, French, bun. | 0 9 1 0 | | |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

| | | | |
|--------------------------|-----------|-------------------------|-----------|
| Arbor Vitae, per doz. | 12 0 36 0 | Ferns, invar., per doz. | 4 0 12 0 |
| Aspidistra, doz. | 18 0 36 0 | Ferns, small, per 100 | 4 0 6 0 |
| " speolmen | 5 0 10 0 | Ficus elastica, each | 1 0 5 0 |
| Azalea, per doz. | 24 0 36 0 | Foliage Plants, var., | |
| Chrysanthemums, doz. | 6 0 12 0 | each | 1 0 5 0 |
| Cineraria, per doz. | 9 0 12 0 | Lilium Harrilssii, | |
| Cyclamens, per doz. | 12 0 18 0 | per pot | 2 0 4 0 |
| Dracaena, various, | | Lycopodiums, doz. | 3 0 4 0 |
| per doz. | 12 0 30 0 | Marguerite Daisy doz. | 6 0 9 0 |
| Dracaena vridls, doz. | 9 0 18 0 | Myrtles, doz. | 6 0 9 0 |
| Euonymus, var. doz. | 6 0 18 0 | Palms in varlety, each | 1 0 15 0 |
| Evergreens, invar. doz. | 6 0 24 0 | Palms, Specimen ... | 21 0 63 0 |
| Erica Hymalis p. doz. | 9 0 15 0 | Pelargoniums | |
| Erica Gracilis, per doz. | 6 0 9 0 | Scarletsper doz. | 2 6 6 0 |
| Erica, various, per doz. | 8 0 12 0 | Tulips, various, doz. | 1 0 1 6 |

A Special Offer to Readers of THE GARDENING WORLD 25/- BOOK for 8/-

NO HOME SHOULD BE WITHOUT ONE.

Ogilvie's Encyclopædia OF USEFUL INFORMATION AND WORLD'S ATLAS.

12298. **COUPON.**

OGILVIE'S ENCYCLOPÆDIA OF USEFUL INFORMATION, AND WORLD'S ATLAS, (Published Price 25s.) 16 COUPONS, AND 6d. WITH EACH.

Name _____

Address _____

SEND FOR THIS SEASON'S SAMPLES OF SHADINGS AND SUN-BLINDS

Sewn and Taped. With all Newest Improvements. Fixed Complete, and Promptly Despatched to Every Part of the United Kingdom.

SELECTED TEXTURES.

LATEST IMPROVEMENTS.

NEWEST DESIGNS.

We shall be pleased for our Foreman in this Department to wait upon you to take measurements, free of charge. All Fixing executed at the lowest possible price.

BOOK OF PRICED SAMPLES FREE BY RETURN OF POST.

SPECIAL OFFER.

CARRIAGE PAID THROUGHOUT THE UNITED KINGDOM.

OUR PRIZE MANURE "LE FRUITIER" 20s. cwt.

The Successful Exhibitors' Favourite Manure.

Sold under Guaranteed Analysis and in Branded and Sealed Bags.

P.S.—If you have not received the Sixth Edition of our Illustrated Catalogue of Garden Specialities, please send for one. (No Gardener should be without.)

WM. WOOD & SON, LTD., James L. Wood, F.R.H.S., Managing Director. Est. 1850.

Contractors to Her Majesty's Government,
North British Wharf, WOOD GREEN, LONDON, N.

Telegraph—"WOOD, WOOD GREEN." Telephone—"10, TOTTENHAM."

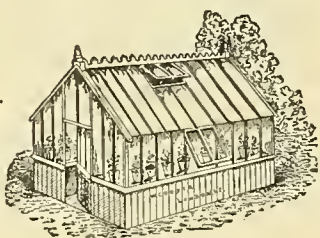
W. COOPER, Ltd., Horticultural Providers, 755, OLD KENT ROAD, LONDON, S.E.

Amateur

Span-Roof Greenhouse.

Everything Complete, and Ready for erecting.

From £2 16s.



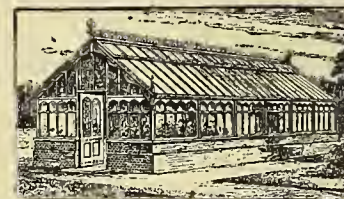
"Cooper" Cycles.



Twelve Months' Warranty.

Latest design frame, large weldless steel tubes, ball bearings, tangent wheels, and break and mudguards. Gent's from £5 10s; Ladies', with dress and gear guards, from £6.

AGENTS WANTED.

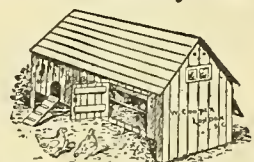


Span-Roof Conservatory. Substantially and Handsomely Built.

See No. 19 in List.

Improved Poultry House.

Span-Roof Poultry House.



5 ft. x 4 ft. ... 35/-
6 ft. x 4 ft. ... 40/-
For other Sizes see List, Post Free.

5 ft. x 4 ft. ... 20/-
6 ft. x 4 ft. ... 24/-
7 ft. x 5 ft. ... 27/-
9 ft. x 6 ft. ... 32/-

Estimate for every description of Horticultural Work Free on Application.



Cucumber Frames. One Light.
4 ft. x 3 ft., 17/-
6 ft. x 4 ft., 28/-
Two Lights.
6 ft. x 4 ft., 30/-
8 ft. x 6 ft., 50/-

Safety Chicken Coop. Coop only, 3/9 each. 6 for 21/-; 12 for 38/-.
3 ft. Movable Wire Run, 2/3 each extra.



Latest Designs in Rustic Work.



Made in Sections complete, £3 5s.

Large Variety in Stock.

This House £4, Complete.



Illustrated Catalogue, containing 364 Pages and 1,200 Illustrations, post free on application.



GARDEN SUNDRIES.

SPECIALY SELECTED ORCHID PEAT

- | | |
|---|---------------------------------|
| Black and Brown Peat | Pot Washing Brushes |
| Silver Sand and Loam | Virgin Cork and Raffia [Twine |
| Cocoa Nut Fibre Refuse | Tanned Netting & Tared |
| Leaf and Peat Mould | Trug Garden Baskets |
| Specially prepared Mould | Flower Sticks, from 1 to 5 feet |
| Sphagnum Moss | Wooden Labels, from 4 to 12in |
| Guano and Dissolved Bones | Thin Bamboo Canes |
| Bones, 1/2 inch and 1/4 inch | Rose and Dahlia Stakes, about |
| Bone Dust, guaranteed pure | 5 feet |
| Blood and Bone Manure, highly recommended | Orchid Baskets and Teak Rods |
| Horticultural Charcoal [Paper | Greenhouse Blinds made to |
| Tobacco Cloth, far superior to | order |
| Mushroom Spawn | Patent Bass Brooms |
| Russia and Archangel Mats | Smyth's Orchid and Hothouse |
| | Shading |

Write for Price List, free by post.

H. G. SMYTH,

Horticultural Sundriesman,

(By Special Appointment to Her Majesty),

Clark's Mews, High Street, BLOOMSBURY, W.C.

SANKEY'S famous GARDEN POTS

Bulwell Potteries, Nottingham.

Messrs. Dicksons, Limited, Chester, write: "The Flower Pots you have so largely supplied us with are light strong, and well made, and in every respect highly satisfactory."

Messrs. Richard Smith & Co, Worcester; write: "We beg to say that we are highly satisfied with your Garden Pots. They are well made, light, yet strong, and we like them better than any other we have ever used."

Messrs. Fisher, Son & Sibray, Ltd., Handsworth Nurseries, Sheffield, write: "We have pleasure in testifying that after having used your pots for the past twenty-five years we have found them all that could be desired."



TRADE MARK

CLAY'S MANURES.
CLAY'S SUCCESSFUL GARDENING.
1s, post free.

CLAY & SON, Stratford, London, E.



TRADE MARK

Liberal in Quantity.
Excellent in Quality.



WEBBS' 21s. BOX contains

- | | |
|----------------------------------|------------------------|
| 6 qts. Peas, for succession. | 3 ozs. & 1 pkt. Cress. |
| 4 pints Beans, Broad. | 2 pkts. Cucumber. |
| 2 pint Beans, Dwarf. | 1 pkt. Endive, best. |
| 1 pint Beans, Runner. | 3 pkts. Herbs. |
| 1 pkt. Beet. | 1 pkt. Leek. |
| 1 pkt. Borecole. | 3 pkts. Lettuce. |
| 3 pkts. Broccoli, succession. | 1 pkt. Melon. |
| 1 pkt. Brussels Sprouts, best. | 4 ozs. Mustard. |
| 3 pkts. Cabbage, for succession. | 4 ozs. Onion, best. |
| 2 ozs. Carrot, for succession. | 1 pkt. Parsley. |
| 1 pkt. Cauliflower. | 1 oz. Parsnip. |
| 2 pkts. Celery, best. | 3 ozs. Radish. |
| 1 pkt. Corn Salad. | 4 ozs. Spinach. |
| 1 pkt. Couve Tronchuda | 1 pkt. Salsafy. |
| | 1 pkt. Savoy, best. |
| | 1 pkt. Scorzonera. |
| | 1 pkt. Tomato, choice. |
| | 3 ozs. Turnips, best. |
| | 1 pkt. Veg. Marrow. |

Other Boxes at 5/-, 7/6, 12/6, 15/-, 31/6, 42/-, 63/-, 105/- each.

ALL CARRIAGE FREE.

See Webbs' Spring Catalogue, post free, 1s.

WEBBS, Wordsley, Stourbridge.

SUTTON'S PEAS

FOR PRODUCING CROPS FROM EARLY SPRING TO LATE AUTUMN.

FIRST DIVISION—

SUTTON'S EXCELSIOR,

Per Quart, 3/-
"For forcing, border and early growing, your Excelsior is superh."—Mr. ALBERT PRIOR, Gardener to P. FRANCIS, Esq.

SECOND DIVISION—

SUTTON'S DWARF DEFIANCE,

Per Quart, 2/6.
"An enormous cropper, well worthy of a place in any garden."—Mr. H. C. PRINSEP, The Gardens, Buxted Park.

THIRD DIVISION—

SUTTON'S PEERLESS,

Per Quart, 3/6.
"Peerless is undoubtedly a gem, covered from top to bottom with monster pods."—Mr. G. LOVELOCK, Gardener to the Right Hon. the EARL of ANCASTER.

FOURTH DIVISION—

SUTTON'S PERFECTION,

Per Quart, 3/-
"Perfection Marrowfat is a splendid variety, and a heavy cropper."—Mr. I. ILOTT, Gardener to C. TRESS, Esq.

FIFTH DIVISION—

SUTTON'S LATE QUEEN,

Per Quart, 3/6.
"Your Late Queen is the best Pea I know for late crop."—Mr. H. J. HARVEY, Gardener to A. B. SHERIDAN, Esq.

SUTTON'S COLLECTIONS

FOR SUCCESSIONAL CROPS,
24 Quarts, 12 excellent sorts, our selection, 34/0
12 " 12 " " " 18/6
6 " 6 " " " 9/6
12 Pints, 12 " " " 10/0

SUTTON'S SEEDS
GENUINE ONLY FROM SUTTON & SONS, READING.

BUNYARD'S KENT ROSES.

Extra fine well-rooted Plants.

STANDARDS DWARFS AND CLIMBERS.

Descriptive Catalogue Free.

GEORGE BUNYARD & Co.,
The Royal Nurseries,
MAIDSTONE.

FIDLERS' SEEDS

GAINED IN 1896
IN OPEN COMPETITION, NEARLY
1,000 FIRST PRIZES.

If you want to

Win Prizes, be first in the market, and have the Best Selection of Vegetables and Flowers.

BUY FIDLERS' SEEDS

Only One Quality
THE BEST.

And Prices Lower than other Houses in the Trade.

Fidlers' give value in Seeds, not in Paper.

FULL DESCRIPTIVE LIST

Free to all upon application to

FIDLER & SONS, SEED GROWERS, READING.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, FEBRUARY 19th, 1898.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, February 22nd.—Sale of Orchids, hardy herbaceous plants, shrubs, Roses &c., by Messrs. Protheroe and Morris.
WEDNESDAY, February 23rd.—Sale of stove foliage plants, Tuberoses, and herbaceous plants, by Messrs. Protheroe and Morris.
THURSDAY, February 24th.—Sale of Roses, Carnations, hardy Ferns, &c. by Messrs. Protheroe and Morris.
FRIDAY, February 25th.—Sale of Impo ted and Established Orchids by Messrs. Protheroe and Morris.

POTATO EXPERIMENTS IN WILTS.*—For some years past experiments have been carried on by the Agricultural Committee of the Wilts County Council with the view of testing various soils, manures, Potatos, the checking of Potato disease, Onion, Grass, Peas, Beans and other crops. The experiments last year were conducted at Quemerford and Lickhill in the neighbourhood of Calne, Wilts, and the results have just been published. The town of Calne is situated on the border land between the lower cretaceous and the oolites, both being limestone formations of different geological age. The more we study the experiments that are being conducted in different parts of the country the more evident it becomes that the question of soils, manures, and crops is a complicated one, fully necessitating local experiments to demonstrate their relative values. No set of experiments, however carefully conducted, will apply to all parts of the country on account of the variations of soil and climate. A strong feature of Potato experiments at the present day is the amount of attention that is given to varieties that produce tubers of great size and give the greatest weight per acre. Of this we should have nothing to complain provided always that the quality is taken

*REPORT ON THE CALNE AGRICULTURAL DEMONSTRATIONS. Eyre and Spottiswoode (Her Majesty's Printers), London—East Harding Street, Fetter Lane, E.C. 1898. Price 1s.

BARR'S SEEDS

OF FINEST SELECTED STRAINS AND TESTED GROWTH

BARR'S 21/- COLLECTION OF VEGETABLE SEEDS

Will give a constant supply of Vegetables all the year round. The Seeds are all of the most approved varieties, and, as will be seen, the utmost liberality has been evinced.

- | | |
|------------------------------------|----------------------|
| 14 pints Peas | 1 packet Endive |
| 4 " Broad Beans | 4 packets Lettuce |
| 1 pint Dwarf French Beans | 1 packet Leek |
| 1 pint Scarlet Runners | 1 " Melon |
| 1 packet Beet | 4 oz. Mustard |
| 1 " Borecole | 4 packets Onion |
| 3 packets Broccoli | 1 oz. Parsnip |
| 1 packet Brussels Sprouts | 3 1/2 oz. Radish |
| 3 packets Cabbage | 1 packet Salsafy |
| 1 packet Colewort | 1 " Scorzonera |
| 1 " Cabbage Savoy | 4 oz. Spinach |
| 2 1/2 oz. Carrot | 3 oz. Turnip |
| 2 packets Celery | 1 packet Tomato |
| 1 packet Cauliflower | 1 " Vegetable Marrow |
| 3 oz. Cress | 1 packet Thyme |
| 1 packet Cress, American or Winter | 1 " Pot Majoram |
| 3 packets Cucumber | 1 " Summer Savory |
| | 1 " Parsley |

Other Collections, 12/6, 42/-, to 105/-.

All Seeds sent Carriage Paid on receipt of remittance.

BARR and SONS,
12 & 13 KING ST., COVENT GARDEN, LONDON.

into account when the tubers are grown as human food. Good table quality and disease resisting power should be placed in the front rank of recommendations even if the weight on any given piece of land might be less.

Noteworthy peculiarities of the soil at the Quemerford station, as shown by analysis were the relatively large percentage of matter insoluble in hydrochloric acid (71.99), the small quantities of lime (4.01), and carbonic acid (2.08). One of the objects of the experiments was to test the cropping qualities of the well-known Potato Reading Giant against the newer variety Wonder. Taking an average of 22 perches in each case it was found that Reading Giant gave 8 tons 17 cwt. 45 lbs. per acre; while Wonder gave exactly one hundredweight more. After removing the small and worthless tubers from both varieties it was found that Wonder weighed over 16 cwt. less than Reading Giant. After being cooked the former had the best appearance, but the latter the best quality. Here again we should advise judges at horticultural shows not to be misled by mere appearance, but to take mealiness and flavour into account when making awards for boiled Potatos. Another object of the trials at this same station was to prove that nitrogen, phosphate and potash are generally desirable when artificial manures only are applied to this particular crop. Our opinion is that it entirely depends upon the composition of the soil, which in this particular case was only moderately fertile. The three ingredients of plant food above named consisted of equal weights of each to which the term "complete chemical manure" was applied. The nitrate of soda was applied at three dressings, while the kainit and superphosphate were applied on the 24th April. When this complete manure was applied at the rate of 8½ cwt. per acre it gave an average return of 9.34 tons per acre for the two varieties of Potato. When 12¾ cwt. was applied the return was 9.23 tons; and 4¼ cwt. gave 8.40 tons of tubers per acre. The difference is certainly not so great as one might have expected, and the reason is not very obvious. We note that the variety Wonder gave the largest return in each of the three cases, but it also gave the greatest proportion of small and diseased tubers. Numerous other statistics of the trials at Quemerford are given in tabular form, and are well worth careful consideration.

Turning to the trials at the Lickhill station, we note that the analysis of the soil showed 32.6 per cent. of matter insoluble in hydrochloric acid; 25.241 of lime, and 18.378 of carbonic acid, the first named being much less, and the two latter greatly in excess of the percentages at Quemerford. The organic matter and combined water, as well as the more important elements of plant food present showed that the soil at Lickhill was more fertile than at the other trial ground. Seventy-eight perches of land divided into thirteen plots of six perches each were placed at the service of the trials at Lickhill. Three plots were left unmanured by way of a check, and gave an average of 5 tons 15 cwt. 22 lbs. of tubers to the acre.

The three plots (18 perches) of land devoted to trials with farmyard manure gave rather interesting results, various important facts being deducible from the table of statistics. The manure was applied at the rate of 16 tons per acre, and the average return for the three plots was 9 tons 17 cwt. of tubers, being considerably greater than that from any chemical manure or combination of them. From results like these, some people are ready to assume that Potatos should never be grown without this particular fertiliser. We consider that the results

were due entirely to the nature of the soil, which was light and contained a large percentage of lime. A mechanical improvement of the soil during the dry summer of last year, particularly during the early part of it, was effected by the moisture-holding character of the farmyard manure. On the other hand we note that the greatest weight of diseased tubers was found on these plots. Farmyard manure always encourages the Potato murrain during wet weather, and this was more than plentiful before the summer was over. The money value of the increase per acre was £9 10s. so that when the cost of the manure (£4) was deducted it left a margin of profit equivalent to £5 10s. as the net profit arising from the use of farmyard manure on this particular soil. The varieties of Potatos employed in the Lickhill experiments were Daniel's Dreadnought, Stourbridge Glory, Reading Giant, Imperator, Reading Russet and Early Puritan.

Complete chemical manure at the rate of 12¾ cwt. per acre gave an average of 9.96 tons of tubers; 8½ cwt. gave 9.71 tons; and 4¼ cwt. gave 8.31 tons. These facts speak for themselves when the varieties of Potatos used, the character of the soil, the cost of the manure, &c., are taken into consideration, showing how necessary it is to weigh everything in the balance when the most profitable culture is the object under consideration. An important result of the trials both at Quemerford and Lickhill was that cut sets of Potatos gave a poorer return than whole tubers even under fairly equal conditions as to soil and manures. There were also some interesting experiments with nitragin, that is, with the microbes or germs that produce the well-known nodules on the roots of leguminous crops, and fix the free nitrogen of the atmosphere.

Another Record for Gardeners.—Father and son were for over sixty-two years head gardeners at the same place. The father was thirty-two years, the son over thirty years in succession without a break, and the latter still looks fit and able to command for years to come a body of "snag-catchers."—*F. B. Peshurst.*

A Forest of Rubber Plants.—A company is being floated to work a forest of Para Rubber (*Hevea brasiliensis*) said to cover an area of 137 square miles in the State of Amazonas, Brazil, and to consist of 1,000,000 matured trees ready for tapping. The estate lies on both sides of the winding Rio Teffé, a tributary of the Amazon, so that there is water communication all the way to the Atlantic.

A Caution.—A man called upon me the other day in answer to my advertisement "businesses for sale," stating he wanted one for his son. Selecting one and noting down the particulars carefully he made arrangements to go and see the same. I, of course, enquired where he lived, and he gave me a bogus address (which I have since found out), saying that he was staying at the King's Cross Hotel (but here he tried the old trick). Says he, "I did a most stupid thing this morning, I came away thinking I had a pound in my pocket, which I find is only a shilling; lend me one." "What?" said I; "try that game here! Get out as quick as you can or I shall help you." Needless to say he went much quicker than he came. Should he attempt a similar game the following description will help anyone to recognise him:—height, about 5 ft. 4 in.; age, about 52; thin, bald-headed; whiskers all over his face, cut short and getting grey; genteelly but shabbily dressed; can tell his tale well, and limps a little when walking. The only regret I have now is that I did not help him off my premises with my foot.—*Alfred Outram, F.R.H.S.*

[On the next occasion this pest of society makes his appearance, and asks for £1 it should be given him, after which he may be handed over to the tender mercies of the law.—*ED.*]

The Kew Guild.—The annual general meeting of the Kew Guild takes place always on the last Thursday of February, so that the forthcoming meeting this year will be held on the 24th inst. It is scarcely necessary to remind Kewites both past and present that all are invited and expected to attend, who can possibly do so.

The Great Fire in Holborn.—Messrs. Carter & Co., The Queen's Seedsmen, beg to announce that the fire-proof outer walls of their premises were scorched only, and this particular warehouse contained but a few score bales of breakfast Oats, so that orders will be executed and despatched with the usual promptitude.

Lord Rosebery at Naples.—The Villa Delahontte, in the neighbourhood of Naples, has been purchased by Lord Rosebery, who has gone to take possession. The Almond trees are in bloom giving a pink flush to the scenery. Scarlet and purple Anemones, blue and white Violets, stud the grass thickly with their brilliant or sober hues, as the case may be, under the dark greyish-green foliage of the Olive trees.

Mr. Rhodes and the Locusts.—Mr. Cecil Rhodes has a farm of some 3,000 acres, in the midst of which stands his stone built house. It is situated near the Inzanga Mountains about seventy miles north from Umbali, and on the border of Portuguese territory in East Africa. The land is watered by streams from the mountains named, and, needless to say, is very rich. It is surrounded neither by hedge nor fence. Almost anything could be grown upon it were it not for the locusts which for two-thirds of the year swarm upon it in myriads, darkening the air as in the days of Moses in Egypt centuries ago. The vile locusts eat up every green thing, while Mr. Rhodes may be seen under the verandah of his house about 5 p. m. enjoying a cigarette or cup of coffee, but at other times walking to and fro reviling the locusts fiercely.

Narrow Escape of Messrs. Carters' Premises.—At a quarter to 3 a. m., on the 10th inst., a fire broke out in White Horse Court, between High Holborn and Eagle Street, Bloomsbury. Two large buildings used by a firm of wholesale druggists were completely gutted. During the progress of the fire there was a series of explosions, and the different stocks of drugs as they became attacked gave off various brilliant hues, and when the roof, burnt through, came down with a crash there was a tremendous outburst of flame and sparks. The intense heat scorched the face of the premises off Messrs. J. Carter & Co., but after an exciting battle with the flames for an hour the firemen got the mastery of the enemy.

The Construction of Plants.—The combined meeting of Kew and Chiswick men as announced in our last issue, took place in the Lecture Room of the Royal Gardens, Kew, on Tuesday last. The Kew men mustered to a man, lady gardeners included, and with the Chiswick gardeners and a few others, the number was run up to seventy-two, who assembled to hear the lecture by Dr. D. H. Scott, F.R.S., honorary keeper of the Jodrell Laboratory, on "The Construction of Plants." Dr. Scott described a living plant as a machine, more or less complicated, but every part well adapted for the work or function it had to perform. In other words it was a machine that constructed itself out of the materials obtained from the air by the foliage, and from the ground by the roots. The subject was a vast one, and he could only deal with it by taking a broad general view and illustrating his remarks by lantern slides thrown on a screen. These consisted of micro-photographs of various plants from microscopic, unicellular plants, upwards to the most highly evolved dicotyledons, monocotyledons, and gymnosperms. All these higher plants were, of course, represented by sections, so that their minute anatomy was clearly drawn upon the screen, and had the recommendation of being not merely diagrams, but pictures true to nature, and, therefore, constituting a most valuable aid to anyone who might be giving instruction in morphology as well as physiology. There were sections of the Lime, Apple, Aristolochia, and other climbers representing dicotyledons both in transverse and tangential sections. Various peculiar types of the same class were shown, as well as the monocotyledonous type of stem. Roots and stems of the Scotch Fir, and various aquatics were most interesting and instructive.

Mr. Joseph Watt, Udston Gardens, Hamilton, has received the appointment of head gardener to Arthur Armitage, Esq., Kerroughtree, Newton Stewart, Wigtonshire, N.B.—*Gama*.

Smoking Bouts.—*Waggs*: "I knew a man so fond of tobacco that he smoked the night scented tobacco." *Snaggs*: "Och, that's naething at a'. I kent a man that smoked a hoose, and many lives were lost, maistly green fly."

Royal Botanic Society.—At the fortnightly meeting of this society, which was held in the Gardens, Regent's Park, on Saturday, 12th inst., Mr. C. Brinsley Marlay in the chair, Mr. J. B. Sowerby, F.L.S., secretary of the society, gave the first of two papers upon fibre plants. He explained the characteristics which vegetable fibres should possess to fit them for the manufacture of textile materials, ropes, etc. Living fibre producing plants, and fibres in various stages of paper making, were shown; also some well-flowered specimens of *Coelogyne cristata*.

Orchids at the Sale Rooms.—Good things still command their price at the Sale Rooms of Messrs. Protheroe & Morris, Cheapside. A piece of *Cymbidium eburneum* fetched 4½ gs.; fine varieties of *Cattleya Trianaei*, 9gs., 5½ gs., and 4½ gs. respectively. *Laelia anceps schroderiana* was secured by Sir Trevor Lawrence, Bart., for 21gs. A grand variety of *Odontoglossum wilckeanum* ran up to 72gs. A dark rose variety of *Lycaste Skinneri* had reached 5½ gs. at the fall of the hammer. *Cypripedium bellatulum album* commanded 5½ gs., and £3 for two small plants.

Syndical Chamber of Belgian Horticulturists.—At a meeting of the jury of this society on the 6th inst. Certificates of Merit were accorded to an exhibit of *Primula*, presented by M. le Comte J. de Hemptinne with unanimity; to *Cypripedium Albert Hye*, shown by M. H. Vanderstraten; to *Croton Mme. Lucien Linden* and *Dracaena godseffiana*, both exhibited by M. A. Rigouts; to *Cattleya Trianaei*, presented by M. J. Boelens; to *Anthurium hybridum*, presented by M. Louis de Smet with unanimity; to *Croton Albert De Smet*, presented by M. L. De Smet-Duvivier; to *Cattleya Trianaei alba*, shown by M. Osc. Wattecamp; to *Vriesia leodiensis x fulgida*, presented by M. L. Poelman Maenhout; and to *Odontoglossum Pescatorei album*, *Laelia anceps* var., *Cattleya Trianaei* var., and *Odontoglossum crispum Trianaei superbum*, all exhibited by M. G. Vincke-Dujardin. The awards were made with unanimity in the case of the first three plants, and by acclamation for the last-named *Odontoglossum* shown by M. G. Vincke-Dujardin. Certificates for culture were awarded to *Araucaria elegans compacta*, presented by M. B. Spae, and to *Lycopodium pinifolium*, shown by M. A. Rigouts.

A Queen's Seedsman Speaks.—On the occasion of his installation as chairman of the London Farmers' Club at the beginning of the present month, Mr. Martin J. Sutton, of Reading, delivered a most practical and statesmanlike address. He first of all glanced briefly at the most important legislative proposals affecting agriculture which are to be discussed by the club whilst he is their chairman, and then proceeded to review the position and prospects of agriculture. He said that, owing to the really fine hay harvest of last year, and the corn harvest which succeeded it, the prospects for 1898 were considerably better than for several years past. Mr. Chamberlain's recent speech before the Liverpool Chamber of Commerce was freely commented on. Mr. Chamberlain's proposed remedy for the failing sugar industry in the West Indies was considered as a hopeful sign that the government of the country were waking up to the fact so ably put by Mr. Chamberlain, that "every country should produce, and should be encouraged, and allowed, and stimulated to produce the articles for which it is by nature best fitted." It was therefore cheering to hope that the "sauce" which Mr. Chamberlain proposed to apply to the "little gosling" of sugar depression in the West Indies will be considered by him to be good enough for the "great gander" of agricultural depression in England. Mr. Sutton concluded by saying that "the farmers of England wanted no dole," but simply justice whereby they might be enabled to fight without one hand being tied by the artificial cheapness of wheat, and meat and dairy produce stimulated by fiscal and other conditions now obtaining.

Ashford Cottage Gardeners sat down to their annual spread on Wednesday, the 9th inst., under the presidency of Mr. W. H. Coke. The toast of the evening: "Success to the Ashford and District Cottage Gardeners' Society," was proposed by the chairman, who spoke of the good done by societies such as theirs. In replying to the toast, Mr. Keene read the balance sheet. From this it appeared that a revenue of £45 had resulted from the summer show. A balance of £3 12s. 1½d. remained on the year's working.

The Royal Horticultural Society of Southampton.—The printed report and statement of accounts for 1897, issued by the Royal Horticultural Society of Southampton, is now before us. It contains a notice that the annual general meeting will be held in Mr. T. Miell's Auction Rooms, Hanover Buildings, Southampton, on Monday, February 21st, when the Mayor of Southampton will preside. The report of the council states that the financial position of the society has been much improved during the past year, the standing debt having been reduced by £62. The results of the summer show were, however, very disappointing, for the gate money was less by £265 than that for the preceding year, and £100 less than the lowest recorded for the last twenty years. The Chrysanthemum show, on the contrary, was a conspicuous success, both from an exhibition and a financial point of view. Having regard to the great risk involved it has been decided to abandon the great Summer Fêtes, at any rate, for a time. Arrangements have been made, however, with the Harbour Board to hold an exhibition on the pier on June 28th and 29th, at which Roses will figure conspicuously. The council looks forward to being able at an early date to clear off the whole of the liability of the society. The statement of accounts shows a total income for the year of £642 18s. 10d., and total expenses for the same period of £581 11s. 1d. The debts standing at the commencement of last season amounted to £198, whereas now they have been reduced to £137 8s. 7d.

Smoking Concert at Anderton's Hotel.—The second annual smoker was held here on Monday last for the benefit of the National Chrysanthemum Society's reserve fund, and the large hall, gratuitously lent by Mr. A. C. Clemow, was crowded all through a lengthy programme and evening. The great success achieved this year was probably due to the fact that a large number of ladies responded to the invitation accorded them. Messrs. W. Cutbush & Son, and Messrs. J. Laing & Sons gave the hall a most pleasing appearance by the artistic display of Palms and pot plants, whilst Mr. D. Ingamells fairly earned the gratitude of the lady artistes by supplying each of them with a very tastefully arranged spray of Violets and Lilies of the Valley. Mr. James H. Veitch, a director of the famous firm whose name he nobly bears, was an A 1 chairman, and well deserved the encomiums tendered to him by Messrs. Richard Dean and Brian Wynne when they asked the audience to give him a vote of thanks. The programme consisted of some thirty items, and each executant justified the good reception given. Mr. Sadleur Browne's songs, "Mary of Argyle," and "Evening Song," were splendidly sung; also "Gipsy John," and "Vulcan Song," by Mr. W. G. Stanley Cleverly, a blind musician and vocalist, who has been certificated at the Normal College. Mr. Albert Bessie in his "School-boy's Song," and "Little Dolly Daydreams," created much amusement. Mr. T. W. Swales, so well-known to members of the National Amateur Gardeners' Association, was again most successful in his rendering of "A Jovial Monk am I," and "The King's Own," and in spite of an apparently severe cold, Mr. Leonard Holmes did good justice to "The Soldier's Song," and "Good Company." The lady artistes, Mrs. Phil Rider, Miss Lily Beste, Miss Emmie Low, and Miss Aida Bessie, L.A.M. Med., of course, formed the great attraction, and the splendid manner in which each performed the allotted tasks will ensure their being asked to assist again. Two special features were: The recitation given in inimitable style by the Rev. H. Vivian Tyrell, and the guitar solo by Mr. Harry Hunter, of the Olympian Pierrots. Mr. Hunter also very skilfully accompanied on the piano. Mr. H. Myers, a representative of the Ichthemic Guano Company, most creditably acted as stage manager. It is expected that a substantial addition will be made to the reserve fund of the N.C.S., through this effort.

When Botanising is dangerous.—Young hotanists should beware of going into a field after the hull rushes and the hedges begin to shoot.

The Lucombe Tree.—If your correspondent, D. Chisholm, refers to Vol. vii., page 490, of THE GARDENING WORLD, he will learn much concerning *Quercus Cerris lucombeana*, and its many varieties; for there I gave the history of this famous Oak—W. Napier, Royal Ashburnham Park Nursery, Chelsea.

Was it worth the trouble?—This question must have been uppermost in the minds of two litigants who recently appeared before Judge Williams at the Aherdare County Court to settle about the produce of a garden. The plaintiff, ex-police constable Thomas Moles, sued his successor, P. C. Parcaiers, for the value of certain vegetables and fruit left in his garden. Judge Williams held that something was due to plaintiff, and said that if the solicitors could not agree, he should have to send a third party to value the claim. Asked whether he would appoint a resident in Aherdare, His Honour said he didn't know; he might send Mr. Pettigrew, and his fee would be five guineas—about twice the claim. This should cure both plaintiff and defendant of going to law.

Sutton's Farmers' Year Book.—Agriculture has so long been under a cloud that it is refreshing to read the opening paragraphs of Sutton's Farmers' Year-Book for the current season. No doubt the authors have exceptional opportunities of glean-ing information from original sources, and they indicate some of the circumstances which justify the opinion that 1898 will prove a favourable year for farmers, should the weather be propitious. One striking feature distinguishes this season's edition of the work from its predecessors. The illustrations almost exclusively represent field crops, and marvellous crops they are. No wonder that the owners were proud to have them photographed. Although pulled roots must always command attention for their typical qualities they are but specimens and the proportion in any crop cannot be inferred from samples. But illustrations of large acreages of fine roots furnish convincing evidence of well-selected stocks. To confirm this view some very remarkable lists are given of the honours won by customers' in open competitions, and these lists of prizes are supplemented by reports from all parts of the kingdom giving the records of weighty crops of Mangels, Swedes, and Turnips. Two of the new introductions have achieved an extraordinary reputation as prize-winners and in each case immense cropping power is combined with high quality in the individual roots. Messrs. Sutton again call attention to the advantages of sowing down land to temporary pasture. These short-term grass layers produce abundant crops of nutritious food for a few years, and when broken up the roots hold a valuable store of nitrogen for the benefit of the following crop. By a proper rotation of grass with corn and roots a supply of nitrogen is thus ensured without the direct outlay of a farthing for this costly manure. Those who contemplate laying down land to permanent meadows or pastures may with advantage study the very practical article on this subject, which is written from the farmers' point of view, and is made increasingly interesting by fifteen illustrations of the most important Grasses. These drawings have been reduced by photography from the larger series published in Mr. Martin J. Sutton's standard work on Permanent and Temporary Pastures. The merits of the different varieties are discussed in a popular way with the practical object of securing the best possible return for the outlay in every instance. To remedy a defective seeding is so difficult and expensive that the frank exposition of this subject by Messrs. Sutton is calculated to prevent a repetition of past blunders. In a season when the short supply of Potatoes has created a famine in certain districts of Ireland it is natural that there should be an unusual demand for the disease-resisting varieties for which the great Reading firm has won a reputation. Crops that have been grown for table use without the attention necessary for maintaining purity and robustness will be offered without scruple as seed Potatoes, and it is therefore of great importance to insure true stocks. Agriculturists will find in Sutton's Farmers' Year-Book a fund of information compiled expressly for their use. Copies will be forwarded free of charge, by the publishers, Sutton & Sons, Reading.

HINTS FOR AMATEURS.

THE SEED ORDER.

Peas.—Amongst what may be termed the higher class vegetables there is none more delicious than the garden Pea. Wonderful improvements have been effected in it of late years, and there is really no comparison between the grand modern varieties and those that used to be grown many years ago; for the former are so immeasurably superior, not only in the quality of the produce, but in the cropping powers and general behaviour of the plants. In no vegetable, with perhaps the possible exception of the Potato, is there a more bewildering list of good things to choose from; indeed there is no list of varieties that can be given, unless it is to assume very lengthy and cumbersome proportions, but would do an apparent injustice to varieties which have not been mentioned, and which, according to some opinions, are fully equal in every way to others that have been included. Opinions vary, of course, and it is as well that they should, and we can only reiterate the advice to individuals who have found a variety that does well in their particular locality to stick to it.

The varieties may be broadly divided into three sections—viz., early, mid-season, and late, and this rough classification will be sufficient for us to group the sorts required to keep up a succession from the end of May, in a favourable season, until the beginning of October, that is to say, a period of five months or thereabouts.

For yielding the earliest crop out of doors most gardeners prefer one of the dwarf varieties. The seed is sown under glass, and the young plants put out in a warm border or other sheltered corner of the garden as soon as the weather permits. Dwarf varieties are especially suitable for this kind of work, as protection can easily be given them if sharp weather comes, although some of the taller-growing sorts do very well under this kind of treatment. American Wonder has long been a favourite for early work, but as far as our experience goes we prefer Chelsea Gem, which is fully as early as American Wonder, and has the additional merit of being a heavier cropper. The pods, which are produced in pairs, are longer than in the first-named variety and hold more peas. The plants run from a foot to 15 in., in height according to the season and the character of the soil in which they are planted.

Carter's Lightning is a taller variety which attains a height of about 2½ ft. For naturally wet or cold soils it may be highly recommended, and in some localities it will turn in before either Chelsea Gem or American Wonder. It is a very heavy cropper, and the pods are always well filled. It is a great favourite with many gardeners, and deserves to be widely grown. Amateurs who have gardens where the soil is very cold will do well not to lose sight of it.

Sutton's Improved William 1st is a real improvement upon the well-known William 1st which has been largely grown in gardens for years past, as an early tall growing sort. The "improved" form is rather dwarfer in habit, being about 3 ft. in height in an ordinary season. A choice may be made between this and Veitch's Exonian.

For a second early variety to succeed the foregoing the cultivator cannot do better than try Carter's Early Morn, a Marrowfat of great excellence both from the quality as well as from the cropping point of view. It is a comparatively new sort but has won golden opinions wherever it has been tried. It was produced by crossing Lightning and Daisy. The height was 3 ft. The pods are large and handsome, and the peas last a long time in condition.

For the main or general crop Carter's Daisy cannot be beaten for a dwarf variety. The plants attain a height of from 15 to 18 in. in height, and crop very heavily, the pods each containing eight or nine large seeds, the quality of which is everything that could be desired. For a tall variety a good stock of Duke of Albany will always give good results, and for exhibition purposes there is no finer sort. The quality is first-class, and the plants crop heavily, the pods being large and handsome. The height is 5 ft. Telephone and Stratagem are standard sorts of great merit, and both of them are 5 ft. in height. Masterpiece is a grand marrow pea 3 ft. high, that has many admirers and can be confidently recommended.

If only two sorts are required Daisy and Telephone will make a capital selection. The other sorts may be included if space permit and if the amateur proposes to exhibit, the claims of Duke of Albany, and Alderman especially should not be forgotten.

Late Peas are not so extensively grown as they might be. It is true that they have a good many enemies to contend against, and have not, on that account, the chance that the earlier crops have of acquitting themselves well. To commence with, the late plants have the drought of summer to contend against, and this in itself is a serious matter, although the difficulty may be overcome to a very great extent by deep cultivation and judicious attention. Mildew is a sore pest to the enfeebled plants and usually makes its appearance to some extent, while it often runs riot. The birds too seem to have sworn enmity to the Peas and peck at and ruin the pods at an alarming rate unless prevented by nets. Despite all these difficulties a few dishes of late Peas are always appreciated.

One of the very best varieties for late work is Autocrat, a blue wrinkled marrow Pea of exceedingly robust habit, a good bearer, and one that puts up well with protracted periods of drought. The height is 4 ft. in an ordinary season, but this will be found to vary considerably according to the special character of the season, whether dry or wet. Sutton's Latest of All is well described by its name, for pickings may be had from it in November—a sufficiently advanced time of the year to suit any and everybody. The plants commence to set their pods close to the ground so that there is very little of the haulm wasted. The height is 3 ft.

Sugar Peas.—These have not been popularised to any great extent in this country, but are highly thought of and largely grown upon the Continent, France notably, where they are known as *Pois sans Parchemin*. The whole of the pods are cooked in the same way as a young French or Runner Bean, and they form a delicious vegetable, and one that is deserving of a little attention. The tough, stringy membrane that is present in the pods of the ordinary shelling Peas that we have been discussing is absent, and its place is taken by a succulent substance that is perfectly sweet and tender when cooked. The catalogues of many seedsman contain no mention of these edible-podded Peas, but the seed can be obtained, if specially asked for, at pretty reasonable prices. Those amateurs who would like to have a little novelty may well invest in this direction.

French Beans.—When grown in pots under glass the dwarf French Beans form a very valuable vegetable during the earlier months of the year. The system of forcing is a simple one and need not give any trouble to an amateur who has a glasshouse in which he can command a temperature of about 60° Fahr. For forcing purposes either Osborn's Forcing, or Ne Plus Ultra will answer admirably, and there is very little to choose between the two varieties in point of forcing, although that little is rather in favour of Ne Plus Ultra. This variety, too, is equally good out of doors for first crops, as it is naturally early, and commences to crop when the plants are yet small.

For a general crop Canadian Wonder is everything that can be desired. It is a most prolific bearer and the pods are of great length and size as well as being of first-class quality when cooked. If only one variety is to be grown this is the one to choose.

The Climbing French Beans constitute an interesting and useful section. The pods are like those of the "dwarfs" in general appearance, being long and relatively narrow, but the habit resembles that of the "runners," from which they differ, however, in their exceeding earliness. Tender and True is one of the best varieties.

The Butter Beans represent a type having a peculiar buttery flavour, which is much admired by some connoisseurs. Sutton's Golden Waxpod is a safe variety to experiment with. It is very dwarf in habit and a free and continuous bearer.—*Rex*.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Roman Hyacinths.—*Oral*: The Roman Hyacinths

so much cultivated are not the offspring of *Hyacinthus romanus*, as you suppose, but of a variety of *H. orientalis* named *albulus*.

Chrysanthemum Cuttings Damping.—*P. L.*: It is sometimes difficult to assign an exact reason for *Chrysanthemum* cuttings damping. You have probably given too much water and have neglected to give air now and again.

Erica Carnea.—This is the Heath you speak of, *Shrubs*. It is one of the finest hardy plants we have, and always blooms early in the year. There is a white form of it (*E. c. alba*), which is equally pretty and valuable.

Daphne Blagayana.—*Shrubs*: It is certainly very early for this pretty *Daphne* to be so far advanced. Perhaps your plant is very much sheltered, and this would account for its precocity in flowering. The season seems out of gear at present.

Pollenising Primulas.—*C. Bent*: You will require a soft camel's-hair brush to pollenise the flowers of your Primulas. Push the brush gently down the tube of the corolla until it touches the stamens, give it a gentle twist round, taking care not to be too heavy-handed, and you will find the pollen adhering to the brush when it is withdrawn. Brush the stigmas, or female organs, over very lightly, for to bruise them would be fatal to the result.

Curious Primula.—*S., Shipston-on-Stour*, forwards a flower of a Chinese Primula which has the calyx developed into a leaf. This is certainly a curious but not a unique production, for Messrs. Jas. Carter & Co., of Holborn, have a variety called Bouquet which always does this. The foliaceous calyx has, in the case of this variety assumed the proportions of quite a large leaf.

Apples on Wet Land.—*E. A.*: Your neighbour is simply courting failure in planting the Apple trees on wet, undrained land of the kind you mention. It should certainly have been drained before planting was attempted. You will at least have an object lesson in how *not* to plant.

Plant for a Front Garden.—*D. W.*: If you will send the measurements of the ground and the approximate shape, we should be in a much better condition than now to advise you as to the number, size, and shape of the beds. You should lose no time in doing this, as the season for planting will this year be a short one, and it is advancing apace. Turf would be a much more expeditious way of forming a small lawn than sowing down with grass seed, but it would also be more expensive, for you must have good turf.

Rhubarb Roots.—*C. C.*: After Rhubarb roots have been lifted and forced as yours have been they are fit for nothing but throwing away, as they are so much weakened that it would take too long for them to recuperate themselves.

Border Carnations.—I intend potting up and flowering under glass in a cool house some of the finest sorts of my border Carnations. Please tell me the best time to pot the plants and the soil to use. Any hints will be appreciated.—*Reader*.

The end of this month will be a good time to pot your plants up, for with the early season they will by that time have made a decent start. For soil you may use three parts of good loam, mixed with a fourth part of dried horse or cow manure rubbed through a sieve. To this add plenty of coarse river sand, and a small sixty pot of scot to each bushel of soil. Mix the whole well together. Pot fairly firmly, and drain the pots well. After potting consign the plants to a cold frame having a bottom of ashes, which keeps the plants clean and moist. The frame should be kept rather close for about a week subsequent to potting, but after the expiration of that time air should be admitted in increasing quantities until the plants are in full swing, when they should be grown as hardy as possible.

Setting Grapes.—*Reader*: It is not necessary to brush the bunches over in order to get the berries to set, as has to be done with early Peaches and Strawberries. A gentle tap on the rods in the middle of

the day is all that is required to produce the desired result, for there is generally plenty of pollen.

THE OLD DOUBLE-WHITE CHINESE PRIMROSE.

As I said in my few notes upon this decorative plant early in January, it is a matter of surprise that in so few private establishments is to be found; and yet, what is more acceptable during the winter months than this exceptionally free-flowering *Primula*? By some, it is considered rather a delicate plant to handle, or difficult of management, especially its propagation. To those hitherto unsuccessful cultivators I commend the undermentioned details which, if strictly adhered to, will reward the grower with satisfactory results, I feel sure.

Assuming then that he has a few stock plants, these should be moulded up at the end of February or early in March with decomposed leaf-soil and silver sand, cocoanut fibre and powdered charcoal, or chopped sphagnum and sand, with a good percentage of the latter, whichever ingredient may be used. This encourages new roots to be made against the time they are pulled to pieces, which with me is generally done towards the end of April, when great care is taken to preserve as many fibrous roots with the healthiest young growths as possible. The soil used for potting consists of finely sifted loam, leaf-soil, and sand, using rather more leaf-soil than loam. Have some small and large 60-sized pots crocked carefully. These should have been previously washed clean and dried before using. The plants should be potted firmly, having a surface of sand over the top, watered with a fine rose can, and placed in a propagating pit or case in an intermediate house having a temperature of about sixty.

Another good place is on a half-spent hot-bed; the little pots should be plunged in both instances, though care must be taken that the little plants do not damp off. I have also been most successful with them placed in a cold frame facing south, kept close, shaded from the sun, and lightly bedewed overhead with the syringe each bright morning. Last season they were placed in a cold pit, due north, where ninety per cent. succeeded. Naturally, in these cold structures, relying solely upon sun heat, they take rather longer to fill their pots with roots; but in whichever position they may be placed, most of them should be making roots and taking hold of the new soil in five or six weeks, consequently a little air should be given them to prevent them becoming drawn.

The plants must be carefully watched in order that no damping of the foliage may occur, or the plant may succumb. All decaying foliage must be promptly removed and a little powdered charcoal and lime applied where the union is broken if at all likely to damp. At the end of June or early in July they should be moved into the pots in which they will flower, the strongest going into 5½ in. or 6 in. pots, while the smaller ones should be put in 4¾ in. pots. The soil for this, the final potting, should be fairly rich, but light material, similar to that given before, with the addition of a little fine peat, soot, and bone-meal. After repotting place them back in a cold frame facing south, and give them close attention in the matters of airing and watering; the last named must never be done unless the plants really want it. They will require a light shading of tiffany or hexagon netting from the month of March up to the end of September, during the brightest part of the day, say from 9 a. m. to 3.30 p. m. The frames should be closed at nights, and if the weather is cold cover with mats.

The plants should, while growing, stand clear of each other, or the foliage will become unduly elongated, and more liable to damp off. Towards the end of September the plants should be taken into the greenhouse, and placed on a shelf or a light position as near the glass as possible, without being in direct touch with it. Speaking generally, an average temperature of 50° suits the plants admirably during the winter months, though the house where mine are flowering often falls to 45° on cold nights. The plants enjoy an abundance of air when once established, but quickly resent anything like a draught.

I find a little weak soot-water, given them once a week when their pots are filled with roots, acts as a good stimulant, and assists them greatly.

Towards the middle of November the successful grower will be well repaid for the little extra care and attention bestowed upon them by seeing good specimen plants full of flower, which they will continue to produce well into March. I should add that great care should be exercised when watering the plants, especially during the winter months. See that it is not poured into the centre, but near the rim of the pot, similarly as when watering *Cyclamen*. The accompanying photograph, which was taken at the end of January this year, shows twelve plants placed at a convenient corner in the same house for the purpose.—*J. Mayne, Bilton.*

CHINESE PRIMULAS AT READING.

THE unusually mild winter has practically resolved itself into spring not only out of doors, but in the indoor department as well, where work is proceeding

experienced workers. The warehouses beneath are piled from floor to roof with bags of other seeds amongst which the garden Peas would seem almost sufficient to sow down the gardens of the world. Other departments are filled with seed Potatoes. All these things are being made up in packets, bags, boxes, and packages of all sizes to suit the requirements of different establishments.

Being some weeks behind our usual time for inspecting the Chinese *Primulas* we fully expected to find them over for a season and laden with seed pods. Fertilisation has been going on for some weeks past and the earliest are practically over, but the mid-season and late varieties still furnish a marvellous display of the size and colour of the flowers into which the old Chinese *Primula* has been transformed by the art of the cultivator, entirely unaided by hybridisation with any other species. The range of colour extends from the purest white to the darkest



F. N. PARSONS,

PRIMULA SINENSIS ALBA PLENA.

BUDLIGH SALTERTON.

at a rapid pace. We had abundant evidence of this the other day as we passed through the extensive seed rooms of Messrs. Sutton & Sons, Reading, while on our way to see the Chinese *Primulas* at the Portland Road Nurseries. In the vegetable seed department the premises have been enlarged and otherwise altered to accommodate the ever increasing business in this particular line. Both here and in the admirably constructed flower seed department order and arrangement are everywhere manifest. In each department the seeds are classified alphabetically, the varieties placed under the species, and all prominently distinguished by printed labels. This facilitates the rapid make-up and despatch of the orders without hindrance or delay. In other departments women were busy sorting the seeds so that all may be spick and span and perfectly reliable. The rapidity with which this operation is accomplished stamps the hall mark of the proficiency of long

maroon-crimson yet seen in the species. Being intended entirely for the production of seed they are grown in 48-size pots without that stimulating feeding which is conducive to gross growth, but inimical to an abundant seed harvest. Under these conditions prolonged flowering is not expected nor indeed desirable, the whole energy of the plant being devoted to the development of good seed after the requisite number of pods have been set.

Sutton's Giant single strain of *Primulas* is the most highly evolved race of the species; and whenever they reach this stage of perfection Chinese *Primulas* seem incapable of going further, and the cultivator gives himself a vast deal of trouble to get the required quantity of seed from any given number plants. Big flowers give few seeds; but the cultivator who grows for decorative purposes will have these fine things, and we can hardly blame him, for a bad variety takes as much time, space and trouble to

grow it as a good one. We passed into house after house until we had been in eight, all filled to their utmost capacity with innumerable varieties arranged in large batches of a colour. Giant Royal White heads the list for size and purity. A watch, with a diameter within a fraction of two inches in diameter when placed against the flowers of this variety, left a wide margin exposed on all sides. The bright carmine-crimson of Giant Crimson seems to scintillate in a clear light as the eye is gazing upon it. Giant Scarlet is quite exceptional in size for so intense a colour, dark varieties being almost always characterised by having small flowers. The variety is early and of the same type as Reading Scarlet, well known for its rich colour. A handsome light variety is that named Giant Silver Gray, a term which well expresses the colour. The flowers are of enormous size, and recall the soft silvery colours met with in the garden varieties of Clematis lanuginosa. It is practically a new variety of which sufficient stock has not yet been obtained to sell otherwise than in the mixed packets.

Large and bright are the flowers of Giant Terra Cotta, well-named, for the flowers are of a rich salmon-rose and easily recognisable amongst other sorts even at a distance. Another handsome flower amongst light kinds is furnished by Giant Pink, which may be described as silvery-pink overlying white. The light green foliage and leaf-stalks conform to or harmonise with the soft hue of the flowers. A similar agreement of parts may be met with in Giant White, the large flowers of which are pure white. Those who like a companion to it will find such in Giant White, Fern-leaved, whose flowers are white when they first expand, but blush with age in a strong light. All of the above may be had in mixture. The flowers of the giant strain are quite equal in size and substance, if indeed, they do not excel in those particulars, to those we have seen when the plants were in their prime, and before the fertilising brush has been at work.

The ordinary type of Chinese Primulas is most profusely varied in shades of colour in conjunction with good habit and free-flowering character. The intensity of colour in Fern-leaved Crimson is certainly remarkable in the species, and indicates careful and constant selection through a long series of generations. It is matched, however, by the Plain-leaved Crimson, whose flowers rise in a pyramidal mass well above a ring of good foliage. The flowers are of an intense glowing crimson, yet brilliant withal, and surely sufficient to satisfy the most fastidious in the matter of contrast with lighter hues. These two varieties are the darkest we have seen amongst Chinese Primulas, and we prefer the plain-leaved sort on account of its more graceful habit. From this to Snowdrift is a great leap in the opposite direction, the profusion of flowers being pure white, and the whole plant light in hue. It is the earliest and most durable variety in the collection, as the flowers wither on the plant, and generally remain there till pulled off. Pearl is a very choice variety, producing a profusion of pure white flowers, accompanied by light green foliage. It has been constant to character since 1879, and still enjoys great popularity. A striking novelty has just been raised from Black Prince crossed with Reading Pink, but cannot yet be put into commerce. The flowers are silvery-white, with a purple centre of that hue seen in a Bougainvillea.

Very choice and handsome is Purity, Fern-leaved, which throws its large, pure white flowers well above the foliage. A few years ago this would have been big enough to be put in the giant strain. Sutton's Blue, Fern-leaved, is a month earlier than the plain-leaved type of the same colour, and throws up huge, pyramidal trusses of brightly coloured flowers. Royal White is the counterpart of Giant Royal White, except in size of bloom. The soft rosy-pink of Reading Pink makes a pleasing light shade of colour. The plain-leaved Double Blue is rather early for a double, and develops massive trusses and flowers of great durability. The rosy-pink flowers of Rosy Queen are almost sufficiently large to take rank with the giant strain. The Fern-leaved foliage is of a pleasing light green, and makes a pleasing setting for the tall flower stems. The bronzy, metallic-looking foliage of Gipsy Queen is in strange contrast with the speckled white flowers, and ought to be more extensively grown for conservatory decoration, the foliage alone being of decorative value.

The moss curled varieties continue to enjoy popu-

lar favour, which does not at all surprise us for they are very unique in appearance. The foliage of the Double Moss Curled White resembles Parsley or something similar at a short distance away, and being incurved, crisped and curled at the margins, displays two or more shades of light green. The foliage of Double Lilac is much darker and bronzy, and the rosy-lilac flowers are produced with great freedom. A considerable amount of table space is devoted to them, and flowers of several other shades of colour besides those mentioned have appeared in the strain.

The plain-leaved Single Blue is a choice and useful sort on account of the pyramidal masses of bright blue flowers it produces. In the same house were numerous double varieties, including Double White, a very early, pure white and floriferous sort. Double Crimson is also early and of compact habit. A clean, soft pink colour is exhibited by Double Pink, the flowers of which are produced in the greatest profusion. The flowers of Double Carnation Flake are pure white when they first expand, but afterwards become flaked.

The house devoted to a trial of varieties is a most interesting sight at the present time. The seed is sown a month later than the rest, and the plants receive no more shifting after they are placed singly in thumb pots, in which they are now flowering. Each plant is a perfect specimen in miniature, bearing a single truss of flowers as large as those in 48-size pots. The giant strain in these small pots is well worthy of inspection. A vast number of varieties is grown, twelve plants of each, and twenty-four when in mixture. Many a gardener would be glad of these small plants for various decorative purposes. All are wonderfully true to name. The trial must be very expensive, and is annually conducted merely to prove the seeds true to name. On one of the shelves of this house is a collection of species of Primula, mostly in bloom, including *P. vulgaris*, *P. Sieboldi*, *P. floribunda*, *P. rosea*, *P. obconica*, *P. sinensis*, and *P. japonica*, with which experiments are being conducted, in the art of hybridising. In another house a whole shelf is occupied with two-year-old plants of *P. floribunda*, most profusely bloomed; *P. obconica*, in many beautiful varieties is also flowering profusely and very attractive.

Last, but not least, comes *P. stellata* or Sutton's Star Primula, to improve which would be to spoil it, notwithstanding all opinions to the contrary. The starry flowers must remain so, and the slender, graceful, elegant, airy, and lightsome habit of the plant likewise. White and Pink varieties are the most noticeable, and the latter shade gets tinted with a beautiful coppery hue later on as the days get longer, the heat stronger and plenty of ventilation is given. Some of the white varieties show a purple flake. The display of bloom shows what can be done by growing this delightful variety for conservatory decoration.

ORCHIDS AT EASTWOOD PARK, NEAR GLASGOW.

THE Eastwood Park collection is very well known to the Orchid "cult." During a period extending over a quarter of a century the enthusiastic owner, D. Tod, Esq., has been constantly adding choice things and weeding out poor forms that do not come up to his standard of excellence. Consequently a visit to this home of good sorts is an education in itself. It has almost become a necessity for one to see the best forms of the different genera, and at Eastwood this can be accomplished.

The following are some of the choice ones that are in flower at the present time:—*Odontoglossum prionopetalon* with a spike of fourteen blooms; and a very choice form of *O. Coradinei* has three spikes of twenty flowers each. The rare *O. wilckeanum* has a spike that carries twenty-four blooms. *O. jenningsianum* is very fine, resembling *O. andersonianum*, only broader in the limbs. *O. sanderianum* carries nine spikes.

O. crispum was well represented by what is called the "Pacho" type. A very striking one, though slightly starry, had large chestnut-red blotches on the sepals and petals, making a magnificent plant. *O. Pescatorei* was not so plentiful, but one splendid variety was in flower, of large size, with the sepals and petals finely shaded with yellow; and the

labellum was finely spotted with lilac, not unlike the markings on *O. Cervantesii*. *O. pulchellum majus* was showing well for flower, the grand plants being in 9-in. pots.

The varieties of *O. Hallii* have always been a notable feature here, and at present two immense specimens are just coming into bloom. There are nine spikes on a plant, each about 4 to 5 ft. long. *O. Hallii leucoglossum* was conspicuous. A huge specimen of *O. Edwardii* carried hundreds of its pretty violet blooms of a larger size than we are accustomed to see.

Coelogynes are finely grown, *C. cristata lemoniana* largely taking the place of *C. cristata*. *C. cristata alba*, 3 ft. across, will soon be a marvel of beauty. The spikes of *Oncidium macranthum* and *O. serratum* are trained under the ridge, and run nearly the length of the house. Suspended from the roof are numerous pans of *Pleione humilis*; and among other things a fine batch of *Sophronites grandiflora*.

Mr. Hutchinson, the gardener, has already won his reputation as an Orchid grower, and, judging from the excellent condition of the plants under his charge, he is evidently determined to maintain it.—*Visitor*.

EARLY SPRING FLOWERS.

WHETHER Nature has been really kind to her children in imparting such an abnormal mildness to the opening month of 1898 is extremely problematical, and will remain so until we have passed through the next two or three months. At the present time we can only remark upon the effects of these continued high temperatures, and hope for the best for the future. The honours of the situation have not for long this season remained with the Snowdrop, and the Winter Aconite, for other subjects have put in a precocious appearance; for instance, Roman Hyacinths, both white and blue, flowering in the open at the beginning of February, as they are in Messrs. Barr & Sons' nursery, at Long Ditton, seem to indicate a curious topsy turvydom of the months, and thus it seems no wonder that other subjects besides the Hyacinths appear to have lost their reckoning.

Long Ditton is not an unusually early locality, for the country is pretty open hereabouts and low-lying, and if there is any cold weather about it is felt here in the biting winds. Still, despite it all, *Scilla bifolia* is in places showing its brilliant blue, and here and there one may note a stray *Narcissus minimus* or *N. cyclamineus* with expanded flowers. On a hedge-bank, facing the west, the large blue *Vinca* is blooming as freely by the side of the common yellow Gorse as if it were a couple of months later. Crocuses, as may well be supposed, have been having a fine time of it, although the sharp frost experienced on the morning of the 5th inst. put their equanimity to a severe test, but of these more anon.

At Long Ditton a number of beds have been enclosed with light wood trellises between 6 ft. and 7 ft. in height, which serve admirably to rob rough or biting winds of their sting, while they do not exclude the light. In these protected areas several early plants are flowering, including *Iris reticulata*, *I. r. Krelagei*, and *I. r. histrioides*. *Fritillaria oranensis*, a native of Algeria, is the earliest of the *Fritillarias*. The flowers are of medium size and nearly globose in shape. The segments are ovate-elliptic in shape, and have a broad maroon stripe down the centre of each upon a bright green ground. The leaves are very glaucous, of great substance, linear-lanceolate in shape, and about 2½ in. in length. The plant attains a height of from 6 in. to 8 in. Here, too, we observed *Galanthus Ikariae*, a fine new species which was fully described in the issue of THE GARDENING WORLD for February 5th. In this case the leaves were exceedingly broad and strong, almost as large, in fact, as those of *G. Imperati*.

In another corner of these protected grounds there were several beds of *Anemone Hepatica* in red, white, and blue, all the plants being full of flower.

Passing to the open we came across one of the most beautiful, and, when we take into consideration its earliness, one of the most valuable of the Hyacinths, *Hyacinthus azureus*, better known, perhaps, in gardens as *Muscari azureum*. The compact little spikes are about an inch in length, and are supported on scapes of 3 in. to 4 in. in length. The colour of the flowers is a light blue—Cambridge

blue, in fact—and as delicate looking as it is beautiful. Always an early bloomer this plant has this year got out of its bed of earth uncommonly early.

On the open rockery we met with an old friend in *Potentilla alba*, which will flower at any season if there is any chance at all. This season has been exactly to its liking, and the white flowers are correspondingly abundant. *Cyclamen Coum*, *C. C. lilacinum*, and *C. ibericum roseum* were also in flower.

The Christmas Roses have been having a royal time of it, and although they were much past their best when we saw them the plants made a brave show from a distance. *Hellehorus niger*, the Bath variety, was the most conspicuous form, and a fine free-flowering one it is.

The Lenten Roses take up the tale where the Christmas Roses lay it down. Mr. J. W. Barr informed us, upon enquiry, that he had never known them do better, for the weather had been exactly in their favour. The Long Ditton collection is one of the finest in existence, for it not only includes all the most noteworthy species, but the best of the hybrids and varieties from the Continent, notably Germany, where *Hellebores* have been systematically taken up.

H. punctatus, which was represented by a large break of plants in full flower, is one of the finest and most useful of the hybrids. Viewed on a sunny day the effect, when seen in the mass of its rose-purple flowers is exceedingly bright.

H. orientalis, the species which is the parent of so many fine varieties, and one of the parents of a number of hybrids is in itself a very ornamental plant. The flowers are of medium size, pure white, and produced in great abundance.

Amongst the seedlings from this species one of the best is *Modesty*, a new one not yet put into commerce. The plant is dwarf in habit, and bears large white flowers heavily spotted with maroon. *Mozart*, another new variety, has large, full, light rose flowers, spotted heavily with maroon. Of the older forms which we noticed in capital condition mention should be made of *Lady Leonora*, rosy-blush; *Queen Victoria*, green-white, spotted maroon at the base, flower of good regular outline, and very compact; *Afghan Prince*, dull green-purple, a curious and fascinating colour; *Frau René Heinemann*, dull purple, heavily spotted with purple-maroon; and *The Geisha*, white. *H. o. antiquorum* is a well-marked variety that is not infrequently accorded specific rank. Both it and *H. o. roseus* were exceptionally full of flower.

The rich plum-coloured *H. colchicus* has given rise to several fine forms of which *H. c. coccineus* is perhaps the finest. The flowers are large and of a rich blood-crimson hue that is splendid when the sun is shining upon it. *Otto Froebel* is another splendid variety with large purple-crimson flowers.

In the *viridis* section we get a lot of plants that may, perchance, be thought to be more curious than pretty, but they are interesting, nevertheless. *H. Bocconi* has large bright green flowers possessing a strong Elder-like perfume. *H. cupreus* has flowers representing a peculiar shade of slaty purple. *H. torquatus* is a very rare plant of very lowly habit suitable for the rock garden. It has dull green-purple flowers. *H. viridis erubescens* is really a rosy-coloured "*viridis*," for habit and build of bloom are identical. *H. v. laxus* has rather smaller flowers than the type, and the habit, as the name suggests, is more lax and spreading.

Of the *Crocuses* which were in flower at the time of our visit none was more beautiful than a bright, orange-yellow, sweet-scented form of *C. chrysanthus*, called *Canary Bird*. The type was also in capital condition. *C. etruscus*, with its delicate white flowers lined and veined with black, was exceedingly good. *C. tommasinianus* is one of the finest of the early spring-flowering species. At Long Ditton it does remarkably well, as was evidenced by the brilliant effect produced by some large beds of the delicate lavender-hued flowers. *C. t. atropurpureus* exhibits a rich shade of blue. *C. versicolor striatus* is a handsome purple variety with deeper purple stripes. *C. biflorus argenteus* is very conspicuous with its snow-white flowers, feathered prettily with black.

All these are real gems for the garden, as those who have seen them planted in masses in the nursery grounds at Long Ditton would not be slow to admit.

The *Globe* discusses the autumn-tinted foliage of *Mahonia Aquifolium* that is used so extensively for associating with *Roses*, and other flowers in button-holes. He is evidently disgusted at having to remove with soap and water the autumn tints that remain upon his fingers after handling the dyed foliage. The practice of dipping the leaves of the *Mahonia* in a bath of dye in order to produce that rich shade of bronze-purple seems to have become a fairly common one of late. It is only an enlargement of the idea that has given us gaudily-dyed grasses, and everlasting.

READING AND DISTRICT GARDENERS.

ALTHOUGH the Fern is one of the most popular plants with gardeners, both professional and amateur, yet an evening had not been devoted to this subject by the members of the above association previous to Monday, the 7th inst., when Mr. Powell, foreman at Park Place Gardens, Henley-on-Thames, read a paper before a crowded attendance of members, presided over by the president, Mr. C. B. Stevens, in the club room, British Workman.

Mr. Powell, in introducing his subject referred to the great popularity of Ferns, and to their being grown by every gardener; for, no matter how small the garden they were required, their uses being numerous. They were plants that could be grown under various circumstances; for it was not only in the greenhouse and stove that you saw excellent specimens, but in the cottage gardens in town and country you very often met with splendid examples of the hardy varieties. After dealing with the varieties most suitable for the out-door rockery, the greenhouse and stove, and the soils best adapted for their successful culture, he impressed upon the younger members in particular the great advantage and pleasure derived from making a study of the various classes of Ferns, especially in the drying and mounting of specimens in books, which would in after years be a source of profit and assistance.

At the request of the lecturer, Mr. Stanton made some very interesting remarks respecting the various varieties, the growth of the spores, and the fertilisation of Ferns, illustrating his remarks by dried specimens of crested Ferns; Ferns with distinct fertile and barren fronds; Ferns showing the various kinds of spore arrangements, whereby botanists were able to determine the genera and species of the family; specimens of peculiar interest such as the gold, silver, variegated and transparent varieties, some of which the speaker had collected thirty-seven years ago.

A discussion took place, bearing chiefly on the culture of *Adiantum farleyense*, in which Messrs. Martin, Turton, Woolford, Neve, Phipps, Bright, Tunbridge, &c., took part. Mr. Woolford exhibited some seedling crested Ferns of various forms, raised at East Thorpe; whilst Mr. Stanton brought a beautiful specimen of *Adiantum Capillus-Veneris* (the British Maidenhair) growing on the outside of an Egyptian earthenware pitcher. Six new members were elected.

GLASTONBURY THORN.

It may not be deemed inappropriate at this season of the year to send you the following as quoted from a well-known periodical of the year 1752:—"We hear from Quainton, in Buckinghamshire, that upwards of 2,000 people came on the 24th December at night with lanterns and candles, to view a Blackthorn, which grows in that neighbourhood, and which was remembered (this year only) to be a slip from the famous Glastonbury Thorn; that it always huddled on Christmas eve at night, was full blown next day, and went all off at night. But the people finding no buds, nor the appearance of any, it was agreed by all, that the 25th December, N.S., could not possibly be the right Christmas day; and accordingly refused going to Church, and treating their friends on that day, as usual. At length the affair became so serious, that the ministers of the neighbouring villages, in order to appease the people, thought it prudent to give notice, that the old Christmas day should be kept holy as before."

It will be remembered that the "New Style" of reckoning, and which was universally strongly commented upon, came into force on the 2nd September of the above year. It will be noticed that the writer of the above designated the Glastonbury Thorn, a *Blackthorn*, by which I presume he means *Prunus*

spinosa, while the Glastonbury Thorn, known to me is a variety of *Crataegus Oxyacantha*, namely, *C. O. praecox*.—D. Chisholm.

GOOSEBERRY PRUNING.

THIS is a much debated subject considering the common-place character of the plant in question. Possibly the thing which imparts the greatest interest to the question is, shall we say, the bird question; for were it not for a few members of the feathered tribe I venture the assertion there would not have been one-fourth of the correspondence in the gardening papers respecting Gooseberry pruning there has been if they would kindly leave our fruit trees and bushes alone, and content themselves with the insect fodder they are credited with being so partial to. It would simplify the task of many a one whose patience with this branch of animal life is often sorely tried. We are told on the one hand to prune late so as to run the chance of a few fruits from the few buds which our kind friends have so generously left us. On the other hand we have the advice to prune early, so that the energies of the plant will be thrown into the buds we ourselves leave. Further than this our advisers direct us to periodically convert ourselves into a kind of hybrid between a miller and a sweep by dusting over our bushes with a mixture of lime and soot. Now, briefly, my experience has taught me that where birds are troublesome the almost only, and certainly the best way is to grow Gooseberries trained to stakes about 5 ft. high, and soon after the leaves have fallen to draw all the shoots closely round the stakes with tar twine, and let them remain so till the buds are too far advanced for the birds to meddle with them. I then untie and thin out the wood. By this plan a good crop may always be secured, unless a late frost of unusual severity occurs. Once or twice I have delayed, with advantage, the untying, because of the prevalence of frosty mornings, till a later period than would otherwise be desirable. Their being close together serves to protect the young shoots to some extent from injury by frost.—W. B. G.

MUSA CAVENDISHII.

ON p. 360 in your issue for 5th February, you give "Rob" some little information respecting this plant, admitting it may be grown and fruited in fairly large pots in a house where there is abundance of heat and moisture. This is very true as far as it goes, and to those who have only just one corner in a stove, where a plant may be placed, it is just worth adopting. Fruit will probably be developed, some of which will ripen; but I fear the result will not be so satisfactory as could be desired. The fact is an ordinary stove is too moist, and too much shaded to grow Bananas well. So many other things are occupants of the same house that constant shading and moisture must be given to the greater number to the detriment of those that revel in heat, light, and at times a drier atmosphere.

It has often appeared to me somewhat surprising that a house specially devoted to the culture of Bananas is not more often erected, when ranges of fruit houses are being put up. If, however, it would be considered out of place among the Vineries, Peach houses, &c., well then devote a separate spot to one such house; and if made at all suitable, I venture to say the results after successful treatment will be that Bananas will become one of the prime factors in the fruit department.

For rich, luscious fruit, commend me to some fine English-grown, thoroughly ripened pods; and, when they are cut from a cluster grown in the garden, there seems to be a double pleasure in eating them. Of course, I by no means seek to slight the grand clusters that are constantly coming over to our ports; they are fine, and if it were not for these we should seldom have a chance of tasting the Banana. *M. Cavendishii* is the one usually met with in gardens, and answers well for all purposes; but *M. paradisiaca*, a taller grower, with much longer leaves, is a most delicious fruit. It has scarcely as long a pod as the former, but it is somewhat stouter. Its height, however, somewhat militates against its culture for fruiting purposes. To those who may purpose growing Musas for fruit, I have in my mind's eye a most useful house adapted to this purpose, and any one putting up one such would find growth and fruiting follow in due course with comparative ease. This house is against the garden wall, somewhat

away from Vineries and Peach houses, though within easy reach of hot-water pipes. The dimensions are 40 ft. long by 7 ft. wide, the front being glass some 12 ft. in height, made of large and convenient doors 6 ft. high, the remaining 6 ft. being fixed sashes. This facilitates the removing of old soil and the placing in of fresh soil or mulching material when such are required. The ends too are of glass; and it will thus be seen that as the house faces the south it commands a large share of light and sunheat.

The inside space is just a 2-ft. path, being iron gratings laid on bricks, and the remaining 5-ft. border, running the whole length, is divided into squares of 5 ft., divided with loose brick partitions, into each of which a plant of Banana is planted. Some small drainage is necessary if the subsoil is sand or gravel, a greater amount of rubbish, brick ends, &c., being used if the under layer is of a clayey nature. Of good loam, say three parts, to one of well rotted manure, with a little gritty substance thrown in to keep the soil from getting too solid, is all that is needed. After placing the soil in the spaces, allowing it to become a trifle warm, the young plants as they are obtained should be planted in the centre, care being taken that they are not put in too deep. It is better to keep them up, as a top-dressing should be given as growth advances, and leaves and stem need large supplies of nourishment.

When once a house of this kind is secured there will be a constant supply of suckers to take the place of those that have fruited and been cut away. It is not wise to let the soil remain for more than two fruitings; it should then be all cleared out of the one or two separate spaces that are being renewed, and a fresh start made, when a new lease seems to be given, and the plants come away with great vigour. When the sunlight and heat are too strong some limewash scattered over the sides and roof are the best breaks that can be given for the intense rays. Abundance of water in the growing season and a high temperature at the same time are absolute essentials.—*W. Swan, Bystock, Exmouth.*

JUDGING AT HORTICULTURAL EXHIBITIONS.

ANYONE who takes a prominent part in judging at horticultural shows must be prepared to be severely criticised not only by the exhibitors but also by the general public, for to please all is simply impossible.

I am quite at one with your correspondent, Mr. M. Temple, in your issue for February 12th, page 379. As an exhibitor I care not who judges my exhibits providing they are practical men, and I am always satisfied with their decision; but I distinctly favour giving equal prizes taken after carefully examining the productions, either by pointing or otherwise, if they are considered of equal merit, and I consider it most unfair to do otherwise. I know it is urged by some that it is an easy way out of a difficulty. Allowing it to be so, surely it is just, and so long as it is my privilege and pleasure to act as a judge I shall certainly support the awarding of equal prizes when I consider it my duty to do so.

I have received equal prizes myself, and have never questioned the award. I will mention one instance which is still quite fresh in my memory. In 1881 when the Kingston Chrysanthemum Society was considered to be one of the most important, if not the most important, show of the kind then held, valuable prizes were offered for trained specimens, and some of the very best judges of the day were appointed to make the awards. The judges deputed to judge the plants were unable to come to a decision and the others were called in, the consequence being the awarding of equal first prizes, which the society generously paid in full, my opponent being my old friend and tutor, Mr. G. King, of Esher. We were both perfectly satisfied with the awards.—*Edwin Beckett, Aldenham House Gardens, Elstree.*

I did not see the article Mr. Temple refers to (page 379), but it is a puzzle to me how judges can find an equal first or second. It is as great a puzzle how they manage to award the prizes in any case "where there are different species tabled" or where it is only "a score each of Roses, Dahlias, Carnations, or Chrysanthemums," if each score contains different varieties, and give anything like an intelligent explanation of how they did it. I have no doubt Mr. Temple will make this clear to the humblest mind in his next article. He assumes that

everyone is satisfied with the present method of judging by points. Now, I think it is on this part of the subject that the greatest misunderstanding takes place. I would like to ask if these points were points of quality, and if one point in one subject was balanced against a similar point in an opposing subject, or if it is only a term used with no definite meaning, but simply used in a general way to mean that figures have been placed to the credit of each subject examined.

If this is so those points are merely figures to remind the judge of the opinions he had formed, and is only a measure of his opinion instead of a sum of qualities, and seeing that men's opinions vary as much as their faces, their judgments must vary in accordance with their opinions, and this is the cause of the "twaddle" that Mr. Temple refers to. There can be no uniformity of judgment till there is a uniformity of opinion, and there can be no uniformity of opinion till we have well defined rules for judging. [There is a small pamphlet of "Rules for Judging," Ed.] The principal cause of disputes at horticultural exhibitions is the attempt to balance qualities against each other which are not the same, and as long as this continues the judgments will be crude and unintelligible. Of course, the remedy for this is to have the same kind of exhibit competing against others of the same kind or variety.—*W. K.*

It is something fresh, to be sure, as related by Mr. Temple, to read of anyone who does not believe in giving equal firsts to equal points. When two and two do not make four, it is about time to be serious. But after all, it was perhaps a deviation from the usual twaddle. The centre of the laws of gravitation is balance—justice; but there are some who are more proud of being out of fulcrum than others of being in. My belief is that such an exposition of unequal judgment upon equal exhibits would do good by exciting pity for a second exhibitor, and wholesale indignation against the abettors and purveyors of their duty.—*A Judge.*

QUESTIONABLE EXHIBITS.

THE affairs of the National Chrysanthemum Society have been subjected of late to a good deal of criticism, and the discussion thus evoked may not be entirely lost as long as it is conducted in a fair and frank spirit. But does not *A Member of the N.C.S.* (p. 364 of THE GARDENING WORLD) go a step too far when he questions the honesty of certain proceedings? Any firm, no matter of what standing, has a perfect right to offer prizes for produce grown from its own seeds, and as perfect a right to make what conditions it likes to govern the competition, provided these conditions apply with equal force to all who enter.

Most people will admit that it is not a fair condition to rule that all produce entered in a competition for vegetables grown from seeds supplied by the firm giving the prizes shall become the property of the donors of the prizes; but what then? Surely if the conditions are not in accordance with the exhibitors' ideas of justice they have the remedy in their own hands, viz., to refrain from exhibiting in that class. There is no dishonesty in imposing any particular conditions, although there may be, and is in this case, *inexpediency.*

Secretary on p. 375 of last week's issue says that "the offering of these prizes leads to a great deal of dishonesty, and should not be encouraged."

Just so! but does not the jeweller who hangs up in his window a tempting selection of jewellery lead men to dishonesty by exciting their cupidity? but we do not shut up the jeweller's shop all the same, although we take steps to guard it.

Neither *Secretary* nor anyone else has a right to impugn the honesty of the gardeners who show, even in classes where the exhibits become the property of the donors of the prizes; indeed, it is only fair to such men to assume, in the lack of evidence to the contrary, that they have their employer's consent to exhibit in the class, and, of course, to abide by the conditions imposed.

Secretary says also that "some firms evidently consider this a cheap way of advertising." Of course it is advertising! what else could it be? what else could a business man expect it to be? but whether cheap or not is another question.

Meanwhile, it is not fair to doubt the honesty of either prize givers or prize winners upon no other foundation than an opinion, for this is a breach of

the laws that govern our country, as well as of the morally not less binding rules that hold society together.—*Fiat justitia.*

The winning exhibits to become the property of the donor is a stipulation which ought not to be tolerated and encouraged in any schedule; be the show what it may, big or little, the principle is the same.

Assuredly, committees in accepting donations admit it is a technical gain to them, and there leave it to the discretion of intending exhibitors to please themselves, but it is neither fair nor wise, and when exhibits are staged, the gardeners do so very often under protest.

I have many times spoken of this restriction, for it is neither giving, selling, nor buying. Only last year in judging the fruit at one show (the extra prizes were mostly of this so-called liberal class) I could not help but remark to my fellow judge that it was a cheap way of purchase, for most of the prize winning kinds would have fetched double the value in the market.—*A Judge.*

LOW-PRICED SEED.

THAT good seed and pedigree under equally good conditions naturally give the best results is incontestable, yet it requires some general insight into things before one can realise what is low, high, or a just position. Morality in explanations, descriptions, and commerce seems to be ignored by mutual consent, and men get so accustomed to misrepresentations that to be open and frank would be to almost break faith with one another.

I would neither condemn source nor seed as doubtful because it has a low selling quotation any more than I would guarantee a sound, costly pedigree animal to do well under a doubtful buyer. Starvation, unsuitable food, inferior conditions, poor, shallow, undrained and unweeded soils are equally as ruinous to all. Seedsmen are aware of these things, and as rightly give no warranty, expressed or implied, in their lists.

Yet there is a class of men who believe in the top price for everything, even for the same variety or pedigree. Indeed, I believe, there is more blame attaching to, and more mistakes are made by thick sowings, planting, and negligence in after cultivation than in all the bad seed put together.

It is certainly unfortunate when some have been at so much trouble and expense in manuring, preparation, &c., to find rubbish. The seed supplied may be good and sound, but *choice* of variety has been the mistake rather than an inferior price.

Cheapness and quality, a go-and-come-again policy in these days, is an adage not to be disparaged, and nothing is more likely to deter the dishonest seedsman than the fear of publicity which the supply of his own seeds will inevitably bring him.

In the seed trade there are some of the most conscientious and upright of men whose quotations are low-priced, yet who would scorn to send seed of doubtful quality.

Our seeds are now to hand. I take a sample quart of a standard sort of Peas at random, and this item alone is 25 and 50 per cent. lower than some. I stake my responsibility, and trust our seedsmen's reputation. Roguing out is quite right, but the expense and trouble are not all this. The fact is many cannot bear brief descriptions, simple lists, small expenses, nett and little profits, but do not scruple to take off their hats, and nearly bow down to the ground to things the opposite.—*B. Lockwood, Lindley.*

PLANTS RECENTLY CERTIFICATED.

THE undermentioned subjects were certificated by the Royal Horticultural Society on the 8th inst.

Orchid Committee.

LAELIA ANCEPS WADDONIENSIS, *Nov. var.*—In this a choice and valuable variety has been added to the list of white forms of *Laelia anceps*. It comes between the varieties *ashworthiana* and *hollidayana*, minus the blotch on the lip of the latter, which circumstance reduces it to the group of *L. a. vestalis*. The sepals are broad, and the elliptic petals white. The lip is white, with violet lines on a very pale yellow ground on the inner face of the side lobes on first expansion; but as the flower gets fully developed,

the violet lines fade to faint, nearly colourless striae, except a dark violet stripe on either side of the yellow disc. It is a delicately marked and very choice variety, well worth the First-class Certificate awarded it. Philip Crowley, Esq. (gardener, Mr. J. Harris), Waddon House, Croydon.

PHAIACALANTHE GRANDE, *Hyb. nov. bigen.*—The seed parent of this bigeneric hybrid was *Phaius grandifolius*, and the pollen parent *Calanthe Bryan*, itself a hybrid. A strong spike bore nine large flowers, the sepals and petals of which are creamy-white, with a purplish tint at the base. The rich purplish-red, projecting lip is a striking feature of a flower that was greatly admired by connoisseurs. Award of Merit. N. C. Cookson, Esq. (gardener, Mr. William Murray), Oakwood, Wylam-on-Tyne.

CALANTHE SPLENDENS, *hyb. nov. bigen.*—This bigeneric hybrid was raised from *Limatodes* crossed with *Calanthe Bryan*, and has a close affinity with *Calanthe Veitchii*. The flowers are large, of a rich rosy-carmine, and very handsome. Award of Merit. N. C. Cookson, Esq.

Floral Committee.

ANTHURIUM DR. LAWRENCE.—The large, heart-shaped spathes of this hybrid are similar in form to those of *A. andreaum*, which was one of the parents, but they are less rugose or wrinkled, and of a beautiful soft salmon colour. The spadix is yellow and ultimately changes to cream. First-class Certificate. Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain, Burford Lodge, Dorking. It is named in compliment to a son of Sir Trevor Lawrence.

Fruit and Vegetable Committee.

APPLE LORD HINDLIP.—The fruit of this Apple is of large size for a dessert variety, conical, deep yellow, shaded with red and marked with crimson. It is a good keeping Apple of excellent flavour, and having previously received an Award of Merit, was now voted a First-class Certificate. Mr. J. Watkins, Pomona Farm, Hereford.

PEAR PASSE CRASSANE.—The fruits of this late keeping Pear are of large size, pyriform, and heavily shaded with russet on a yellow ground. The flesh is juicy and melting except about the core, and of sweet, agreeable flavour. First-class Certificate. Roger Leigh, Esq. (gardener, Mr. G. Woodward), Barham Court, Maidstone.

CUCUMBER EVERY DAY.—The fruits of this variety are of medium length, but of even thickness almost from end to end, and of a beautiful dark green colour. It has been in bearing all the winter, and is a cross between Rochford's Market and All-the-Year-Round. Award of Merit. Her Majesty the Queen (gardener, Mr. Owen Thomas), Windsor.

Kitchen Garden Calendar.

IN sheltered situations, and on dry sandy soils, a sowing of early Carrots may now be made; but where the land is cold and stiff this had better be deferred for another fortnight. Though Carrots are hardy, and will withstand the frost, there is little or no advantage gained by sowing too soon where the land is wet and heavy, as the rains usually heat down such ground until the surface becomes so hard that the young plants have a difficulty in pushing through. On light soil there is this difference, instead of the surface becoming baked when dry weather sets in, the particles of earth do not run together, therefore the young plants are able to push their way through. Early Gem, Parisian Forcing, Early French Forcing, and Early Nantes are all good kinds, and may be sown in drills 6 in. apart.

A sowing of Early Milan Turnips may also be made on a warm border. The seed should be well protected from small birds, which are troublesome at this time of the year. A pinch of Lettuce, Early Cauliflower, and Brussels Sprouts may also be put in, as well as Radishes. The seed will not germinate very quickly, but the plants will be earlier than those from sowings made in the next month. Where the land is hot and dry in summer there is often some difficulty in getting good Cauliflower during August, but if a sowing be made now of Autumn Mammoth, Autumn Giant, Magnum Bonum, Walcheren, or the Pearl, and the plants put out in good time, before the dry weather sets in, fine, close, compact hearts may be had from the end of July onward.

In warm places in the South, Lettuce that was planted out in the autumn should be looked over, and where there are any blanks these should be filled up from the seed bed. Lettuces in this part of the country have never suffered so much during the winter, for the foliage was very tender owing to the mild autumn, and the foggy weather about Christmas took hold of them severely. With us it was not only those in the open ground that suffered, but plants in frames were killed in like manner. Where the soil is cold, planting had better be deferred for a few weeks yet, as we may possibly get some severe weather in the next month. Do not be in a hurry to transplant autumn-sown Onions, particularly on cold wet land. It is no uncommon thing to see the plants lifted out of the soil by the frost in March, if planting is done thus early; better by far leave them until the end of the next month in the seed beds.

Spring Cabbages are very forward this season, and should the weather continue mild, several of the varieties will be ready for use early in April. Those planted in September will be greatly benefitted by having a sprinkling of sulphate of ammonia or nitrate of soda. This should, however, not be allowed to come in contact with the foliage, but should be carefully put between the rows, to be hoed in when the surface is dry. Such manures soon dissolve when the soil is moist and are, therefore, quickly taken up by the roots.

Seakale cuttings may now be planted. We prefer doing this as digging proceeds, so as to prevent trampling on the ground afterwards. If sets have been made as previously advised, these can be planted in rows 2 ft. apart, allowing a distance of 9 in. or 10 in. between the sets according to the quality of the land. Lily White is a first-class variety which forces much easier than the old purple; it is, however, not quite such a strong grower unless the ground is extra good. The tops of the sets should be kept about 2 in. under the surface of the soil; by so doing they will be out of the reach of frost and will start more readily into growth. Pay special attention to all vegetables under glass, and see that none suffer for want of air. During mild, showery weather snails and slugs are very troublesome, especially to the young tender foliage of Carrots, Lettuce and Cauliflower, all of which they will devour with the greatest avidity before the young leaves are well through the soil. Dusting with lime, soot, or such things as will make them distasteful to their palates, will usually keep them off.—*Kitchen Gardener.*

The Orchid Grower's Calendar.

POTTING.—The potting shed for the next few weeks will be the scene of great activity, and as success depends in a great measure on doing things at the right time, it behoves us all to be ready with plenty of material for the work on hand, so that it may be done quickly and well. The preparation of the compost claims the attention of the thoughtful grower, for he knows by experience that Orchids as well as other plants like to have about their roots something that is sweet and nice, neither must it be wet and heavy, or on the other hand too dry. He, therefore, like ourselves, examines the peat and if (which is generally the case) it is too dry adopts some means to make it sufficiently moist for his purpose. If the compost is used in a dry state the water given the plant runs off instead of soaking through the whole, the consequence being that whilst the moss is sodden wet the peat is dust-dry just under the surface; such a state of things as this never suits the plants.

The way we manage is to wet the turves that are dust-dry and place them on the top of the stoke-hole furnace in the evening. The heat causes the moisture to penetrate the whole mass, so that when pulled to pieces next morning it is warm and in a fit state to use. With the sphagnum moss just the opposite is generally the case, and even were it not so the washing which is required to free it from the small slugs and their numerous eggs makes it so wet that it has to be dried before it can be used. It dries but slowly in an open shed, so that some other means have to be adopted or valuable time is wasted. The plan we find answers well is to spread it out evenly over the floors of the warm divisions at night. The heat from the hot water pipes will dry it sufficiently

that it may, after all the rubbish is picked out, be used with the peat.

In large establishments a heated potting-shed is generally provided, but where there is no such accommodation, it is advisable to do the potting in the house in which the plants are growing. A simple contrivance or make-shift is to get a box, knock out one of the sides, stand the box on the stage, and you have a nice little bench, which you can easily shift about. This is specially adapted for small houses and small plants. When large ones are dealt with, it may be best to lay a mat over the staging.

It will hardly be necessary for me to point out that the crocks for drainage and the pots or pans must be clean, the latter inside and out.

Everything having been got ready as mentioned, commence with those plants that have gone through a slight season of rest. *Cattleya labiata autumnalis*, for instance, should be repotted now. Those plants that are well-rooted and in a thriving condition may require a pot or pan one or two sizes larger, but those with few roots must be kept in as small pots as possible. The pretty little *Sophrontis grandiflora*, that has now done flowering, will be all the better for a bit of new stuff, also the white *Masdevallia tovarensis*. In the cool house there will be several plants that were not repotted in September that may be done at this season.

SHADING.—It is as well that the blinds should be fixed as soon as possible after the middle of the month, for the sun has some power already. Their use will depend on the position of the houses a great deal—one of our cool houses is very much exposed, so much so, that we had to throw mats on the roof last week.—C.

FRUIT UNDER GLASS.

THINNING EARLY GRAPES.—A start should be made betimes with the thinning of the berries on the pot Vines, for with the mild and bright weather they are moving at an unusual pace for the season. Keep a sharp look-out upon lateral growths, and pinch at the first leaf all that appear. The evaporating troughs must be kept filled with water, and the supply of moisture given by these assisted by frequent dampings down.

EARLY PERMANENT VINERY.—The Vines in this house are now in flower, and a drier atmosphere must accordingly be kept up. The sunny fore-half of February has largely made up for the comparatively sunless January, and the growths, with the foliage, have become much firmer and more substantial during the last fortnight. They were inclined to be weak previous to that date.

SUCCESSION VINERY.—Here the work of tying down the shoots in their places must be carried on. Considerable caution must be exercised in this part of the cultural routine. The amount of pressure put upon a shoot at one time should never be very great, and as every Vine has a trick of its own, so to speak, the shoots upon one standing far more without snapping out than those of another, too much care cannot be exercised. Make a running knot on the strings that hold the shoots so that pressure may be increased or decreased according to necessity.

EARLY PEACHES.—After the fruit has been set the syringe may be started to work again morning and afternoon. The work of disbudding too will claim immediate attention. It is not too much to say that disbudding is the most important part of the pruning of the trees, for if the latter are allowed to develop a lot more shoots than are necessary, they become heavily handicapped from the commencement of the season in comparison with others that are properly attended to in this respect. A very little reflection will suffice to convince the cultivator that it is bad practice to remove too many shoots at one time. The operation should therefore be spread over a week or two, allowing from four to five days to elapse between each distinct operation. As a rule two buds will be enough to leave to a small bearing shoot, although three may occasionally be necessary in order to cover the space. The lowest well-placed shoot must in all cases be left for succession, and may be trained in by the side of the bearing one for that purpose. It is also necessary to have a bud beyond the fruit near the apex of the bearing shoot in order to foster a flow of sap past the fruit. On bearing trees intermediate buds may be removed. A start may be made by taking out badly placed

buds, spreading the disbudding fairly equally over the whole area of the tree. For the present a temperature of 55° Fahr by night will be a safe one, a rise of about 10° being allowed on sunny days. Shut up the house early in the afternoon, which will obviate the necessity for so much fire-heat.

SUCCESSION HOUSE.—With the opening of the flowers the syringing must cease, and less water should be thrown about the walls and passages in order that the atmosphere may become sufficiently dry to admit of the easy dispersal of the pollen. The process of artificial pollination must be prosecuted vigorously, going over the flowers each day about noon. A rabbit's tail affixed to a light bamboo rod is the handiest tool to use. It should be borne in mind that a very light touch is sufficient to pick up the pollen from the anthers and transfer it to the stigma, and also that any bruising of the stigma from too heavy handling of the brush is almost sure to prove fatal to the incipient fruit.

EARLY CHERRIES.—As soon as the fruit is set a thorough syringing should be given the trees, which will clear from them all old blossoms, and fruits that have been but imperfectly set. From this time the regular syringings should be kept up until the fruit commences to colour. Meanwhile, attend to the stopping of shoots before they reach an unsightly length, for next year's crop has to be looked after as well as the present one. Take care to avoid draughts, but do not coddle the trees under any consideration, for a too high temperature at this stage would be very injurious.

SUCCESSION HOUSES.—In the second early house the trees are now in full bloom, and pollination, as in the case of Peaches, must be conducted artificially. A temperature of about 50° should be given during the night, with a 5° or 10° rise during the day according to circumstances. Air as freely as the day will permit, but do not open the ventilators on the north side of the house.

THE BORDERS in which Vines, Figs, Peaches, etc., are growing will now require the closest attention, for in the advanced houses the roots are very active, and a check for want of sufficient moisture, although easily enough given, would be attended with very serious consequences. Any water used should be warmed by the addition of hot water until it stands at a temperature of not less than 60° Fahr., and in the case of the earliest Vines if it is 5° or 8° warmer it will be all the better.—A. S. G.

THE SHERWOOD £10 10s. SILVER CUP FOR ANNUALS AND BIENNIALS.

THE details given on page 48 of the Royal Horticultural Society's "Arrangements, 1898," do not appear to some people sufficient, and various applicants have asked the following questions, which, with their answers, the president and council would be greatly obliged by your kindness in publishing for the information of others.

Q.—"The contents of each tube must consist of one variety only. Am I to understand that *Coreopsis grandiflora* and *C. Drummondii*, or *Nasturtium Cloth of Gold* and *N. Crimson King*, and so on may not be exhibited in the same tube?"
A.—"They may not."

Q.—"Are the tubes not to exceed 3 in. in diameter at the top side?" A.—"They must not exceed."

Q.—"The vases must be provided by exhibitors, and must not exceed 6 in. in diameter inside. Does this apply to the 'plain glass vases' only?" A.—"Yes. The tubes must not exceed 3 in. nor the vases 6 in."

Q.—"Who provides the tubes?" A.—"Exhibitor; unless he is content with the stoneware jars the society provides at all times."

Q.—"Will regulation XI. be enforced—all specimens must be the bona-fide property of and grown by exhibitor?" A.—"Yes."

Q.—"Must exhibitor stage, that is, arrange his own exhibit, or may he call in professional help?" A.—"A special person may not be procured for this special purpose. Exhibitor, or his gardener, or some member of the family of either must arrange exhibit."

Q.—"Can the exhibit be repeated?" A.—"Yes."

Q.—"Will other foliage be allowed?" A.—"Only the foliage of the variety itself."

Q.—"May grasses be mingled with flowers?" A.—"No."

GARDENING MISCELLANY.

ANEMONE JAPONICA COURONNE VIRGINALE. M. V. LEMOINE, of Nancy, France, is always eminently successful in the raising of new plants. That under notice is a double form of *Anemone japonica* having about four rows of petals, which show a small cluster of stamens in the centre when fully expanded. The flowers measure about 3½ ins. in diameter, and are white with a shade of rose as they begin to age. They are beautifully neat in form, being built up of a great number of relatively narrow petals after the style of the typical *A. japonica*. A good illustration of it in Möller's *Deutsche Gärtner Zeitung* for 1st January, shows a bunch of flowers and leaves.

BIRDS AND FRUIT BUDS.

WITH such an open and mild winter one would think that insect food could be had in plenty without resorting to the buds of Gooseberries and Currants; but in our case this does not seem to be so, for it is years since I noticed such depredations as sparrows and finches have done up to now. Although there is both wheat and barley-corn in the poultry trough just "over the garden wall," they are still militant. Perhaps, were it not for that corn, the bushes might have gone too ere now, and not have remained as standing mementoes for an order to thread them, and for fishing-net dealers. Who knows?—B. L.

LAW NOTE.

THE CATTLEYA ACLANDIAE ALBA ACTION.

IN the Court of Appeal on Tuesday last, Lord Justices A. L. Smith, Chitty, and Collins were engaged with the case of Ashworth v. Wells, which came before their lordships in the form of an application by the defendant to have the decision of the Divisional Court, directing a new trial, set aside on the ground that the judgment entered for him at trial before the learned County Court judge at Manchester was right, and ought to be affirmed.

Mr. Montagu Lush appeared for the appellant, and said that in 1895 Mr. Wells decided to sell by auction in London his valuable collection of Orchids. Among the purchasers was the plaintiff, who was also a well-known Orchid grower—indeed, it was stated that his collection was valued at something like £15,000 to £20,000. One of the lots Mr. Ashworth purchased was described in the catalogue as a "*Cattleya Aclandiae* alba, seven bulbs, three leads—the only known plant," which was eventually knocked down to him for twenty guineas.

The plant was placed among Mr. Ashworth's other Orchids, and, after two years' careful culture, produced not an "alba," or white flower, but a purple one. It was not disputed that the description in the catalogue was a warranty that it was an alba; that it having proved to be only a common *Cattleya Aclandiae*, the value of which was less than 10s., the plaintiff was entitled to have his money back.

The dispute between the parties was whether the plaintiff was right in claiming special damages for false warranty. The learned County-court judge, while being of opinion that if the Orchid in question had been an actual alba it would have been at the time of sale worth more than £50, held that until the plant had shown its real nature no Orchid grower would have given more than 20s. for it. As the defendant had paid that sum into court, together with £2 as compensation for the loss of time and trouble expended by the plaintiff during the two years upon its culture, he entered judgment for him with costs.

The plaintiff thereupon appealed to the Divisional Court, which decided that the County-court judge ought to have taken a wider view, and not have restricted the damages to the price which the plaintiff had given for it two years ago at the auction.

They therefore directed that the case should be sent back to be retried, and the damages assessed in accordance with their expression of opinion. Mr. Wells then appealed to the Court of Appeal.

Mr. C. A. Russell, Q.C., with whom was Mr. Tweedale, submitted that the appeal was ill-founded and that the opinion as to the basis upon which the measure of damages should be calculated, expressed

by the Divisional Court, was right. The County-court judge ought to have considered the value at which the Orchid would have arrived at by this time. The claim was reduced to £50 in order to give jurisdiction to the County-court to try the case. His judgment was also inconsistent, for he found as a fact that if the Orchid had been really an alba it would have been worth more than £50 at the time of sale. He asked, therefore, that their lordships would direct judgment to be entered for Mr. Ashworth for the full amount of his claim—£50—with costs, and save the expense of a new trial.

Lord Justice Smith, in the course of a long judgment, said the warranty was that this plant when it bloomed—if in fact it ever did bloom—would produce a white blossom. It was not a warranty that the plant would blossom or even that it would live. The plaintiff thought it knowing that he would have to keep it a considerable time in the ordinary course of events before there would be a flower. It was not suggested that if the cultivation had been different the plant would have produced a white instead of the purple flower. The County Court judge was wrong in deciding that Mr. Ashworth was only entitled to have his money back and was not entitled to claim anything more by way of special damage. The plaintiff claimed £50, although evidence was given to show that a white *Cattleya*, if one was ever found to exist, would be worth a very large sum. The Court would order judgment to be entered for the plaintiff for £50, with costs, and the defendant's appeal would be disallowed.

Lord Justice Chitty and Lord Justice Collins agreed to this judgment, and the appeal was dismissed.

OBITUARY.

MR. EDMUND TONKS.

THE ranks of amateur gardeners have been much depleted by the loss of Mr. Edmund Tonks, who passed away at his residence, Packwood Grange, Knowle, Birmingham, after having been for some considerable time an invalid. Mr. Tonks was originally intended for the legal profession, and with a view to that intent went to Oxford and obtained there his B.C.L. He was called to the Bar in 1847 but never practised, circumstances causing him to join his father in the business of Wm. Tonks & Sons, brass-founders, Birmingham. He took a keen interest in all that related to horticulture, and he took especial delight in dealing with problems connected with the diseases of plants. He was a Fellow of the Royal Horticultural Society, and read an interesting paper on "Canker in Fruit Trees" at the Apple and Pear Congress held at Chiswick in October, 1888. His *magnum opus* was, however, the preparation of a "General Index to the Latin names, and synonyms of the plants depicted in the first 107 volumes of Curtis's Botanical Magazine. Only 150 copies of this book were published. Mr. Tonks was much respected and loved by all who knew him. Candid and out-spoken to a fault he lived his life a kind-hearted, generous, and sympathetic gentleman. Of shrewd common sense he had no small store, and his range of reading was wide and thorough.

QUESTIONS AND ANSWERS

* * * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Growing Seakale.—T. C. Steel: For the general items concerning the planting of Seakale, see under "Kitchen Garden Calendar" in another column. For your part of the country it would be quite safe to plant Seakale roots or crowns sometime next month, earlier or later, according to the state of the weather and the dry and workable condition of the soil. It is perfectly hardy, so that all you have to do is to select a suitable time, when the ground is in working order. You could at the same time sow seeds in properly prepared and manured ground. The seeds will come up as the temperature rises and you can thin out the seedlings to 9 in. apart in rows 2 ft. asunder. In some parts of the country the seedlings get large enough to be fit for forcing in winter, but unless your soil is very good and the place sheltered you may not be able to accomplish this in a single season. After a second summer's growth, however, the crowns should be strong and excellent for forcing. To economise seed you might place three in a group 9 in. or 10 in. apart in the rows and leave the strongest after the seedlings show which are to make the most vigorous plants. Any gaps that may occur might be filled up with the seedlings lifted. If the crowns or roots give rise to more than one, the supernumerary ones may be broken off, and the remaining one will make useful stuff for forcing. Keep the ground frequently hoed so as to loosen the soil and keep down the weeds.

Calceolaria Cuttings.—A Subscriber: Calceolarias often suffer from a disease or some pathological ail-

ment which causes the leaves to blacken, commencing at the midrib and veins. After examining the specimens you sent us, we could see no symptoms of this form of decay as we usually find it. The skin of the stems was blackened and decayed, even in some cases while the interior of the stem was sound and green. Under the circumstances, we think the damping was due to the late period of the year at which the stems were struck. The crown of leaves was perfectly sound. The cuttings should have been inserted a month earlier so as to give them time to form a callus, and possibly a few roots before the cold weather set in. Of course, you were not responsible for their not being inserted at the proper time, owing to the circumstance you mention. You might be able to get a fresh stock in spring; and, in any case, you should on all future occasions use perfectly healthy cuttings as a safeguard against disease. It is advantageous to get a fresh stock now and again for this reason. When inserting them on future occasions, either in boxes or frames, use plenty of coarse river or silver sand, with some leaf-soil, make the compost quite firm, as it then holds less moisture, and is safer for the plants in winter.

Violets with curled leaves.—*H. D.*: We found a few red spiders on the leaves, but do not think they were the cause of the mischief. Green fly is often very troublesome to the young leaves and shoots of Violets, but we found none on the plant sent, which, however, bore only a few very small leaves. We are rather inclined to think that the foliage was destroyed in autumn by some of the many destructive fungoid pests that attack Violets, some in autumn and some in spring. You should have sent us specimens in autumn, however, as the enemy would have been present in a discernible stage. Although it may yet be hanging about on the plants the small and young leaves do not show anything characteristic by which the pest can be recognised. If the pest proves to be a fungus it will be necessary to get fresh stock, planting it on fresh ground at a distance from the present beds. You do not say whether you have planted any of the Violets on a hot-bed with the object of getting flowers from them. It is just possible that by selecting the healthiest plants and growing them on a gentle hot-bed, you would get them to grow and flower at a time when the fungus is resting. At all events it would be worth a trial. We should like to see specimens in autumn if you decide to keep the plants on for another year.

Apples for Flavour.—*Thos. Rixon*: You, as a gardener, can show Apples for the Veitch flavour prizes. Three varieties of Apples and three varieties of Pears may be sent, but not more; each variety should consist of six fruits. Apply to the Secretary, Royal Horticultural Society, 117, Victoria Street, S.W. The next meeting of the society is on March 8th.

Plans of Flower Beds.—*T. B.*: There are few, if any, books that give designs of flower beds such as you mention; but a good many designs used to be given in the "Guide to Hampton Court." There has been a change of superintendents lately, and we are not sure whether the Guide is continued, although we think it should be. You might apply to the Superintendent, Hampton Court Gardens, Middlesex, enquiring whether it is still in print. We believe it costs about 6d. We gave an illustration of chain bedding in THE GARDENING WORLD for September 2nd, 1897. You might send us your full address (not necessarily for publication) and we may be able to help you further, as opportunity offers.

Camellia Buds Dropping.—*Oak Tree*: We have little doubt that it is a question of treatment, over which, however, you may have little control. Plants in pots are very difficult to manage, especially after they get to some size. Some varieties are more liable to cast their buds than others, particularly early varieties that plump up very large buds at a time of the year when there is great liability to fluctuations of temperature and moisture. Genial mild weather often starts the buds into active growth, when a sudden change of temperature may act as a check and cause the buds to drop. The soil in the pots may get dry though it may appear fairly wet on the surface. We have known gardeners very unsuccessful with Camellias in pots; but who were very successful when they made up a bed of good loam and peat into which they planted the Camellias. The latter then made excellent growth with dark green foliage and flowered profusely. Could you manage to make up a bed for your plants even if it is only 2 ft. or 3 ft. wide and at least 2 ft. deep. Insure good drainage, and use a compost of peat and loam, half and half, broken up rather roughly and mixed with a good sprinkling of sand and lumps of charcoal about the size of walnuts. If the plants are well exposed to light, we have little doubt they will repay the trouble.

Names of Plants.—*D. W.*: 1, *Coelogyne cristata* lemoniana; 2, *Dendrobium wardianum* var.; 3, *Dendrobium crassinode*; 4, *Odontoglossum luteo-purpureum*; 5, *Cattleya Trianaei* var.—*A. T.*: 1, *Forsythia suspensa*; 2, *Libocedrus decurrens*; 3, *Eupatorium ianthinum*; 4, *Carex brunnea variegata*; 5, *Anemone Hepatica alba*; 6, *Chionodoxa Luciliae*.—*R. W.*: *Agepanthus umbellatus variegatus*.

Communications Received.—*Devonian*.—Waverley.—J. C., Chard—M. Temple.—D. Chisholm.—Omega.—A. F. Barron.—C. C. M. (next week).—Sutton & Sons.—G. L. Grant.—J. S.—W. L.—Rob. E. S.—G. Reardon.—M.—P. Q.—Ailsa.

TRADE CATALOGUES RECEIVED.

THE DEVON CHRYSANTHEMUM NURSERY, Perly Cross, Teignmouth.—Special Spring List of Dahlia and Chrysanthemum Novelties.
SUTTON & SONS, Reading, Berks.—Sutton's Farmers' Year Book, and Graziers' Manual.
W. ATLEE BURPEE & Co., Philadelphia, U. S. A.—Burpee's Manual of Thoroughbred Live Stock and Fancy Poultry.
DICKSONS, Limited, Seed Growers, &c., Chester.—Select Farm Seeds of Guaranteed Purity, Genuine-ness and Germination.

INDEX TO ADVERTISEMENTS.

| | |
|---------------------------------|--------------------------------|
| Auction Sales. | Insecticides. |
| Protheroe & Morris386 | Gishurst Compound385 |
| Sedgwick, Son & Weall386 | Manures. |
| Catalogues. | Chemical Union385 |
| Barr & Sons385 | Clay & Son385 |
| Bunyard & Co.385 | W. Colchester385 |
| Carter's388 | Homco385 |
| Dobbie & Co.386 | Native Guano Co.386 |
| J. Forbes388 | Ohlendorff's385 |
| Kelway & Son385 | Standens'387 |
| J. Peed & Sons387 | W. Thomson & Sons... 387 |
| F. Roemer385 | Webb & Sons396 |
| C. Sharpe & Co.387 | Miscellaneous. |
| Simpson & Son385 | British Carpet Weaving Co 400 |
| R. Smith & Co.388 | Canadian Emigration386 |
| Sutton & Sons385 | Epps's Cocoa386 |
| J. J. Tholen385 | Gishurstine385 |
| Chrysanthemums. | Juoo Cycles399 |
| Church Bros.385 | Smyth's Baskets385 |
| J. W. Cole385 | Netting. |
| Devon Nursery385 | Rigby, Wainwright & Co. 385 |
| R. Owen385 | H. Robinson385 |
| W. Wells385 | Orchids. |
| Florists' Flowers. | J. Cypher386 |
| J. D. Hamon387 | Leeds Orchid Co.385 |
| W. Hardy & Sons385 | W. L. Lewis & Co.385 |
| Kelway & Son385 | H. Longhurst385 |
| J. Laing & Sons387 | P. McArthur387 |
| McArthur & Co.387 | F. Sander & Co385 |
| J. Peed & Sons388 | Publications. |
| J. Wells385 | GARDENING WORLD399 |
| Flower Pots. | Ogilvie399 |
| Sankey & Sons, Ltd.386 | Roses. |
| Fruit Trees. | G. Bunyard & Co.389 |
| G. Bunyard & Co.385 | B. R. Cant388 |
| R. Smith & Co.387 | J. Cocker & Sons385 |
| Garden Sundries, &c. | R. Smith & Co.387 |
| J. Arnold385 | J. Walters387 |
| Essery's Coal400 | Seeds. |
| Eveson Coal and Coke Co 385 | Barr & Sons389 |
| Hirst, Brooke & Hirst.385 | J. R. Box385 |
| A. Outram386 | Carter's388 |
| Pinches' Labels386 | H. Eckford387 |
| H. G. Smyth385 | Fidler & Sons389 |
| Summer Cloud386 | Hurst & Son388 |
| Heating Apparatus. | McArthur & Co.387 |
| W. Cooper, Limited400 | I. Peed & Sons386 |
| Messenger & Co.387 | Simpson & Son385 |
| Thames Bank Iron Co ..385 | R. Smith & Co.387 |
| Horticultural Builders. | Sutton & Sons389 |
| J. Boyd & Sons385 | R. Sydenham385 |
| W. Cooper, Ltd.400 | B. S. Williams & Son ...388 |
| J. Gray385 | Webbs'389 |
| W. Richardson & Co387 | Situations, &c. 386 |
| J. Weeks & Co., Ltd.385 | Societies 386 |

WEBBS' FERTILISERS FOR VEGETABLES & FLOWERS

For **POTATOES** per bag of 28 lbs. .. 5/0
For **TOMATOES**, ditto .. 6/0
For **CHRYSANTHEMUMS**, ditto .. 7/6
For **LAWNS**, ditto .. 6/0
For **VINES**, ditto .. 6/0

WEBBS' COMPOUND MANURE.

The best general Manure for Vegetables and Flowers, 1 lb., 1s.; 3 lbs., 2s. 6d.; 7 lb., 5s.; 25 lbs. 13s.
Reduced rates for large quantities on application.

OUR MANURE WORKS AT SALTNEY, CHESTER, ARE 5 ACRES IN EXTENT.

WEBB & SONS,

The Queen's Seedsmen, WORDSLEY, STOURBRIDGE.

JUNO CYCLES ARE THE VERY BEST.

12 Equal Monthly Payments. LARGE DISCOUNT. CARRIAGE PAID.

THE JUNO EASY TERMS
LISTS POST FREE
CASH DISCOUNT & CARRIAGE PAID

JUNO Diamonds from £10.
16s. 8d. monthly.
JUNO Ladies' or Gent's Safety, £12 12s.
21s. monthly. £14 14s.
24s. 6d. monthly.
Write at once for new illustrated Juno List, Machines and accessories. Sent post free. See also 4/6 Ball Pedals, 4/4 Toe Clips 9d., Saddle Covers 1/-. All descriptions in stock. Lists free.

Metropolitan Machineists' Co., Ltd.
Steam Works, Show Rooms, Riding School, Offices—
75, 76, Bishopsgate Without, LONDON, E.C.
And at Piccadilly Circus, exactly opposite the Criterion, London, W.

Our new large JUNO Cycle Riding School for ladies and Gentlemen now open, 1,700 ft. Single lesson, 1/6; come till perfect, 10/6, or free to buyers of the Juno.

The Gardening World
ESTABLISHED 1884.
Price One Penny; Post Free, Three-halfpence
Subscription (including postage): 3 months, 1s. 8d.
6 months, 3s. 3d.; 12 months, 6s. 6d., prepaid.
Foreign Subscriptions to all countries in the Postal Union, 8s. 8d. per annum, prepaid.

SUBSCRIPTION FORM.
Please send me "THE GARDENING WORLD,"
for _____ months, commencing on _____

for which I enclose _____
Name _____
Address _____

Handsomely bound Volumes, I to XIII., 6s. 6d. each.
Covers for binding, 2s. 6d. each.

* * Advertisements for the current week, and also "Stop Orders," must reach the office not later than the first post on Wednesday Morning.

"GARDENING WORLD" Office, 1, Clement's Inn Strand, London, W.C.

19298. **COUPON.**
OGILVIE'S ENCYCLOPÆDIA OF USEFUL INFORMATION, AND WORLD'S ATLAS, (Published Price 25s).
16 COUPONS, AND 6d. WITH EACH.
Name _____
Address _____

COVENT GARDEN MARKET.

February 16th, 1898.

FRUIT.—AVERAGE WHOLESALE PRICES.

| | |
|--------------------------------|------------------------------|
| Apples ... per bushel 4 0 10 0 | Grapes, per lb. 2 0 3 6 |
| Cobbs 21 0 22 6 | Pine-apples |
| per 100 lbs. | —St. Michael's each 2 6 7 6 |

VEGETABLES.—AVERAGE WHOLESALE PRICES.

| | |
|---------------------------------|--------------------------------|
| Artichokes Globe doz. 2 0 0 0 | Herbs per bunch 0 2 |
| Asparagus, per bundle 3 0 8 0 | Horse Radish, bundle 1 0 2 0 |
| Beans, French, per | Lettuces ... per dozen 1 3 1 6 |
| per lb. 0 9 1 6 | Mushrooms, p. basket 1 0 1 6 |
| Beet per dozen 1 0 | Onions per bnnoh 0 4 0 6 |
| Brussels Sprouts | Parsley ... per bunch 0 3 |
| per half sieve 1 0 1 6 | Radishes... per dozen 1 0 1 3 |
| Cabbages ... per doz. 1 0 1 3 | Seakale... per basket 1 6 2 0 |
| Carrots ... per bunch 0 3 | Small salad, punnet 0 4 |
| Caniflowers doz. 2 0 3 0 | Spinach per bushel 2 0 3 0 |
| Celery per bundle 1 0 1 6 | Tomatoes per lb. 0 6 1 0 |
| Cucumbers per doz. 6 0 12 0 | Turnips ... per bun. 0 3 |
| Endive, French, doz. 1 6 2 0 | |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| | |
|--------------------------------|--------------------------------|
| Arum Lilies, 12 blms. 2 0 3 0 | Narcissus, white, |
| Asparagus Fern, bun. 1 6 3 0 | doz. huns. 1 0 2 0 |
| Azaleas, doz. sprays 0 6 0 9 | Orohlds, doz. blooms 1 6 0 9 |
| Bonvardias, per bun. 0 6 0 8 | Pelargoniums, 12 bun. 6 0 8 0 |
| Carnations doz. blms. 1 6 3 0 | Roses (Indoor), doz. 6 1 0 |
| Daffodils, per dozen 0 5 0 9 | Tea, white, doz. 1 0 2 0 |
| Enocharis ... per doz 3 0 6 0 | Perle 1 6 4 0 |
| Gardenias ... per doz. 6 0 9 0 | Safrano 1 0 2 0 |
| Geranium, scarlet, | (English), |
| doz. bunches 4 0 6 0 | Pink Roses, doz. 2 6 6 0 |
| Lilium longiflorum | Primroses, doz. bun. 1 0 1 6 |
| per doz. 4 0 6 0 | Smilax, per bunch ... 1 6 2 6 |
| Lilly of the Valley doz. | Snowdrops, 10z. bun. 0 9 1 6 |
| sprays 0 6 1 3 | Tuberose, doz. |
| Lilac (French) per | blooms ... 1 0 1 6 |
| bunch 2 0 4 6 | Tulips, various, doz. 0 6 1 3 |
| Marguerites, 12 bun. 2 0 4 0 | Violets (Parma), per |
| Marienhal Fern, 12bs. 4 0 8 0 | bunch 3 0 4 0 |
| Mimosa, French, bun. 0 9 1 0 | doz. bun. 0 9 2 0 |
| | Wallflowers, doz. bun. 4 0 6 0 |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES.

| | |
|-----------------------------------|---------------------------------|
| Arbor Vitae, per doz. 12 0 36 0 | Ficus elastica, each 1 0 5 0 |
| Aspidistra, doz. 18 0 36 0 | Foliage Plants, var., |
| " speolmen 5 0 10 0 | each 1 0 5 0 |
| Azalea, per doz. 24 0 36 0 | Hyaclaths, doz. pots 6 0 12 0 |
| Cineraria, per doz. 6 0 9 0 | Lilium Harrissii, |
| Cyclamens, per doz. 12 0 18 0 | per pot 2 0 4 0 |
| Diaeaena, various, | Lycopodiums, doz. 3 0 4 0 |
| per doz. 12 0 30 0 | Marguerite Daisy, doz. 0 9 0 9 |
| Dracaena viridis, doz. 9 0 18 0 | Myrtles, doz. 6 0 9 0 |
| Euonymus, var. doz. 6 0 18 0 | Palms in variety, each 1 0 15 0 |
| Evergreens, in var. doz. 6 0 24 0 | Palms, Specimen ... 21 0 63 0 |
| Erica Hyemalis p. doz. 9 0 15 0 | Pelargoniums |
| Erica Gracilis, per doz. 6 0 9 0 | Scarlets per doz 2 6 6 0 |
| Erica, various, per doz. 8 0 12 0 | Tulips, various, doz. 1 0 1 9 |
| Ferns, in var., per doz. 4 0 12 0 | Zenesta, per doz. 8 0 12 0 |
| Ferns, small, per 100 4 0 6 0 | |

DIRECT FROM COLLIERY. PATRONISED BY HIS GRACE EARL WINCHILSEA.

GUARANTEED 25 PER CENT. MORE DURABLE THAN CHEAPER SORTS.

Used at the Mansions and Gardens of the NOBILITY and GENTRY, and at the principal Maltings in United Kingdom.
 (DOWSON'S PLANT) AND WATER GAS FOR STEAM. HOP AND ORCHID GROWERS AND NURSERYMEN.

ESSERY'S ORIGINAL ANTHRACITE.

Machine Cut. Three sizes ready for use. Hard and Large, entirely without Smoke, superseding Coke in every respect. Effecting a very important Saving by constant combustion. Much greater Heat, Durability, Cleanliness, and Diminution of Labour. Autograph Certificates. References. First Cost Prices.

Can be had only from **WILLIAM H. ESSERY, Pantyffynon Collieries, SWANSEA.**
 Established 1848. N.B.—Not my Coal unless delivered in trucks painted "William H. Essery."

"Hardy Ornamental Flowering Trees & Shrubs."

SECOND AND CHEAP EDITION, By A. D. WEBSTER, Price 2s.; post free, 2s. 3d.

"GARDENING WORLD" OFFICE, 1, Clement's Inn, STRAND, LONDON.

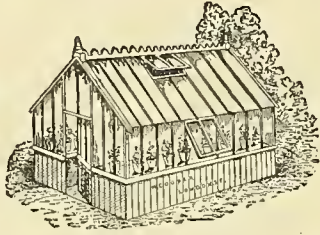
W. COOPER, Ltd., Horticultural Providers, 755, OLD KENT ROAD, LONDON, S.E.

Amateur

Span-Roof
Greenhouse

Everything Complete,
and Ready for erect-
ing.

From £2 16s.



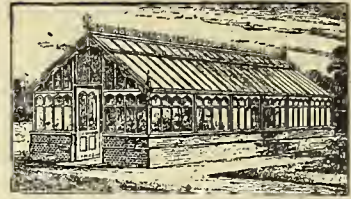
"Cooper" Cycles.



Twelve Months' Warranty.

Latest design frame, large weldless steel tubes, ball bearings, tangent wheels, and break and mud guards. Gent's from £5 10s; Ladies', with dress and gear guards, from £6.

AGENTS WANTED.



Span-Roof
Conservatory.

Substantially and
Handsome
Built.

See No. 19 in List.

Improved

Poultry House.



5 ft. x 4 ft. ... 35/-
6 ft. x 4 ft. ... 40/-
For other Sizes see List,
Post Free.

Span-Roof

Poultry House.



5 ft. x 4 ft. ... 20/-
6 ft. x 4 ft. ... 24/-
7 ft. x 5 ft. ... 27/-
9 ft. x 6 ft. ... 32/-

**Estimate for every descrip-
tion of Horticultural Work
Free on Application.**



Cucumber
Frames.

One Light.
4 ft. x 3 ft., 17/-
6 ft. x 4 ft., 28/-
Two Lights.
6 ft. x 4 ft., 30/-
8 ft. x 6 ft., 50/-

Safety
Chicken Coop.
Coop only, 3/9 each.
6 for 21/-; 12 for 38/-.
3 ft. Movable Wire Run,
2/3 each extra.



Latest Designs in Rustic Work.



Made in Sections
complete, £33 5s.

Large Variety
in Stock.

This House £4,
Complete.



Illustrated Catalogue, containing 364 Pages and 1,200 Illustrations, post free on application.

BE SURE TO CUT

**10,000 RUGS
GIVEN AWAY!**

GUARANTEED GENUINE BARGAINS.

THIS PHENOMENAL OFFER is made to the readers of THE GARDENING WORLD only. On receipt of Postal Order for 6s., or 74 stamps, we will forward DIRECT FROM OUR LOOMS to your address one of our 10s. 6d. genuine SEAMLESS WOVEN, REVERSIBLE CARPETS, suitable for Drawing-Room, Dining-room, Bed-room, &c., handsomely bordered and woven in 30 different patterns and art colourings to suit all requirements, and LARGE ENOUGH TO COVER ANY ORDINARY-SIZED ROOM. These Carpets will be sold as an advertisement for the goods of the British Carpet Weaving Company Below the Actual Cost of Production. They are made of material equal to wool, and being a speciality of our own, can only be obtained direct from our Looms, thus saving the purchasers all middle profits. Over 200,000 sold during the past twelve months.

GIVEN AWAY.—With every Carpet we shall ABSOLUTELY GIVE AWAY a very handsome RUG to match, or we will send TWO CARPETS and TWO RUGS for 10s. 6d.

MONEY WILLINGLY RETURNED IF NOT APPROVED.

Thousands of Repeat Orders and Unsolicited Testimonials Received

"St. Peter's, Jersey.
Gentlemen,—I received the Carpets quite safely, and must say that I am delighted with them, and shall do my utmost to recommend them. I really do not know however they could be made for the money.
Yours truly, "J. INGLIS."

"29, Lichfield Road, Cricklewood, N.W.
Dear Sir,—The Carpets and Hearthrug came safely to hand, and are eminently satisfactory. You may imagine how well satisfied I am when I want you please to send me the following goods, &c.
Yours Truly, E. H. HILTON."

SPECIAL NOTE. This offer is made to the owing to premises being required by the London County Council for Street Improvements. All Goods must be cleared Regardless of Cost.

All orders despatched same day as received. Cheques and Postal Orders to be crossed Union Bank, and made payable to J. HARGREAVES. (Estab. 1872.) Address—

THE BRITISH CARPET WEAVING CO., 31, OLD ST., LONDON, E.C.

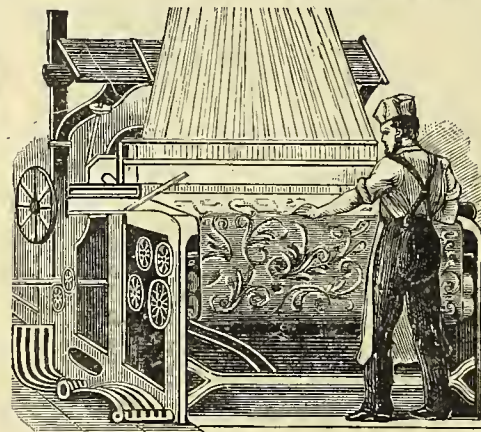
NOT APPEAR AGAIN

Gigantic Removal Sale

OF OUR WORLD-RENOVED

BRUSSELETTE CARPETS.

ADMITTEDLY THE CHEAPEST IN THE WORLD
Seamless, Woven, and Reversible, Rich Turkey Patterns and Colourings, Superior Quality, with Handsome Border to Match, a Marvel of Excellence and Beauty.



SIZES AND PRICES.

| No. | ft.in. | ft.in. | Sale Price. | Former Price. |
|-----|--------|---------|-------------|---------------|
| 1 | 9 0 | by 6 0 | 5 6 | 9 0 |
| 2 | 9 0 | by 7 6 | 7 0 | 11 0 |
| 3 | 9 0 | by 9 0 | 8 6 | 13 6 |
| 4 | 10 6 | by 7 6 | 8 9 | 13 9 |
| 5 | 10 6 | by 9 0 | 10 0 | 15 6 |
| 6 | 12 0 | by 9 0 | 11 6 | 18 0 |
| 7 | 10 6 | by 10 6 | 12 0 | 18 6 |
| 8 | 12 0 | by 10 6 | 13 6 | 20 6 |
| 9 | 15 0 | by 9 0 | 14 3 | 22 6 |
| 10 | 13 6 | by 10 6 | 15 3 | 24 0 |
| 11 | 12 0 | by 12 0 | 15 3 | 24 0 |
| 12 | 13 6 | by 12 0 | 17 0 | 27 0 |
| 13 | 15 0 | by 12 0 | 19 0 | 32 0 |
| 14 | 18 0 | by 12 0 | 22 9 | 36 0 |
| 15 | 21 0 | by 12 0 | 26 0 | 42 0 |

These Carpets are splendid imitations of Real Brussels Carpets, the designs having been carefully copied from the originals, both as regards colourings and patterns, so that when in use it is almost impossible, except by close scrutiny, to detect the difference. All designs are registered, and deservedly considered Works of Art. We can confidently recommend them for use in the Dining and Drawing Rooms, or any rooms and landings where hard wear is a necessity.

We will supply any sized Carpet at 1s. 2d. per yard. Estimates given free on receipt of size.

GIVEN AWAY.

As an advertisement for the introduction of these goods to all readers of THE GARDENING WORLD, we have decided to give away to every purchaser a very handsomely woven Hearthrug, 6 ft. long and 3 ft. wide, to match Carpets in Colours, &c.

Thousands of Repeat Orders and Unsolicited Testimonials Received.

SATISFACTION GUARANTEED OR MONEY WILLINGLY RETURNED.

WEBBS' BOXES OF FLORAL GEMS

For the Gardens of Ladies & Amateurs

Contain Collections that are highly desirable to every admirer of an abundant succession of exquisite bloom, as they consist of the choicest and most universal favourites of the garden, liberally arranged for the various prices.

WEBBS' 10s. 6d. BOX CONTAINS :

- | | |
|---|--|
| 12 vars. Half-hardy and Tender Annuals. | 1 pkt. Double Zinnia Elegans. |
| 6 " Popular Hardy Perennials. | ½ oz. Large-flowering Mignonette. |
| 8 " Pæony-flowered Aster | 1 " Sweet Pea, mixed. |
| 12 " Showy Hardy Annuals | 3 vars. Ornamental Grasses, for winter bouquets. |
| 1 pkt. Petunia, mixed. | 3 " Everlasting Flowers, for winter bouquets. |
| 6 vars. German Ten-week Stock. | 1 pkt. Balsam, choice mixed. |

Other Boxes at 2/6, 5/-, 7/6, 15/-, 21/-, 31/6, 42/- and 63/- each. Boxes and Carriage Free.

Webbs' Spring Catalogue, Post free, 1s.

WEBBS,
Wordsley, Stourbridge.

BARR'S SEEDS

OF FINEST SELECTED STRAINS AND TESTED GROWTH

BARR'S 21/- COLLECTION OF VEGETABLE SEEDS

Will give a constant supply of Vegetables all the year round. The Seeds are all of the most approved varieties, and, as will be seen, the utmost liberality has been evinced.

- | | |
|------------------------------------|----------------------|
| 14 pints Peas | 1 packet End ve |
| 4 " Broad Beans | 4 packets Lettuce |
| 1 pint Dwarf French Beans | 1 packet Leek |
| 1 pint Scarlet Runners | 1 " Melon |
| 1 packet Beet | 4 oz. Mustard |
| 1 " Borecole | 4 packets Onion |
| 3 packets Broccoli | 1 oz. Parsnip |
| 1 packet Brussels Sprouts | 3½ oz. Radish |
| 3 packets Cabbage | 1 packet Salsafy |
| 1 packet Colewort | 1 " Scorzonera |
| 1 " Cabbage Savoy | 4 oz. Spinach |
| 2½ oz. Carrot | 3 oz. Turnip |
| 2 packets Celery | 1 packet Tomato |
| 1 packet Cauliflower | 1 " Vegetable Marrow |
| 3 oz. Cress | 1 packet Thyme |
| 1 packet Cress, American or Winter | 1 " Pot Majoram |
| 3 packets Cucumber | 1 " Summer Savory |
| | 1 " Parsley |

Other Collections, 12/6, 42/-, to 105/-.

All Seeds sent Carriage Paid on receipt of remittance.

BARR and SONS,
12 & 13 KING ST., COYENT GARDEN, LONDON.

VEITCH'S GENUINE SEEDS



VEITCH'S CHELSEA GEM PEA.

First-class Certificate R.H.S.

The earliest dwarf wrinkled variety, and a much larger cropper than any other dwarf sort. Of splendid table quality. Particularly suitable for forcing and for very early use. Per Quart, 2s.

VEITCH'S CRITERION PEA.

A magnificent variety of robust constitution, very free branching habit, and an abundant cropper; one of the best for exhibition. Per Quart, 2s.

VEITCH'S AUTOCRAT PEA.

First-class Certificate R.H.S.

A grand blue wrinkled Marrow for late use, and a decided improvement upon all old varieties of the same class. Per Quart, 2s. 6d.

For full descriptions of the above, and other Choice NOVELTIES, see SEED CATALOGUE for 1898, forwarded Post Free on Application.

JAMES VEITCH & SONS, Ltd.,
ROYAL EXOTIC NURSERY,
Chelsea, London, S.W.

FIDLERS' SEEDS

GAINED IN 1896

IN OPEN COMPETITION, NEARLY
1,000 FIRST PRIZES.

If you want to

Win Prizes, be first in the market, and have the Best Selection of Vegetables and Flowers.

BUY FIDLERS' SEEDS

Only One Quality
THE BEST.

And Prices Lower than other Houses in the Trade.

Fidlers' give value in Seeds, not in Paper.

FULL DESCRIPTIVE LIST

Free to all upon application to

FIDLER & SONS, SEED GROWERS, READING.

SPECIALITIES.

TOMATOS! TOMATOS!

AUSTIN'S

"ECLIPSE" and "COMET."

Acknowledged to be the best market varieties in existence, and have maintained their high reputation when many so-called wonders have been discarded.

Each variety, 1/- per packet.

Exhibition Parsley, unexcelled, superb strain, from exhibition plants, per pkt. 6d., and 1/-.

Austin & McAslan, Seed Merchants, Glasgow.
ESTABLISHED 1717



THE MELON OF THE SEASON.

VEITCH'S TAUNTON HERO.

White fleshed, nearly round, lightly netted, bright golden-yellow, grand flavour, and very rich aroma. A strong grower and free setter, and does equally well in a Melon house or a cold frame.

Eleven First Prizes at West of England Shows.

Per Packet, 1s. 6d. and 2s. 6d.

THE CUCUMBER OF THE SEASON.

VEITCH'S WESTERN

WONDER.

Very handsome, dark green, good size and superior flavour. Easily grown, and a wonderfully free cropper.

Per Packet, 1s. 6d.

ROBERT VEITCH & SON,
EXETER.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, FEBRUARY 26th, 1898.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, February 28th.—Annual Meeting of the National Chrysanthemum Society, at Anderton's Hotel, Fleet Street, E.C., at 7 p.m.

TUESDAY, March 1st.—Sale of Roses, greenhouse, and hardy plants, by Messrs. Protheroe and Morris.

WEDNESDAY, March 2nd.—Sale of Lilliums, Roses, and herbaceous plants, by Messrs. Protheroe and Morris.

FRIDAY, March 4th.—Sale of Imported Brazilian and Mexican Orchids, by Messrs. Protheroe and Morris.

NOVELTIES IN VEGETABLES.—The world will never grow old and effete so long as something new can be raised in the way of plant life, whether fruit, flower or vegetable. In this week's issue we make an attempt to review a number of the year's novelties in vegetables. Judging by the number of awards made to ornamental plants and flowers, including Orchids, last year by the Royal Horticultural Society, the palm must be given to this branch of gardening as that in which the greatest activity is displayed in the production of novelties. In the case of Orchids, however, apart from the raising of hybrids, a large number of the new things consist of importations of new finds rather than the production of novelties. Amongst vegetables the field is greatly limited by the fact that human beings cannot utilise a thousandth part of those plants as food, which the eye can admire. It may be remarked that new vegetables are introduced from time to time from more or less distant parts of the world, but they fail to take the fancy of the British public. Even where a good many give these new things a trial, they gradually fall away into desue-

tude and oblivion. Many consider the fresh introductions as inferior to the vegetables we already possess; though in some cases we are charitable enough to consider the verdict given as a matter of opinion or largely due to an acquired taste. The people from whom we get these things may think differently; while in certain cases our climate may be, and sometimes undoubtedly is the ruling factor in the case. In the case of fruits, moreover, there are many exotic kinds for which the community has a decided liking, and some of them are grown to a greater or less extent. World wide inter-communication, rapid transit and artificial means of preserving fruits during the voyage, will tend more and more to bring these things to our doors at less cost than it would take to grow them here.

The above applies only to a small extent in the case of green vegetables, and that only to early vegetables grown in the Channel Islands and neighbouring parts of the Continent. Furthermore, those vegetables are more or less closely identical in kind with our own. Taking all these facts into consideration it will be seen that the production of new vegetables consists chiefly in raising new and improved varieties of those we already possess. For the more or less ancient origination of our vegetables we are indebted to the Continent for the most of them. Cultivation as an art is older upon the Continent, than on this island, particularly on the shores of the Mediterranean, where many of the more important types, exclusive of Potatos, Tomatos, Dwarf Beans and Scarlet Runners were in common use before cultivation had made much, if any, headway in the British Islands. Nevertheless, we must not forget that the botanical or wild species of many of our most common vegetables are natives, or at least wild, in this country.

During the past year, as, indeed, during several previous ones, great activity has been displayed in the raising of new varieties of Peas. Nothing so important amongst Peas has been raised since the hybridising of the Garden with the Field Pea gave rise to the wrinkled marrow type. Since then, however, the modern race of that breed has been vastly improved and practically evolved to the present state of perfection with which mostly every gardener is familiar. There is no telling what the next great leap amongst Peas may be, but we should like to witness the evolution of a race as self-supporting as a field of wheat, and as tall as the average growth of that cereal. True, we have dwarf varieties which require no staking, but the crop they produce is limited by comparison with that of the taller growing varieties which soon fall over and lie upon the ground, while in most cases the haulm is actually restricted or shortened if not supported in the field. We can scarcely imagine the impetus that would be given to the cultivation of Peas by the market grower as well as gardeners in private establishments, were a race of self-supporting Peas (say about 3 ft. high) to become a reality in the near future. By a process of intense culture in garden and field such a quantity of Peas could be raised that the actual area under crop need not be greatly increased; while, on the other hand, the absence of any necessity for staking would so lessen the cost of production as to bring this esteemed and nutritious vegetable within reach of the poorest.

A great and wide-spread interest is still manifested in the raising of new varieties of Potatos; and, indeed, this will always continue to be so while existing sorts tend to degenerate after a number of years of cultivation, and while they remain liable to be ravaged by the Potato disease. The chief aims are to obtain shapely tubers of

large size, good qualities, and possessed of heavy cropping and disease-resisting properties. We remember many old kinds possessing most of these recommendations, except the last named, that have now disappeared from cultivation. Some of them maintained a lingering existence for many years, owing as much to the sentiment of cultivators for the memory of old friends, as to any real benefit they derived from their vanishing favourites. Tomatos are equally if not more liable to degenerate as Potatos. Certain students of the subject reckon that the life of a variety is limited to ten years, after which it is either very inferior or a different thing altogether. Great earnestness still prevails amongst cultivators in raising new sorts. A large number of new Melons, obtained by the crossing of existing varieties, continues to be raised. Flavour and good qualities generally seem to be the chief incentives to their production, while other inducements are no doubt active. Medium sized rather than fruits of gross dimensions are generally the aim of modern raisers, and this is to be commended. Many cultivators also take pride in raising and exhibiting new seedling Cucumbers, by crossing old favourites with the object of combining the good qualities of the parents. Dwarf or French Beans and Scarlet Runners are not neglected. Cabbages, Cauliflower, Broccoli, Turnips, and, indeed, the Brassica tribe generally, receive due attention. The maintenance of the quality of the different strains will always necessitate a considerable amount of attention in the matter of repeated selection, and the keeping of the seed crops sufficiently far apart so as to be beyond the influence of bees and other insects. The unstable character of the Brassica tribe necessitates eternal vigilance on the part of the seed grower.

ROYAL GARDENERS' ORPHAN FUND.—The annual general meeting of this charity is again a thing of the past, having taken place on the 18th inst. It was much better attended than in 1897, and was acknowledged to be in every way a much more successful meeting than on last occasion when, it may be remembered, the whole of the ten candidates were placed on the list of those receiving support from the Fund, and that too without election by way of commemorating the sixtieth year of the Queen's reign. The excitement attendant upon an election has always the effect of drawing together a greater number of those interested in the welfare of the orphans, than the mere perfunctory business of placing their names upon the list. Altogether there were eighteen candidates, of whom the executive committee resolved to elect nine, that is, one-half of the number, to the benefits of the Fund. The highest number of votes polled for any one child was 349 in a most deserving case, and the lowest 19. The total number of votes recorded was 3,157, exclusive of a solitary spoiled vote. This indicates much more careful working on the part of voters than in the case of the other great charity recently reported by us. After the nine successful candidates were declared duly elected as a result of the polling, the next highest candidate was allocated to the benefits of the interest on the J. W. Thomson Trust. The chairman, after having moved the adoption of the report, raised the question of how many children, belonging to one and the same family, might be elected to the benefits of the Royal Gardeners' Orphan Fund during any one year. He spoke of this not in his capacity as chairman, but as a private individual, and suggested that the question might be brought forward and discussed at the next annual general meeting. A more detailed report will be given next week.

Novelties in Vegetables will be continued in our issue for next week, as a number of them have been crowded out.

The Reindeer of Norway, according to Dr. Nansen, will eat nothing but Lichens which grow in Polar regions, and are, therefore, useless for carrying relief to Klondyke.

Mr. William Milne, presently engaged as inside foreman at Lanfine Gardens, Newmilns, Ayrshire, has been engaged as head gardener to F. G. McAndrew, Esq, Knock Castle, Largs, Ayrshire. Mr. Milne, who enters on his new duties on 1st April, leaves Lanfine with the best wishes of all with whom he came in contact.

National Chrysanthemum Society.—The annual general meeting of the members of the above society will take place at Anderton's Hotel, Fleet Street, E.C., on Monday, February 28th next, at seven o'clock, to receive the committee's annual report and statement of accounts; to elect president and vice-president, officers and committee for the year ensuing; to consider certain amendments to the rules; and to transact such business as pertains to the annual general meeting. The attendance of all members is particularly requested.—*Richard Dean, General Secretary.*

Lewes Chrysanthemum Society.—The annual dinner of the Lewes and District Chrysanthemum Society took place at the King's Head, Southover, on the evening of the 8th inst. Alderman Jos. Farncombe occupied the chair. Mr. Prinsep, in proposing "The Lewes Chrysanthemum Society, and the Honorary Members," spoke of the advance made by the society during the years that he had been connected with it. The Chrysanthemums at last year's show would have done credit to any place in the kingdom, but the vegetables were not so well up to the mark. The chairman, who is also president of the society, acknowledged the toast. Other toasts followed. A recitation given by Councillor Lenny, and songs by Messrs. Meux, Bedford, Briggs, Stidworthy, Watkins, Eade, Hunt, and Jupp, added considerably to the enjoyment and success of the evening.

Shropshire Horticultural Society.—The schedule of prizes for the projected spring and summer shows has just been issued by the society. The spring show is fixed for March 29th, for which entries close on March 26th. There are forty classes in this part of the schedule distributed amongst Orchids, Cinerarias, Primulas, bulbs, and miscellaneous collections of spring flowering plants. The summer show is to take place on August 17th and 18th, and entries must be received for it not later than noon August 12th. At this show provision is made for no fewer than 168 classes, which are pretty equally divided amongst plants, flowers, fruit, and vegetables. Numerous special prizes are offered from various sources, and if magnitude of preparation counts for anything the show should be an even greater success than formerly. The prizes in the schedule amount to £950, exclusive of gold and silver medals, which will also represent a tidy little sum. The coming floral fête of 1898 will be the 24th held by the society.

International Horticultural Exhibition at Ghent.—The fourteenth International Horticultural Exhibition is to be celebrated at Ghent, from April 16th to April 24th next, inclusive. The exhibition is held under the auspices of the *Société Royale d'Agriculture et de Botanique de Gand*, and is the 163rd exhibition of this society. Amateurs and trade growers, as well as public Botanic Gardens both of Belgium and other countries, are cordially invited to take part. A programme or schedule of the classes has been issued by the society, from which it appears that prizes are offered in no fewer than 716 classes. The prizes consist of large and small gold, silver-gilt, and silver medals, some of them being prettily mounted or framed in appropriate cases. The exhibits will range through stove and greenhouse, miscellaneous flowering and foliage plants, Orchids, Palms, Cycads, Pandanads, Ferns, herbaceous and hardy plants, succulents, Conifers, forced fruits, cut flowers, etc. These exhibits are divided into twenty-eight groups. The jury of examination will consist of well-known gentlemen, skilled in the various branches of horticulture.

The Biggest Thing on Earth in Parks.—Yellowstone National Park in north-western Wyoming, U.S.A. It has an area of 3,312 square miles.

Preston and Fulwood Gardeners.—At the last monthly meeting the members of this institution were favoured with a paper on "Seeds," by Mr. J. Roberts. Alderman Woods filled the chair. The lecturer dealt in an able manner with the common requirements, growth, and substance of seeds, illustrating his remarks by samples of various seeds in different stages of germination. Mr. Roberts spoke of the requirements of seeds as being air, water, and soil. He referred to the process of malting barley in which the starch contained in the seed was converted into sugar by the action of a ferment. He spoke, too, of the essential constituents of plants, and of the method by which they obtained them from the air and the soil, in the latter case by the action of water. A brisk discussion took place at the close, and many questions were asked. The lecturer subsequently replied to these.

The Swanley College.—The women's department of this famous horticultural training school continues to flourish apace. In the report for the year 1897 just issued by the council of the college reference is made to the fact that so far from the ranks of the gardening profession being overcrowded with women, remunerative employment has been found for all students who were duly qualified, and that the demand is still in excess of the supply. Miss Gulvin, one of the students first employed at Kew, has accepted a responsible post with several gardeners under her, of whom Miss Groome, another Swanley student is one. Miss Hutchings is still at Kew, and two others are in training there. Edinburgh Botanic Gardens have also been opened to two women gardeners. Other students of the college who have done well include Miss Smith, who is still at work at Lady Henry Somerset's Industrial Farm Colony at Duxhurst, where she organises and directs the horticultural work; Miss Prior, who is directing and instructing in gardening the patients at the Hale Convalescent Home; Miss Agar, who is at the Wycombe Abbey School as head gardener; Miss Clark, who has been teaching botany at the Princess Helena College, Ealing; Miss Morrison, who has been employed in laying out gardens in London; Miss Atkey, who has been employed in planting an orchard in Suffolk; and Miss Windermere and Miss Cope, who have been appointed to lecture on bee-keeping and London trees respectively.

The Metropolitan Public Gardens Association has just issued its 15th annual report. This runs to a pamphlet of 116 pages dealing with the work of the association. A map of London and its suburbs comes next to the title page, localities where work has been done being marked with red ink. These red marks are conspicuously numerous in that congested area of the metropolis marked E.C. in the postal guide. The sphere of operations extends from Tottenham and Muswell Hill on the north, to Penge and Lower Tooting on the south; and from Woolwich and East Ham on the east to Twickenham and Ealing in the aristocratic west. The benefits conferred by the association or through its instrumentality include the laying out of open spaces or grants to other bodies for that purpose, opposition to infringements of public rights, negotiations concerning inimical movements, the obtaining of new open spaces, the planting of trees in suitable localities, and the placing of seats and drinking fountains where they may prove of service. Amongst the items of work which have been successfully carried out during the past year we notice a grant of £13 5s. to the Paddington Vestry for trees planted in the Great Western Road, trees planted in Pender Street, Deptford, a recommendation to the St. Giles' District Board of Works to plant trees in Great Russell Street, W.C.; and assistance to the schemes of acquiring Churchyard Bottom Wood, Highgate, N., for a public park, the extension of the Chelsea Embankment, and the appointment of an inspector for judging window and cottage gardens for prizes. In an appendix a list of trees and shrubs suitable for town planting, compiled by Mr. W. Goldring, is given. All those who would like to help forward the laudable work of the society may send their cheques or postal orders to Lord Neath, or the Secretary, 83, Lancaster Gate, London, W.

The Californian Woodpecker must be a good forager. It is said to carry home acorns to its stores from a distance of thirty miles.

Mr. William Paton has been appointed head gardener to Mrs. Harmsworth, Poynter's Hall, Totteridge, Herts. Mr. Paton is a young Ayrshire trained gardener, and judging from his training and experience, coupled with his great energy he will prove himself a credit to the "land of Burns."

Floral Fete for Newton-Stewart.—The annual prize schedule of the Newton-Stewart, Minigaff and District Horticultural Society, which has just been published, is a well got up catalogue. The fete is to be held in Kirroughtree Park, by the kindness of the owner, who is also the president of the society. Amongst the prizes are gold and silver medals from various donors, a silver challenge cup, and the bronze medal of the R. H. S. Messrs. Cocker & Sons, of Aberdeen, offer two silver medals, and Messrs. Sander & Co., St. Albans, a Cattleya value 4 gs. The prizes to be given for Chrysanthemums at the show projected for November next, include a silver-gilt medal from Mr. H. J. Jones, of Lewisham; a handsomely bound volume of *Pearson's Magazine*, from Messrs. C. Arthur Pearson, Ltd.; volumes of *THE GARDENING*

more attractive. There is no word as yet, however, with regard to the flower shows which were held for many years by the present company, but which were latterly discontinued, still with a vigorous and energetic executive we may hope for the best.

EARLY CABBAGE.

WITH us these are quite five weeks in advance of most seasons, and I hear that excellent Cabbage has been cut during the past few weeks in North Devon, where it is much colder than here. I have tried several varieties, but for earliness and compactness none pleases me better than Ellam's Early, this being an ideal Cabbage for a gentleman's table, I consider. Out of 1,000 only 3 per cent. have bolted, but all the three kinds that I am growing are behaving well in this respect, to which I must attribute the exceptionally mild winter. The plants have had no check whatever since they were put out on the 20th September, so they have kept growing, and are now quite nice, firm heads, which we are cutting daily for the dining-room. It is after a mild time, succeeded by severe frost, that I have always found the greatest number go to seed when they make a fresh start again.—*J. Mayne, Bicton.*



TOMATO, THE POLEGATE IMPROVED.

WORLD, and *Gardening Illustrated*, presented by their respective editors, and a volume of *Cottage Gardening* from Messrs. Cassell & Co.

Sale of the Crystal Palace.—We understand that the directors of the Crystal Palace Company have under consideration proposals from an influential quarter for the purchase of the Crystal Palace and Grounds, although no details of the scheme have as yet been made public, but as it will be necessary to obtain special parliamentary powers for carrying through the scheme of reconstruction, the present company having been incorporated by Act of Parliament, they must soon be made so. The capitalisation of the existing company reaches the enormous figure of £1,533,675, and it is proposed to reduce this by more than half, a large working capital being provided in addition. The schools of engineering, art, and music, so long associated with the Palace, will be continued, and increased facilities for tuition granted. Strong representations have been made as to the urgent need for an improved railway service if the enterprise is to pay, and it is highly probable that improvements will be made in this direction. The catering will also be rendered

TOMATO THE POLEGATE IMPROVED.

TOMATOS more than anything, perhaps, require constant attention in order to keep them up to the desired standard, for which reason it is necessary to raise fresh stocks or varieties to take the place of those that get worn out by age and other circumstances. The Polegate Improved is the result of a cross between the old Trophy and Perfection. The former was highly popular and extensively grown for many years, particularly by growers for market, but it has been displaced to some extent by more recent selections or by crossing it with others, as in the case under notice. The fruit is of large size, smooth, and shapely. The skin is bright red, with the smallest amount of waste at the eye, while the flesh is also richly coloured, solid, and of good flavour. A household of 149 plants, confined to a single stem each, gave a harvest of 2,159 fruits in a house unaided by fire-heat, thus testifying to the heavy cropping character of the variety. The accompanying illustration was lent us by Messrs. Wm. Cutbush & Son, Highgate, London, and shows how well adapted for exhibition the variety is.

SEAKALE, THE LILY WHITE.

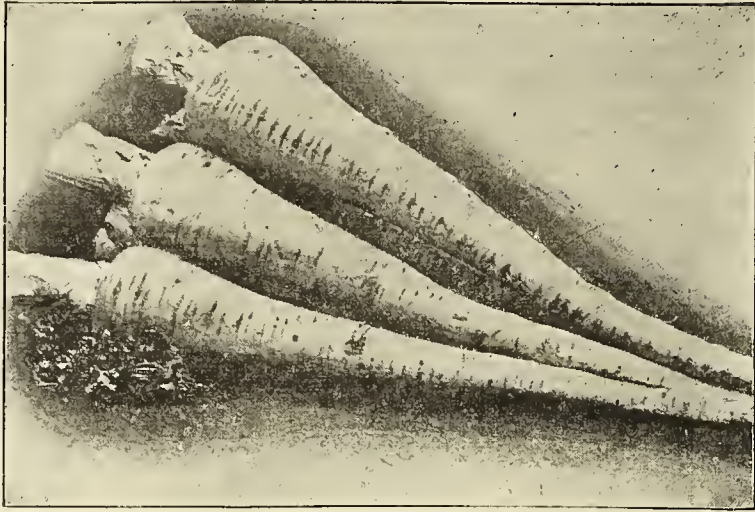
CONTRARY to most vegetables of note, there are not many varieties of Seakale from which to pick and choose. The ordinary form, or The Old Purple, as it is occasionally called, is possessed of considerable merit, but Lily White is in every way an advance

PARSNIP BARR'S NEW WHITE MARROW.

THIS new variety may be described as of moderate length, thick at the top, and tapering evenly downwards. The accompanying illustration scarcely shows it at its best, owing to the fact that the roots

a funny story of a farmer who, on being served with Artichokes at a public dinner, remarked confidentially to a neighbour that if he couldn't grow better "taters" than them he wouldn't grow any at all.

The establishment of cooking tests for vegetables at horticultural shows is a step in the right direction, for after all the ultimate test of the practical value



PARSNIP, BARR'S NEW WHITE MARROW.



CARROT, BARR'S NEW INTERMEDIATE.

upon it. The flavour is decidedly better, and also the appearance, for the leaf stalks are without that purple tinge to the tips, so characteristic of the older form. Lily White forces exceedingly well, and the shoots blanch easily and well. Gardeners who wish for the best of everything cannot do better than invest in a stock of it. It will take up no more room than the inferior variety, and will give much better results.

from which the photograph was taken were grown in the nursery of Messrs. Barr & Sons, at Long Ditton, Surrey, where the soil is light and sandy, and last summer proved unusually dry and unfavourable to free development. No special preparations had been given the soil, so that growers will know what that means in the case of Parsnips. Moreover, the flesh is of very fine flavour, being considered the most delicate of all, and the roots, when grown in properly prepared soil, are well adapted for the exhibition table. Messrs. Barr & Sons supplied the block.

of a vegetable, especially a Potato, is whether it will or will not cook, and this can only be established with its cooking qualities relative to other varieties by a fair and common trial. Sometimes, of course, the variety is at fault, but far more often the cook

CARROT BARR'S NEW INTERMEDIATE.

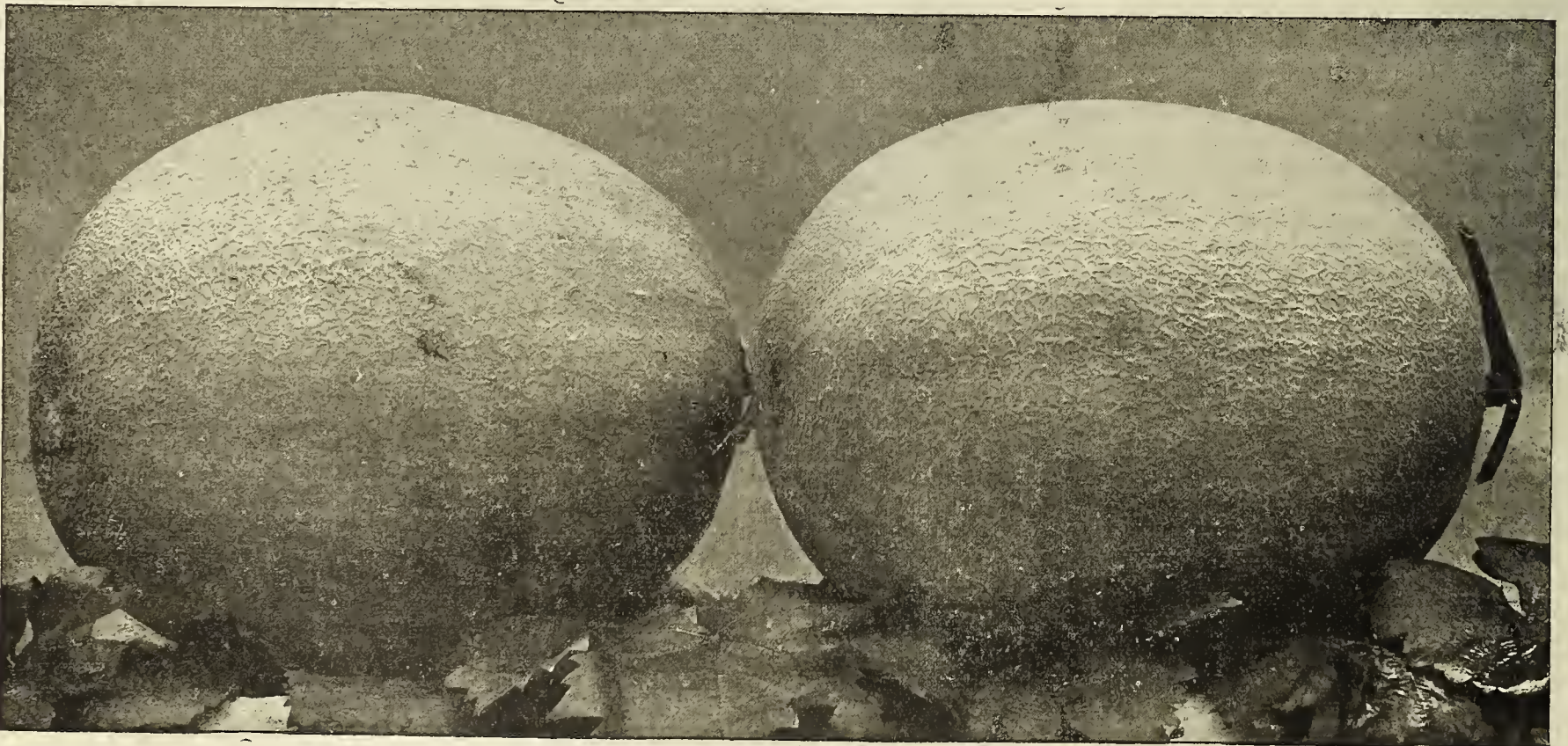
CARROTS of medium length are more appreciated than those which are thin, very much elongated, and penetrate the soil deeply. Barr's New Intermediate conforms to this, having been raised as the result of a cross between the half-long and the long types. It resembles a very fine form of James' Intermediate, but is of better colour, being of a rich red hue, and not so coarse in the flesh. The latter is, in fact, finer

THE COOKING OF VEGETABLES.

THE cultivator may cultivate never so well, and the vegetables may come up to the highest standard of

MELON FROGMORE SCARLET.

THE fruits of this Melon are of large size, oval, pale yellow, and faintly netted with creamy-white. The flesh is of great depth, rich scarlet, of excellent flavour, and handsome in appearance, whether in the cut or uncut state. It was raised by Mr. Owen Thomas, gardener to Her Majesty the Queen, from the variety Duchess crossed with the useful old Beechwood, the progeny resembling the pollen parent considerably, and otherwise inheriting its good



MELON FROGMORE SCARLET.

than in the well-known variety just named, and, therefore, constitutes more delicate eating. Its fine shape and colour make the variety well adapted for exhibition purposes. The accompanying illustration was furnished by Messrs. Barr & Sons, King Street, Covent Garden.

excellence, but all avails nought if the cooking is bad. It is an old adage that "God sends the meat and the devil sends the cooks," and bearing this in mind we can only suggest that the cooks in certain quarters are special emissaries, judging from their work. Apropos of being used to bad cooking comes

qualities. It was one of the few Melons which was honoured with an Award of Merit from the Royal Horticultural Society last year, this recognition being given it on the 25th August last. The stock of it has passed into the hands of Messrs. J. Veitch & Sons, Ltd., Royal Exotic Nursery, King's

Road, Chelsea, who have furnished us with the accompanying illustration.

POTATO SUTTON'S IDEAL.

THE raising of new Potatos is not only very engrossing work, but it is absolutely necessary to combat

a vivid recollection of a large heap of the variety last autumn, and must confess we were very much taken with the clean and handsome appearance of the tubers. The accompanying illustration, for which we are indebted to Messrs. Sutton & Sons, Reading, shows tubers resulting from one root, while others not represented brought the total weight up to 8 lbs.

the cooking quality, for all who have tried it are agreed that it is a white-fleshed, mealy Potato of excellent flavour when cooked, and quite free from disease. The skin is very slightly rough, and the eyes are practically on the surface, so that there can be no waste in its preparation for cooking, and for the same reason exhibitors will find it most serviceable.



POTATO, SUTTON'S IDEAL.

disease, and the tendency of old sorts to degenerate. That under notice is a second early Kidney Potato of beautiful shape, smooth and attractive appearance, disease-resisting, and suitable either for the kitchen or exhibition table. It is also an enormous cropper, and, therefore, entitled to the name, Ideal. We have

Several experts have already given it a good trial, and speak of it in glowing terms. One good vegetable grower found the produce, in his trial of the variety, equivalent to 20 tons 6 cwt. per acre. Such enormous weight would seem to be suggestive of coarseness, but that applies neither to the form nor

Choose Big heavy Seed if you want good Lettuce is the advice given to American cultivators by Professor Galloway, for he says, "only the largest seed should be saved, as in most cases the vigour, size, and heading qualities of the plants are in direct proportion to the size of the seed."

POTATO CARTERS' MONARCH.

AMONGST vegetables the Potato has got many advocates who, practically, have pledged themselves to maintain the standard of utility of this useful vegetable, and keep it in the front rank of progress. The variety under notice was raised by Mr. W. J. Stokes, near Trowbridge, and has since been tested by the Royal Horticultural Society at Chiswick, who give it very favourable notice, both with regard to cropping, shape, and cooking properties. During 1894, 1895 and 1897, it has taken the leading place in large, open competitions, when shown by the raiser at the great Bath show. The parents of the variety were Sharpe's Victor and Schoolmaster, the potentialities of which are seen in the tubers, some of which are round, and others oval even at the

BUTTER BEANS.

FROM times almost immemorial our Gallic neighbours have been adepts in the gastronomic art, and one result of this has been that their seedsmen have evolved delicious vegetables that we with our insular prejudice are inclined for a long time to look askance at. The Butter Beans afford a case in point. The French and Runner Beans may be divided into two classes, according to the character of their pods, viz., the "Tough-podded" (*Haricots à cosser* or *Haricots à parchemin*), the pods of which become leathery upon reaching maturity, and the true "Edible-podded" (*Haricots mange tout* or *Haricots sans parchemin*), whose pods never become tough or stringy, even when they are quite ripe. It is to the first class that the varieties grown in this country

fine form of the same height, but with longer and more slender pods. The seeds are white instead of black, as in the former variety, and they possess the additional advantage of being fit to send to table when cooked properly. A third first-class tall variety is Mont d'Or, which was raised in the neighbourhood of Lyons. The pods are nearly 6 in. in length, slender, and of an excellent flavour that has secured its popularity throughout France.

Amongst dwarf varieties there is nothing to beat Sutton's Miniature Golden Waxpod. The plants are of compact and sturdy habit, and commence to fruit at an early stage of their career, continuing this for an exceptionally long period. This variety likewise takes kindly to forcing. As its name indicates, this is a miniature of Golden Waxpod, another sort well worth cultivation.



POTATO. CARTERS' MONARCH.

same root. The dominant type, however, is round, of large size and more or less rough or netted on the surface. On fairly good garden soil heavy crops of shapely tubers are obtained. Several years have now intervened since the variety was raised so that its character should now be well established. The accompanying illustration, for which we are indebted to Messrs. J. Carter & Co., High Holborn, London, gives a good idea of the variety now being put into commerce for the first time by that firm.

The Weight of Bees.—According to the *Irish Farming World* about 3,500 bees moderately filled with honey will weigh a pound. Four pounds of bees will average a prime swarm. Some swarms have been known to weigh as much as ten pounds, and as low as one pound.

belong, for the pods are only edible in their earlier stages. In the second we may place the Butter Beans. All these Beans are characterised by pods of a pale yellow, butter, or wax-like colour—hence the name. Their flavour, too, when cooked is somewhat waxy, although to the palate of the connoisseur they are more delicate than our ordinary French Beans.

We need not enter here into details of culture, for the same treatment that suits our ordinary French Beans will suit them capitally.

Both dwarf and tall varieties can be obtained, and, indeed, there is a considerable number of each from which to pick and choose. The Black Algerian (*Haricot d'Alger Noir*) is one of the oldest varieties, and is in great favour upon the Continent. The height is 6½ ft. The Tall White Algerian is another

CARDOONS.

AMONGST the more uncommon, and to some people novel vegetables, come Cardoons. They may be served at table in a number of ways, and in each will constitute a pleasant variety at a time of the year when the number of vegetables obtainable is not large nor the variety great.

The stalks of the inner and more succulent leaves may be stewed until tender, and sent to table with suitable sauce. These stalks, too, may be, and are, employed as an ingredient in the making of soups, whilst the whole plant, when properly blanched, furnishes an excellent salad.

Any ordinary garden soil will grow Cardoons well enough, provided plenty of water is given during the growing season. The latter is the chief consideration, and to obtain it it is often necessary to consign the

plants to trenches after the manner of Celery. It is only in very thirsty soils or where labour is scarce, however, that this is absolutely requisite, although it is greatly conducive to free growth on any soil.

fleshed, but strictly speaking this is a white-fleshed variety, and a first-class one too. The flesh is of great depth, juicy, melting, aromatic, and of excellent flavour. The plant grows strongly, and sets

THE DICKSON POTATO.

THOSE who have tried this new Potato express golden opinions concerning it. The tubers are uniformly of large size, kidney-shaped, with very shallow



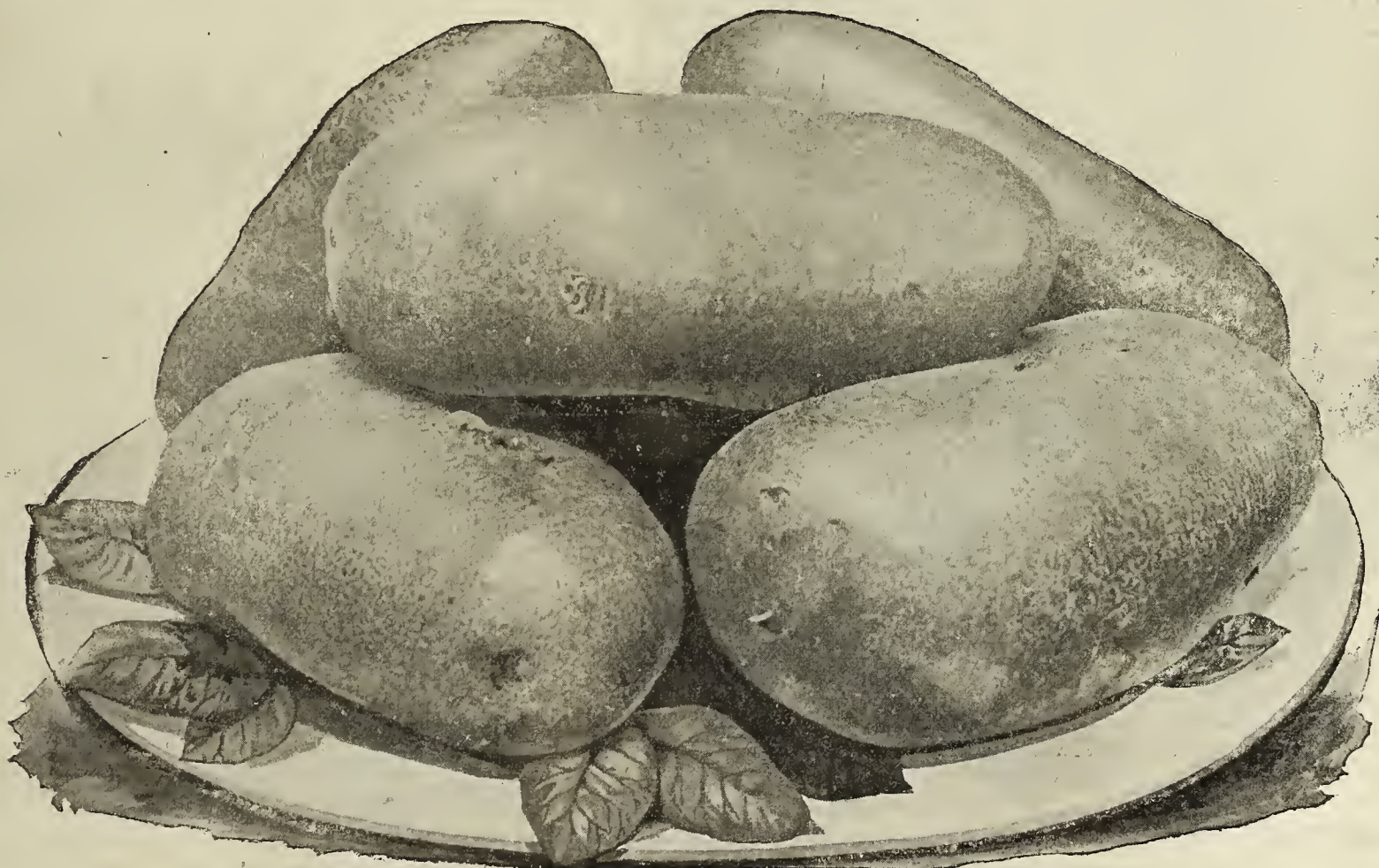
MELON, TAUNTON HERO.

MELON TAUNTON HERO.

THE fruits of this Melon are perfectly globular, golden-yellow, and densely netted with gray lines, as the accompanying photographic reproduction will show. When grown under cool conditions as in

very freely, so that altogether it is a useful all-round variety. Strange to say it has been in existence for at least five years, and during that time has taken eleven first prizes at important exhibitions in various parts of the south and west of England, yet it has only just been put into commerce

eyes, and of a beautiful russety colour. They are not subject to disease (at least that is the experience of some first-class gardeners in the rainy districts of the West of England, and in Ireland), and when lifted are of excellent cooking qualities. There can be no doubt of its productiveness, for one grower,



POTATO, THE DICKSON.

frames the fruits usually average about 4 lbs. each, but when subjected to a high temperature in heated pits under the usual treatment they attain greater dimensions, say 5 lbs. or 6 lbs. It is a very usual custom to describe Melons as green or scarlet-

this year. Why it should thus have been neglected is difficult to say, but a really good thing often takes years to discover its merits. Its recognition is now due to Messrs. R. Veitch & Son, Exeter, who have placed the illustration at our disposal.

who had it on trial, raised 44 lbs. of tubers from 1 lb. of seed. The tubers come into use in succession to the early kidney varieties, and keep as well as Maincrop, Magnum Bonum, and others of that class. Taking these facts into consideration, and its

heavy cropping capabilities, it may properly be classed amongst the maincrop varieties, suitable alike for the kitchen or exhibition table. Some market gardeners have already got their eye upon it, so that there is no doubt a great future before it. Messrs. Dickson, Limited, Chester, furnished the accompanying illustration.

Each contains eight to ten seeds of a fine dark green, and excellent flavour. The variety bears heavily, the pods being brought together owing to the shortness of the internodes of the stem. The accompanying illustration, for which we are indebted to Messrs. Ed. Webb & Sons, Wordsley, Stourbridge, shows the general aspect of the pods, and the number of seeds with which they are packed. Gardeners who



WEBB'S PEA, ASTRONOMER.

WEBB'S PEA ASTRONOMER.

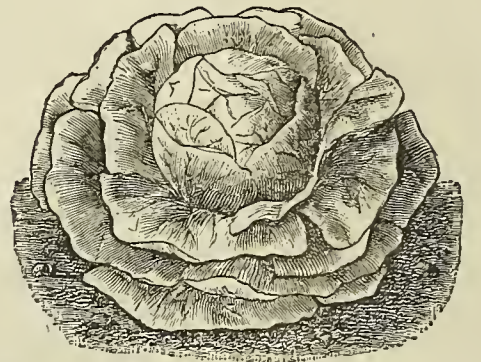
RECENT years have seen great improvement amongst Peas. That under notice is dwarf for a main crop variety, being only 3 ft. high; yet the short-jointed haulm grows slowly, and keeps on bearing over a considerable period. For this reason it is valuable for mid-season or late sowing. The pods are of great length and broad, but not swollen or inflated, so that they turn out well when shelled.

have tried it speak in favourable terms of the cropping capabilities of the variety, and the high quality of the seeds, now put into commerce for the first time.

Lemons are used as soap by people in the West Indies. They squeeze the juice of a lemon over their hands and wash briskly in water till they are clean.

CABBAGE LETTUCE, NANSEN, OR NORTH POLE.

HARDINESS is a matter of primary importance in a Lettuce intended to stand the winter in the open ground. Wherever Lettuces are required (and that is in most establishments) the gardener is often sorely tried in order to get a supply as early as possible from the open ground. Sheltered places under walls



CABBAGE LETTUCE, NANSEN, OR NORTH POLE.

and in cold frames are utilised with this object, and even then the supply is often very limited in quantity after the winter has passed. The variety under notice was planted in considerable quantity on a piece of ground that was inundated during the winter of 1894, and the water frozen over, yet after the water disappeared the Lettuces proved to be quite safe, giving a good account of themselves in spring as the fine weather advanced. The hearts are of medium size, compact, solid for a Cabbage Lettuce, and form tender eating in salad or otherwise. The variety is one of the novelties of Messrs. H. Cannell & Sons, Swanley, Kent, who furnished the accompanying illustration.

TOMATO FIRST AND LAST.

FOR general work Tomatos of medium size are now widely recognised in this country as the best and most useful. The new variety under notice comes under that category, and the accompanying illustration, for which we are indebted to Messrs. Charles Sharpe & Co., Limited, Sleaford, Lincolnshire, shows a fruit that is nearly globular, beautifully smooth,



TOMATO FIRST AND LAST.

glossy, and rich dark red. It is also very solid, having but few seeds. The flavour leaves nothing to be desired. The plant is sturdy, short-jointed, vigorous, continuous bearing, and sets its fruit very freely, so that the bunches commence near the base, and continue to be produced all through the season, provided the plant is confined to a single stem and allowed to run up as high as it likes. Each bunch consists of some nine to twelve fruits of a

good useful size. The variety is also very suitable for early work when treated with that object in view. Those who have tried it speak very highly of it. If sufficiently early to ripen out of doors, its value will be all the greater.

CUCUMBER SUTTON'S PRIDE OF THE MARKET.

FOR market work a dark green hue is highly appreciated, and the new variety under notice not only possesses this recommendation in a high degree, but

sentable for several days after it is cut. The fruits have a very short handle at the end next the stalk, the rest being of uniform thickness, slightly angular, and furnished with a few spines only. The plant possesses a vigorous constitution, grows freely, and



CANNELL'S CARROT, ROBERTS' WINNER.

CANNELL'S CARROT, ROBERTS' WINNER.

THE accompanying figure shows a very distinct Carrot belonging to the early stump-rooted type. Most of the varieties belonging to this section are either short and top-shaped, or if more elongated they taper distinctly from the top downwards. That under notice is cylindrical without waste at either end, in properly pulverised and otherwise well prepared ground. The portion surrounding the core is of a clear and bright red colour, while of close texture and fine flavour. It will prove serviceable either in private establishments as well as in market gardens for an early supply of roots, whether forced or from the open ground. The attractive appearance of well-grown roots will also appeal to exhibitors who patronise the earlier summer shows. Messrs. H. Cannell & Sons, Swanley, Kent, supply the accompanying woodcut of it.

MELON DIAMOND JUBILEE.

THE oblong or oval fruits of this new Melon are of medium size, varying from 3 lbs. to 5 lbs. in weight, according to cultural treatment. The accompanying illustration, supplied us by Messrs. H. Cannell & Sons, Swanley, Kent, gives a general appearance of the fruit, which is golden-yellow and irregularly netted with gray. The flesh is greenish-white, juicy, melting, and of excellent flavour when grown under favourable conditions, for which the grower himself



MELON DIAMOND JUBILEE.



CUCUMBER SUTTON'S PRIDE OF THE MARKET.

is responsible. The variety unites the good properties of Best of All and Countess, which were the parents. It sets freely, ripens early, and is, therefore, well adapted for the earlier crops of the season.

retains it for some days after being cut, so that there is a chance for it reaching the consumer while yet in prime condition. In private establishments, where a whole fruit is not required every day, the gardener has the satisfaction of knowing that it will be pre-

bears abundantly over a long period. The accompanying illustration, lent us by Messrs. Sutton & Sons, Reading, represents a brace of fruits very much reduced in size, but showing the characteristic features of the variety.

CELERIAC.

CELERIAC or Turnip-rooted Celery is a vegetable that is comparatively rarely grown to any extent in English gardens, although upon the Continent—notably in Germany—it is in high favour.

In the ordinary Celery the stem, or at least the edible part of it, is very small, and only serves to bear the leaves, of which the stalks when blanched are eaten, but even this small piece of stem is the sweetest and most toothsome morsel of the whole stick. In Celeriac we have the stem or axis of the plant developed to a considerable extent, and forming a swollen basal protuberance in shape not unlike a Turnip, although here the resemblance ceases. The great advantage attaching to Celeriac is that it withstands the frost much better than the more succulent Celery, and this is no doubt the reason why it is so much grown in Germany, where the frosts are much more severe and of longer continuance than they are in this country.

Celery cooked and served in the same way as Seakale is by no means a strange dish at English tables, and vast quantities are each year consumed in this fashion. Celeriac may be cooked in the same way as Beet and is fully as delicious as, and even more so in some people's estimation than Celery, for the flavour is more delicate. A good plan is to drop the swollen stems, from which the leaves have been roughly cut, into boiling water which should contain no salt or any flavouring which would spoil the fineness of the vegetable. Keep them boiling for an hour or two until they are quite tender, then pare and slice them up, serving with white sauce.

To grow Celeriac well a long season of growth should be given it. The seed should be sown in a gentle heat at the beginning of March, pricking out the young plants into pans in the same way as Celery and growing them on under glass till the weather admits of their being put outside. A light rich soil is the most suitable, and the plants should be put out on the level ground, and not in trenches like Celery. A distance of from fifteen to eighteen inches each way will suffice for room.

QUESTIONS AND ANSWERS

Grubs at roots of Primulas and Begonias.—*W.E.B.*: The grubs you sent are those of an Otiorhynchus, most likely the Clay-coloured Weevil (*O. picipes*). There are two others which infest gardens, but the grubs are similar and you can determine them only in the perfect or weevil stage. All those plants which go wrong in the pots should be turned out, and every grub killed, which you can find. The weevils cannot fly, but crawl into cracks, and crevices of the walls of the houses, and beneath loose rubbish of all kinds. Your best plan then is to cement all crevices, and remove everything which would afford them shelter, but yet are not needed in the plant houses. By laying a few loose pieces of board about the houses over night, and examining these traps in the morning you may be able to catch the old or perfect weevils, thereby preventing them from laying their eggs in the soil of pots, or even under the potting benches. By perseverance in these methods you should be able to exterminate them and so prevent a recurrence of the evil next year.

Daisies on the Lawn.—*X.Y.Z.*: The most effectual remedy is to get a spud or two consisting of a short wooden handle fitted into a piece of iron forked at the end (such an implement is generally easily obtainable from a seedsman, sundriesman, or ironmonger), and set some boys to fork up the Daisies. We know that it is a slow process, but none the less effectual. The work should be done at once, while the ground is soft. An old bread knife or something similar that would cut the Daisies just below the crown, would probably answer the purpose as well, and enable the work to proceed quite as quickly. There will be bare spots on the lawn so that you ought to top-dress it with rich soil from beneath the potting benches, mixed with some well decayed manure. Spread this on the grass and scatter it with a broom or rake. Then sow some grass seeds, roll the ground at intervals till mowing commences. Possibly a few Daisies may come up next summer, but a boy may be set to deal with them after rain. The roller will then smooth down the lawn. By vigilance and by feeding the grass, the latter will grow vigorously, covering the ground and leaving no space for the Daisies. Lawns usually get impoverished by the cutting and removal of the grass.

Planting out Young Vines.—*Omega*:—It would depend very much upon the state of growth of the Vines at the time of planting. If they are in a resting condition you could plant them in the open border about the beginning of April. It would occasion the least trouble in establishing the same if you keep them cool and resting till that time. Then

plant them out in the properly prepared soil, and the growth they make will harden as it grows. You will also be able to spread out the roots properly before covering them with soil. If you start them into growth before planting out, you would have to shade them from sunshine till partly established, especially if you break the ball of soil in order to spread out the roots.

Stopping and timing Chrysanthemums.—*Dubitant*: By only stopping your plants once it is difficult to see how you are to get from twelve to twenty shoots, that is, strong and vigorous ones. By stopping the plants once you should get three strong leads. Some varieties might give a greater number, but others would almost be certain to give fewer. Supposing you get three strong shoots which grow till a crown bud appears. Several side shoots would then break out, and if allowed to grow, they would completely stop the further growth of the crown bud. Say that each of the three shoots produced three others. You would then have nine; but the buds they develop would not be first crown buds. Some varieties produce a number of crown buds in succession. There is another plan which you may not have tried, namely, growing on some plants for a second year. They will throw up numerous suckers from the base, and you can retain the number that suits your requirements, cutting the rest away. You can stop them once and finally select the number of shoots you wish retained. You can then take the first or second crown, whichever is most suitable. Select plants for this purpose that have not been overfed the previous season. Repot and tend them as usual.

Chrysanthemums Diseased.—*C. C. M.*: The cuttings you sent us are badly attacked with the Chrysanthemum rust, a species of Puccinia in the Uredo stage, and considered to be Uredo Tanacetii, allied to the rust of Roses, Carnations, etc., but by no means identical, being a different species. There is a good deal of it in America, where it is very destructive to Chrysanthemums, and from whence it has in all probability been introduced unintentionally to this country. We have had samples sent us on previous occasions from growers in Britain. The disease is as incurable as Carnation rust, and the only thing you can do is to avoid introducing it to your collection, if possible. A damp atmosphere is favourable to the spreading of the fungus, but with Chrysanthemums it is difficult to avoid moisture, especially in autumn and winter. The varieties attacked with it should be destroyed if they are as bad as the specimens sent. Being a new disease, we cannot yet say if it attacks all varieties indiscriminately, as that has to be found out by experience.

Carnations diseased.—*Omega*: Your Carnations are affected with the Carnation Rust caused by the fungus *Uromyces caryophyllinus*. It is a bad case if the leaves are all as bad as those you sent us. The disease is incurable, because the fungus lives in the interior of the plants. You should burn the worst plants; then pick off and burn all diseased leaves on other plants. By way of prevention keep the plants practically dust dry at the roots. The atmosphere should also be dry, cool and well ventilated. Never syringe the plants. Propagate from shoots clear of the disease. If you can, get clean and fresh stock, the old may be destroyed and the house thoroughly cleaned before putting in the new stock.

Names of Plants.—*E. Ballard*: 1, Pinus Peuce; 2, Abies nordmanniana; 3, Picea Morinda (otherwise known as Abies smithiana).—*W. L.*: 1, Forsythia viridissima; 2, Euonymus radicans variegatus; 3, Euonymus microphyllus variegatus; 4, Cornus mas.—*W. G. B.*: Eucalyptus globulus, in the adult stage.—*C. A. M.*: 1, Doodia aspera; 2, Selaginella apus.—*H. C.*: 1, Lonicera Cavendishii; 2, Pyrus japonica; 3, Crocus biflorus var.; 4, Erica mediterranea.—*P. C.*: 1, Odontoglossum Lindleyanum; 2, Cypripedium Godefroyae; 3, Laelia anceps; 4, Odontoglossum Hallii; 5, Davallia hirta cristata; 6, Platyloma rotundifolia.—*A. J.*: 1, Primula denticulata; 2, Vinca major.

Communications Received.—*J. Mayne*.—*J. G. P.*—*John Plummer*.—*Wm. Witard*.—*W. Atlee Burpee & Co.*—A Member of the N.C.S.—*W. B. G.*—*J. W. Moorman*.—*A. D.*—*Leeds Orchid Co.*—*J. H. W.*—*H. J. Hobby*.—*E. T. L.*—*A. O. S.*—*Axton*.—*Y. Y.*—*Rob.*—*Wily*.

TRADE CATALOGUES RECEIVED.

TOOGOOD & SONS, Southampton. — Toogood's Annual Pasture-seed Report.

FRANK CANT & Co., Braiswick Nursery, Colchester. — Rose Catalogue.

LITTLE & BALLANTYNE, The Queen's Seedsman, Carlisle. — Farm Seeds.

E. H. KRELAGE & SON, Royal Bloemhof Nurseries, Haarlem, Holland. — Catalogue of Novelties, Begonias, Cannas, Dahlias, Gladiolus, Gloxinias, &c.

DOBIE & Co., Seed Growers to Her Majesty, Rothesay. — Agricultural Seeds for Spring, 1898.

J. C. SCHMIDT, Erfurt, Germany. — Catalogue of Sundries for Garden and Field, House and Hall.

CONSOLIDATED STEEL AND WIRE COMPANY, Havemeyer Building, New York City. — Catalogue of Consolidated Field Fencing.

R. H. BATH, LTD., The Flower Farms, Wisbech. — Choice Plants for the Garden.

WEBBS' FERTILISERS

FOR VEGETABLES & FLOWERS

For **POTATOES** per bag of 28 lbs. .. 5/0
 For **TOMATOES**, ditto .. 6/0
 For **CHRYSANTHEMUMS**, ditto .. 7/6
 For **LAWNS**, ditto .. 6/0
 For **VINES**, ditto .. 6/0

WEBBS' COMPOUND MANURE.

The best general Manure for Vegetables and Flowers, 1lb., 1s.; 3lbs., 2s. 6d.; 7lb., 5s.; 28lbs. 13s.
 Reduced rates for large quantities on application.

OUR MANURE WORKS AT SALTNEY, CHESTER, ARE 5 ACRES IN EXTENT.

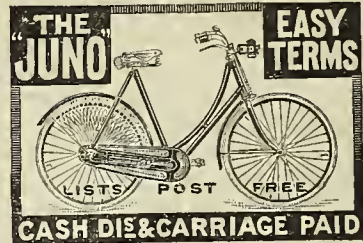
WEBB & SONS,

The Queen's Seedsman, WORDSLEY, STOURBRIDGE.

JUNO CYCLES ARE THE VERY BEST.

12 Equal Monthly Payments.

LARGE DISCOUNT. CARRIAGE PAID.



JUNO Diamonds from £10.
 16s. 8d. monthly.
JUNO Ladies' or Gent's Safety, £12 12s.
 21s. monthly.
 £14 14s.
 24s. 6d. monthly.
 Write at once for new Illustrated Juno List, Machines and accessories. Sent post free. See also 4/6. Ball Pedals. 4/8. Top Clips 9d. Saddle Covers 1/- All des.

CASH DISCOUNT & CARRIAGE PAID
 Metropolitan Machinists' Co., Ltd.
 Steam Works, Show Rooms, Riding School, Offices—
 75, 76, Bishopsgate Without, LONDON, E.C.
 And at Piccadilly Circus, exactly opposite the Criterion, London, W.

Our new large JUNO Cycle Riding School for ladies and Gentlemen now open, 1,700 ft. Single lesson, 1/6; come till perfect, 10/6, or free to buyers of the Juno.

The Gardening World

ESTABLISHED 1884.

Price One Penny; Post Free, Three-halfpence

Subscription (including postage): 3 months, 1s. 8d.
 6 months, 3s. 3d.; 12 months, 6s. 6d., prepaid.

Foreign Subscriptions to all countries in the Postal Union, 8s. 8d. per annum, prepaid.

SUBSCRIPTION FORM.

Please send me "THE GARDENING WORLD,"
 for _____ months, commencing on _____

for which I enclose _____

Name _____

Address _____

Handsomely bound Volumes, I to XIII., 6s. 6d. each.
 Covers for binding, 2s. 6d. each.

** Advertisements for the current week, and also "Stop Orders," must reach the office not later than the first post on Wednesday Morning.

"GARDENING WORLD" Office, 1, Clement's Inn Strand, London, W.C.

Special Offer. — Warranted 1st. Quality.

SPIRAEA JAPONICA, 2s. 6d.; do. multiflora compacta, 3s. 6d.; Lillium auratum, 3s., large, 5s., extra, 6s.; Lillium Melpomene, extra fine, 4s. and 6s.; Lillium speciosum album, rubrum, and roseum, 3s.; Lillium Harrisii, 4s. All per dozen, for cash. Choice Ferns, in 60-pots, 8s. 6d. per 100.
MORLE & CO., The Conservatories, Finchley Road, N.W.

New Palm Seeds, just arrived.

MORLE & CO., offer fine samples of Kentia Belmoreana, 14s.; K. Fosteriana, 16s.; Cocos Weddelliana, 7s. 6d.; Scaevola elegans, 7s.; Latania borbonica, 10s.; Corypha australis, 5s. All per 1,000; sample 100 in variety, 2s.; 500, 7s. 6d., free. Large quantities special prices.
MORLE & CO., The Conservatories, Finchley Road, N.W.

CHOICE PALMS in 60-pots, for Table Decoration, or potting on, Kentias, Scaevorias, Coryphas, Cocos, Arecas, Latantias, &c., in variety, 6s. per dozen, 40s. per 100, packing free for cash; large and bushy, in 48-pots, 18s. to 24s. per dozen.
MORLE & CO., 152, Finchley Road, N.W.

WEBBS'



NEW BEDDING STOCK.

Specially adapted for creating effect in beds and masses in the open ground. The spikes of bloom are large, and produced in abundance throughout the summer; mixed, 1 ft., per packet, 1/-, post free.

WEBBS', Wordsley, Stourbridge.

VEITCH'S SUPERB TOMATOES.

VEITCH'S "GOLDEN JUBILEE."

First-class Certificate, Royal Horticultural Society, May 26th, 1897.

A splendid acquisition; one of the finest Tomatoes of recent introduction, of a beautiful golden colour, magnificent cropper, and of excellent flavour.

PER PACKET, 2/6.

"FROGMORE SELECTED."

First-class Certificate, Royal Horticultural Society.

This exceedingly prolific variety was raised by Mr. Thomas, the Royal Gardens, Frogmore. The Fruit, is of a bright red, medium in size, very uniform and smooth in outline, and suitable either for forcing or outdoor cultivation.

PER PACKET, 1/6.

"HAM GREEN FAVOURITE."

First-class Certificate, Royal Horticultural Society.

This splendid variety for two successive seasons held the foremost place in the comparative trials of Tomatoes at the Royal Horticultural Society's Gardens, Chiswick.

PER PACKET, 1/6.

For full description of the above and many other Choice NOVELTIES and SPECIALITIES, see SEEN CATALOGUE, forwarded gratis and post free on application.

JAMES VEITCH & SONS, Ltd.,

ROYAL EXOTIC NURSERY,
Chelsea, London, S.W.

BEAUTIFUL LAWNS, How to Make AND Keep Them.

SEE

SUTTON'S PAMPHLET ON LAWNS.

Sutton's Fine Grasses Only for
Tennis Lawns.

Per Gallon, 3/6; per Bushel, 25/-.

"The Grass Seed for Tennis Lawns has come up magnificently, not a single weed or patchy place in it."—C. BLACKWELL FOSTER, Esq., Drayton.

Sutton's Grasses and Clovers for
Garden Lawns.

Per Gallon, 3/6; per Bushel, 25/-.

"We have a splendid Lawn from the Grasses and Clovers with which you supplied us last spring; it is indeed a grand Lawn."—Mr. ALBERT TOMS, Gardener to SIR ROBERT AFFLECK, Bart.

SUTTON & SONS, The Royal Seedsmen, Reading

Caladiums

FINEST COLLECTION in the World. We make a speciality of CALADIUMS. Gold Medals Manchester & Leicester. Silver Cup, R.H.S., &c.

Satisfaction guaranteed. JOHN PEED AND SONS, West Norwood, London.

CANT'S

WORLD-RENOWNED

ROSES

WON THE

QUEEN'S DIAMOND JUBILEE CUP

Presented by HER MAJESTY, June 26, 1897.

For 48 Varieties of Roses.

12 GRAND BUSH PLANTS, B.R.C.'s choice from this famous collection, free by Parcel Post, for 9/-.

12 STANDARD PLANTS, B.R.C.'s choice from this famous collection, Free on Rail for 18/-.

Full Descriptive Catalogue on application to

BENJAMIN R. CANT,
ROSE GROWER,
COLCHESTER.

SEED LIST

(Free on Application).

FEATURES:—

Alphabetically arranged.
Best sorts, in heavy type, can be seen at a glance.
Probably the most explicit practical instructions for cultivation ever published in any Catalogue.
Many hints and recipes for cooking and serving the various vegetables.
Directions for the storing and forcing of vegetables
Medical qualities of many vegetables and herbs.
Prizes of £5, £3, (two of) £2, and £1 offered for photographs of horticultural subjects (see page 2 of Catalogue).
THE LIST, containing 93 pages and a profusion of illustrations, shows (a) WHAT TO GROW, (b) HOW TO GROW IT, and (c) WHAT TO DO WITH IT WHEN GROWN, and has been described by an Agent as one of the largest estates in England as a BOOK OF REFERENCE.
Another Customer, testifying as to quality writes:—"I should like to add that all the Seeds, &c., purchased from your establishment during the past 14 years have been of the very best quality, and have given great satisfaction."

RD. SMITH & Co.,

Seed Merchants & Nurserymen,

WORCESTER.

1898. FORBES' CATALOGUE 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants

is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and price of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other Valuable Information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,
ESTABLISHED 1870.
Nurseryman, Hawick, Scotland.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—Bacon.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, MARCH 5th, 1898.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, March 7th.—Sale of Roses, hardy herbaceous plants, and greenhouse Ferns by Messrs. Protheroe and Morris.
TUESDAY, March 8th.—Royal Horticultural Society: meeting of committees at 12 noon.
Sale of Imported and Established Orchids, by Messrs. Protheroe and Morris.
WEDNESDAY, March 9th.—Important sale of glasshouses, boilers, piping, etc., at Harefield Grove, Middlesex, by Messrs. Sedgewick, Son, and Weall; time 11 o'clock (two days).
Sale of Lilies, Roses, Carnations, and Palms, by Messrs. Protheroe and Morris.
FRIDAY, March 11th.—Sale of Imported and Established Orchids, by Messrs. Protheroe and Morris.

POPULAR AND BOTANICAL NAMES OF PLANTS.—A writer in the *Guardian* in a very able article on "The Gardener's Library" discusses the vexed question of plant names, and like most others who pursue the subject for any length of time, comes to the conclusion that the botanical names are the most reliable, and that any attempt to popularise plants, particularly exotics, by substituting English for Latin names, must end in failure. That has been shown conclusively for many generations past, during which time numerous botanical authors have given an elaborate set of English names, even for the most common of plants. Amongst others may be mentioned Turner, Dodoens, Gerard, Parkinson, Miller, and other old writers and compilers of herbals and dictionaries. These names

were in many cases translations of the Latin ones, which in Miller's great dictionary often assumed cumbersome proportions. More recently we get translations of the botanical names in the *Botanical Magazine*, *Botanical Register*, and other high class works of that stamp. Compared with the translations given by Miller, the names are vastly simpler, and almost follow a binominal system of nomenclature as in the case of botanical names themselves; nevertheless their adoption by the British public has been exceptional; nay, in the majority of cases the names have been entirely ignored. For this reason the *Botanical Magazine* gave up the practice of furnishing English names in 1871.

Efforts more or less strong have recently been made by various parties to introduce a system of the wholesale naming of plants in English, dropping those of Latin and Greek derivation. This quickly fell through, and we are not in the least surprised at the result; for instead of simplification, confusion became more confounded by the pinning of old names to newer plants, or even two old names were attached to a plant entirely different both in appearance and affinity. More than this, the conflict of rival systems or name-makers soon gives the flower-loving public a greater list of synonyms than the botanists of past ages have done; and they are by no means few. Popular names for common plants are possible; and those already well known under any common name have been familiar objects for centuries. Exotic plants, particularly those that are rare, or botanical curiosities, and thousands that are hardly likely to become familiar garden plants in this country, cannot possibly become popular. How then are the British public to know them by any name, much more a popular one, when they lack the opportunity of getting familiar with the plants? In certain cases they may have the privilege of seeing certain plants once a year, but by the end of another twelvemonth they have, in all probability, forgotten what the plants themselves were like. Recognition is absolutely necessary before plants can have popular names; therefore, it is superfluous to give English renderings of the botanical ones, or to create new appellations to be immediately forgotten.

To make any system of naming popular it would require sustained effort on the part of the promoters, and a general and generous acceptance on the part of the public of the system advocated; but any attempt that may be made to get a general agreement on the part of the public is foredoomed to failure. Furthermore, if anything like order is to be maintained amongst a host of English names, it seems that nothing short of a binominal system of nomenclature, and rigid adherence to it, would prevent the most bewildering confusion. The whole thing seems to us an attempt to know plants by means of a system of nomenclature involving the smallest amount of trouble in its acquirement. There is no royal road to learning, however, and those who imagine it otherwise will sooner or later, mostly sooner, be undeceived. There is yet another class of travellers and would be naturalists who despise all names whether scientific or trivial. To such people a "Primrose by a river's brim" is not even a Primrose, merely a bit of yellow in a setting of green. When the enthusiasm of such travellers induces them to write an account of their travels, they give word pictures of what they may describe as pretty or grand, but being couched in indefinite terms that may mean anything or nothing, no reader can follow them with any degree of intelligence, so that their descriptions, being meaningless, and of no practical value, soon fall flat

and rapidly pass into oblivion. As with people, so with plants, animals and inanimate objects, their names must be learnt and properly applied, otherwise they cannot be individualised, nor distinguished from others with which they may be surrounded. It is quite useless for such travellers to preface their books, as an excuse for the baldness of their descriptions, with the plea that they "make no pretence to any scientific knowledge of any part of natural history." They disclose no secrets and impart no information by so doing. True delight in plants is largely bound up with a knowledge of them and their names.

Sir Joseph Hooker, the veteran botanist, is to be made the recipient of a special Gold Medal, by the Council of the Linnean Society, on the occasion of the completion of his *magnum opus*, the "Flora of India."

A Spring Flower Show, organised entirely in aid of the Royal Gardeners' Orphan Fund, is to be held by the Ealing and District Gardeners' Society on the 15th instant. The show will be opened to the public at 2 p.m. by Mrs. E. M. Nelson, Hanger Hill House, Ealing, and remain open till 9 p.m.

Honourable Distinction.—At the last meeting of the Royal Horticultural Society of France it was announced that a despatch had been received from Prince Anatole Gargarine to the effect that the Russian Government had conferred the order of Saint-Anne on M. Charles Baltet of Troyes, France, for his important works on arboriculture and pomology appreciated in Russia during the last thirty years.

The Kew Guild.—The annual general meeting of the members of this Guild met to the number of seventy in the Lecture Room, Kew Gardens, on the 24th instant, under the presidency of the curator, Mr. Geo. Nicholson. The report was a very satisfactory one, showing no indebtedness to anyone except to life members, of whom there had been a phenomenal increase during the past year. Rule II. was altered so as to include as members of the Guild all who are or have been gardeners at Kew, or in positions of responsibility. These would comprise the botanists at the herbarium, the museum keepers, &c.

Loss to French Horticulture.—In view of a great horticultural exhibition which was to be held at Lyons, France, during the present year, it was proposed that the Rhone Horticultural Society and the Lyons Horticultural Association should amalgamate, but the two rival societies failed to agree upon the point. The municipal council of Lyons considered that there ought to be only one society, and thinking that dissension should not be encouraged, resolved to withhold the subsidy of 500 francs, which had been asked for each of the two societies. That means the loss of 1,000 francs annually to horticulture at Lyons.

Scientific and Sporting Tour.—A select and fully equipped party under the command of an experienced traveller will start from London in April next, visiting the best sporting districts in British East Africa. The party will travel *via* the Mediterranean and East Coast of Africa to Mombasa, thence by the Uganda Railway, and up country in easy stages. The expedition will occupy twelve months, and the entire route will be in British territory. The present is a favourable opportunity to visit the country while it remains in its natural state before it is further intersected by the railway now in progress. The locality to be visited is the hill districts around Mount Kenia, the climate of which is extremely exhilarating and invigorating. The country is interesting to sportsmen and students of zoology, as it abounds with lions, elephants, rhinoceros, quagga, koodoo, gazelle, springbuck, and numerous species of antelopes. The camp will be conducted on semi-military lines, as far as possible, but each will have ample opportunity to engage in zoological and botanical studies, &c. All information may be obtained from Messrs. J. & H. Lindsay, World Travel Bureau, 7, Waterloo Place, Edinburgh.

Mr. Malcolmson, a Scotch tea planter in Ceylon, is about to start plantations in Mexico, and at present is negotiating for the transport of 500 Japanese coolies to Vera Cruz.

Knowledge Unnecessary.—First Cabbage: "Professor Gooseberry is going to lecture on 'Gardening at Klondike' at the village of Mudcheap." Second Cabbage: "What does he know about it? He has never been there." F.C.: "Neither have the villagers."—*Snaggs*.

A Giant Chrysanthemum.—M. Foukouba, gardener to the Mikado, Tokio, Japan, is an enthusiastic and celebrated Chrysanthemum grower. There is a photographic illustration of a colossal specimen in the *Nord Horticole* for February, and which was grown by the Mikado's gardener in the open air under a very slight shade from bamboo hurdles, which at the same time furnished shelter from the violence of wind. The specimen was trained in the form of a broad-based, though unequal-sided cone, the diameter of which measured 16½ ft. in one direction, and 9 ft. 10 in. in the other. This gigantic specimen was raised from a cutting struck in 1897; and when the photograph was taken in November last, the plant carried over 800 blooms, the greater number of which had a diameter of 7 in. to 7½ in.

Tonbridge Gardeners' and Amateurs' Society.—The 24th annual dinner of this old and influential society was celebrated at the Bull Hotel, Tonbridge, on the 8th ult. Major C. E. Warner presided. In proposing the toast of the evening—"Success to the society"—the chairman said that the society had never been in a more prosperous condition than now. He coupled with the toast the names of Messrs. F. Webber and C. Baldock. Both of these gentlemen replied, Mr. C. Baldock, as hon. secretary, giving some figures showing the financial position of the society. After paying all expenses they had, he said, a balance in hand of over £30. The toast list was interspersed with songs by Messrs. J. Smith, Orrom, L. Breeze, J. S. Charlton, and Huntly, whilst the recitations given by Dr. Pollen were much enjoyed.

Chiswick Gardeners' Mutual Improvement Association.—At the meeting of this association on the 17th ult., a paper on "Carnations," was read by Mr. J. F. McLeod, The Gardens, Dover House, Roehampton. He dealt with the subject entirely from a practical point of view, dealing with all the more important sections of the Carnation, including propagation, pot culture under glass, the various suitable composts and the various shifts necessary to secure certain results. Commencing with Malmaison Carnations he recorded many failures on account of fungoid diseases, the destruction of the old plants, the procuring of fresh stock and final triumph. The secret of conquering rust and allied diseases in winter was to keep the plants dust dry at the roots, and the atmosphere of the house as well. Tree, border and florists' Carnations were dealt with in turn, and lists of the best varieties of each given. There was a good attendance of gardeners, and many of them took part in a well sustained discussion.

Shirley Gardeners' Mutual Improvement Association.—The monthly meeting was held at the Parish Room, Shirley, Southampton, on the 21st ult., the President, Mr. W. F. G. Spranger, presiding over a fair attendance of the members. Mr. E. T. Mellor, B.Sc. London, lecturer to the Hartley College, Southampton, gave his concluding lecture on "Fungi Injurious and Beneficial." He said the number of injurious parasitic fungi, according to a recent authority is about 1,600, showing what a vast army of enemies the cultivator of the soil has to contend with. Taking the *Peronospora infestans* as a typical example of the class of injurious fungi, the lecturer, by means of a large number of lantern slides traced its life history, showing how by the aid of resting spores it tided over the winter and started into life again in the favourable weather. Beneficial fungi were represented by the tubercles found on all leguminous plants. These were said to be able to take up nitrogen from the air, which passed from them to the plant, thus enabling the plant to grow well on very poor soil. A brief discussion followed, and hearty votes of thanks to the lecturer and to the president terminated a most instructive series of lectures on the subject.

Mr. P. C. M. Veitch, of Exeter, we are glad to learn, has recovered from his recent illness. He had been confined to bed for three weeks with influenza, and was unable to be present at the annual general meeting of the Royal Gardeners' Orphan Fund.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, March 8th, in the Drill Hall, James Street, Victoria Street, Westminster, 1 to 4 p.m. The committees will meet as usual. At 3 o'clock the Rev. Professor George Henslow, M.A., V.M.H., will lecture on "Some of the Plants Exhibited."

Rise of the Zonal Pelargonium.—On Friday the 25th ult., Mr. H. Cannell, of Swanley, Kent, delivered a historical lecture on "The Rise of the Zonal Pelargonium during the last 50 years," at 7 p.m. in the Widmore School Rooms, Bickley, Kent. Mr. H. Cannell has long been known as the most ardent and successful advocate for the advancement of these old-fashioned yet most modern of popular flowers, which may be seen in grand form at any time during the twelve months of the year in the nurseries at Swanley. He exhibited some flowers measuring nearly 3 ins. across, and spoke extempore.

Highgate and District Chrysanthemum Society.—Committee meetings of the above society were held on the 11th and 17th ult., when the schedule for the exhibition to be held at the Holloway Hall on November 8th, 9th, and 10th next, was settled, several classes being added to last year's schedule, making up the total to ninety classes. It was unanimously decided by the committee that the Society should discontinue its affiliation with the N. C. S. and award its own certificates and medals. It was also agreed that certificates should be awarded to new varieties of Chrysanthemums, if of sufficient merit. The judges were then elected as follows:—Mr. Theobald, Mr. Caryer, Mr. Rowbottom, and Mr. Witty.

New Palm House for Stanley Park, Liverpool.—It is with pleasure that we announce Mr. H. Yates Thompson has communicated to the Liverpool City Council his willingness to provide a Palm House for Stanley Park. This is most gratifying; and the donor has considered it desirable to place an erection about 120 ft. in length at a cost of about £6,000 in this thickly populated district, in which the residents have but slight opportunities of enjoying the beauties of floriculture. It will be remembered that Mr. Thompson gave the grand house, in Sefton Park (which was figured in our pages September, 1896, with a full description) at a cost of something like £12,000. The architect, who also designed the Sefton Park house is Mr. Mackenzie, of the firm of Mackenzie and Moncur, of Edinburgh, who are to be the builders of the proposed erection. It is proposed that the house should be placed on the north side of the Park near the terrace and handstands.

Exeter and District Gardeners' Association.—On the 23rd ult., before the members of this society a lecture on Potatos was delivered by Mr. W. R. Baker, gardener to Lady Duckworth, Knightleys. Mr. T. H. Stade, of Poltimore Gardens, filled the chair. Mr. Baker in the course of his lecture alluded to the botanical affinities of the Potato. He said that it was a native of South America and was supposed to have been first brought to England by Sir Francis Drake in 1576. It was introduced to Ireland in 1586. Speaking of the Potato disease, he said that it was at its worst in Devonshire in 1845. Mr. Baker referred to the discovery of the efficacy of what is now known as the Bordeaux mixture in dealing with the disease. He advised an occasional change of seed, as no matter how good the variety was it would wear out in time. The best soil for Potatos was a good friable loam, and the worst that which was naturally wet and heavy. Thin, sandy soil would produce well-flavoured tubers but plenty of manure was needed to procure good crops. Mr. Baker then detailed the methods of cultivation, and also dealt with the questions of storage and preparation of sets. A collection of the leading types of Potatos in cultivation was shown for the purpose of illustration, the merits of the several varieties being pointed out and commented on. A brisk and an instructive discussion followed the reading of the paper.

A Big Garden.—There is an area of 50,000 square miles in China described as a garden. It consists of meadowland filled with ponds, lakes, and canals.

Death in Church.—Soon after the service commenced in the Abbey Church, at Romsey, last Sunday morning, a gardener, named Grosvenor, aged sixty-eight, died suddenly. An appropriate hymn was sung, and the vicar gave a brief suitable extempore address instead of the prepared sermon.

Royal Horticultural Society of Ireland.—A meeting of the council of this society was held on Monday, 14th ult., at 61, Dawson Street, Dublin, George Carson, Esq., J.P., in the chair. A discussion as to the proposed alteration of the date of the spring show took place, and it was finally decided to hold the show at the Royal University Buildings, on Friday, April 1st. The judges for the various departments were nominated, and other general arrangements made. The entries close on March 25th.

Northumberland is Not Behind—at least so it would appear from the list of flowers in bloom in a garden in that county during the month that has passed. Here is the list:—cultivated: Snowdrop, Violet, Crocus, Primrose, Anemone, Hellebores (in variety), Wallflower, Rose Gloire de Dijon, Aconite, Erica carnea, double Daisies, Mezereon, Periwinkle, Scabious, white Arabis, Polyanthus, Doronicum, Laurustinus, Honesty, Sweet Rocket, Mother-of-thousands, Houndstongue, Forget-me-not, Viola, Marguerite; wild: Primrose, Celandine, Daisy, Dog's Mercury, Groundsel white and red Dead Nettle, Veronica, Spurge, Dandelion.

Ealing and District Gardeners' Society.—The usual weekly meeting of this society took place on the 22nd ult., in the Municipal Buildings, Ealing, when Mr. David Tannock, Kew Gardens, gave an exceptionally interesting paper on "Cape Bulbs," Mr. C. B. Green in the chair. Mr. Tannock, however, by request, travelled outside hulbs proper, with a view to render his subject as popular and practical as possible, which he succeeded in doing to the satisfaction of his audience. Mr Tannock, therefore, included in his list such beautiful and free-flowering plants as Gladioli, Freesias, Ixias, Sparaxis, etc., as well as hulbs proper, native to South Africa, like Crinum, Vallotas, Nerines, Amaryllis, etc., giving an outline in each case, of their history and culture. Clivias or Imantophyllums, Lachenalias, Agapanthus, etc., were also treated of, and a variety of other information afforded. Mr. Tannock recommended that many of the hardier species and varieties of these bulbous subjects be planted outside at the foot of a warm wall, where, if they were planted in suitable soil, would sometimes give remarkable results. He detailed their practice at Kew, argued for a more extended culture, both in frames and in the open air, in fact, Mr. Tannock proved by his sensible remarks that he was as good a gardener as a botanist. A cordial vote of thanks was unanimously given.

Transactions of the Scottish Horticultural Association.—For the information of members and friends this influential northern society publishes in compact form in a handy little book in paper covers the gist of what has been done through the year, and likewise its intentions for another season in the which we now are. The twenty-first annual report finds place at the beginning of the book. It congratulates the members and all concerned upon the satisfactory condition of the society, both from a financial and a member-strength point of view. The annual Chrysanthemum Exhibition held in the Waverley Market, Edinburgh, on November 13th, 19th, and 20th, proved a colossal success, there being no fewer than 1186 entries, whilst 4632 blooms were staged. The surplus profits of the show, which amounted to £250, were distributed amongst deserving charities. The statement of accounts for the year showed an expenditure of £64 5s 11d. in addition to the £250 above mentioned, and the expenses of the Chrysanthemum show which came to £1,189 5s. We would suggest the lumping of these two accounts as we fail to see the object in keeping them separate. The list of members is embodied in the transactions. A full syllabus of papers to be delivered at the monthly meetings of the society has been arranged. We notice, too, that it is proposed to have a supper to celebrate the majority of the institution. This will take place at the Windsor Hotel, 100, Princes Street, Edinburgh, on Wednesday, the 9th inst.

British Natural History.—Messrs. Blackwood will publish on Friday next a "Sketch of the Natural History (Vertebrate) of the British Islands," from the pen of Mr. F. G. Attilo, whose "Sketch of the Natural History of Australia" was recently widely reviewed. This volume will be more comprehensive in nature than the Australian one, and will take the form of an introductory textbook. The plates and numerous illustrations have all been specially executed for the work by Messrs. G. E. Lodge and E. F. T. and A. K. Bennett.

Generous Offer to Cambridge.—Sir Ernest Clarke has just delivered the last of four lectures at St John's College, Cambridge, on the "History and Economics of Agriculture." He referred to previous endeavours to establish a special examination in agricultural science for the ordinary B.A. degree. Having recently stated his case to Sir Walter Gilbey, the latter authorised him to inform the Vice-Chancellor that if the Senate could see its way to do this, he (Sir Walter) would be ready to offer the University £2,000 to provide a stipend of £200 for a reader in agriculture during the next ten years.

NATIONAL CHRYSANTHEMUM SOCIETY.

THE annual general meeting of the National Chrysanthemum Society which took place, as announced, at Anderton's Hotel, on the 28th ult., proved to be a very stormy one. Dissatisfaction appeared to be in the air and it made itself felt soon after proceedings were opened by Mr. T. W. Sanders, who was voted to the chair on the motion of Mr. George Gordon, seconded by Mr. H. Cannell.

The report and financial statement were read by Mr. R. Dean. The chairman formally moved and Mr. H. J. Jones seconded their adoption, both briefly. It is not necessary to give the details of either the report or financial statement, as the members present refused by the overwhelming majority of eighty-six to six to have anything to do with them. The retiring treasurer Mr. Starling, struck the key note of the fray by assuring the members that they were in anything but a sound financial position. They were in debt, and in order to pay it off fairly and squarely they would have to draw upon the reserve fund to a considerable extent. The time had come when the society ought to have paid auditors and a responsible treasurer; he himself had been a treasurer only in name. He did not, however, cast any imputation upon the auditors for they, he learned, had done their work well, and the accounts, as *accounts*, were right enough.

Mr. George Gordon discussed in some detail several of the items of expenditure, instituting a comparison between 1891 and 1897, and pointing out that several charges had increased. He thought they ought to pay their way before distributing medals among themselves, and that they ought not to spread their tails for every ass to bray at or fool to kick. From the schedule it appeared that £610 were to be given away in prize money and medals during the present year, while the probable income was £714, thus leaving only £104 to meet all other expenses. He asked where the money was to come from and thought the members ought to check this extravagance. He moved as an amendment that "the report and financial statement be referred to the committee to prepare a proper balance sheet, to give an estimate of coming expenditure, to report on the advisability of reducing the number of shows, or the prize money, and to place the same before an adjourned annual meeting. Mr. J. W. Moorman seconded and, with Mr. Bevan, strongly supported the amendment, which was then put to the vote and carried by eighty six votes to six. Messrs. G. Addison and C. Harman-Payne were the tellers of votes.

Mr. Cholmeley moved that the report and balance sheet be printed and circulated at least seven days before the annual meeting. He was not attacking men, he said, but principles, and as a business man he was convinced that the system hitherto followed was wrong. Mr. Wooderson seconded the motion, which on being put to the meeting was carried unanimously.

Mr. Spicer proposed the adjournment of the meeting for three weeks. Mr. Fife seconded, and Messrs. Gordon and Cholmeley supported. The audience was in unanimous accord, and the meeting was forthwith adjourned, the other business that was upon the agenda list standing over until the adjourned meeting.

HINTS FOR AMATEURS.

THE SEED ORDER

Cabbage.—It is for spring and early summer use that the Cabbage is most esteemed. Several sorts should be grown, so as to extend the period of bearing over a fairly long season. For early crop there is nothing to beat Ellams' Dwarf Early. In all localities this seems to do equally well. The plants are of dwarf and close habit, being well under a foot in height. They can thus be planted pretty close together, and the utmost got out of every square yard of ground. The heads are of medium size, solid, of great weight, and good flavour. An additional qualification is the way in which the plants will stand through severe winters. Wheeler's Imperial is also an early variety that comes in just after Ellams. For a general crop there is nothing to beat Enfield Market, a sturdy variety that throws heads of good size. It also is very hardy, and a good doer all round.

Sowing in the spring to furnish heads, which shall be ready for use during the summer and autumn months, is frequently practised in gardens where a variety of vegetables must be on hand at all times, or where Cabbages are special favourites. The varieties of Cabbage in cultivation fall into two distinct sections, viz., those suitable for autumn sowing and those fitted for sowing in spring. In most instances, sorts that give good results when sown in spring, are not successes when sown in autumn, consequently we must select another variety besides those we have already mentioned. Sutton's Tender and True is one of the best for the purpose. Under anything like ordinarily favourable conditions, heads may be cut in about three months from the date of sowing. The hearts are very solid, of capital flavour, and are very prettily shaped.

Savoy Cabbages are invaluable for winter use, and there is really no more delicious vegetable when the heads have been nicely crisped with frost. Drumhead is a variety that is much grown in gardens where large size is of importance, whilst Tom Thumb represents the other extreme in point of size. For amateurs we would recommend the latter in preference to the former. The heads are rather small, it is true, but compensation is obtained by the closer planting that is possible. The flavour is everything that can be desired, and if only one variety can be grown we should certainly recommend this, as a few plants can be put in at almost any odd corner. Golden Globe is a medium-sized variety of great excellence, and the same may be said of Dwarf Green Curled. A packet of seed from a well-selected and tested stock of the last-named variety will yield first-rate results. For a first choice then of two varieties grow Tom Thumb and Dwarf Green Curled.

Cauliflowers.—For a first early, and to come in as a succession to the late Broccoli, try First Crop. This form is very dwarf, and of compact habit. Thick planting may therefore be practised, which is of some importance from the economical point of view when dealing with early Cauliflowers. Magnum Bonum will form a capital succession variety. The heads are large, but as they are well protected with leaves, they last for some time in condition. Favourite, which is a little later than Magnum Bonum, specially recommends itself to amateurs on account of the ease with which it may be grown. For an autumn crop the claims of Veitch's Autumn Giant cannot be gainsaid; indeed, the merits of this grand variety are so well known and have been so thoroughly tested in all parts of the country that no further recommendation is needed. We may say, however, that it will supply heads of first-class quality as long as the frost will let it alone, thus joining hands with the early Broccoli.

Broccoli.—One of the very best of the early Broccoli is Veitch's Self-protecting, which thus carries on the succession after Autumn Giant Cauliflower has ceased to be of service. Carter's Mammoth Spring White will furnish heads from January to April, inclusive, if well treated. It is withal of good flavour, and the heads, which are of really mammoth size, are well protected by the leaves. For a late variety the amateur will do well to invest in Late Queen, which has, perhaps, greater cold-resisting powers than any other variety. The plants are dwarf and exceptionally sturdy. Like

late Broccoli generally the heads are well protected by the abundant foliage, and no matter how severe the winters a good percentage of the plants are sure to survive. The heads turn in in May and June, varying, of course, according to the locality and the character of the season.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Peach Buds Falling.—Please say what is the cause of Peach-tree buds falling off. The trees are covered with mildew. I painted them last December with Gishurst Compound. Would it be possible that it was too strong?—*Amateur.*

Generally speaking, Gishurst Compound is one of the safest specifics to use, and it is not at all likely that the mixture was too strong. You may possibly have been heavy-handed in applying it, and have bruised some of the buds a little, thus causing them to drop, but again it is not likely that this is the whole cause of the evil. The true reasons, for it is likely that there is more than one, are very complex in their workings, and to be able to put one's finger on the special one, it is necessary to know the whole of the facts of the case, and to have studied carefully the treatment given to the trees.

The dropping of buds is, broadly speaking, caused by some weakness, constitutional or acquired, on the part of the trees. In the case of some varieties, such as Noblesse, it is a natural trick that the trees have, and then nothing seems to be effectual in combating the evil. A fruitful cause of bud-dropping is the giving of too much heat when forcing; accordingly, the greatest care should be taken at this time. Another cause is neglect of water whilst the trees are maturing their growth in the autumn. The result of this is that the buds are improperly developed. They remain on the trees until the turn of the year, and then as soon as a little artificial heat is applied many of them are cast off. It will thus be seen that a combination of the evils of insufficient water supply in the autumn and too high a temperature at an early stage of their career in the spring would be especially dangerous, since either of the two is sufficient in itself to produce the dropping complained of.

In your case we are inclined to think that the dropping of buds is due to the fact that the presence of mildew last year prevented the proper development of the buds and maturation of the wood, this acting along the same lines as neglect in the matter of water would have done.

Your remedy will be to attend to the trees carefully so that they shall be given every chance to grow. An occasional spraying with a solution of potassium sulphide should be given. Half an ounce of the sulphide dissolved in a gallon of water will kill all the spores of the mildew and will do no harm to the trees at all.

We have replied at some length to this question because it is one that, unfortunately, is of some moment to both amateur and professional gardeners. It is most provoking even to the most even-tempered individual to see the fruit buds vanishing from his trees, and with them his chance of a crop.

Hardy Perennials for Cutting.—I give a list of perennials I grow. Can you suggest some additions for cutting purposes, and to bloom during August? The list is—Anemone japonica, Roses, Helianthus in variety, Pentstemons, Phloxes, Carnations, Rudbeckias, Gaillardias, Malva moschata, Stenactis, Dahlias, Chrysanthemum frutescens, Chrysanthemum early Japanese, Galega, Montbretias, Gladioli, Eryngiums, Achilleas, Coreopses, Inula glandulosa, Geums, Heuchera sanguinea, Monarda didyma.—*C. Hart.*

This is an exceedingly comprehensive list, and our correspondent's garden must be very well stocked indeed. If all these plants are well grown there should be no lack of cut flower. There are several of the Campanulas that would be in flower at this time of the year. *C. pyramidalis* in both its blue

and white forms is most useful at the beginning of the month. *C. Vidalii*, often grown as a pot plant for the greenhouse, also does very well in the herbaceous border when the winters are not too long and severe. In addition to the type *Anemone japonica*, *A. j. rubra* is a fine rosy-coloured form that is well worth growing. *Heuchera macrantha* will form a good addition to *H. sanguinea*. You mention Pentstemons in your list. These we take to mean the florist varieties. If you have not *P. barbatum* a very useful species usually met with in gardens under the name of *Chelone barbata*, we should advise you to get it. The Aquilegias are a host in themselves; *A. chrysantha*, *A. canadensis*, *A. caerulea*, and the numerous pretty hybrids are all of the greatest service. The three species named commence to bloom before August, but they continue to produce their blooms over a lengthy period, although much depends on the locality. We wonder that you do not include the Gypsophilas, for both *G. elegans* and *G. paniculata* would be invaluable for you. The earlier flowered perennial Asters (*Michaelmas Daisies*) such as *A. acris*, *A. a. drucunculoides*, *A. Amellus*, and *A. alpinus* would be in flower in August.

To these you may add *Boltonia decurrens*, *Anthericum Liliago*, *A. L. major*, *Cimicifuga cordifolia*, *C. racemosa*, *Centaurea Cyanus*, *C. atropurpurea*, *C. macrocephala*, *Helenium pumilum*, *Linum narbonense*, *Linaria vulgaris*, *L. V. Peloria*, *Lobelia splendens* Queen Victoria, *Potentilla* in variety, including such double forms as *Californie*, *Congo*, *Madame Rouillard*, *Velours Pourpre*, and *William Rollison*, *Statice Gmelini*, and *S. incana*. *Thalictrum adiantifolium* may well find a place in this list, for its graceful foliage renders it of great value for mixing with cut flowers of all descriptions.

Mildew on Chrysanthemums.—*Rob.*: The presence of the mildew on the young plants is probably due to lack of caution and consistency in ventilation, possibly combined with a little too much water at the root. Plants that are coddled up one day, and a lot of air rushed on the next, are almost sure to be attacked at this time of the year. If only a few spots are to be seen, you may stop the disease from spreading further by dusting the spots with flowers of sulphur. Be careful in future with both watering and airing.

Old Chrysanthemums.—I should like to grow on a few of the best sorts of the old plants in pots this year if they would do well. Please advise me how to proceed. *Wily.*

There is no reason why the plants should not do well, although it is not a common practice to grow them on for the second year. Knock the old plants out of their pots, and shake away a good deal of the soil, thus reducing the balls to an extent that will allow of their being put in smaller pots. Consign them to a cold frame and keep them close for a week or two until they get a start. Thin out the shoots at the base to as many as are required. If the stools are strong there may be a good deal of thinning to do. It should, therefore, be done gradually and carefully.

Tree Carnations.—*Y. Y.*: Do not delay in putting in the cuttings. Select points, about 3 in. long, of young shoots, pull them out from the parent plant by means of a sharp jerk, and there you have the cutting made ready to insert without the necessity for the use of the knife at all. Use light sandy soil and put five or six cuttings in a "thumb" pot. If you have a propagating frame with a minimum temperature of 60° Fahr. put the cuttings in it. They will then root in a week or two, after which they may be gradually inured to a higher temperature. Striking the cuttings thus in heat may seem to be a coddling practice but it is a great saving of time, and a far heavier percentage of cuttings root than when a lower temperature is given.

Lifting Tulips.—I planted a number of bulbs of Darwin Tulips at the beginning of last November. The leaves are through the ground for a couple of inches at the present time. I want badly to lift them to another place. Will this injure the plants.—*A. O.*

It won't do them any good, certainly, but if you exercise care in lifting and replanting, neither should it do them a very great amount of harm. Be very careful to dig deep enough for them, and break off as few of the roots as possible—some, of course, are bound to come to grief during the process.

PEA, SUTTON'S CONTINUITY.

THERE is always an eager desire to get a Pea that will supply the first dish for table use. We have nothing to say against this desire, nor the efforts made to secure it; but late Peas are liable to be overlooked, particularly in dry localities where a

is a distinctly late Pea, which, when sown in the second week of June, will come into use during the third week of August, just at a time when Peas are a scarce commodity in the southern and warmer counties of Britain. The haulm is of vigorous growth, not subject to mildew, and produces a

consumers of Green Peas. Several leading, practical cultivators speak of it in the highest terms of praise. It varies in height according to the weather, soil, and cultural treatment; but the fact that it was grown to a height of 4 ft. last year tells plainly of its vigour; while usable pods on the lower portions of



NEW LATE PEA, SUTTON'S CONTINUITY.

droughty season has the effect of putting a stop to growth or fostering mildew. With a little skilful management the dry period may be tided over, after which it is possible to get Peas as late as November, as was the case last year in many parts of the country both north and south. Sutton's Continuity

heavy crop of pods that come into use over an extended period. The pods are of a dark green, straight, almost square at the ends, 4 ins. to 4½ ins. in length, and filled with about nine seeds of first size and quality, the flavour being distinctly of the marrowfat type, which appeals so strongly to the

the haulm and flowers at the top indicated its continuous bearing character implied in the name. The accompanying photographic illustration, put at our service by Messrs. Sutton & Sons, Reading, will give readers an idea of the productiveness of the variety.

TOMATO VEITCH'S GOLDEN JUBILEE.
THE several fine exhibits of this Golden Tomato brought before the public during the past two years, but particularly the magnificent trophy at the great show of British-grown fruit at the Crystal Palace last autumn, ought to be sufficient to remove any remaining prejudices which the British public may

with red, the latter being just sufficient to lend an additional charm to a variety already admitted on all hands to be the finest and most handsome yellow Tomato brought before the public. The flesh is of excellent flavour, and so solid as to leave little room either for seeds or core. When first shown at a meeting of the Royal Horticultural Society on

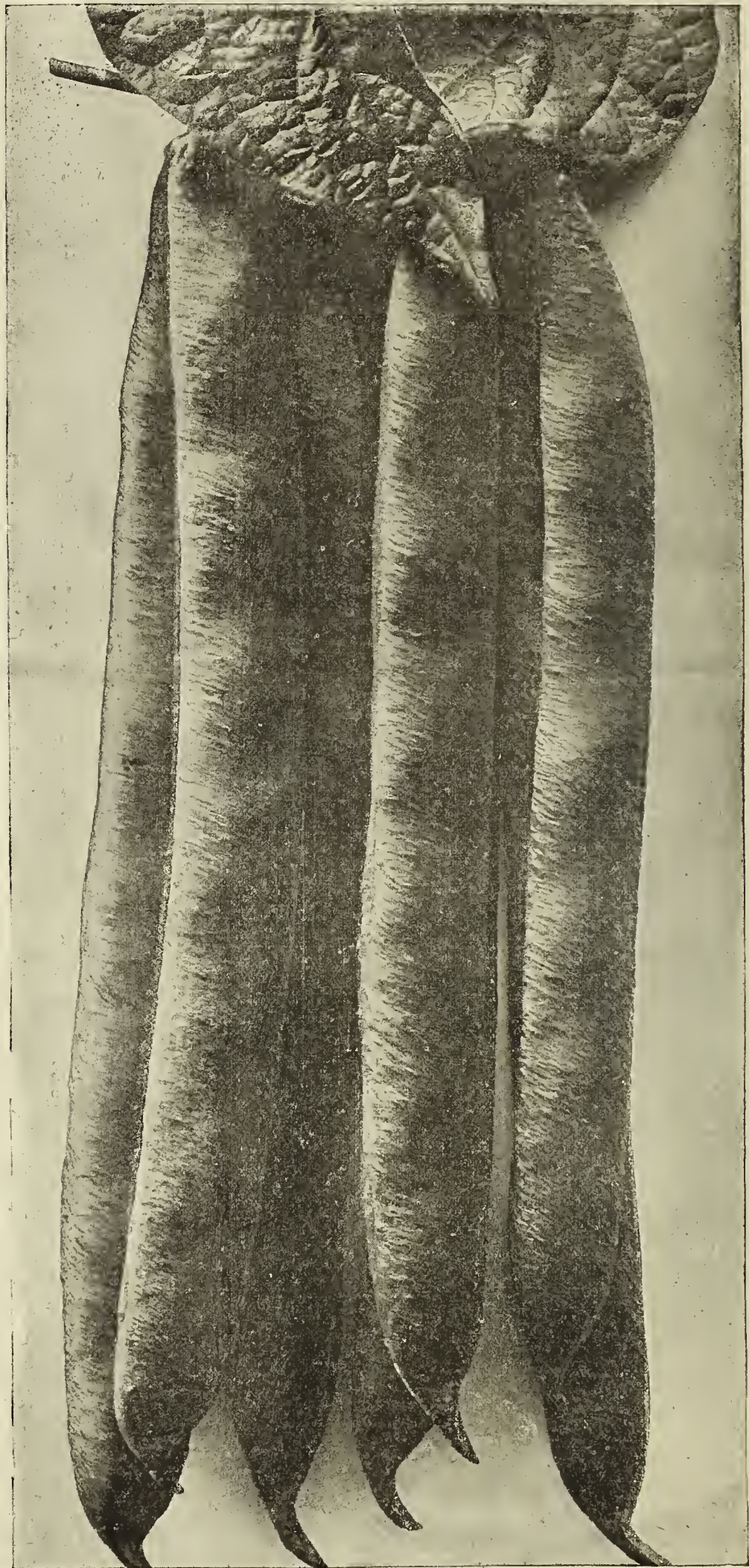
plainly shows the free-fruited character of the variety, now being put into commerce by Messrs. J. Veitch & Sons, Ltd., Chelsea, who have enabled us to place the figure before our readers.

RUNNER BEAN, ECLIPSE.

LARGE size is still a desideratum amongst Scarlet



TOMATO VEITCH'S GOLDEN JUBILEE.



WEBBS' RUNNER BEAN, ECLIPSE

entertain towards yellow varieties. Veitch's Golden Jubilee was raised by Mr. Owen Thomas, of the Royal Gardens, Windsor, as the result of a cross between Golden Princess and Frogmore Selected. The fruits are of medium size, perfectly smooth, rich golden-yellow, more or less clouded or overlaid

the 5th August, 1895, it was accorded an Award of Merit, but when brought up again on the 26th May, 1897, the members of the committee were so impressed with the superior quality of the fruit that they unanimously awarded it a First-class Certificate. The accompanying photographic illustration

Runners, provided the other qualities requisite are present. Webb's new Runner Bean Eclipse is considered an improvement upon the well known Selected Scarlet Runner Bean sent out by Messrs. Ed. Webb & Sons, Wordsley, Stourbridge. Under good cultural treatment the pods attain a length of 12 ins.,

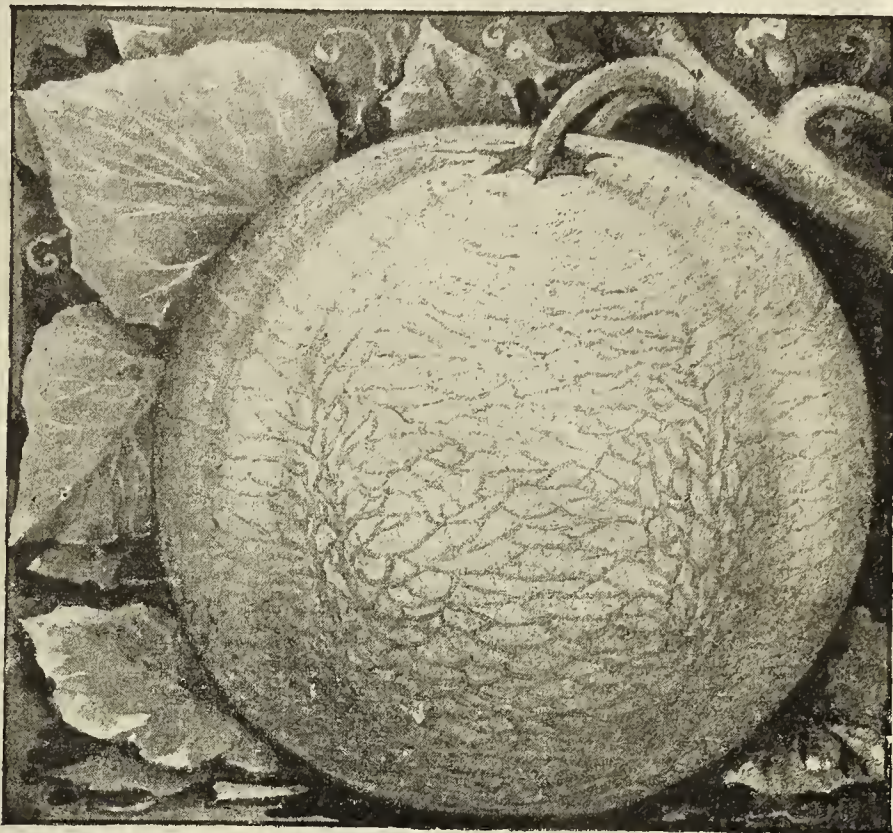
though the average may be less, and being tender, crisp, and succulent they make delicate eating when cooked. Several gardeners who have given the variety a trial speak in favourable terms of the

occurring amongst batches of seedlings. The aim has been to get a Cucumber combining the dark green hue of Tender and True, the quality of Lockie's Perfection, and the free-bearing character

Thomas, of the Royal Gardens, Windsor. The fruit is globular and of useful size for the table of private establishments, the average weight being about 3 lb. The skin is of a light cream colour, finely netted,



CUCUMBER VEITCH'S WESTERN WONDER.



THE LADY MELON.

heavy and continuous bearing character of the variety, while the flavour is excellent when brought to table. It has already been well tried, but is just now being put into commerce for the first time. The shape of the pods is well indicated by the accompanying photographic illustration lent us by Messrs. Webb.

of Telegraph. The fruits are cylindrical, smooth, and taper very slightly to the base, while they are of moderate and useful size. The flavour is all that could be desired in a Cucumber, and when the variety comes to be known its recommendations generally will ensure extended cultivation. Messrs. Robert Veitch and Son, 54, High Street, Exeter, have placed the accompanying illustration at our

and the rind is thin; while the flesh is of great depth, leaving only a small cavity for seeds, and is of a pale green, slightly tinted with red. It is unusual in this respect by combining the characters of the three leading types, as classified by colour, namely, scarlet, green, and white. The flavour is excellent, as is usually the case with small fruited melons. The variety sets freely and bears heavily. An award of



TOMATO THE CROPPER. (See p. 428).

CUCUMBER VEITCH'S WESTERN WONDER.

THIS new variety may be described as the result of repeated and careful selection of the best type

disposal. The selection of the variety was made in their own Cucumber house at Exwick.

THE LADY MELON.

IN this we have another of the successes of Mr. Owen

merit was accorded it by the Royal Horticultural Society when shown by Mr. Thomas. The stock has passed into the hands of Messrs. Dicksons, Ltd., Chester, who placed the illustration at our service.

TOMATO THE CROPPER.

THE great aim with most cultivators of Tomatos is to get the heaviest crop of fruit from any given space; and those who grow for market in this country well know that Tomatos of great size are not wanted. For exhibition purposes the matter is slightly different; but good judges do not now give the palm for mere size. For dessert purposes fruits of medium size are preferred; and our experience is that medium-sized fruits are the best flavoured and most relished by the consumer. The accompanying illustration, prepared from a photograph, shows a heavy crop of fruits of moderate size. The largest fruits do not reach half-a-pound in weight, while all the smaller ones are serviceable. It was put into commerce last year by Messrs. Wm. Cutbush & Son, Highgate, London, who lent us the accompanying illustration, and it still maintains the character indicated by the name.

HARDY FRUIT PROSPECTS.

THE choicer fruits such as Apricots and Peaches are well studded with fruit buds, and are fast expanding their petals, which means that some kind of protection will have to be given them to ward off frost or hail should either happen. We can hardly hope to escape such at this early season. Apples, as far as I can see around the garden, promise well; and Pears against walls, as well as in the open, give every indication of an abundance of blossom, which will soon be open. The Plums, too, are showing well in similar positions to the last named. Nature did her part well last summer and early autumn in ripening up the wood of all fruit trees; and we must hope she will be no less propitious now, but assist in setting and swelling the fruit. Then I predict we shall have an abundance of all the kinds named above.—*Devonian.*

READING AND DISTRICT GARDENERS.

THE fortnightly meeting of the above association was held in the Club Room, British Workman, Reading, on the 21st ult., the president, Mr. C. B. Stevens, presiding over a good attendance of members. The subject for the evening was "A Chat about Melons" introduced by Mr. B. Dockerill, The Gardens, Elmhurst, Reading, a well known grower and successful exhibitor of this fruit.

The paper was of the most practical nature and dealt with the cultivation of the Melon in all its branches. Mr. Dockerill said he was obliged to condense a large subject into a small paper, but trusted that it would be sufficient to open up a good discussion on the principal points worth considering; for the Melon was a fruit so widely known that it was reasonable to assume that there was hardly a gardener who had not made its acquaintance in one way or another; and it would be difficult to find a garden of any dimensions where this excellent fruit was not grown. The requirements for its successful cultivation were not large, for they may be summed up in the following words:—Heat, moisture, fresh air, sunshine, and good soil. Span-roof houses were preferred, standing in an open situation running from north to south, and frames made on the same principal were certainly preferable to the lean-to.

After dealing with the inside arrangements of the house, particulars were given as to the making of the borders, the best soil to be used, raising of the seed, the system of planting, stopping, top-dressing, temperature, ventilation, watering, &c. As to varieties, after briefly referring to the sorts of bygone days such as William Tillery, Reid's Scarlet Flesh, Victory of Bath, &c., the qualities of many of those grown at the present time were touched upon. The foremost position as the best for all purposes whether for growing in houses, frames, for exhibition, or for flavour was given to that grand variety Sutton's Hero of Lockinge.

In conclusion the diseases to which the plants were subjected were referred to and also the growing of Melons for exhibition, a practice in which the speaker had been exceedingly successful; for at the Reading Horticultural Show in 1892 in a competition for a brace of Melons, fourteen entries, and for a single specimen, twelve entries, Mr. Dockerill was awarded the highest honours in both classes. As late as 1896 he again took first prizes in both classes, the fruit in each case being grown in frames.

An interesting and profitable discussion ensued in which Mr. M. H. F. Sutton, Messrs. Turton, Martin, Woolford, Bound, Hobbs, Neve, and the president took part. A hearty vote of thanks was given to the lecturer for his very practical paper. Exhibits were small in number but interesting. Mr. Thompson, gardener to F. Wheeler, Esq., Tylehurst, exhibited a two-spined Arum, and Mr. Dockerill some excellent blooms, equal in quality to those seen in November, of Mrs. E. W. Clarke and J. H. Taylor Chrysanthemums.

QUESTIONABLE EXHIBITS.

WHATEVER may be the results of the present discussion as regards the N. C. S. withdrawing the unfair conditions attached to the prizes offered for vegetables at the October show, there can be no doubt the ventilation of the conditions on which the prizes are offered will do good; and if it curtails such absurd conditions being imposed in the future, some good has been accomplished. As a rule attention has only to be called to such questionable conditions to prevent them becoming popular with those who have the arrangement of horticultural schedules. I am pleased to notice the correspondence that has taken place and the strong opinion expressed against the conditions imposed. Although *Fiat justitia* in his admirable article (page 396) thinks I have used too strong a term in questioning the *honesty* of certain proceedings, yet in the following paragraph of his article he says: "*Most people will admit that it is not a fair condition to rule that all produce entered in a competition for vegetables grown from seed supplied by the firm giving the prizes shall become the property of the donors of the prizes.*"

Just so. Then if most people will admit (and I think they will) that it is not a fair condition, it is then unjust, and it should not be encouraged by the N.C.S. They should have no interest in offering prizes through the Society that are not fair and honourable.

Again, although any firm offering prizes for produce grown from its own seeds has the right to impose what conditions it likes to govern the competition, the society through which they are offered has an equal right to refuse them if it thinks the conditions under which they are offered are not fair and honourable.—*A member of the N.C.S.*

"JUDGING AT HORTICULTURAL EXHIBITIONS."

I THINK most of your readers will be interested in this question, as it affects a great many of us directly or indirectly. I agree with a good deal that Mr. Beckett has written concerning this knotty problem. As he says, *it is quite impossible to please the many critics who scrutinise the awards at a fruit or flower show.* What judges do, or should do, is to thoroughly examine all exhibits that are placed before them, and to adjudicate upon the same. After having satisfied themselves clearly which is the best, they can feel they have conscientiously done their duty to the best of their ability, and can only hope that the exhibitors as well as the general public will take the same practical view, though in practice it is often the other way about.

Of course, it is a well known fact that judges do err at times; the best of us are not infallible. Exhibitors are sometimes to blame for this, for instead of getting their exhibits all staged and ready for the judges by eleven o'clock (this being the usual hour) it is often an hour later before the hall or tent is cleared. This is wasting valuable time that should have been at the disposal of the judges. The consequence is they have to hurry over the awards to get done by opening time, and probably justice has not been meted out in the right quarter. When I am officiating, and there should be two exhibits as near alike as possible, as regards quality, size, or effect, whichever it may be, I always hang fire as it were, and endeavour to find a fault here, or a point there, so as to avoid those equal firsts or seconds—to my mind a very unsatisfactory solution. I do not think this equality is practised much outside horticultural shows, and if horse, cattle, poultry shows, etc., can do without this, surely we ought to be able to.

Mr. Beckett says he is always satisfied with the awards of practical men when he is exhibiting. I am pleased to hear this, and wish I could say the

same of some I know, who are very bad losers but excellent winners.—*J. Mayne, Bicton, Devon.*

GARDENERS' ROYAL ORPHAN FUND.

THE REPORT.

The tenth annual general meeting of this well-known charity was held as usual at Anderton's Hotel, Fleet Street, E.C. W. Marshall, Esq., took the chair at 2 p.m. At the chairman's request the notice convening the meeting was read by Mr. B. Wynne, and the minutes of the last general meeting were then presented and approved.

The report of the executive committee was presented by Mr. A. F. Barron. After commenting upon the fact that the tenth year of the institution had been safely passed through, it expressed regret that the receipts for the past year had not been so satisfactory as could be desired, and urged the necessity of increased efforts on behalf of friends. During the past ten years ninety-eight children had received benefit from the Fund, of which number sixty-two were even now in receipt of a weekly allowance. The total amount paid to children since the inauguration of the charity in 1887 was £5,807 5s. Amongst the most important donations were £50 from the Scottish Horticultural Association, £26 5s. from the Royal Caledonian Horticultural Society; £23 12s. 6d. from the Chislehurst Gardeners' Society; and £18 8s. from the Altrincham Gardeners' Society. A sum of £457 5s. 11d. had been bequeathed by the late Mr. J. W. Thomson, and invested in accordance with the terms of his will. This legacy would henceforth be known as the "J. W. Thomson Trust."

The annual dinner held at the Hotel Cecil in April last, and presided over by Sir J. Whittaker Ellis, Bart., had resulted in a handsome subscription list of £635.

The best thanks of the committee were due to the treasurer, Mr. N. Sherwood, and the auditors, Mr. P. Rudolph Barr and Mr. M. Rowan.

The loss by death of Dr. Robert Hogg, and Mr. W. G. Head, both staunch supporters of the Fund was deeply deplored.

The members of the executive committee who retire by rotation were Messrs. Assbee, Ballantine, Cannell, Cummins, Gordon, McLeod, Roupell, and Wynne. All offer themselves for re-election with the exception of Messrs. Ballantine and Cummins, Messrs. A. Outram and G. H. Richards being nominated to fill the vacancies.

Mr. A. F. Barron was again nominated for secretary at the same remuneration.

The cash statement declared total receipts of £2,625 1s. 1d., including a balance from the last account of £599 11s. 10d. The expenditure summed up to £1,689 3s. 10d., with a balance in hand of £935 17s. 3d. Among the most important items appeared £853 15s. spent in allowances to orphans at the ordinary rate of 5s. per week to each child. Special grants in aid had been made of £22 10s., whilst the "Emma Sherwood Memorial" accounted for £13, thus making a total disbursed in charity of £889 5s. A further sum of £422 7s. 4d. had been invested in Canada stock. The invested moneys of the Fund amounted to £7,070 6s. 10d. in 2½ per cent. Consols, and £2,422 7s. 4d. in 3 per cent. Canada stock.

Mr. W. Marshall briefly moved that the report and statement of accounts issued to the members be taken as read, and adopted. He had nothing, he said, to comment upon with relation to the report, since everything had been duly mentioned, but he would suggest, as a private individual, that the committee should consider how many children from one family should be placed upon the funds. Personally, he thought that the number should not exceed two. Mr. Bates seconded the adoption of the report, which was carried unanimously.

Mr. Poupert moved, and Mr. Osman seconded that N. N. Sherwood, Esq., be re-elected treasurer, and thanked for his past services.

It was proposed by Mr. R. Dean that Mr. M. Rowan be re-elected auditor, and that he and his auditor colleague, Mr. P. Rudolph Barr, be thanked for services rendered. Mr. Roupell seconded.

On the motion of the chairman, seconded by Mr. H. B. May, Messrs. Assbee, Cummins, Gordon, McLeod, Roupell, and Wynne were asked to continue upon the committee. Mr. Cummins proposed that Messrs. A. Outram and G. H. Richards be asked to

serve upon the committee, *vice* Messrs. Ballantine and Cannell, who retire. Mr. G. Reynolds seconded.

Mr. Marshall said an agreeable duty fell to him in proposing Mr. A. F. Barron as secretary for the ensuing year. Mr. Walker seconded.

All these motions were carried.

On the motion of Mr. H. J. Jones, supported by Mr. J. Fraser, Messrs. R. Dean, McLeod, Walker, and H. B. May were appointed scrutineers of the ballot.

The meeting then adjourned for the declaration of the poll, which closed at 4.30 p.m.

RESULT OF THE BALLOT.

This was made known at 4.50 p.m. The total number of votes polled was 3,157, and the successful candidates were as follows, with the number of votes obtained by each:—Agnes Macintosh, 349; Robert John Smith, 332; Jamesina Baird, 278; Lydia Annie Milne, 275; Hermine Kosbab, 272; William Ewart Holmes, 269; Ruth Amy Worth, 241; Margaret Annie Richardson, 232; and Constance Mary James, 209. Annie Kathleen French, with 166 votes to her credit, was tenth on the list and therefore came in for the benefit of the "J. W. Thomson Trust." The meeting closed with votes of the thanks to the scrutineers of the ballot, and to Mr. Marshall for presiding.

THE ANNUAL FRIENDLY DINNER.

Mr. P. C. M. Veitch, of Exeter, had been announced to take the chair at the dinner, which took place at 6.30 in an adjoining room, but was prevented from fulfilling the engagement by illness. Mr. N. N. Sherwood therefore acted in that capacity.

After the usual loyal toasts of the Queen, Prince and Princess of Wales, and the rest of the Royal Family had been honoured at the invitation of the chairman, Mr. Sherwood proposed "continued success and prosperity to the Gardeners' Royal Orphan Fund." He alluded briefly in the course of his remarks to the information given in the report. He was sorry to find that the past year had not been so successful as they could have wished it to have been, but they must not think matters were so bad as these words might lead them to think. He assured his audience that the nursery and seed trade would always be ready to do what lay in its power to help such charities, and impressed upon them the necessity for enlisting the sympathies of all gardeners. In alluding to the large donations which had been received from various sources during the course of the year, he mentioned one of £31 sent by Mr. M. Todd, of Edinburgh, since the publication of the report. The donation of £14 sent by Mr. H. J. Jones, was made up of no fewer than 2,501 coins. Mr. Miles, of Southampton, who had during 1897 obtained fifty-five new subscribers, was mentioned as an instance of what might be done by an energetic local secretary. He coupled with the toast the name of Mr. Marshall, who suitably responded.

Other toasts followed, including one to the chairman, and one to the secretary, Mr. A. F. Barron. The evening was much enlivened by some capital songs from Messrs. D. W. Crane, Poupart, R. H. Mason, and H. J. Jones. The musical sketch and recitation given by Mr. Rowland Henry evoked roars of laughter, and Mr. Weeks with his recitation "Abimelech" fairly brought the house down.

CHRISTMAS AND LENTEN ROSES.

CHRISTMAS and Lenten Roses are general favourites, not only on account of their early flowering properties, but they are also esteemed for their quaint beauty and general usefulness, supplying as they do a rich harvest of durable flowers, at a season when flowers are *flowers*, in other words when we poor benighted apostles of the floral world are at our wits' end what to dish up for variety, until gentle spring unfolds her hidden treasures.

All spring flowers promise to be with us much earlier than usual; in fact, many are well with us now. Snowdrops are in plenty; *Eranthis hyemalis* (Winter Aconite) in sheets of gold; and Christmas Roses just about over, have been in evidence since early December. The earliest of the Lenten Roses are now (Feb. 12th) at their best. Many of them commenced to unfold their quaint, drooping flowers in early January. We do not, as a rule, have these in flower in Scotland until March and April, unless, of course, they have the protection of a frame or hand light, a plan generally adopted in most gardens. When so treated the flowers are not only cleaner, but have

also longer stems, which further enhance their value for decorative purposes.

Visiting Mr. Forbes' hardy plant nursery at Hawick, in the end of January, I noticed that even here, growing in nursery rows on an open border, many of the Hellebores were in full bloom. *H. niger* and its varieties, *H. n. maximus* and *H. n. angustifolius* were fine, the last-named being especially so. I consider this by far the best, being not only purer in colour, but also more vigorous and free in all respects. The rosy tinge generally seen in *H. niger* and *H. n. altifolius* (generally known as *maximus*) is entirely wanting in *H. n. angustifolius* the Scotch Christmas Rose. (By the way, why are they known as Roses at all? it seems a strange incongruity, though certainly not more so than some of our newspaper Christmas numbers, which also claim the title. Whether right or wrong the cognomen has evidently come to stay).

Of the varieties generally known as Lenten Roses, the following were well in flower:—*H. atrorubens*, reddish purple; *H. caucasicus*, white tinged rose on the outside; *H. caucasicus punctatus*, reddish rose; and *H. colchicus coccineus*, plum purple, suffused red. *H. orientalis* Apotheker Bogrin is crimson purple, spotted with crimson; *H. o. F. C. Heinemann* is dark purple, spotted with crimson; *H. o. Inspector Hartweg* is rosy purple, spotted carmine. *H. o. Albian Otto*, *H. o. Councillor Benary*, and *H. o. Professor Scleicher*, were the most prominent whites in flower. A great many other sorts were showing bud, and ere now I fancy will be in bloom. The flowers are borne in panicles on stems 15 ins. or so in height, clear of the foliage, which is not in their favour should severe weather set in. These Lenten Roses are gross feeders and soon exhaust the soil. A mulching of dung or a top dressing of good soil, and copious waterings in their growing season are very beneficial, especially as the plants dislike being disturbed at the root, and should not be broken up any oftener than is absolutely necessary.—*Waverley*.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Dendrobium pardalinum.—The parentage of this hybrid Dendrobe is given as *D. Ainsworthii* and *D. statterianum*, both being garden forms. It bears a close resemblance to the first-named parent, but the ground colour of the segments is creamy rather than white. There is a faint purple blotch at the tips of the sepals and petals. The disc of the lip is furnished with a large, circular, rich crimson blotch, which covers the greater portion of the same, and is wonderfully well defined in outline. On each side of the base the surface is thickly striated with slender lines of a lighter but brighter crimson. These lines and the blotch are brought out very clearly and effectively under the influence of artificial light. The name *pardalinum* is, however, a misnomer, for we can hardly imagine a *pard* furnished with a solitary blotch. The flowers are deliciously fragrant for days after they are cut whether placed in water or not, the odour recalling that of Violets. The hybrid has been flowering for some time past in the collection of Thos. McMeekin, Esq., Falkland Park, South Norwood Hill.

Odontoglossum wilckeanum Rosslyn var.—A piece of this magnificent variety, after a year's growth by Messrs. McBean & Sons, Cooksbridge, Lewes, has produced a spike 4½ ft. in length, and carrying thirteen flowers of large size. Last year it was a small and weak plant. It is the property of H. T. Pitt, Esq., Rosslyn, Stamford Hill. The segments are broad and imbricated, and almost covered by large, dark, chestnut-red blotches on a clear yellow ground. The lip is paler, but the large blotch upon it is brighter. The flowers measured 3½ in. by 3¾ in.

Odontoglossum wilckeanum rubiginosum.—The large, rich, chocolate-red blotches on the flowers of this variety make it the darkest and richest of the forms of *O. wilckeanum* we remember having seen. They have a waxy and shining lustre which gives the flower a most striking appearance. H. T. Pitt, Esq., Rosslyn, Stamford Hill, is the fortunate possessor.

The Orange Crop of New Zealand has been known to bring £200 per acre in some seasons.

Kitchen Garden Calendar.

ONIONS are an important crop in most gardens, and to have them of the finest quality special care must be taken in their cultivation. The time of sowing the seed, as well as the preparation of the ground, are important items; this being so, an effort should be made to get the seed in on the first favourable opportunity. There is nothing gained, however, by sowing when the soil sticks to the boots and gets carried off on to the paths. Where the ground was turned up roughly in the autumn it should be forked over, breaking all the clods so as to render it as fine as possible. If the day be fine and the sun shines brightly, by the afternoon that which was forked over early in the morning will be sufficiently dry on the surface to walk upon without any harm being done. When in this condition it should be trodden, so as to make the surface firm, after which the plot intended to be sown should be raked level and the drills made. There is no necessity to form beds, or to make a division between the different varieties, which is a waste of ground. It is, however, better to allow a little more room between the drills than is usually done, as this facilitates the work of keeping the plants clean. Neither is it advisable to sow too thickly, as the plants cannot gain strength in their young state when overcrowded. Deep sowing must in all cases be avoided, for the nearer the bulbs are to the surface the better their shape.

PARSNIPS for an early supply may now be sown. Those who wish to grow them for exhibition and have some difficulty in obtaining clean straight roots, would do well to make holes with a dibber eighteen inches deep, which should be filled in with finely sifted soil to which a little sand has been added.

CARROTS.—Make a sowing of these on a warm sheltered border, choosing the early short horn varieties such as Gem, Parisian Forcing, etc. In warm sheltered places a few Potatos may now be planted; but it is not advisable to plant more than sufficient for an early supply, as better results will be obtained by deferring such work till the first week in April; but where there is space at the foot of a south wall, or such like place, where protection can be afforded should there be any frost, two or three weeks may be gained in the time they are ready to lift. Lettuces that have been kept in frames during the winter may now be transplanted in the open ground; a small sowing should also be made on a warm border. Cabbages are much earlier this year than usual, and possibly, should there be a dry, cold March, many of them may run to seed. To avoid any blanks a pinch of seed should now be sown either in a box or out of doors; plants so raised grow away quickly when the weather gets warmer.

GLOBE ARTICHOKE.—This vegetable in many gardens is much neglected, and the few small hard heads that are obtained are almost worthless. To produce large succulent heads the ground must be liberally treated and suckers of the finest types obtained. These should be planted in rows at least 4 ft. apart each way, that the foliage may have ample room to develop itself. The present is a good time to make new plantations.

VEGETABLES UNDER GLASS.—As the days get longer these will need more attention, for they will be more liable to get dry. In all cases ample air must be afforded when the weather is favourable, to keep them in a healthy condition. Peas, Lettuce, Cauliflower, Onions, and such like should be gradually hardened off ready for planting out as soon as the weather is favourable. Early Tomato plants must be kept near the light to prevent them becoming drawn. Make a small sowing of Vegetable Marrows for an early supply, and do not neglect to keep up a supply of forced salads. A pinch of white Celery seed may now be sown. This will germinate much more readily if placed in a hot bed than in a house.

CUCUMBERS.—A few seeds may now be put in to give a supply of plants to fill frames on hot beds where vegetables have been forced. Plants in houses at this time of the year need great care both in watering and ventilation. Those in fruit must be closely watched, as in many places there are not sufficient insects to fertilize the flowers, the consequence being they fail to set any fruit. Where this

is so artificial fertilization must be resorted to. Where the houses are excessively damp the pollen seldom gets dry, so that it is impossible for the fruit to swell. To overcome this give the trellis a sharp tap about the time air is put on in the morning. It will be observed that a spot of moisture will fall from each flower, which, if allowed to remain, would keep the pollen moist all day. About mid-day select the most prominent flowers and fertilise them in the same way as Melons by rubbing the pollen on the stigma. Avoid overcrowding of the foliage by regulating the growths; stopping should always be done either at the first or second joint beyond the fruit according to the state of the plants. When young two joints may be allowed, but as the trellises become covered leave only one.—*Kitchen Gardener.*

The Orchid Grower's Calendar.

SHADING—Assuming the sun blinds as recommended in the previous calendar are all in position, it will, perhaps, be necessary to whiten over spaces where they do not quite meet, also the ends, etc. A good composition for this purpose, and one we always use, is made up of the following ingredients:—get 3 lbs. of whitening and mix with half a gallon of skimmed milk; add to this half-a-pint of turpentine, thoroughly mix and apply with an ordinary white-wash brush. The turps make it adhere to the glass and prevent its being washed off every time there is a shower. There is, of course, an objection to the use of turpentine on the roof glass on account of the likelihood of its being washed off into the tanks, but if it is put on when fine and bright, it will soon dry, and is not easily removed.

FIRING—During the spring time when the sun pops in and out, great caution must be observed with the artificial heating. It is at no time good for the plants when fire-heat and strong sun-heat clashes, so that whilst it is as well to have the fires low on bright days it would not do to let them out altogether. But to counteract any undue raising of the temperature it is best to run the blinds down for a few hours, or at bright intervals which prevails in showery weather.

CATLEYA TRIANAEL.—A fine variety of this spring-flowering Cattleya is a valuable acquisition; but what a lot of had ones you flower out of an importation before you come across even a passable variety. It is much cheaper in the end to pick up fine ones in flower, it saves time, labour, and disappointment. It is just as well to remember that a had one requires just as much space and attention as a good one. The plants are just now making a good show. After the flowers fade, they will begin to make roots freely and must be encouraged by being afforded some fresh material should the old have become exhausted. As I have often pointed out, we are not great advocates for top dressing, it makes the top look nice, but it is not a fair index to the whole. However, if the peat is good and the plant has not outgrown its pot, there is no harm in pricking a little live sphagnum moss here and there.

CYMBIDIUM LOWIANUM.—Where there is good accommodation for such strong growing plants, there is, I am sure, nothing that pays better to grow than does this Orchid, whether for pleasure or profit. When well treated it flowers with amazing freeness, and regularity. Its lasting properties, too, are unsurpassed, and are not even equalled in any other Orchid. The colour, too, orange-green sepals and petals, with bronze lines and the bright crimson lips, appeals to the refined tastes of the ladies.

COOL HOUSE.—*Odontoglossum triumphans* is now in season. I am glad, too, to note that this yellow-ground *Odontoglossum* is again coming into favour. It is singularly handsome and effective when well flowered. There is a chance, too, of getting a specimen of *O. excellens*, the natural hybrid between *O. Pescatorei* and *O. triumphans*, so that no wonder newly imported plants go well at auctions. There is only one thing that can be urged against it, and that is, it soon goes flabby when cut, and is therefore not in much request as cut flowers.

ODONTOGLOSSUM CITROSUM.—In the intermediate house this beautiful *Odontoglossum* is pushing up its spikes from the centre of the young growths, and should be well looked after, for slugs and small shell snails attack them in the young state. Our plants are rather shrivelled, owing to their being kept dry to induce them to flower freely. After the spikes are well up they receive a good soaking without wetting the young growths, which would tend to make them rot.—C.

QUESTIONS AND ANSWERS

Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Old Fashioned Rose.—*Sigma*: We quite agree with what you say regarding the Rose *Félicité Perpétué*; but, under any other name it would smell as sweet. Now that you have given the proper rendering of the other old favourite, namely, *Village Maid*, we have no difficulty in tracing the same. It is an old garden variety of *Rosa gallica*, having white flowers, striped with red, and what rosarians would term a *Gallica Rose*.

Grub at the roots of Apple Trees.—*J. H. W.*: The grub you sent arrived in a very damaged condition, but as far as we can see there is no cause for alarm. It was evidently the grub of a beetle, but looked more like a predaceous insect than otherwise, that is, one that lives on other insects. In any case it was perfectly distinct from the grub of any of the cockchafer tribe, which are well known to be destructive to the roots of a large number of garden plants, including fruit trees. Nor was it any of the weevils that usually make themselves obnoxious in gardens. We presume you have no direct evidence of injury to the roots of the trees. It is very doubtful if the grub could have recently been brought by manure, particularly if the latter was at all wet, from the courtyard or stables.

The Damping of Cucumbers.—*Wm. Witard*: You will find some hints on this subject towards the end of the article headed *Kitchen Garden Calendar*.

Lifting Parsnips.—*T. Read*: The roots will take no harm if you lift them carefully and pile them alternately with layers of moist sand. The object of covering them is to prevent their getting dried up by the loss of moisture. In the absence of room in a shed they may be stored in some out-of-the-way corner facing the north, or at least screened from sunshine, to avoid starting them early into growth. The manuring and digging of the ground may then be accomplished without let or hindrance.

Yew Twigs Poisonous.—*W. R.*: There have been cases of poisoning amongst horses, attributed to this cause from time to time. Cut and withered twigs are more dangerous, or have been more blamed than the fresh twigs and foliage on the tree. You can easily avoid any risk by sweeping up the prunings and wheeling them to a heap where a fire may be kindled, and every scrap of Yew piled upon it as the fire is proceeding. None should be left lying about where they may be blown by the wind in the way of cattle.

Standard Gooseberries.—*Interested*: Those we have seen have all been grafted or budded on stems about 4 ft. in height. The Golden-flowered Currant (*Ribes aureum*) was the stock used, probably on account of the rapidity of its growth, whereby a clean stem can quickly be obtained. These standards flower and fruit freely enough, at least for a number of years, though we cannot say how many. They are both curious and ornamental, and useful in proportion to the quantity of berries they produce. The heads standing as they do, clear of the ground, the berries are not liable to be splashed with sand and mud. They are no more proof against attacks from birds than the ordinary bush, but, while small, could perhaps be more easily protected by netting.

Names of Plants.—*G. Guyott*: *Dendrohium Pierardi*.—*W. K.*: 1. *Coronilla glauca*; 2. *Grevillea thelemanniana*; 3. *Asplenium obtusatum lucidum*; 4. *Pteris argyrea*; 5. *Doryopteris palmata*.—*A. C.*: 1. *Crocus vernus* var.; 2. *Scilla sibirica*; 3. *Vinca major variegata*; 4. *Ilex aquifolium ferox argentea*; 5. *Prunus cerasifera Pissardi*; 6. *Viburnum Opulus sterilis* (the Snowball-tree).—*H. D.*: 1. *Tillandsia zehrina*; 2. *Pellionia daveauana*; 3. *Eupatorium weinmannianum*; 4. *Coleonema alium*.

Communications Received.—*P.*—*L. Brown*.—*H. C. P.*—*W. M. N.*, Plymouth.—*The Leeds Orchid Co.*—*H. Mann*—*F. A. Walton*.—*T. B.*—*A. C.*—*H. B.*—*A. R.*—*W. C. M.*—*S. G.*—*P. W.*—*Era.*—*G. T. L.*—*A. N.*—*Stolon*—*Leonard E.*—*R. J. Askew*.—*T. T.*

TRADE CATALOGUES RECEIVED.

F. H. HORSFORD, Horsford's Nurseries, Charlotte, Vermont, U.S.A.—Hardy Ornamental Trees, Plants, Bulbs, Shrubs, Ferns, Vines.

LUTHER BURBANK, Burbank's Experiment Farms, Santa Rosa, Sonoma County, California, U.S.A.—The 1893 Supplement to *New Creations in Fruits and Flowers*.

TOOGOOD & SONS, Southampton.—*Toogood's Royal Farm Seeds*.

W. P. LAIRD & SINCLAIR, 73, Nethergate, Dundee.—*List of Farm Seeds*.

COVENT GARDEN MARKET.

March 2nd, 1898.

FRUIT.—AVERAGE WHOLESALE PRICES.

| | s. | d. | s. d. | | s. | d. | s. d. |
|-----------------------|----|----|-------|--------------------|----|----|-------|
| Apples ... per bushel | 4 | 6 | 10 | Grapes, per lb. | 2 | 0 | 3 |
| Cobbs | 21 | 0 | 22 | Pine-apples | | | |
| per bushels. | | | | —St Michael's each | 2 | 6 | 7 |

VEGETABLES.—AVERAGE WHOLESALE PRICES.

| | s. | d. | s. d. | | s. | d. | s. d. |
|-----------------------|----|----|-------|------------------------|----|----|-------|
| Artichokes Globe doz. | 2 | 0 | 1 | Herbs ... per bunch | 0 | 2 | |
| Asparagus, per bundle | 3 | 0 | 8 | Horse Radish, bundle | 1 | 0 | 2 |
| Beans, French, per | | | | Lettuces ... per dozen | 1 | 3 | 1 |
| per lb. | 0 | 9 | 1 | Mushrooms, p. basket | 1 | 0 | 1 |
| Beet..... per dozen | 1 | 0 | 6 | Onions..... per bunch | 0 | 4 | 0 |
| Brussels Sprouts | | | | Parsley ... per bunch | 0 | 3 | |
| per half sieve | 1 | 0 | 1 | Radishes... per dozen | 1 | 0 | 3 |
| Cabbages ... per doz. | 1 | 0 | 1 | Seakale... per basket | 1 | 6 | 2 |
| Carrots ... per bunch | 0 | 3 | | Small salad, punnet | 0 | 4 | |
| Caniflowers.....doz. | 2 | 0 | 3 | Splnach per bushel | 2 | 0 | 3 |
| Celery.....per bundle | 1 | 0 | 1 | Tomatoes..... per lb. | 0 | 6 | 1 |
| Cucumbers per doz. | 6 | 0 | 12 | Turnips ... per bun. | 0 | 3 | |
| Eodive, French, doz. | 1 | 6 | 2 | | | | |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| | s. | d. | s. d. | | s. | d. | s. d. |
|-------------------------|----|----|-------|------------------------|----|----|-------|
| Arum Lilies, 12 blms. | 2 | 0 | 3 | Orchids, doz. blooms | 1 | 6 | 9 |
| Asparagus Fern, bun. | 1 | 6 | 3 | Pelargoniums, 12 bun. | 6 | 0 | 8 |
| Azaleas, doz. sprays | 0 | 4 | 0 | Red Roses, per doz. | 4 | 0 | 6 |
| Bouvardias, per bun. | 0 | 6 | 0 | Roses (Indoor), doz. | 0 | 6 | 1 |
| Carnations doz. blms. | 1 | 6 | 0 | Tea, white, doz. | 1 | 0 | 2 |
| Daffodils, per dozen | 0 | 5 | 0 | Perle | 1 | 6 | 4 |
| Eucaris ... per doz. | 3 | 0 | 4 | Safrano | 1 | 0 | 2 |
| Gardenias ... per doz. | 6 | 0 | 9 | (English), | | | |
| Geranium, scarlet, | | | | Pink Roses, doz. | 3 | 0 | 8 |
| doz. bunches | 4 | 0 | 6 | Primroses, doz. bun. | 1 | 0 | 1 |
| Lilium longiflorum | | | | Smilax, per bunch | 1 | 6 | 2 |
| per doz. | 4 | 0 | 6 | Soowdrops, doz. bun. | 0 | 9 | 1 |
| Lily of the Valley doz. | | | | Tuberose, doz. | | | |
| sprays | 0 | 6 | 1 | hlooms ... | 1 | 0 | 1 |
| Lilac (French) per buo. | 3 | 0 | 4 | Tulips, various, doz. | 0 | 6 | 1 |
| Marguerites, 12 bun. | 2 | 0 | 4 | Violets (Parma), per | | | |
| Mauveonair Fern, 12bs. | 4 | 0 | 8 | bunch | 3 | 0 | 4 |
| Mimosa, French, bun. | 0 | 9 | 1 | doz. bun. | 0 | 9 | 2 |
| Narcissus, white, | | | | Wallflowers, doz. bun. | 4 | 0 | 6 |
| doz. buns. | 1 | 0 | 2 | | | | |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES.

| | s. | d. | s. d. | | s. | d. | s. d. |
|--------------------------|----|----|-------|------------------------|----|----|-------|
| Arbor Vitae, per doz. | 12 | 0 | 36 | Ficus elastica, each | 1 | 0 | 5 |
| Aspidistra, doz..... | 18 | 0 | 36 | Foliage Plants, var., | | | |
| specimen | 5 | 0 | 10 | each | 1 | 0 | 5 |
| Azalea, per doz. | 24 | 0 | 36 | Hyacinths, doz. pots | 6 | 0 | 12 |
| Cineraria, per doz. | 6 | 0 | 9 | Lilium Harrissii, | | | |
| Cyclamens, per doz. | 12 | 0 | 18 | per pot | 2 | 0 | 4 |
| Draacaena, various, | | | | Lycopodiums, doz. | 3 | 0 | 4 |
| per doz. | 12 | 0 | 30 | Marguerite Daisy doz. | 6 | 0 | 9 |
| Dracaena viridis, doz. | 9 | 0 | 18 | Myrtles, doz. | 6 | 0 | 9 |
| Eunonymus, var. doz. | 6 | 0 | 18 | Palms in variety, each | 1 | 0 | 15 |
| Evergreens, invar. doz. | 6 | 0 | 24 | Palms, Specimen | 21 | 0 | 63 |
| Erica Hyemalis, p. doz. | 9 | 0 | 15 | Pelargoniums | | | |
| Erica Gracilis, per doz. | 6 | 0 | 9 | Scarlets ... per doz. | 2 | 6 | 6 |
| Erica, various, per doz. | 8 | 0 | 12 | Tulips, various, doz. | 1 | 0 | 9 |
| Ferns, invar., per doz. | 4 | 0 | 12 | Zenesta, per doz. | 8 | 0 | 12 |
| Ferns, small, per 100 | 4 | 0 | 6 | | | | |

INDEX TO ADVERTISEMENTS.

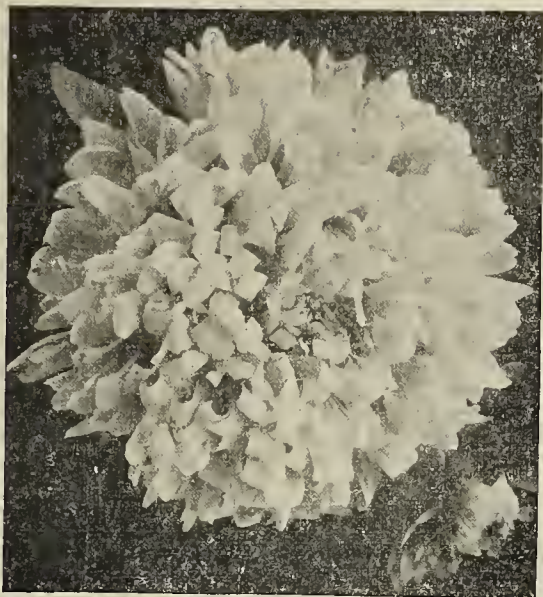
| | |
|---------------------------------|---------------------------------|
| Auction Sales. | Manures. |
| Protheroe & Morris 418 | Chemical Union 417 |
| Catalogues. | Clay & Son 432 |
| Barr & Sons 417 | W. Colchester 417 |
| Bunyard & Co. 417 | Homco 417 |
| J. Forbes 419 | Mumoure 419 |
| Kelway & Son 417 | Native Guano Co. 418 |
| J. Peed & Sons 421 | Ohlendorff's 417 |
| F. Roemer 417 | Stauden's 418 |
| C. Sharpe & Co. 432 | W. Thomson & Sons 419 |
| Simpson & Son 417 | Webb & Sons 418 |
| R. Smith & Co. 421 | Miscellaneous. |
| Sutton & Sons 417 | Caoadiao Emigration 418 |
| J. J. Tboolen 417 | Cooper's Cycles 431 |
| Chrysanthemums. | Epps's Cocoa 418 |
| Church Bros. 417 | Gishurstine 417 |
| Devon Nursery 417 | Juoo Cycles 418 |
| J. Hole & Soo 417 | Smyth's Baskets 417 |
| R. Owen 417 | Netting. |
| Richardson 417 | Rigby, Wainwright & Co. 417 |
| T. S. Ware 420 | Orchids. |
| Florists' Flowers. | J. Cypher 420 |
| F. Gifford 420 | Leeds Orchid Co. 417 |
| Kelway & Son 417 | W. L. Lewis & Co. 417 |
| J. Laing & Sons 420 | P. McArthur 419 |
| McArthur & Co. 419 | F. Sander & Co 417 |
| Morie & Co. 419 | Publications. |
| J. Peed & Sons 419 | GARDENING WORLD 418 |
| T. S. Ware 420 | Macmillans 419 |
| J. Wells 417 | Ogilvie 418 |
| T. S. Ware 420 | Roses. |
| Flower Pots. | G. Bunyard & Co. 420 |
| Sankey & Sons, Ltd. 432 | B. R. Cant 421 |
| Fruit Trees. | J. Cocker & Sons 417 |
| G. Bunyard & Co. 417 | R. Smith & Co. 419 |
| R. Smith & Co. 419 | J. Walters 419 |
| Garden Sundries, &c. | Seeds. |
| J. Aroold 417 | Austin & McAslan 418 |
| Essery's Coal 432 | Barr & Sons 420 |
| Eveson Coal and Coke Co 417 | H. Eckford 420 |
| Hirst, Brooke & Hirst. 417 | Fidler & Sons 420 |
| Pioches' Labels 432 | Hurst & Soo 420 |
| Porter's Stakes 417 | McArthur & Co. 419 |
| H. G. Smyth 418 | Morie & Co. 419 |
| Summer Cloud 419 | J. Peed & Sons 420 |
| W. Wood & Son, Ltd. 432 | F. Roemer 417 |
| Heating Apparatus. | Simpson & Son 419 |
| W. Cooper, Limited 431 | R. Smith & Co. 419 |
| Messenger & Co. 418 | Sutton & Sons 421 |
| Thames Bank Iron Co 417 | R. Sydeoham 417 |
| W. Richardson & Co. 432 | J. Veitch & Sons, Ltd. 421 |
| Horticultural Builders. | T. S. Ware 420 |
| J. Boyd & Sons 417 | B. S. Williams & Son 420 |
| W. Cooper, Ltd. 431 | Webbs' 420 |
| J. Gray 417 | Weed Killers. |
| W. Richardson & Co 432 | Acme Chemical Co. 419 |
| J. Weeks & Co., Ltd. 417 | Boundary Chemical Co. 417 |
| Insecticides. | W. Wood & Co, Ltd. 432 |
| Corry & Co. 418 | Situations, &c. |
| Gishurst Compound 417 | 418 |
| | Societies |
| | 418 |

READERS OF ADVERTISEMENTS

in these pages will greatly oblige and assist us by always mentioning

THE GARDENING WORLD

WEBBS'



NEW ASTERS.

WEBBS' WHITE QUEEN. Per packet ... 1s.
WEBBS' SCARLET KING. " " " " 1s.

Webbs' White Queen and Webbs' Scarlet King are an entirely distinct race of Asters, dwarf in habit of growth, and specially adapted for massing and bedding purposes; they grow about 8 inches high, and each plant bears from 20 to 30 large and perfectly-formed flowers.

Webb & Sons offer nearly £300 in Prizes at Horticultural Shows. List on application.

WORDSLEY, STOURBRIDGE.

SEED LIST

(Free on Application).

FEATURES:-

- Alphabetically arranged.
- Best sorts, in heavy type, can be seen at a glance.
- Probably the most explicit practical instructions for cultivation ever published in any Catalogue.
- Many hints and recipes for cooking and serving the various vegetables.
- Directions for the storing and forcing of vegetables
- Medical qualities of many vegetables and herbs.
- Prizes of £5, £3, (two of) £2, and £1 offered for photographs of horticultural subjects (see page 2 of Catalogue).
- THE LIST, containing 93 pages and a profusion of illustrations, shows (a) WHAT TO GROW, (b) HOW TO GROW IT, and (c) WHAT TO DO WITH IT WHEN GROWN, and has been described by an Agent as one of the largest estates in England as a BOOK OF REFERENCE.
- Another Customer, testifying as to quality writes:—"I should like to add that all the Seeds, &c., purchased from your establishment during the past 14 years have been of the very best quality, and have given great satisfaction."

RD. SMITH & Co.,

Seed Merchants & Nurserymen,

WORCESTER.

1898. **FORBES' CATALOGUE** 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants

is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and price of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other Valuable Information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,

ESTABLISHED 1870.

Nurseryman, Hawick, Scotland.

Caladiums FINEST COLLECTION in the World. We make a speciality of CALADIUMS. Gold Medals Manchester & Leicester. Silver Cup, R.H.S., &c. Satisfaction guaranteed. JOHN PEED AND SONS, West Norwood, London.

NEW DOUBLE VIOLET, MRS. J. J. ASTOR.

This beautiful Violet, of a deep rosy-heliotrope is meeting with a most cordial reception, and as the stock is getting very limited, and we have already many orders booked for April and May, we beg all intending purchasers will please apply at once to prevent disappointment.

The Managers, Hood Gardens, Totnes.

DAHLIAS.

10,000 Ground Roots for Propagating.

We have no occasion to Boast or Exaggerate.

G. PEARCE, Dahlia Grower, Hobart, Tasmania, says:—
18/1/98.

"The dahlia to hand in perfect order, not one defective. This speaks well for your splendid reputation and packing. I am well pleased with quality and sorts sent, and am delighted I left the selection to you."

CATALOGUE is: free to coming customers.

H. CANNELL & SONS,
Swanley, Kent.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, MARCH 12th, 1898.

NEXT WEEK'S ENGAGEMENTS.

- MONDAY, March 14th.—Annual meeting of the United Horticultural Benefit and Provident Society, at the Caledonian Hotel. Sale of hardy herbaceous plants and Roses, by Messrs. Protheroe and Morris.
- TUESDAY, March 15th.—Sale of Carnations, Begonias, Cannas etc., by Messrs. Protheroe and Morris.
- WEDNESDAY, March 16th.—Sale of Lilliums, Carnations, Roses etc., by Messrs. Protheroe and Morris.
- FRIDAY, March 18th.—Sale of Imported and Established Orchids, by Messrs. Protheroe and Morris.

THE NATIONAL CHRYSANTHEMUM SOCIETY.

—Our short account of the state of affairs of this society will have come as a surprise to many of our readers at a distance who have been accustomed to reading the detailed reports of the magnitude of the Chrysanthemum shows held annually, but particularly the November show. Revelations already made, or pending, do not in the least minimise the magnitude or importance of the great annual competition; they merely refer to the internal management of affairs. From time to time for years past there have been complaints, and several attempts made at reform, but the reformers have either been lacking in courage, or not sufficiently numerous when the time came for making them at the annual general meeting. A large majority of the members, or at least those who attended the meeting on the 28th ult., are now fully alive to the critical nature of the situation, and seem fully determined to make reform a reality. It is evident that the affairs of the society have not been managed on the best modern principles. There is no new discovery in this, though competent men have held aloof from raising a quarrel about the matter seeing that they were only following in the lead of their predecessors. Only a long run of general prosperity could have staved off

a crisis in the history of the society before this time. We do not mean to imply that the society even now is down upon its luck, but the management must be made thorough, in every department and in every detail, so that both the energy and means of the society may be economised and directed into the proper channels for the general good. We hope the members will attend at the adjourned meeting, to be held on the 21st inst., at 6 p.m., in even greater force than they did on the last occasion, and fully fortified to carry out their resolutions of putting the society on a sound financial basis of working.

Judging from the fact that 114 new names were added to the long roll of membership during the past year, the society is still in the heyday of its prosperity; but this, of course, can only continue on the understanding that every member and every affiliated society is fully convinced that the organisation and management is on the most modern and approved principles of government. Since the society came into existence the old order of things has greatly changed, and many of the members now understand and appreciate good government, and will sooner or later insist upon it. The Chrysanthemum is no aristocratic flower, its admirers and cultivators being the masses; and as such the community at large must be accepted and encouraged to take an intelligent interest in all that pertains not only to the outward appearance of the exhibitions, but to the internal working or administration that controls and gives energy to the same. When at any time the society should want financial support, it damps the ardour of the most enthusiastic helper to know that a loose hand is being kept on resources that ought to be economised by firm and judicious handling.

One of the recommendations submitted at the last meeting was that the advisability of holding so many shows during the course of the year should be considered and reported upon at the adjourned annual meeting. The September show might very well be dispensed with, unless the increasing number of growers of early Chrysanthemums can be induced to make that show worthy of the name. Hitherto that has mainly been a Dahlia show, notwithstanding the fact that it comes so close upon the show of the National Dahlia Society, which may be admitted to be fairly representative of all that is essential to the welfare of that flower in its various sections. There is no occasion, therefore, to waste the money of Chrysanthemum growers upon the Dahlia, which has a good clientele of its own. This need not apply to the association of fruit and vegetables with the November show, considering that it gives a greatly increased interest to the exhibition, both on the part of the exhibitors and the general public. Strong and influential societies in various parts of Britain recognise and value fruit and vegetables as a fitting complement to an autumn show, and as the National Chrysanthemum Society is the only one at present that fosters a good fruit and vegetable exhibition in the Metropolis, its services in that respect deserve fitting recognition and encouragement.

There are other matters that require overhauling in the affairs of the National Chrysanthemum Society, if we are to judge from a pamphlet sent us by Mr. J. W. Moorman, and compiled by him as a summary of the discussion that has been carried on in the pages of the gardening Press during the past winter. The following subjects were put forward by Mr. Moorman as requiring ventilating at the annual general meeting, and the proceedings on last occasion not reaching this stage, we take it for granted the points at issue will

come under discussion at the next or adjourned meeting:—

- "FIRSTLY.—Whether the time has not arrived for the society to have a paid secretary and no vote?
- "SECONDLY.—That it be an instruction to the committee to inquire and report on what other places (if any) can be obtained for our exhibitions, either by a subsidy, as now, or otherwise?
- "THIRDLY.—To consider if the time has not arrived when in reliance on our own resources we can proceed on independent lines like most provincial societies, which are in a sound financial condition?
- "FOURTHLY.—As there appears to be much disquietude arising from the fact that the secretary is the delegated referee at all exhibitions, whether the advisability of a change should not be considered in the form of a small reference committee or otherwise?
- "FIFTHLY.—That as the custom of selling the floor space of the Aquarium to trade exhibitors (some of whom are not *bona fide* growers of Chrysanthemums), and that inasmuch as such sales have driven competitive exhibits of Chrysanthemums into semi-dark galleries upstairs, whether such custom of selling space for a different purpose than than for which the National Chrysanthemum Society was established shall be seriously considered with a view to its discontinuance.
- "SIXTHLY.—That an exhibition committee be appointed to closely examine the question of minor shows, with the object of ascertaining their advantages or otherwise, to the society, and report the result of their investigations to the General Committee."

United Horticultural Benefit & Provident Society.—The Annual Meeting of this Society will take place on Monday next, March 14th, at 8 p.m. at the Caledonian Hotel. Mr. George Wythes of Syon House has kindly consented to preside.

Bananas from Madeira.—Of the two Bananas grown in the Madeiras, *Musa Cavendishii* is the one preferred. It gives heavier bunches, and the individual fruits are larger, says Consul Crawford, of Funchal. It is grown in great quantities to supply fruit for export.

Glanbeuno, Carnarvon.—Glanbeuno, the charming residence of the late F. W. Foster, Esq., situated within two miles of the town of Carnarvon, has been sold to Owen Jones, Esq., of Greenbank, Carnarvon. Mr. John Williams has been head gardener here for many years, and has engaged to remain in the same position with the new purchaser. Glanbeuno is noted for its fine gardens and long ranges of glasshouses, consisting of plant houses, Vines and Peaches. The range of Peach houses is 150 ft. in length, and one old Royal George about thirty-five years old has spread on the back wall, covering half the house, and yielding regularly every season about 200 peaches, rich in flavour and colour, and many times at the head of the winning boards at various provincial shows. 'Mums are represented here also when the fever comes round in November. Also specimens of Crotons and Orchids. Grapes finish well here.

The Midland Carnation and Picotee Society.—The Seventh Annual Report, with the lists of subscribers and awards, and the balance-sheet for 1897 issued by this very-much-alive Midland Society are before us. The publication takes the form of a neatly got up catalogue of eighty-four pages, exclusive of the covers. A variety of information is given that cannot fail to be of service to both exhibitors and mere cultivators of the handsome flower. Amongst other things there is a list of some of the leading flowers in each class that are suitable for exhibition—just the kind of information that novices in the art are hungry for. Then there is a capitally written and practical article upon the "Cultivation of Carnations and Picotees," from Mr. Robert Sydenham. We notice that, owing to unfavourable weather, the gate-money was this year smaller than on any previous occasion, but increased subscriptions from various members have enabled the society to tide over the misfortune with undiminished and even increased balance and prestige. The balance-sheet shows a total income for the year of £237 19s., including last year's balance of £37 4s. 5d. The expenses incurred amounted to £189 15s. 8d., thus leaving the goodly sum of £48 13s. 4d. in the hands of the treasurer. We wish the society the continued success and prosperity that it deserves.

Landscape Gardening.—Brown (after an hour's digging for the ferret), "Call this rabbit shootin'? I call it landscape gardening!"—*Punch*.

An Old Rose Tree.—There is a very old Rose twined about the ancient cathedral of Hildesheim, near Brunswick. It is said to date back to the time of Charlemagne, and to be recorded as a curiosity in chronicles of the ninth century. Some destructive insect has lately attacked it, and the people of Hildesheim are alarmed about their ancient heirloom, summoning the best arboriculturists to their assistance.

Evolution Committee of the Royal Society.—Mr. Bateson, at the meeting of the Scientific Committee of the Royal Horticultural Society, on the 9th ult., called attention to the existence of the Evolution Committee of the Royal Society, the object of which is to promote accurate observations of facts relating to variation, heredity, selection, and other phenomena connected with the evolution of plants and animals. A horticultural sub-committee has been appointed to further the above objects in the hope that any persons engaged in practical horticulture may be willing to assist the committee by communicating the results obtained, and allowing their operations to be observed and recorded. The secretary of the Scientific Committee will be glad to receive any communications.

A Successful Student in a Far Land.—We are pleased to learn of the success of Mr. Hamish W. Russell, a student and reader of THE GARDENING WORLD, at Rippon Grove, Elsternwick, Victoria. He is the grandson of the late Mr. James Russell, of Poltalloch, Argyleshire, whose portrait we gave a little over a year ago, unfortunately for the last time. His grandson, Mr. H. W. Russell, is under 17 years of age, but has, nevertheless, just completed his second year at the college there. He was first under the late Mr. Neilson, government fruit expert; and during the second year under Mr. Luffman, the present curator. At the end of the first year he took the first prize for root grafting against both junior and senior pupils. Last year, however, a more equitable arrangement prevailed and the senior and junior divisions were separated. In the junior division Mr. Russell secured five first prizes, namely (1) for hoeing and digging, etc. (2) an essay on orchard management (3) an essay on suitable stocks for fruit trees (4) botany and vegetable pathology, and (5) horticulture. It is peculiarly gratifying to learn of such indomitable energy amongst the scions of the mother land in the distant daughter colony under entirely different climatic influences. For instance, in the early part of January the behaviour of the weather must have been very trying for those who were working or studying. For a week on end the temperature varied between 100° and 107° in the shade.

The genus *Arenaria*.—At the meeting of the Linnean Society of London, on February 17th, Mr. F. N. Williams, F.L.S., read a paper on "*Arenaria*," one of the larger genera of Caryophyllaceae, which now includes a considerable number of species. *Alsine* and others, usually included as sections of the genus, he thought should be regarded as distinct genera; *Alsine* and *Arenaria* are distinguished by the same cardinal character which separates *Lychnis* from *Silene*. The genus under revision includes species (of which 168 are enumerated) distributed chiefly throughout the north temperate zone, though in the New World a few occur in South America. A few species which extend toward the Tropics occur at considerable elevations on mountain-ranges, reaching, for instance, 19,000 ft. in the Himalayas of W. Tibet. In this revision, for the formation of primary groups, the two associated characters relied on are the number of teeth formed by dehiscence of the ripe capsule, and the structure of the disk. An examination of several series of specimens, especially of those of the better known forms growing *in situ*, shows these two characters to be fairly constant, and suitable for the definition of primary groups, although in habit and aspect species of *Alsine* are not readily distinguished from those of *Arenaria*. The author's descriptions are confined to species recognised during the last fifty years (from 1848 to 1897 inclusive), the others being cited in their proper place by name and references.

The English Sparrow in America is quite as lively as he is here, and is reported to be eating the buds of Cherries, Peaches, and Gooseberries. Everything English seems to be able to make a home anywhere, but in this case the sparrow will not be allowed undisturbed possession.

Orchids at the Sale Rooms.—Good things still command their price. A small piece of *Dendrobium nobile nobilius* was secured for 10 gs. at the Sale Rooms of Messrs. Protheroe & Morris, Cheapside, on the 4th inst. Many growers of Orchids are yet waiting for a piece to add to their collection. A beautiful variety of *Cattleya Trianaei* was bought for 4 gs.; and *C. Schroderae* secured 3½ gs. A fine variety of *Odontoglossum crispum*, though by no means a first-class one, reached £2 5s. at the fall of the hammer.

The Winter Flower Competition recently announced by the *Western Weekly News* was a great success. Prizes were offered for the best collections of plants in bloom in the open, with the object of seeing how many flowers could be found out of doors in Cornwall and Devon. The first prize of 10s. was awarded to Miss Helen Kathleen Tyacke, of Tendeira, Helston, whose collection contained ninety-one specimens. Of these, seventy-two were garden, and 19 wild plants. The list of garden flowers included white and pink Camellias, several Roses, a number of Narcissi and Anemones, *Solanum jasminoides*, and such fruit trees as the Gooseberry, Plum, Pear, and Apple. Mrs. Young, Woodbrook, near Dawlish, who sent sixty-eight specimens, and Mr. L. M. Brighton, Tea and Pleasure Gardens, Buralston, R.S.O., who forwarded fifty-five, received each a prize of 5s.

The National Amateur Gardeners' Association continues to give proofs of vitality and progress. The report and statement of accounts for 1897 which has been forwarded us by the hon. general secretary, Mr. Leonard Brown, shows that the nett result of the year's working is a balance of £4 13s. 5d. on the right side. Then the association owns a library of popular and useful horticultural works, valued at £30—an advantage that the members doubtless appreciate. The Saturday afternoon outings during the year proved most enjoyable, and they were well attended. The shows and the annual dinner were all successes, and the *Amateur World of Horticulture* continues to perform good services. Amongst the present year's fixtures the dates are given of the numerous competitions for challenge cups and trophies from various donors that are to take place. Some of these trophies are valuable and will doubtless insure a good competition. Lectures on different horticultural subjects will be given through the year by men of note and standing. The garden party and exhibition will be held, as usual, in the Royal Botanic Society's gardens at Regent's Park. July 9 is the date fixed.

The Royal Horticultural Society of Southampton.—The annual report and statement of this Society's accounts were presented to the members at the annual meeting which took place on the 20th ult. The mayor of Southampton (Alderman G. J. Tilling, J.P.) filled the chair. The report, which was the 36th of its kind, was on the whole a most satisfactory one. Periods of depression were deplored, as for instance the summer show, when, despite the fine weather and a first-class exhibition, the receipts fell £265 below those of the previous year, and £100 below the lowest record. This was due and could be traced to the number of counter attractions, including the Jubilee celebrations. The total income from the year was shown to have been £644 6s. 2d. The expenses for the same period were £581 11s. 1d. thus leaving a profit of £62 15s. 1d. on the year's working. For this satisfactory result the report expressed the indebtedness of the society to the president, Sir Samuel Montagu, Bart, M.P., and other leading patrons. At the election of officers, which followed the reading and consideration of the report and financial statement, Sir Samuel Montagu was re-elected president. The vice-presidents, of whom there is a lengthy list of thirty-eight, were re-elected *en bloc*. Mr. C. Fudge will continue to fill the office of hon. secretary, and, we doubt not, to discharge the various duties connected therewith as admirably as he has done in the past. Mr. W. G. Davy still holds the post of treasurer. The usual votes of thanks all round were given and received.

Jadoo Fibre.—The Secretary to the American Carnation Society has written to the Jadoo Company, and states that 100 per cent. of Carnation cuttings have been rooted by him in Jadoo Fibre, and that he now means to use it exclusively for propagating. This statement, made by an official with such a standing as Mr. Heer, should mean a considerable influx of orders to the company, both from home and abroad.

Cypripediums with Fungus.—At a meeting of the Scientific Committee of the Royal Horticultural Society last month, Mr. Douglas exhibited specimens with the roots badly infested by a mycelium. Mr. Veitch at once recognised it as the result of a too damp atmosphere, recording the fact that having on one occasion to make a double roof, it caused so much damp that he lost many Orchids from the same cause, but on improving the atmosphere this completely prevented any recurrence of the fungus.

Royal Botanic Society.—Mr. J. B. Sowerby, the energetic secretary of this society is favouring the members with a series of lectures on "Vegetable Fibres, and Fibre-producing Plants." The second lecture of the series was delivered on the 26th ult., Mr. C. Brinsley Marley presiding. Mr. Sowerby dealt specially on this occasion with flax, hemp and cotton. Several interesting exhibits were handed round for purposes of illustration, not the least interesting of which was a piece of flaxen mummy-cloth, supposed to be about 3,000 years old. The chairman announced that at the next meeting of Fellows there would be a microscopic exhibition of pollen grains.

International Show at Ghent.—The Royal Agricultural and Botanical Society of Ghent is actively engaged forwarding everything pertaining to the great show to be opened on the 16th April next and continued till the 24th. The jury will consist of 200 members all strangers to the town of Ghent, who will have to allocate the prizes in the 720 classes open to competitors. His Majesty the King of Belgium offers a Gold Medal for the 100 most meritorious exotic Orchids; while H. M. The Queen of Belgium offers a Gold Medal for 25 stove and greenhouse plants in flower. A work of art (value 500 francs) is offered in memory of Comte Charles de Kerchove de Denterghem, for the most remarkable 100 hardy annuals or biennials. M. Leon Van den Bossche offers a work of art (value 500 francs) for a collection the most numerous in botanical, woody, and sub-woody species of cool greenhouse plants, not in European culture outside of botanical gardens. A work of art (value 300 francs) will be decreed in the name of the English committee to honour the memory of Louis Van Houtte, for the most varied collection of 40 plants, flowering or otherwise, but in good examples. Besides the above, many other valuable prizes are offered.

Chiswick Gardeners' Mutual Improvement Association.—On the 3rd inst., Mr. A. Pentney, Worton Hall Gardens, Isleworth, read a paper at the meeting of this society on "The Present Day Gardener." Mr. Pentney took a pretty wide survey of the subject, comparing the capabilities of the modern gardener with his predecessors, who, with fewer and less suitable appliances, was able to accomplish much in the way of growing Pines and various large specimen plants. He mentioned a considerable number of types or classes of gardener, to which he added the most recent innovation, the lady gardener. The various comparatively recent improvements of certain classes of plants received a considerable amount of attention. The microscope as an aid to gardening was mentioned amongst the appliances at the command of those of a scientific turn of mind. The old gardener was no botanist, though a knowledge of the subject was of material advantage to any gardener. In landscape gardening, the work of laying out new gardens is now tending along more natural lines than formerly. Briefly, the gardeners' education is never complete; but he considered that the remuneration offered is by no means adequate, considering the education that a gardener must give himself in order to fit him for the duties required. A large number of the members present took part in the discussion. Mr. S. T. Wright, the president, announced that the Rev. Prof. George Henslow, is to deliver a course of four lectures on various subjects pertaining to gardening to the members of this society in July next.

A Papyrus Manuscript has the honour of bearing the earliest caricature, as far as is known. The lion and the unicorn are represented playing a game of draughts or something similar.

Woolton Gardeners' Mutual Improvement Society.—A meeting of this society was recently held, when Mr. R. Todd, of Woolton Wood, delivered a lecture on "Should Coniferae be more extensively planted?" and urged a plea for the more extensive planting in the neighbourhood of Liverpool for two reasons, utility and beauty. The lecturer referred to the beauty of the woods and trees in spring and autumn, but dwelt strongly on the barren and leafless aspect during winter. To enforce the object in view, some of the finest pinetums in the North of England and Scotland were enumerated, and some of the more notable Pine woods of Scotland were mentioned, with the heights of many of the trees and the value of the timber. The extensive planting in the Isle of Man was also referred to, with the suggestion that the Government should continue the work in the wild wastes of England and Ireland. A strong discussion followed in which Messrs. J. Hogan, J. McColl, T. Carling, J. Rae, H. Corlett, T. Griffiths, H. Ellis, R. G. Waterman, and the chairman, Mr. W. W. Gamble, took part, principally on the dearth of good specimens in our pleasure grounds in the district, and the cause of the hottom branches dying off. A cordial vote of thanks was tendered to the lecturer and chairman for their services.

Currant Blight.—Mr. Berry gave an interesting account of the history and progress of this destructive injury, especially to Black Currants in Kent, at the last meeting of the Scientific Committee of the Royal Horticultural Society. It was first observed some ten years ago, but has now reached alarming dimensions. Miss Ormerod recommended picking off and destroying the buds infested with the mite (*Phytoptus Ribis*), the cause of the complaint. This was done, but last year a sudden development occurred, when picking became useless. The "Baldwin," a very heavy cropper, was the variety most seriously attacked. The "Red Budded Naples" was only slightly affected, but this variety is not a heavy cropper, and the fruit being more readily shed, it is not so useful as the Baldwin for market purposes. He suggested that experiments might be carried out at Chiswick to discover which was the most blight-resisting variety, as was done with other plants in Victoria in the Horticultural Gardens, so as to aid the fruit industry in Australia. Mr. McLachlan gave some account of the general habits of the *Phytopti*, remarking that this species was first noticed by Westwood some thirty years ago. It is nearly legless, and lives inside the bud, consequently it is very difficult to reach by means of insecticides. He could only recommend hand picking, unless a mite-proof variety could be found, as they had raised more or less phylloxera-proof Vines. Mr. Michael also contributed further details, observing that all the species of *Phytoptus* were parasites, and that while many species might attack the same plant, a single species might also live on many kinds. They were excessively minute, possessing only two pairs of legs instead of eight, and always protect themselves, so that it becomes a very difficult matter to reach them, as—e.g., in the curled-up edges of leaves, and within buds. It had been found that kerosene emulsion continuously applied by spraying had been more or less effective against *P. Pyri*, but acari are far less sensitive to chemicals than insects. The eggs especially have a dense cuticle, so as to render it quite impervious to chemical action of insecticides. The only chance was to repeat the process of spraying, and catch the successive broods. The only thing absolutely fatal to acarid life was boiling water; eggs and all were destroyed at once. Mr. Berry, in replying, observed that the remedy hitherto suggested of cutting down the shoots of the Currant hedges attacked was quite useless. Mr. Veitch suggested that analysis of the branches of the varieties affected or otherwise might reveal some differences, but Mr. Wilks expressed himself as very doubtful of any appreciable differences being attainable even if they exist. Mr. Engleheart raised the question as to whether the Baldwin variety was weaker than others through over-propagation, but Mr. Michael added that *Phytopti* do not by any means prefer weaker plants, but are found more usually on perfectly healthy ones.

S.A.F.A.O.H. is supposed to stand for the "Society of American Florists and Ornamental Horticulturists." The *Florists' Exchange* has had a go at this cumbrous and unnecessarily lengthy title by interpreting the letters as the "Scotch American Florists' Ancient Order Hibernians." Not bad by any means!

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Cattleya Trianaei, Mrs. W. H. Cannon, *J. O'Brien*.—The resources of *C. Trianaei* have by no means been exhausted, yet, judging from a flower of this new variety sent us by Mr. W. H. Cannon, 19, Wool Exchange, Basinghall Street, London. The flower was notable for its massiveness rather than diameter, owing to the very broad and sturdy character of the petals which ascend at an angle of 45° and then spread above the middle. Both sepals and petals are of the faintest shade of blush white, the petals being broadly ovate, crisped at the margins and clawed at the base; they measure 3½ ins. in length, and 2¾ ins. across, a fact that will give some idea of the bold and massive character of the flower. The lip is proportionate in size to the rest of the segments, and forms a very characteristic feature of the flower. The tube is pale blush-lilac externally, and likewise internally, with the exception of the usual obovate, orange blotch. The lamina is obliquely orbicular, beautifully crisped at the margins; in colour it is like the tube, with the addition of a large, rich purple, triangular or transversely rhomboid blotch on the centre. Mr. Cannon may well be proud of it for it is a charming variety. Accompanying the above were four grand flowers of *Dendrobium findlayanum*, measuring 3½ ins. across the petals.

READING AND DISTRICT GARDENERS.

ONE of the largest attendances of members during the present season assembled on Monday evening last, in the Club Room, under the presidency of Mr. C. B. Stevens, to hear a paper on "The Cultivation of a few useful Flowering Plants for Stove and Warm Greenhouse" by Mr. Townshend, Gardener to Sir Wm. Farrer, Sandhurst. The large attendance fully testified to the esteem in which Mr. Townshend is held, and appreciation of the services rendered by him in adding to the interest of the Society's meetings by continued exhibits of interesting flowering plants, etc. The lecturer, in introducing his subject, said that in taking up the subject for the evening, he would treat with those plants which with proper treatment are easily managed and are for the most part inexpensive to buy, and are prettier than houses of *Chrysanthemums*, which are grown in far too large a quantity in most private gardens, to the detriment of many beautiful flowering plants.

The following subjects were touched upon, and short but ample instructions were given of each variety:—*Achimenes*, *Begonia manicata*, *B. Ingrami*, *B. fuchsoides*, *B. insignis*, *B. corallina*, *Justicia speciosa*, *J. flavicoma*, *Heterocentrum roseum*, *Centradenia rosea*, *Centropogon lucianus*, *Clerodendron splendens*, *C. Balfouri*, *Scutellaria mocciniana*, *S. pulcherrima*, *Eranthemum pulchellum*, *Thyracanthus rutilans*, *Dendrobium nobile*, *Anthurium scherzerianum*, *Phajus grandifolius*, *Zygopetalum Mackayii*, *Libonia floribunda*, *Habrothamnus Newelli*, *Streptosolen Jamesonii*, *Salvia Pitcherii*, *Diplacus hybridus splendens*, *Torenia Fournierii*, and *Exacum affinis*.

A lengthy discussion took place which drifted chiefly to the advantage or disadvantage of pruning *Dendrobium nobile*. A hearty vote of thanks was accorded Mr. Townshend for his unique and practical paper.

An interesting collection of cut blooms was exhibited by the lecturer, the most noticeable being *Centradenia rosea*, *Clerodendron Balfouri*, *Phajus grandifolius*, *Zygopetalum Mackayii*, *Habrothamnus Newelli*, *Streptosolen Jamesonii* and the various *Begonias* named above. Mr. Bound, Bill Hill Gardens, showed some blooms of a good type of *Dendrobium findlayanum* and *Odontoglossum Rossii major*.

HINTS FOR AMATEURS.

THE HARDY FLOWER GARDEN.

Valeriana Phu aurea.—At this season of the year there is no more conspicuous object in the herbaceous border than this Valerian with the barbaric name. Just now, the young shoots present a bright golden yellow hue, which, with their gracefully cut (pinnately lobed) leaves, renders them exceedingly handsome and effective. The cultivation of this plant only presents one special difficulty. For some reason or other it offers a great and somewhat curious attraction to cats, which will find it out from a considerable distance, flock to it and roll over and over the plants, tearing, meanwhile, the young leaves and shoots with their teeth and claws. Any enterprising amateur who would like his garden to become a rendezvous for all the cats in the neighbourhood should not lose the chance, for a plant of this Valerian in the garden will inevitably produce this result; and then what a treat it is to listen to the caterwaulings and voiced joys and sorrows of the various members of the feline assembly; surely madness would lie that way. We would therefore advise all amateurs who desire rest and quietness, as well as the safety of the rest of their plants to shun the *Valeriana Phu aurea*, despite its high sounding name and its handsome appearance. True, the plant might be protected with wire, but it will act as a bait to the cats all the time, and then woe betide the remainder of the occupants of the herbaceous border.

Eranthis cilicica.—Almost everyone who knows anything or who cares anything about hardy flowers knows and loves the little Winter Aconite, which is one of the very earliest subjects to brave the inclemency of the opening year, and lights our gardens with sheets as of burnished gold, but *Eranthis cilicica*, an introduction from Cilicia, as the specific name denotes, is unknown to the majority. When it becomes known it cannot fail to become a great favourite, fully as great indeed as *E. hyemalis*. To describe *E. cilicica* briefly, it is an enlarged and a glorified form of *E. hyemalis*, being taller and more vigorous altogether. The flowers are larger and, if anything, have rather more orange in the yellow. The involucre of the leaves under the flowers is larger, and the individual leaves are as deeply divided as in *E. hyemalis*. Another great difference between the two species is that *E. cilicica* is fully from four to six weeks later in blooming than *E. hyemalis*, and thus forms a succession to it. In the face of the fact that apart from the yellow Crocuses, we have very little yellow amongst early flowers, advantage should be taken of this second species of *Eranthis*. There appears to be nothing special about its cultivation, for where one grows there also will the other. *E. cilicica* should also prove useful for growing in pots for the cool conservatory. Anyway, amateurs who are on the lookout for handsome and easily managed hardy plants should by no means lose sight of *Eranthis cilicica*.

Early Fritillaries.—The plants composing the genus *Fritillaria* cover with their respective flowering seasons a considerable part of the year, and moreover, the earliest commence to bloom before the year is very old. There is also a good deal of variety amongst the different forms, and thus a good sized collection must be grown in order to be fairly representative. Both for planting in the open ground or for culture in pots for flowering in the conservatory, the Fritillaries are alike good, and their quaint and curiously chequered bell-shaped flowers always command attention and admiration.

Of the early flowering forms, the one most worthy of attention is undoubtedly *F. oranensis*, a native of Algeria. We saw this species in flower fully a month ago, although the plants were growing in a sheltered place. During the last week we have observed it in good condition in several places; indeed, these later flowers were characterised, as might be reasonably expected, by much brighter colours. At its best, *F. oranensis* has a most distinctive presence. The flowers are rather longer than broad, being a little over an inch in length. They are produced singly on the flower stems. The colours are deep purple-maroon and dark green, the latter colour being apparent in a broad central stripe running from base to apex of each segment. The purple-maroon

appears as a broad margin to this green central stripe, and the effect of the two colours is sufficiently striking. The leaves are about four inches in length, lanceolate in shape, and very glaucous and succulent. The whole plant is from 8 in. to 1 ft. in height according to the particular soil in which it is grown, and the special character of the season.

F. pluriflora is a second species, rather rare in cultivation, that is deserving of the amateur's attention. It is a native of California, and is unique with regard to the colour of its flowers, which exhibit a pretty shade of rosy-lilac, passing off as the flower ages into rosy-purple. In habit and style of growth, the plant resembles *F. oranensis*, but the leaves are scarcely so glaucous, and there is the notable difference that from two to four (usually three) flowers are produced on a scape, instead of the flowers being solitary. The flowers, too, in addition to the difference of colour are rather narrower in proportion to their length, and their individual segments are narrower, and not of so much substance. *F. pluriflora* is altogether a most charming plant, with only one disadvantage, for like other rare and pretty things the price is rather high.

Tulipa violacea.—The gaudy florists' Tulips have their admirers by the thousand, and some of the more showy species are also able to hark in the sun of popular favour, but there are many Tulip species that are but little known to most, and entirely unknown to many. Among these we may place *Tulipa violacea*. Amateur gardeners who delight in having a corner of their rock-garden devoted to the rarer, and, as some would call it, the more refined floral gems, have in *Tulipa violacea* just the kind of plant that will suit them. A special interest attaches to it from the fact that it is the earliest to flower of all the Tulips. The plant is very dwarf in habit, never exceeding 6 in. or 7 in. in height, although it is frequently a good deal under that. The flowers, as may be expected, are small, but they make up for that by their delicate fragrance. The colour is a rich red-purple. The plant is a native of Persia, and as yet a comparative stranger to many gardeners.

Narcissus pallidus-praecox.—It is not always necessary to pay a high price for a good thing; indeed, in far too many cases, a plant is prized because it is priced too high for many people to be able to obtain it. In *Narcissus pallidus-praecox* we have a very handsome Daffodil which can be obtained at a very reasonable figure. The pale yellow blooms are at the present time much in evidence in all parts of the garden, no matter whether the situation is exposed or sheltered. The recent inclement weather has tried the blooms considerably, but they have stood the test remarkably well, and indeed look little the worse for the experience, although their lives will be undoubtedly shortened thereby. *N. pallidus-praecox* is the earliest of the large trumpet Daffodils, and as such is worthy of every attention.

N. minimus.—This miniature trumpet Daffodil is really one of the most useful of all the Daffodils, for what it lacks in size it makes up in refinement. Coupled with the latter is a happy, adaptable disposition that enables it to be grown with equal success in the open ground, in nooks, in the rockery, or Alpine gardens, or in pots or pans in the greenhouse and conservatory. The abnormally early character of 1898, as far as we have gone, has resulted in proportionate precocity on the part of this plant, for it has been in bloom in the open for weeks past, and is, at the time of writing, a veritable blaze of gold. Everybody should know it, and then everybody would grow it in some fashion or other.—*Rex*.

On Striking Chrysanthemums.—I observed in the Amateurs' Page a few days ago, a complaint from a correspondent who was unsuccessful in his attempt to strike cuttings of the Queen of Autumn Flowers. Having had very successful results this year I record my practice, hoping it may be of interest.

I procure a box or boxes, according to the number of cuttings I wish to root, deep enough to hold a 60-size pot, say, when filled with cuttings and a 3 in. label inserted. Having filled my pots with suitable compost and inserted my cuttings, correctly labelled, &c., I give them a good watering, put them in the box and place on the box a sheet of glass, not necessarily immediately after watering. The foliage may dry a little, but the glass should fit closely so as to exclude external air, and if it is removed once a day, and the moisture wiped off and replaced, success is almost sure to follow.

It is advisable to look over the cuttings and search for any sign of damping, which is indicated by one or two of the leaves having a brown and mouldy appearance. All leaves so affected should be carefully removed, and in about three weeks roots will be formed. In from four to five weeks the plants may be removed to airy quarters, being then able to support themselves. I had almost forgotten to say that I place the box on the bench near the light in a cool vinery, from which frost is only just excluded. I have potted most of my cuttings within a month of inserting the cuttings. By this, I mean I have shaken them out of the cutting-pots and potted them singly in 60-sized pots, and, at the time of writing, February 24th, these cuttings are sturdy plants in cold frames, which will, with the return of genial weather (like *Oliver Twist*), be asking for more—not porridge, but pot room.—*P*.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Old Nepenthes.—I have two old plants of *Nepenthes* in a warm house that have become very tall and ungainly. They are growing in baskets suspended from the roof. I should like to reduce them to more respectable proportions, and assume that the best method of doing so will be to cut them back. *J. Askew*.

Yes! your best plan will be to cut the old plants back, say, to within 6 in. of the base of the stem. The present is a very favourable time for doing this, and we should advise you not to delay, for you will thus give the plants the chance of a long growing season wherein to build themselves up. The growths that you cut away from the old plants will serve as cuttings if you cut them up into pieces a few inches in length with two or three leaves to each piece. These cuttings will root pretty readily if inserted in sphagnum moss and sand with a few pieces of fibrous peat and a little charcoal mixed, and placed in a high temperature with plenty of moisture. Do not attempt to repot or re-basket the old plants until they commence to make some growth. You may then shift them, employing a compost of good fibrous peat, sphagnum, sand, and charcoal.

Propagating Double Begonias.—*Robert N.*: You may start the old tubers into growth as soon as you like by placing them in shallow boxes, covering them with sandy soil, and transferring them to a warm house. As the shoots make their appearance they may be taken off and inserted as cuttings. A temperature of about 55° Fahr. in a propagating frame will insure these cuttings rooting quickly. Do not deprive the old tubers of every shoot unless you do not desire to keep them any longer. The removal of the young shoots is, of course, very weakening, and if carried to the extreme must necessarily result in the death of the parent plants.

Gardening Guide.—*N. N.*: You will find all the information you will need, and a lot more beside in Sutton's "Culture of Vegetables and Flowers from Seed," price 5s., direct from the Reading firm, or from the publishers, Messrs. Simpkin, Marshall, Hamilton, Kent & Co., Ltd., Paternoster Row, London, E.C. A new edition (the seventh) has just been published.

Selaginella to Name.—*E.*: The *Selaginella* is *S. apus*, commonly met with in gardens as *S. apoda*, and *S. densa*. It likes a warm greenhouse temperature, but will do fairly well in a cool house.

Cocoa-nut Fibre Refuse.—Would it be advisable to mix a little cocoanut fibre refuse with the soil used for potting Ferns.—*S. Acton*.

The fibre would answer very well in the case of small Ferns or other plants that have not to stay long in the same pots, but for larger plants we would not recommend it by any means. The fibre soon gets sour, and the soil is soured too, as a natural result, when the poor plants have a very uncomfortable time of it.

Two-year-old Cucumber Seed.—*E. T. L.*: If the seed has been kept in a fairly dry and cool place it should not have lost much of its germinating power, and you may use it without much fear of a failure. It will be well, however, to sow double the quantity that you would of one-year-old seed.

SAVOY SUTTON'S PERFECTION.

THE Savoys constitute a pleasant variation from the ordinary Cabbage, both in appearance and flavour, making a useful vegetable during the first half of winter, and being greatly improved in tenderness after a touch or two of frost. Amongst Savoys Sutton's Perfection comes in after the earliest varieties. The dwarf and compact habit of the plants enables them to be grown pretty closely together, so that a few rows in a vegetable break afford space for a considerable number of useful-sized heads for the table. The dark green leaves and their finely rugose or wrinkled character give the variety a refined and even highly-ornamental character, and should render the variety highly popular after it becomes known amongst the fraternity. It also combines the good qualities of several of the better known forms of garden Savoys, which is another recommendation for extended culture in the vegetable garden. The accompanying illustration, lent us by Messrs. Sutton & Sons, Reading, shows how beautifully compact and firm the heads are.

ile, *Silene pendula*, and Tulips of indescribable colour, providing March and April are not too drying. If those months should be dry, the plants suffer considerably in our light sandy soil, and the display is cut very short.

I must apologise for my lengthened notes, but would like to say a word or two anent the Rhododendrons and Camellias, and how well they are flowering. The former have been in bloom more or less ever since last October. Of *R. nobleanum* and its many varieties one or two slight frosts have marred a few heads that were fully out, but plenty more were open in about a week's time. This continuous flowering is an advantage, as I find them very useful just now for large vases. The Camellias have been quite a show, red, white, and pink varieties all in bloom up to Monday, the 7th February, when we registered 4° of frost, which, of course, disfigured all the blooms that were open. Frost and strong winds play havoc with these when once expanded. Primroses are in abundance, and have been ever since Christmas.—*Devonian*.

ORCHIDS AT WILLIAMSWOOD, NEAR GLASGOW.

A PLACE of interest in the neighbourhood of Glasgow is Williamswood, the residence of Wm. Campbell, Esq. It is only a few years since Mr. Campbell put up a range of glass specially for Orchids. It is in

collection are frequently seen on the exhibition table, and occupy an honourable position, much to the satisfaction of the genial gardener, Mr. Harry Reid.—*Visitor*.

SANDHURST LODGE, NEAR WOKINGHAM.

IN the Reading district there are some good gardens, and much interest is exhibited in gardening. This is shown by the interesting meetings of the Gardeners' Mutual Improvement Society.

Although Sandhurst Lodge, the residence of Sir W. J. Farrer, is not close to this town, being about ten miles distant, it is situated in a well wooded and pleasant part of Sandhurst, and near Wellington College, which is so well known, and within ten minutes walk of Wellington College Station. The mansion is approached by a drive which comes close to the railway station.

This drive is well kept and ornamented by many fine trees and shrubs, showing at a glance that there is a lover of really ornamental gardening who supports the place. The mansion is mostly surrounded by trees and shrubs. The character of the mansion I do not intend to deal with, as this is not of so much importance from a gardening point of view; and there are so many things of interest in this place, that to give a detailed account would take more space than the Editor may care to give



SAVOY SUTTON'S PERFECTION.

THE HERBACEOUS BORDER.

EVEN in the month of February we have several flowering bulbs or tubers that tend to brighten our garden at a season when outdoor flowers are at a minimum. The first to claim attention is the beautiful purple-blue *Iris reticulata*, with yellow and white stripes, spotted with black, and sweetly scented. A large clump of this must have a charming effect. With gentle forcing it can be had in bloom by Christmas, I am told, but have not tried this myself. Then there are some of the single Anemones, flowering exceptionally early this year, partly owing to the mild weather, no doubt, and notable among these stands out the brilliant crimson, *A. fulgens*, so useful for cutting; and the Caen Anemones give us a great variety of colours. The Winter Aconite (*Eranthis hyemalis*) is past its best; but the paper-white and double Polyanthus Narcissus, such as Grand Monarque, Queen of the Netherlands, etc., are fast opening their flowers. These were forced about two years ago, and afterwards planted in the borders.

The many coloured Crocuses, too, help to brighten our beds, borders, and sunny banks wherever planted on the turf. All of those just enumerated, if dotted about in clumps, enliven our otherwise flowerless beds or borders. Some plant Polyanthus, Daisies, and such-like spring flowers, but we keep those to the flower garden proper; and a bit later on we will be rewarded with glowing beds of the latter, together with Wallflowers, Myosotis, Alyssum saxat-

three divisions, and admirably adapted for Orchid culture.

The first division is entirely devoted to the *Odonoglossum*. The plants are in the pink of condition, their growth no doubt being to a certain extent accountable for their vigorous and healthy look. A large amount of interest attaches to imported plants, as we always expect some particular treasure to turn up. A very fine *O. Pescatorei* has already been named after the owner, and no doubt other good things will yet appear.

The second division contains a mixed lot of all the useful kinds; while the third has mostly been filled with *Laelia purpurata* in variety, full of flowering sheaths, and in splendid health. Cattleyas and seedling *Cypripediums* were plentiful.

Another house standing by itself was filled with splendid plants of *Dendrobis*. *D. devonianum* had growths, 5 ft. long, and correspondingly thick. *D. nobile* was bristling with flower huds. A plant of *D. nobile* here has got so far out of the beaten track as to bloom in November, and has not yet made much progress with the growths that should have been made last summer. It will be interesting to watch how this plant behaves in future. So far it has got the same treatment as the others, and it is probable that it is something inherent in this particular plant, that is the cause of so great a divergence. Many fine plants of *D. wardianum* are just showing for bloom, and others are promising well. Specimens of this

me. Consequently I shall only mention a few of the most important features that came to my notice in a hurried look round the place during the past summer.

Some ten or twelve years ago I used to go and see the place, residing as I did then in the neighbourhood, and Mr. Townshend being an old acquaintance. I well remember the changes that were then taking place. Some few years previous to that time Sir William Farrer had come to reside here. As I entered the grounds I could see great changes had taken place, and much that formerly had little to attract was made most interesting.

It was early summer when I visited it, and many lovely hardy shrubs and trees were in bloom, many of which were planted to produce a good effect. As an instance of this I may name a large vigorous tree of the Red Chestnut, hacked by deep Coniferous trees; and to see the sun shining on this in full bloom is a glorious sight.

The ground is much broken, the house standing on high ground overlooking the slopes and well kept green sward. On the turf are some fine trees such as the Douglas Fir, *Abies Pinsapo*, *Cupressus* of sorts, *Cryptomeria*, etc. Some of these stand adjoining shrubby borders, the trees standing on the turf in a half circle, with fine masses of Ghent and other Azaleas, some of the best Rhododendrons, Weigelas, and other flowering shrubs.

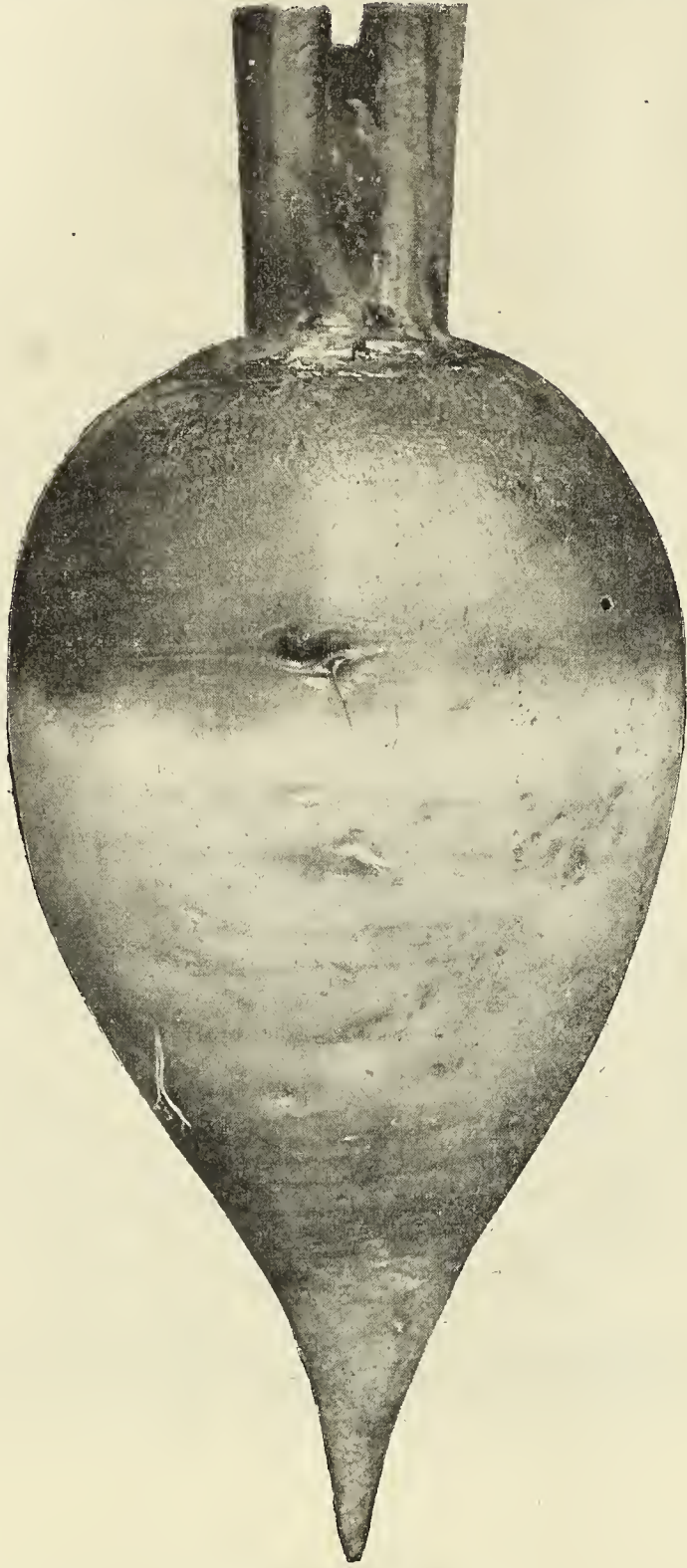
One of the most pleasant changes and improve-

ments that has been made here is the converting of the old kitchen garden into pleasure grounds. Standing as it did just in sight of the dressed portion of the grounds, it did not quite harmonise with the surroundings. In doing this, while changing it, due consideration has been made not to lose sight of the beautiful. Now standing on the turf are several fine

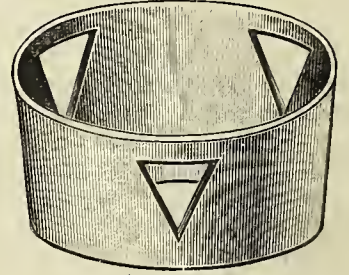
are placed on a sloping bank, with a walk running below them; and as you walk and look up at them in full bloom, it is more easy to admire than describe them. The plants are placed about 6 ft. or 7 ft. apart. *Begonia Ingramii* and *Solanum jasminoides* are also used in the same way with the very best results. In all cases the plants are large. Bedding-

a walk. At the foot is a border for growing many rock plants; and on the other side is a border for herbaceous and other hardy plants.

I must not omit to mention some few prominent features in other departments. In the glass department was one of the finest batches of *Achimenes* I ever saw. The plants were growing in 48 and



TURNIP SUTTON'S CRITERION.

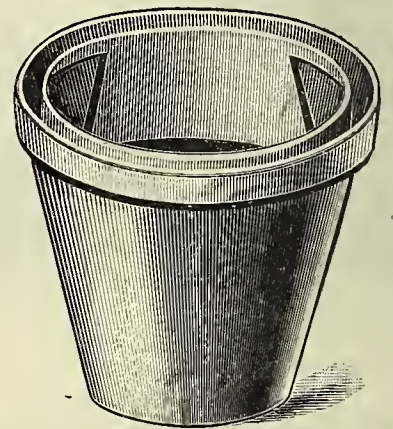


THE RIM.

32-sized pots, were lightly staked, sturdy, and a mass of bloom. Many kinds were grown, and brought to my memory days gone by, when we used to grow these extensively. In the same house was a fine batch of show and decorative *Pelargoniums* of the very best kinds, grown short-jointed, and requiring no staking. Many of the fine kinds grown by the market men were to be found here.

In the stoves, which were full of the most useful kinds of plants, mention must be made of a fine specimen of *Medinilla magnifica* (a plant not often seen done well) in fine condition; also a grand pair of plants of *Anthurium scherzerianum*, a mass of bloom. *Aristolochia gigas*, with its curious blooms, was ornamenting the wall. On the roof was *Begonia corallina*, 18 ft. by 10 ft.; and as one looked on the mass of bright coral-red blooms hanging down, the effect was not easily forgotten. *Browallia elata major* is grown with effect here. Many fine foliage plants were giving good results.

In the fruit houses were good crops of Grapes; also, in a small pit I observed a batch of *Primula obconica rosea*, and from the blooms then on the plants, I should consider it a distinct break in colour



THE RIM IN POSITION.

old Apple and Pear trees; and when in bloom nothing could harmonise better with the dark green of the evergreen trees. I often think fruit trees are not half as much used as they ought to be in the ornamental portion of gardens.

The old kitchen-garden wall facing south has been utilised to the best, by planting it with the best climbers and wall shrubs, and training them to wires, thereby allowing them to hang somewhat loosely, which is just the way to see the effect the bunch Roses are capable of producing.

I must now give an outline of the way some portions of the grounds are ornamented with big *Fuchsias* and other plants, such as *Plumbago capensis* and many kinds of scented-leaved *Pelargoniums* which are not often seen at the present time compared with some thirty years ago. Let it suffice to name one which most cultivators of that period remember, namely, *Shrubland Pet.* This and many other kinds are grown as big plants many feet high, and plunged with other things in the turf.

The *Fuchsias* are quite a feature here in summer, grown, as they are in quantity, in big pots, some as standards, and otherwise. The pots are plunged under the turf and placed in groups sufficient to give a mass of colour. In one part of the grounds they

out is not much done here on the old lines, but Mr. Townshend is well known for his advanced style of gardening and that he has entirely given up the old stereotyped form.

Passing from this portion of the ornamental grounds, I was then shown the ponds that are occupied with aquatic plants. Most of the new *Nymphaeas* are found here, as they are added to the collection as soon as their value is recognised. These ornamental ponds are so arranged that the top one of the three supplies water for the other two, and is made to produce a piece of swampy ground, which is now being added to, giving opportunities of growing many swamp-loving subjects, all of which are used to the best advantage.

At the time of my visit *Aponogeton distachyum* (or *Water Hawthorn*) was in full bloom, not by the foot, but by the yard, and I never saw such a mass in bloom at one time before. This water-gardening is quite a feature of the place, and the gardener has helped towards its development by giving his experience in the gardening press, both relating to the hardy and the tropical kinds. The latter he is growing in a tank outside, heated from a small pipe which comes out of the wall from the hot-water pipes, and keeps the water in the tank warm. Running alongside these ponds and above them is

(a thing not easily accomplished). I observed Mr. Townshend has a regard for many old plants, as amongst others I found *Heterocentron roseum*, a plant not often seen now.

In the kitchen garden I noticed the wall and other trees looked well; and outside the garden and near the pleasure grounds is an iron archway. Against this fruit trees are planted, and Mr. Townshend told me they generally gave him good crops, and some kinds of Pears did really well.

Vegetables were in strong force, and evidently every available space is used to grow something. On one of the outside borders of the kitchen garden was growing a wonderfully fine strain of self-coloured *Pansies*, true to colour and name.

I cannot close these hurried notes without remarking that the keeping of, and the material used in the garden, show that both Sir William Farrer and his gardener are enthusiasts in gardening. It was quite a pleasure to me to look over a garden so full of interest, as it is not often one gets an opportunity of seeing a garden in which the owner takes such a deep interest.—*J. C., Chard.*

Twenty Million Acres of Land in the United States are said to be owned by British landlords.

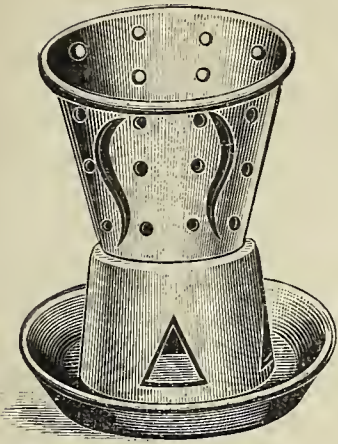
TURNIP, SUTTON'S CRITERION.

IN this we have an improvement upon the older and better known forms of the strap-leaved type of Turnip, well known for its service in furnishing the earliest supplies of an indispensable vegetable. The accompanying illustration shows how distinct the variety is in shape from the older strap-leaved varie-

stood on the flat bottom of another, because it sinks partly within the rim, and is thereby held firmly. A glance at the accompanying illustrations will show the Rim by itself, also placed in position inside a pot, and also when used as a pot-holder when stood in a saucer. In the latter case it is narrow, and a large pot simply stood upon it.

CABBAGE CARTERS' MODEL.

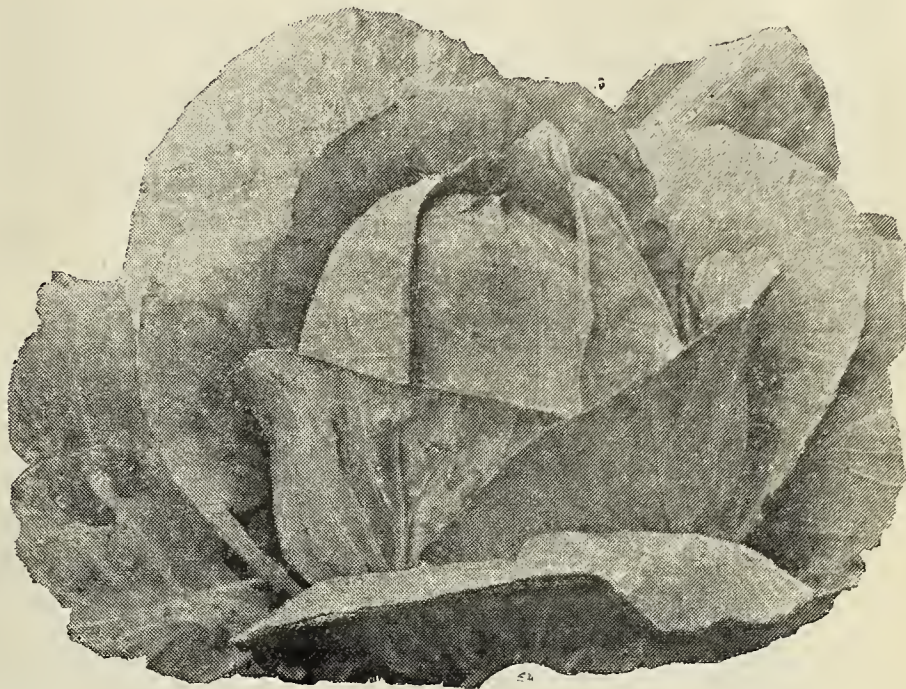
WHILE the heads of this Cabbage are of fair average size for those of an early variety, they are developed close to the ground by reason of the shortness of the stem. The hearts are roundly-conical, firm, compact, and constitute tender and delicate eating when in their prime during the early part of summer. Owing



THE RIM AS POT HOLDER.



IVORINE LABEL.



CABBAGE CARTERS' MODEL.

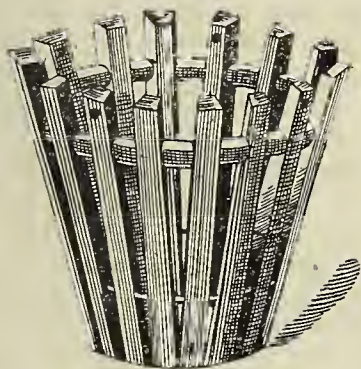
ties. The root penetrates the soil more deeply and has a better command of the soil-moisture than stump-rooted sorts, which are liable to feel the effect of early drought, and run to seed at a time when they are much wanted in the kitchen. The new type under notice is early, and red where exposed above the soil, the rest being white. The flesh is pure white, sweet, mild and otherwise deli-

POT-SHAPED TEAK BASKET.

For Orchid culture, Cattleyas more particularly, the Pot-shaped Teak Baskets are not only durable and handy, but extremely serviceable. There is no confinement to the roots anywhere, as in the case of the ordinary earthenware pots, but they make their exit everywhere, creep round and attach themselves to the wood, attaining a maximum development, which is hardly ever the case under ordinary pot culture. The baskets consist of upright, nearly square rods, but slightly bevelled towards their inner edges. Towards the top the rods are held apart by small blocks of bamboo, while for the rest they are simply threaded together by copper wires running through and securing them, one wire in line with the bamboo blocks, and the other towards the bottom. The accompanying illustration gives a general idea of this serviceable basket.

IVORINE PLANT LABELS.

Plant labels have been made of endless forms and materials. Those under notice consist of a flat, white ivorine disc of some secretly prepared substance, specially intended for plant labels. The material is perfectly smooth on both faces, so that either or both may be written upon with pen and ink or pencil. A rubber stamp may also be used where a large number of impressions of one name are necessary. For general purposes the pencil or pen are most serviceable. The label is bendable and elastic, that is, it may be doubled up and then flattened again without breaking; it may also be washed when it gets dirty, so as to show up the name. We think that the pen, dipped into ordinary writing ink, makes the best, most legible, and most enduring impression; for it can at any time afterwards be washed without effacing the writing. The accompanying illustration shows the simplicity of the design. The label is thin, light, and simply suspended by means of a short copper wire stuck into the pot or basket in which the plant is growing. The disc itself may be made in any form, that shown in the illustration being considered the most suitable and serviceable. All of the illustrations were supplied us by The Leeds Orchid Company, Roundhay, Leeds, who issue West's patents generally, including those we figure.



POT SHAPED TEAK BASKET.

to the dwarf character of the variety, the plants require but a moderate amount of space, and fairly close planting makes them all the more serviceable for table use. The accompanying illustration, lent us by Messrs. J. Carter & Co., High Holborn, London, shows the general features of the variety.

ROYAL GARDENERS' ORPHAN FUND.

SEEING your report of the meeting of the G. O. Fund in last week's paper, I cannot help thinking how much we who have its interest at heart have to be thankful for, especially to our Committee, past and present, also to our good Secretary for the able way in which they have used the money entrusted to them, and for the untiring labour they have given for the benefit of others. Then again, there are those who have helped us with large sums of money, knowing that they themselves can in no way reap benefit for the same; but how little we have to thank those who will be the first to apply for help in their need, I mean the gardeners of Great Britain, a body who seem to forget that in helping this Fund, they are helping themselves; and the consequence is that certainly not one-tenth of them subscribe. I wonder if they have ever thought what the annual income would be if everyone, gardeners, foremen and journeymen would subscribe one penny a week. I think if they would sit down and work this out the result would not only surprise them, but it would, I believe, nerve them on to the effort; and with that income secured, many more Children would be enjoying help which now has to be so carefully harvested, and the funded property would be increased each year.—Charles Fenny.

CLIMATIC NOTES AND SOILS.

IT is often asserted that climate alone is responsible for the production of fine fruits; but the nature of the soil also plays an important part in the development of fruits. This we have proved in districts wide apart, with altitudes varying by hundreds of feet. But we never saw such a difference in Apples, Pears, and stone fruit, as in our present locality where the soil is of fine loam, and deep, resting on gravel. Some varieties do well, and would not be a discredit to cultivation in the finest districts in England. The same sorts (under our care) do not succeed well on cold damp soil. When water cannot drain freely from the land the roots are kept cold. Though planted on elevations of brick rubbish the fruits do not attain to that excellence where the soil is naturally good, and the drainage in perfect order.

cately flavoured. Messrs. Sutton & Sons have enabled us to lay the figure of it before our readers.

WEST'S PATENTS.

PLANT POT RIM.

THIS is a contrivance to prevent the water from running off the compost and through the openings of perforated pots, such as are used for Orchids, Aroids, Ferns, &c. In those cases, if the compost is once allowed to get dry, there is great difficulty in getting the moisture again to penetrate the material. To obviate this difficulty the Plant Pot Rim has been made, and consists simply of a terra cotta rim perforated at the sides with three triangular holes. This is put inside the pot intended to hold the plants. A little compost or moss is put inside with it and pressed down till it is firm, and somewhat below the rim of the pot. The pot being well drained it is now ready for the compost and the plant. In the case of Orchids the roots find their way down the outside of the rim and fix themselves to it. The rim may be lifted out, compost and all, when looking for slugs, and put back again without damage to the plant. Another use to which the rim may be put is as a pot-holder, instead of using inverted pots when Orchids are stood over saucers of water. The rim holds the pot more securely than when the latter is

Soil for Lettuce.—Professor Galloway (U.S.A.) has declared that the soil best suited for the production of the finest Lettuce is "one which contains much sand and little clay and silt, loose at all times regardless of treatment, never 'puddles' when worked, and on which no matter how wet, clods and lumps never form."

Sun and shelter are of great moment, but with these advantages when there is an absence of good soil and drainage, fine quality is also absent.—*M. T., Carron, N. B.*

DWARF FRENCH BEAN SUTTON'S PERFECTION.

THIS new French Bean may be described as a second early, since it follows in the wake of Sutton's Forcing. It produces enormous crops of long succulent pods, as may be seen by reference to the accompanying photograph of a plant grown in the open garden. The pods are of great length, and so plump in their development that a transverse section is nearly round. It is essentially a French Bean for the table, both on account of its marvellous cropping powers and continuous bearing character. The gar-

rose, yellow and green of the crisped and crested leaves that the plants may be and have been employed with excellent results for the filling of beds in the flower garden where winter effects were desired. For garnishing purposes the leaves are everything that could be desired, and a few plants may well be included within the kitchen garden bounds to furnish material for this purpose, if for no other.

NOTICES OF BOOKS.

AUNT KATE'S GARDENING BOOK. Published by the proprietors of "The People's Journal," Dundee. Price 1d.

Aunt Kate's Gardening Book is the sixth of a series of handbooks issued from the office of *The People's*

the herbaceous border, budding and grafting, native Ferns, exhibiting at flower shows, and kindred matters concerning which amateurs are always desiring information. Short notes describe how the cultivator can best deal with a few of the more common insect enemies that may infest his favourites. Altogether a great amount of reliable information has been gathered together in small compass by a writer who is himself a professional gardener, and his work has been well edited by one who also has a good experience in gardening. We met with a few, though unimportant errors in orthography, particularly in the case of botanical names. The book should meet with as much favour as its predecessors of the series.

A FRENCH BOOK ON CHRYSANTHEMUMS.

LES CHRYSANTHEMES A GRANDES FLEURS. Choix des Meilleures Variétés et Nouveautés Françaises et Etrangères du Nord, Bailleul (Nord), France. Prix 0.60c. (6d.)

The book runs to 120 pages, and devotes the most of its space, as the sub-title shows, to a descriptive list of a selection of the best varieties in commerce, to French and foreign novelties. The older varieties are mostly well known in this country, indeed, many of them have been raised here, or in America. M. Anatole Cordonnier gives a list of his own novelties, followed by lists of new varieties of Chrysanthemums raised by M. Bonnefous, M. de Reydellet, M. Héraud, M. Lacroix, Louis de Lautar de Labernose, M. Nonin, M. Molin, M. Delaux, M. Calvat, and others whose names are mostly well known in this country by the varieties which have been named after the raisers or members of their families. Novelties from New Zealand, Australia, and other countries are also recorded. The descriptions are all in French, so that only those with a little knowledge of the language will be able to grasp what the flowers are like. We note that many of them have received First-class Certificates or Diplomas of Merit from different societies scattered throughout France. The names are mostly reasonably short, though a few will occasion trouble to the label writer to get them fully expressed upon the labels, as for instance, Souvenir du l'Exposition du Havre, President Maxime de la Rocheterié, and Société de Chrysanthémistes du Nord. There are various articles on the popularisation of the Chrysanthemum, the period for taking cuttings, soils, liquid and other manures.

EARLY SPRING FLOWERS AT TOTTENHAM.

As in other places, the spring flowers have, at Tottenham, made their appearance in force unusually early in the season, as a recent visit to Mr. T. S. Ware's establishment convinced us. The hardy plants grown at this famous nursery are thoroughly representative of what Nature in her best moods, aided by scientific horticulture, has been able to effect, but it is not until we begin to take stock, as it were, that we really appreciate the numbers of pretty and useful plants that are available for the decoration of our gardens and rockeries thus early in spring.

Some of these floral gems are, alas, too tender to brave the storms of February and the boisterous days and chilly nights of the beginning of March without protection of some kind, and thus we found that a goodly number of the plants that were in flower were either in frames or in sheltered corners where further protection may be speedily given if necessary. And it has been necessary, for no further gone than the 25th ult. the thermometer registered 12° of frost. The result of this was apparent to us in a fine clump of *Saxifraga crassifolia*, which had had all the expanding flowers completely killed by the frost. Other things have, of course, suffered proportionately.

One of the most striking features in the plants growing in the frames was a nice little batch of the handsome *Adonis amurensis*, the bright yellow flowers and deeply divided leaves of which made a vastly pretty picture. As an early-flowering subject for the rockery this *Adonis* is worthy of all consideration. Here, too, we saw a few flowers of the pretty *Anemone ranunculoides*, which, however, has not done so well this year as it did last.

Hardy terrestrial Orchids are made a speciality of



DWARF FRENCH BEAN SUTTON'S PERFECTION.

dener can help it in this respect by removing the pods as soon as they become fit for use. A good watering before nightfall in dry weather would also stimulate them to fresh growth. The flavour leaves nothing to be desired. We are indebted Messrs. Sutton & Sons, Reading, for the illustration.

ORNAMENTAL KALES.

ALL the Borecoles or Kales can boast of a distinctly handsome appearance when growing, and some of the densely curled Scotch varieties more especially. In the section of variegated or garnishing Kales, however, we get the biggest development of the purely decorative. This may be gained to some extent at the expense of culinary merit, but it is not often that the plants are subjected to this ordeal, for they are much too pretty to cook. So very showy indeed are the different shades of purple,

Journal for the benefit of its numerous readers all over Britain who may possess a garden. The handbook is in pamphlet form, running to forty closely printed pages, and containing a great amount of information on the subject considering the amount of space at command and the lowness of the price, putting it within the compass of the poorest cottager. A large portion of the book is taken up with a monthly calendar, each of some length, and dealing with the fruit garden, the cultivation of flowers, the greenhouse, the vegetable garden and window plants. Besides the mere hints as to what should be done during any particular part of the month, there are details as to how it should be done, including cultural operations, and the varieties or sorts of vegetables, etc., most likely to give satisfaction.

The calendar is followed by cultural directions concerning the Chrysanthemum, and other short chapters on uncommon vegetables, Melon culture,

at Tottenham, a considerable number of forms being catalogued. These hardy plants, although they have not the showiness of their exotic relatives grown under glass, are still beautiful and very interesting. The Spider Orchids, *Ophrys aranifera* is one of the earliest of these, since it is in bloom at the present time, of course somewhat in advance of its normal period. The green sepals and petals and the dark maroon, curiously-shaped lip, are both quaint and pretty. *Orchis robertiana*, with its large dense spikes of purple and white flowers, has more pretensions to decorative qualities.

In some of the larger houses there is at the present time a very fine display of hardy flowers which have been grown in pots and given a little heat to induce them to bloom early. Amongst these we saw some capital samples of *Narcissus minimus*, *N. pallidus praecox*, *N. nobilis*, the comparatively rare *N. Johnstoni*, and the curious Tunisian species *N. Broussonetii*; also good clumps of *Iris reticulata* (this has been cut down out of doors). Batches of healthy well-flowered plants of *Primula denticulata* and its albino *P. d. alba* were likewise most commendable.

In the protected grounds we noticed a considerable number of handsome plants, one of the most noteworthy of which was *Colchicum libanoticum*. The plant is very dwarf in habit, and the cup-shaped, pearly pink flowers are produced quite close to the ground. The leaves are lanceolate in shape, with obtuse apices, and rather succulent in texture. This little *Colchicum* is certainly one of the gems of the genus, and deserves wide recognition. *Eranthis cilicica* is a new and rarely beautiful plant that cannot fail to be much grown and not less appreciated. It is taller and larger in all its parts than the well known *E. hyemalis*, the popular Winter Aconite, and the flowers are, if anything, of a deeper yellow. It comes into bloom about six weeks later than *E. hyemalis*.

Of the early Fritillaries, *F. oranensis*, an Algerian species, with its handsome bell-shaped green and maroon flowers, was well sustaining its credit. *F. pluriflora* was a novelty to us, and a most beautiful one too. The flowers, which are rather small, exhibit a soft, pleasing shade of purple-pink, a colour rarely seen in this class of plants. Three to four flowers are borne on a single scape. The leaves are narrowly lanceolate in shape, very glaucous, and succulent. The plant is a native of California. *Anemone blanda* was rendering a capital account of itself, and, indeed, Mr. Reuthe informed us, had been in flower ever since the middle of January. *Tulipa violacea*, with its small, sweet-scented, red-purple flowers, is perhaps more interesting than pretty. At any rate, it has done well to flower thus early, for being of diminutive proportions it would probably stand a poor chance of recognition if it attempted to bloom at the same time as its more impressive relatives. A batch of *Hyacinthus azureus* in one corner of the frame ground furnished a patch of vivid blue than which nothing could be more beautiful. The early-flowering Irises were represented by masses of such forms as *I. persica purpurea*, *I. stylosa alba*, *I. reticulata Krelagi*, and *I. r. histrioides*. All are pretty and useful, but the flowers are very delicate. *Crocus Balansae* is a little gem that resembles *C. chrysanthus*, but is a little richer yellow, and is several weeks later in flowering, for *C. chrysanthus* is now over. *C. biflorus nubigenus* is one of the prettiest "biflorus" forms. The flowers are white with a large and conspicuous yellow base.

The Snowdrops have been having a grand time of it, and indeed we have never seen them looking better than during this year. The new *Galanthus Ikariae* has done remarkably well, and in several places we saw instances of its effectiveness. Even late planted bulbs have flowered well, although these plants were noticeable from their comparatively dwarf habit, both in length of scape and leaf. Several corners of the rockery were quite gay with it; indeed, to quote Mr. Reuthe's own words, "it is impossible to praise it too highly for beauty and usefulness." This statement we could but endorse in the face of the samples before us. *G. Elwesii*, the Giant Snowdrop, must not be forgotten, for there is no doubt that it contests with *G. Ikariae* the first place for decorative value. We noticed a more vigorous form of it named *G. E. robustus*, and were particularly impressed with its appearance. Whilst speaking of Snowdrops, mention should be made of the free-flowering *G. byzantinus*, which

comes into bloom directly after the autumn flowering *G. corcyrensis*. The flowers are long and of a pure, snowy white, prettily blotched with a delicate shade of green. Certainly the three most useful snowdrops are *G. Ikariae*, *G. Elwesii*, and *G. byzantinus*. Those lovers of flowers who like something in the way of novelty should grow *G. Scharlocki*, which has two very long spathes to each flower, instead of one, as in the case of all other known Snowdrops.

Saxifraga apiculata, with its light yellow flowers, is one of the earliest of the mossy Saxifrages to bloom in the open. *S. sancta* is a little later, and the flowers exhibit a deeper yellow hue. The latter species was just commencing to open its flowers.

Rarely, if ever, can one see a finer batch of *Anemone Pulsatilla* than that at Tottenham. The plants are seven or eight years of age, and are thus of great size and strength. They are throwing up great numbers of flowers, which so far have escaped the frost, and which may thus be trusted to make a grand display in the near future.

Amongst the hardy flowers we may make mention of *Rhododendron praecox*, which was represented by a number of sturdy little bushes full of flower. This is one of the most beautiful and most valuable of the early Rhododendrons, and one which, when the frost can be induced to let it alone, may always be expected to be in capital form at the end of February. The frost which recently visited us had, we found, tried the flowers sorely.

Although it does not come into the list of hardy early flowers, we cannot forbear to mention a grand batch of the shrubby *Veronica Traversii*, than which there is no prettier shrub for town gardens. The plants in question were sturdy, compact-habited samples about 1 ft. in height, and some four years of age. It has never fallen to our lot to see a finer stock of plants. *V. buxifolia* was showing up well a little distance away. This is a dwarfer species, but also a very handsome one, and quite distinct. *Iberis Little Gem* is a plant that has a great future before it. Dwarf and bushy in habit, it flowers continuously from spring till autumn, and we found its buds just on the point of bursting. Those who are on the look out for a hardy and handsome subject for rock garden, herbaceous border, or culture in pots, cannot do better than invest in a few of it.

GARDENING MISCELLANY.

CINERARIAS.

THERE is a grand lot of these in bloom at the present time at Yoecliffe House, Wirksworth, the seat of C. Wright, Esq. On measuring some of the plants I found them to be 18 or 20 ins. across; and they are grown in 5-inch pots. Mr. G. Daking, the gardener, is very proud of his plants and well he might be. The strain is that of Messrs. J. Carter & Co., High Holborn.—*T. Cockerill, Wirksworth.*

EVER-BLOOMING PRAIRIE QUEEN ROSE.

AMONG the novelties illustrated in the novelty supplement of the *Florists' Exchange* for February 12th, this handsome Rose occupies a foremost position. It is stated to be perfectly hardy, and to withstand a temperature of 10° below zero without protection. The flowers are very double, beautifully fragrant, and dark carmine in hue. They are of medium size, and produced in clusters like all those varieties of the Polyantha section. The growth is quick and vigorous, and the habit distinctly climbing. It is, moreover, recommended for pot work, as well as for cultivation in the open ground. If the variety possesses all these good qualities, it will doubtless become as great a favourite on this as on the other side of the "herring-pond."

ADIANTUM CUNEATUM.

AT Yoecliffe House there are some splendid specimen plants of the above. We found on running the tape measure across some of the plants that they are 4 ft. in diameter. The specimens are growing in 9-inch pots, and have been brought to this high state of perfection by the use of "Daking's Acamattuty."—*T.C.*

LILY-WHITE SEAKALE.

MANY proprietors will not have Seakale on their tables which is not pure white, of good size and perfectly tender. The Lily-White variety is very dis-

tinct and its colour is all that can be desired. It is grown as easily as the older variety; but it must not be supposed that its tempting colour always indicates tenderness. If air is allowed to circulate in the space where forcing is done, tough stringy produce can only be grown, and the inexperienced may supply a culinary article which may do them discredit. The old plan of covering with leaves, and other fermenting material, with pots placed over the crowns, is always safe. Boxfuls of roots buried in heaps of leaves supply good Seakale.—*M. T., Carron, N.B.*

VICTORIA TRICKERI.

THIS is considered by an eminent firm of nurserymen and seedsmen in the United States to be such an improvement upon the old *V. regia* that the latter will be no longer catalogued. It is stated to be much hardier, and to have a deeper upturned rim to the leaves than the type, whilst the calyx is free from spines. It is also said to be more vigorous in growth, producing double the number of leaves and flowers that *V. regia* does. It has been tested well in the States, and in every case gave satisfaction; also at Kew in our own country, where it maintained its distinctive characteristics. The last issue of the *Florists' Exchange* that reached us gave a small illustration of it.

SOCIETIES.

ROYAL HORTICULTURAL.—March 8th.

THE Drill Hall was well filled with exhibits of all sorts on Tuesday last, including Orchids, stove and greenhouse plants, *Amaryllis*, *Cyclamen*, *Camellias*, *Ferns*, *Daffodils* in quantity, double *Cherries*, *Azaleas* and various other forced subjects.

Messrs. J. Veitch & Sons, Ltd., Chelsea, staged a grand group of Orchids consisting largely of *Dendrobiums*, *Epidendrums* and *Cattleyas*. Very finely flowered were *Dendrobium crassinode*, *D. wardianum*, *D. Edithae*, *D. Wiganiae*, *D. Euryalus*, *D. splendidissimum*, *D. Cybele nobilium*, and *D. striatum*, all except the two first named being hybrids. Very fine also were the hybrids of *Epidendrum* all coming under the name of *E. elegantulum*, and derived from a cross between *E. Wallisii* and *E. Endresio-Wallisii* the last named being a hybrid derived from the species whose name it bears. *Epiphronitis Veitchi* obtained from *Epidendrum radicans* and *Sophronites grandiflora*, was also shown along with its parents; *Cymbidium eburneo-lowianum* standing between its parents was also noticeable upon the table (Silver Banksian Medal).

The sensation in the above group was a small piece of *Odontoglossum crispum* Baroness Schroder, belonging to Baron Schroder (gardener, Mr. H. Ballantine), The Dell, Egham.

Messrs. Charlesworth & Co., Heaton, Bradford, also exhibited Orchids, consisting chiefly of *Odontoglossums*, *Dendrobiums*, and many grandly flowered specimens of *Phaius Norman*, *P. N. aurea*, and *P. N. rosea*. All were finely set up with *Palms* and *Ferns* (Bronze Banksian Medal).

Messrs. Hugh Low & Co., Clapton, showed a small mixed group of Orchids containing a magnificent variety of *Odontoglossum nebulosum*, named *O. n. pardinum*, remarkable for the size and number of the spots upon it.

C. L. N. Ingram, Esq. (gardener, Mr. Bond), Elstead House, Godalming, staged a large and showy group of *Dendrobium splendidissimum grandiflorum*, every plant being well grown and most of them profusely flowered.

Philip Crowley, Esq. (gardener, Mr. J. Harris), Waddon House, Croydon, staged a huge, well-flowered piece of *Cypripedium villosum*. Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking, exhibited *Dendrobium Euterpe* and *D. Clio*. A fine spike of *Epidendrum stamfordianum* was shown by J. T. Bennett Pöe, Esq. (gardener, Mr. Downes), Holmwood, Cheshunt. C. J. Lucas, Esq. (gardener, Mr. G. Duncan), Warnham Court, Horsham, showed *Laeliocattleya warnhamensis*, a fine hybrid. Otto Froebel, Zurich, Switzerland, showed a fine plant of *Spiranthes colorata maculata*. J. Rutherford, Esq. (gardener, Mr. John Lupton), Beardwood, Blackburn, staged a number of *Odontoglossums*.

H. T. Pitt, Esq., Rosslyn, Stamford Hill, exhibited

a piece of *Odontoglossum wilckeanum* Pittiae bearing a grand spike of flowers. T. B. Haywood, Esq., staged a beautiful and most interesting little group of *Dendrobium Ainsworthii* Woodhatch, var. Baron Schroder, had a small collection of cut flowers of *Odontoglossum coronarium*, *O. Pescatorei* melanocentrum and others. H. Druce, Esq. (gardener, Mr. Walker), 43, Circus Road, St. John's Wood, exhibited a plant of the hybrid *Cypripedium* Mrs. H. Druce.

Messrs. J. Hill & Son, Lower Edmonton, staged a very imposing and showy exhibit of exotic Ferns, for which a Silver-Gilt Flora Medal was given. In this group there were some superb specimens of *Asplenium Nidus avis*, *Stenochloena scandens*, and *Nephrolepis davallioides furcans*, whilst a grand plant of *Alsophila excelsa* was hoisted up into a central position overhead, where it had a novel effect. Baskets of small plants of *Pteris palmata*, *P. Mayi*, *Lastrea aristata variegata*, *Adiantum rhodophyllum*, and *Blechnum brasiliense* were installed.

From Messrs. J. Veitch & Son, Ltd., Chelsea, came a unique exhibit of well bloomed samples of the double *Cerasus Pseudo-Cerasus* in pots. This ornamental Cherry forms a handsome pot plant. The same firm sent plants of *Staphylea colchica* and *Spiraea confusa* in first-rate condition (Silver Banksian Medal).

Mr. Wm. Paul & Son, Waltham Cross, occupied the same place as at the last meeting with a similar and equally meritorious exhibit of Camellias. Conspicua, Contessa de Hainant, Marchioness of Exeter, and Madame Cachet were some of the best varieties, and these were represented by fine specimens. The collection of cut blooms in the front showed the Camellia at its best (Silver-Gilt Banksian Medal).

Mr. John May, Gordon Nursery, Twickenham, showed a fine hatch of Persian Cyclamen. The flowers throughout were of good substance and great size, whilst the colours were exceptionally well developed (Silver Flora Medal).

Cyclamen also came from Mr. Chas. Turner, Slough. The plants were well-flowered and healthy samples, but the individual flowers were small.

A large display of Cyclamen was furnished by the St. George's Nursery Company, Hanwell, W. The quality was very good and the flowers large and fine (Silver Banksian Medal).

The Church Road Nursery Company, also from Hanwell, had a meritorious lot of Cyclamen; indeed, in both exhibits the quality was much above the average.

A Bronze Flora Medal was awarded to the Church Road Company.

The exhibit of *Azalea mollis*, and hybrids between that species and *A. sinensis* sent by Messrs. R. and G. Cuthbert, Southgate, Middlesex, was a very showy and brilliant one. The plants were sturdy samples, and exceptionally well flowered (Silver Banksian Medal).

Messrs. W. Cutbush & Son, Highgate, N., had a nice display of miscellaneous plants in which the hardwooded element predominated. *Acacia cordifolia*, *A. Drummondii*, *Erica persoluta alba*, *Eriostemon intermedius*, and the Otabeite Orange were represented by some capital plants.

A splendid batch of *Boronia megastigma* came from Messrs. W. Balchin & Sons, Hassocks Nurseries, Sussex. These plants were simply perfection.

Messrs. J. Veitch & Sons, Ltd., had a fine lot of *Hippeastrums*. *Dryades*, *Navala*, and *Miranda* were some of the finer newer forms (Silver Banksian Medal).

A group of miscellaneous stove foliage plants was staged by Messrs. John Laing & Sons, Forest Hill, S.E., including *Clivias*, *Dracaenas*, *Crotons*, and *Caladiums* (Bronze Flora Medal).

A specially noteworthy exhibit of Clematises in pots was made by Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton. *Lady Londesboro*, *Miss Bateman*, and *Mrs. Quilter* were three of the best forms on view (Silver Banksian Medal).

Mr. Geo. Mount, Canterbury, staged a superb lot of cut Roses for which a Silver Flora Medal was granted.

The samples shown of Mrs. John Laing, Catharine Mermet, Captain Hayward, and Anna Olivier left nothing to be desired in shape of bloom and delicacy of colouring.

A unique lot of crested Cyclamen in rose, red, crimson, and white came from M.M. L.P. de Langhe-

Vervaene, 150, Rue de Constantinople, Saint Gilles, Brussels.

Captain Holford (gardener, Mr. A. Chapman), Westonbirt, Tetbury, Gloucester, sent a few well grown and high class *Hippeastrums*. The flowers were remarkably large and fine.

Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., had a showy group of flowering subjects, chiefly *Clivias*, and *Azalea mollis*.

Hardy flowers were shown in capital form by Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N. Such Daffodils as *Henry Irving*, *Golden Spur*, *Victoria*, and *Queen Bess* were first class, also *Anemone apennina*, *Muscari botryoides*, *M. b. album*, *Erythronium Dens-Canis*, and *Chionodoxas* in variety. This was a very comprehensive exhibit.

P. Purnell, Esq., The Woodlands, Streatham, had a neat group of *Narcissi* and Alpine plants (Silver Banksian Medal).

A choice lot of bardy flowers was sent by Messrs. Barr and Sons, Covent Garden. It included, *Anemone fulgens*, *Erica carnea* and *Chionodoxa*, in variety.

Messrs. Thos. Cripps & Son, Tunbridge Wells, had *Deutzia Lemoinei* in grand condition.

Messrs. Wallace & Co., Kilnfield Gardens, Colchester sent a handsome collection of early flowering Irises.

At a meeting of the Fruit and Vegetable Committee, a vote of thanks was passed to Messrs. James Veitch & Sons, Limited, for a choice collection of the handsome garnishing Kales.

Mr. W. J. Empson, gardener to Mrs. Wingfield, Amptill, received a Silver Banksian Medal for 21 dishes of Apples. *Beauty of Kent*, *Beaumann's Red*, *Winter Reinette*, and *Mère de Ménage* were in capital preservation. A fine dish of Pear *Uvedale's St. Germain* was likewise shown.

Messrs. H. Lane & Son, Berkhamsted, showed *Apple Lane's Prince Albert* in splendid condition.

A Bronze Banksian Medal went to C. P. Serocold, Esq., for a group of Apples.

Fifteen dishes of Apples competed for the Veitch flavour prizes. C. P. Serocold, Esq., Taplow Hill, was placed first with *Cox's Orange Pippin*. Mr. C. J. Salter, gardener to T. B. Haywood, Esq., Woodhatch Lodge, Reigate, was second with *Bess Pool*.

Robert Maher, Esq., Yattendon Court, Newbury, sent the only dish of Pears in *Bergamot d' Esperen* which received the second prize.

Mr. George Wythes, gardener to Earl Percy, Syon House, Brentford, received a "cultural commendation" for two magnificent bunches of *Asparagus*, and some fine *Artichokes*.

QUESTIONS AND ANSWERS

* * * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as *Carnations*, *Pelargoniums*, *Chrysanthemums*, *Roses*, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Flowers of *Dendrobium Nobile*.—*J. Hunter*: The flowers you sent were certainly very fine. You might grow a good many imported plants before you get anything so fine as No. 3, which would be our choice of the three varieties, as well as yours. The large flower, but particularly the broad, rounded lip would bring the variety close to *D. nobile sanderianum*, from which it differs, however, in being less highly coloured, particularly the sepals. The intense blotch on the lip is all that could be desired. For the sake of distinction, and as a memento of where it first flowered you might name it *D. nobile Kings-knowes* var. The second best variety you sent is No. 1, on account of the great length of all the segments, which make the flowers of great size. There is also a wonderful amount of colour on both faces of the segments. The great length of the cordate, acuminate lip is also remarkable, though the way in which the point is rolled back, forming a wide and complete coil, hides this character to some extent. We do not remember seeing anything like it before, and being well worth growing, you might give it some distinctive name. A good many of the varieties of *D. nobile* have been named by different people, but seeing that they are not described, it is difficult or impossible to hear them all in memory. No. 3 of your list is pretty, but the segments are too narrow to meet the likings of growers generally.

Eradication of Weeds.—*William Brown*: Weeds may consist of any kind of plant that is out of place, that is, growing in the box edgings, on the walks,

lawns, flower beds, or in the fruit and vegetable quarters. Some of them may consist of garden plants gone astray; but we can give you a few examples of the wild or native weeds. Groundsel (*Senecio vulgaris*), Yar (*Spergula arvensis*), Shepherd's Purse (*Capsella Bursa-pastoris*), Chickweed (*Stellaria media*), annual *Veronicas* such as *V. arvensis*, *V. agrestis*, *Fumitory* (*Fumaria officinalis*), and *Solanum nigrum* are examples of annual weeds that should always be destroyed by means of the Dutch hoe, wherever the nature of the crops will permit of it. Otherwise a small hand hoe may be used, or the weeds may be pulled up by hand. Weeds on lawns are *Daisies* (*Bellis perennis*), *Dandelions* (*Taraxacum officinale*), *Plantains* (*Plantago major* and *P. lanceolata*) and *Docks* (*Rumex crispus* and *R. obtusifolius*). All of these may be dug up by means of a forked or two-pointed spud. *Daisies* may also be destroyed by means of Lawn Sand. Where the weeds are to be forked up the work should be done in moist weather while the ground is soft and favourable to the removal of the roots. Weeds on walks may consist of any of the above named annuals, but grasses are much more common in such places, particularly *Poa annua*, the annual meadow grass. In some gardens the walks are hoed and the weeds raked off. In other cases they are pulled up by hand. A third method is by some of the weed-killers sold by horticultural sundriesmen. Perennial weeds are often more troublesome, particularly those having underground roots that descend perpendicularly like those of the *Dandelion* or *Dock*; or those having horizontal creeping stems beneath the soil like *Couch Grass* (*Triticum repens*), *Tussilago* (*T. farfara*), *Bishopweed* (*Aegopodium Podagraria*), *Bindweed* (*Convolvulus arvensis* and *C. sepium*), *Horsetail* (*Equisetum arvense*), *Comfrey* (*Symphytum officinale*), perennial *Sowthistle* (*Sonchus arvensis*), *Fieldthistle* (*Carduus arvensis*) and *Yellow or Meadow Vetchling* (*Lathyrus pratensis*). Other perennials creeping less extensively are *Sheep's Sorrel* (*Rumex acetosella*), common *Sorrel* (*R. acetosa*), *Crowfoot* (*Ranunculus repens*), *Oxeye Daisy* (*Chrysanthemum Leucanthemum*) *Hawkweed* (*Hieracium Acetosella*), &c. All of these perennials, whether they have long tap roots, or creeping stems, should not as a rule be attacked with any kind of hoe, but should be carefully dug up with a fork, and every scrap of them wheeled off the ground to rot in a heap or be burned. These hints should be sufficient for your purpose, and when describing their nature and the best means of eradicating them, you should follow all good gardening practice, and you cannot go wrong in a horticultural examination.

Planting Herbaceous Borders.—*L. C.*: You should proceed at once with the planting of all subjects that are perfectly hardy, provided the weather is suitable and the ground sufficiently dry to be workable without puddling. You should lift a portion of the plants only at one time. Lay them close together on a piece of spare ground close handy, fix the labels firmly in each clump, and cover any roots that may be exposed by means of mats. Then wheel a heavy dressing of old hotbed manure, leaf soil or other rich material on to the ground. Then commence at one end by taking out a trench, wheeling the soil to the far end of the border to be trenched. Trench the soil to the depth of 18 in. or 2 ft., but do not turn up any poor material on the surface, merely breaking up and loosening it. After the ground has been trenched and the manure thoroughly mixed with the soil from which the plants have been lifted, you can then replant them before proceeding to lift any more. Arrange them according to height from your past observations.

Names of Plants.—*A. C.*: 1, *Forsythia suspensa*; 2, *Pyrus japonica*; 3, *Juniperus sinensis*; 4, *Elaeagnus pungens variegata*; 5, *Euonymus japonicus maculatus*.—*T. W.*: 1, *Iris reticulata*; 2, *Narcissus minor*; 3, *Narcissus Bulbocodium*; 4, *Anemone blanda*.—*R. J.*: 1, *Dendrobium findlayanum*; 2, *Dendrobium crassinode*; 3, *Asplenium bulbiferum minus*, usually named *A. Colensoi* in gardens.—*North*: *Carex Morovii variegata* (for a fuller reply see next week).

Communications Received.—*W. L.*—*W. B. G.*—*B.*—*J. T. Thurston*.—*Simplicity Holder* and *Indicator*.—*North*.—*A. H.*—*W. J.*—*R. W.*—*A. R. G.*—*S. A.*—*B. T.*—*A. E.*—*Rob.*—*C. L. James*.—*Thos. Rood*.—*L. L. Norman*.—*Reader*.

TRADE CATALOGUES RECEIVED.

PINEHURST NURSERIES, Pinehurst, North Carolina, U. S. A.—List of Trees, Shrubs and Herbs.

THOS. S. WARE, Hale Farm Nurseries, Tottenham, London.—Illustrated Catalogue of Hardy Perennials; also Catalogue of Hardy Florists' Flowers, consisting of *Carnations*, *Paeonies*, *Pinks*, *Pansies*, *New Roses*, etc.

FRED'K W. KELSEY, 150, Broadway, New York.—Choice Trees and Shrubs for Lawn, Street, or Park Planting.

FOTHERINGHAM & KING, Seed Merchants, Corn Exchange, Dumfries.—Farm Seeds.

LOUIS VIEWEG, Quedlinburg (Prussen), Germany.—Seed and Plant Catalogue.

PETER LAMBERT, Trier, Germany.—Newest Roses. **HERD BROTHERS**, 47, King Street, Penrith.—Agricultural Seeds.

WEBBS' FLOWER SEEDS.



WEBBS' BRILLIANT PETUNIA,
the most beautiful strain in cultivation, 1s. 6d.
and 2s. 6d. per packet.

WEBBS' POPULAR BOXES of FLORAL GEMS,
containing Seeds of beautiful and easily cultivated Flowers, arranged for the

GARDENS OF LADIES AND AMATEURS.
2/6, 5/-, 7/6, 10/6, 15/-, 21/-, 31/6, 42/-, and 63/- each.
DELIVERED FREE.

**The Queen's Seedsmen,
WORDSLEY, STOURBRIDGE.**

NEW DOUBLE VIOLET, MRS. J. J. ASTOR.

This beautiful Violet, of a deep rosy-heliotrope is meeting with a most cordial reception, and as the stock is getting very limited, and we have already many orders booked for April and May, we beg all intending purchasers will please apply at once to prevent disappointment.

The Managers, Hood Gardens, Totnes.

HARDY CLIMBERS. FINE COLLECTION.

FOR PILLARS, ARCHES, WALLS,
PERGOLAS, TREES, &c.

GEO. BUNYARD & CO.

Beg to say their List of the above may now be had free, from

THE ROYAL NURSERIES, MAIDSTONE.

1898. FORBES' CATALOGUE 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants

is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and price of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other Valuable Information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,
ESTABLISHED 1870.
Nurseryman, Hawick, Scotland.

The Most Beautiful Flowers

CAN BE ENSURED BY SOWING

SUTTON'S COLLECTIONS OF FLOWER SEEDS.

SUTTON'S 10/6 COLLECTION

Consists of Aster, Mignonette, Nasturtium, Sweet Pea, Ten-week Stock, and other beautiful varieties.

SUTTON'S 15/- COLLECTION

Consists of Aster, Balsam, Phlox, Portulaca, Zinnia, and other beautiful varieties.

SUTTON'S 21/- COLLECTION

Consists of Aster, Calceolaria, Cineraria, Petunia, Phlox, Portulaca, Primula, and other beautiful varieties.

OTHER COLLECTIONS from 2s. 6d.

All Flower Seeds sent Post Free.

SUTTON'S SEEDS

GENUINE ONLY FROM SUTTON & SONS, READING.



"Gardening is the prnest of hman pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, MARCH 19th, 1898.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, March 21st.—Adjourned Annual Meeting of the National Chrysanthemum Society at Anderton's Hotel, Fleet Street, E.C., time 6 p.m. Sale of hardy herbaceous plants, Carnations, etc. by Messrs. Protheroe and Morris.
TUESDAY, March 22nd.—Royal Horticultural Society, meeting of committees at 12 noon. Sale of the Battenhall Mount Collection of Orchids by Messrs. Protheroe and Morris.
WEDNESDAY, March 23rd.—Torquay District Gardeners' Association Spring Show. Sale of Lilliums, Ferns, Tuberoses, Palms, etc., by Messrs. Protheroe and Morris.
FRIDAY, March 18th.—Sale of Imported and Established Orchids, by Messrs. Protheroe and Morris.

GARDENERS AWAKENING TO THE NEEDS OF THE TIMES.—From various sources all over the country we have evidence that young gardeners are becoming more and more alive to the necessity of acquiring by some means or other a knowledge of the higher and more scientific branches of their profession. There is some satisfaction in this and a hope that the teaching being given in various parts of the country will not be lost upon the rising generation. What has long been urgently needed was an awakening of thought and study as a means of helping gardeners to habits of careful and correct observation in youth; and to acquire the faculty of turning these things to practical account when opportunity serves them. We do not imply that a gardener by merely cramming his mind with facts and information acquired from

the accumulated knowledge of others whether offered to them in the form of books or from lectures delivered. The lessons should be carefully thought out and acted upon in conjunction with the best rules and guidance of modern practice. He must get conversant with the leading facts of the case that bear on any particular case so that he can apply that phase of the scientific teaching which relates to the particular soil of the district or garden under his charge. It is not sufficient to blindly follow the teaching of the profession which has been handed down from master to apprentice for centuries past. There is much to unlearn of old methods, prejudices to be got rid of, and indifference to be cast aside, by the young men who elect to make the profession of gardening the means of a livelihood.

In the dissemination of knowledge both teacher and scholar must play their part well. That information should be imparted in an attractive way goes without saying, although it is equally certain that many teachers have not this particular faculty in a large measure. On the other hand, little good will result to students who attend classes or lectures merely to be amused or entertained. Some may be given to criticising, more particularly if they happen to be better versed in some branches of the subject than the teacher himself. Others will rail at every attempt on the part of teachers to impart instruction, simply on the ground that the system is an innovation, and contrary to all the traditions of the profession which served their fathers and grandfathers well. This spirit is in direct antagonism to the best interests of the cause. Little prejudices and conceits should be laid aside, and would-be students should come forward in an enquiring frame of mind, and both teacher and scholar should act on the principle of mutual co-operation for the good of the cause and the community in general. Those who ignore this aspect of the subject, will have to blame themselves if in after years they should find they have been left dragging behind the times. Knowledge, when thoroughly acquired, becomes, as it were, part and parcel of the man, and though he may scarcely be aware that he possesses it, he can turn it to account when opportunity offers. It is easily carried about when once acquired, no matter when or where, and costs nothing either for carriage or house room. A very good maxim is put forward by Mr. L. H. Bailey, of the Cornell University, who says that "It is more needful to learn first to think correctly than to perform correctly; for all accurate labour is the child of accurate thought." In other words the head must direct the hand, and better results must surely follow than when labour is merely mechanical.

There are several burning questions in connection with the dissemination of horticultural teaching amongst the community. The question has been put forward whether all men receiving horticultural instruction at the hands of county councils or others are to be made gardeners. There is no need for such a supposition. Whether they take to horticultural pursuits on their own account or as the servants of others, surely there is room for them so long as foreign produce floods our markets and which can be produced of equally good quality in this country, as far as soil and climate are concerned. The presence of the lady gardener is another source of vexation in some quarters; but she is hardly likely to offer any serious competition in the labour market generally, being unfitted by nature for undertaking duties that can often with difficulty be carried out by the strong hand of the sterner sex. There are, doubtless,

openings in the country that she could fill with propriety to herself and her employer, openings where the emoluments offered would be no temptation to any energetic and well qualified gardener. On the other hand, there are many nurserymen and florists who could turn their daughters to useful account in the management of some branch or department of their business. Moreover, women are often called upon to manage a business on their own account. In the United States many floral establishments are managed by women. There is no lack of opportunity in this country, unfortunately, when the husband dies, leaving it may be a widow whose family is young. In such cases the advantage of a good horticultural training would serve the widow in good stead, enabling her it might be to carry on the establishment, which otherwise might, perforce, have to be given up.

We do not advocate a cry for more gardeners, knowing as we do the congested condition of the profession; but all the same we consider there is need for progress and advancement all along the line so that our countrymen may continue to hold their own not only at home but all over the world where competition demands that the gardener should be well abreast of the times. This striving to be in the front rank should be the duty of every gardener, and, in so attending to his own duty, he is also attending to the duty imposed upon him in patriotism to his country and nation. Not every branch of gardening is equally well attended to in this country. For instance, notwithstanding the agitation for an extension of fruit culture, it is well known that some people undertake the work who have no knowledge, practical or scientific, of the requirements of the case. Indeed, we are informed that it is very difficult to lay hands on young gardeners capable of undertaking the management of a fruit farm or garden. The question of manures and fertilisers and their proper application offers another burning question that must needs be followed up with energy, both in the matter of scientific teaching and practical demonstration. It is no longer sufficient to know that the ashes of sundry specified plants consist of so many elements, in certain percentages. Good cultivators should be able to ascertain the relative fertility of the soil, and the capabilities of particular crops for collecting their requirements from the soil, so that in applying fertilisers they may be able to do so economically. That gardeners and others are beginning to interest themselves in these and similar questions is a pleasing sign of the times.

The Cotton Crop of Egypt has doubled under British rule, amounting now to 500,000,000 lbs. annually.

Daffodil Prizes for Spring.—Since the schedule of arrangements was issued by the Royal Horticultural Society, Messrs. Barr & Sons, King Street, Covent Garden, have offered a Silver Cup for Daffodils, to be competed for at the meeting of the society in the Drill Hall, James Street, Victoria Street, Westminster, on Tuesday the 12th April. The Cup has been designed by Mr. H. G. Moon and is offered as the first prize for a collection of not less than forty varieties of cut Daffodils, and including varieties belonging to the three sections—Magni-coronati, Medio-coronati, and Parvi-coronati (Polyanthus excluded). Bottles will be provided by the society, and not more than three bottles of any one sort may be staged. Correct naming will be taken into account as well as elegance of arrangement. The society offers a Silver Flora Medal and a money prize for the second best exhibit. Notice of entry should be addressed to the Secretary, R.H.S., 117, Victoria Street, S.W.

Cotton Plantations of twelve different colours may be seen in Peru.

Holland Exports Annually bulbs to the value of three-quarters of a million pounds sterling, of which £25,000 worth go to the United States.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, March 22nd, in the Drill Hall, James Street, Victoria Street, Westminster, 1 to 5 p.m. A lecture on "Soils" will be given by Mr. J. J. Willis at 3 o'clock.

National Chrysanthemum Society.—The adjourned annual general meeting of members will take place at Anderton's Hotel, Fleet Street, E.C., on Monday, March 21st next, at 6 o'clock in the evening:—To receive the committee's revised statement of accounts, together with an estimate of receipts and expenses for the current year; to elect a president, vice-presidents, officers, and committee for the year ensuing; to consider certain amendments to the rules; and to transact such business as pertains to the annual general meeting. The attendance of all members is particularly requested.

The National Auricula and Primula Society (*Southern Section*) has just sent out its twenty-first annual report, as usual, in neat pamphlet form. During 1897 the receipts have been £87 17s. 3d., and the expenses £71 2s. 6d. The treasurer and secretary, who is Mr. T. E. Henwood, Auricula Villa, 16, Hamilton Road, Reading, will thus have a balance of £16 14s. 9d. to carry forward. The show held by the society in connection with the R.H.S. at the Westminster Drill Hall on April 13th last was a complete success, and another one on the same lines and at the same place is, therefore, fixed for April 26th next. We hope it will turn out all that could be wished. The winners in all the classes at the 1897 show, together with the varieties they showed, are given, and the latter feature should be valuable for reference and information to intending exhibitors who may be in need of such a guide. The list of last year's subscribers is also given. We hope to see a substantial increase this year.

Tunbridge Wells Gardeners had, on the 22nd ult., the pleasure of listening to an admirable lecture on "Cyclamen" from Mr. James Martin, of Messrs. Sutton & Sons, of Reading. Mr. Martin is so well known as an authority on Cyclamen, that anything he has to say upon the subject is sure of rapt attention and a good audience. It was therefore not surprising that on this occasion the attendance was large and enthusiastic. In the course of his remarks Mr. Martin traced the introduction and development of the Persian Cyclamen from the year 1730, and exhibited some blooms of the oldest forms obtainable, to illustrate the progress made by the flower under cultivation. Mr. Martin also gave minute details concerning seed propagation and the life generally of the plant for which he has done so much. He gave point and interest to his remarks by his rich fund of anecdote and apt illustration. Mr. Alderman Cronk (chairman of the Technical Committee) presided, and voiced the general feeling when he commented on the kindness of the Messrs. Sutton in sending Mr. Martin to instruct them.

The Netherlands Horticultural and Botanical Society.—This society, which has for its objects the exhibition and recognition by award of noteworthy plants, has just successfully completed its eighth year. In accordance with the custom of former years a catalogue of the work accomplished by the society has been issued printed in Dutch and French. In this catalogue there appear the names of all the plants that have been exhibited, together with the names of the persons or firms showing them, and the date at which they appeared before the committee. The plants shown are either new introductions, home-raised seedlings, or specially good examples of culture. All of these are eligible for award. The awards consist of First-class Certificates, Awards of Merit, Botanical Certificates, Honourable Mention, and *Remerciement*, which being equivalent to our "Vote of thanks" is of little value. Plants which have obtained any of these awards are placed together, whilst in another column appears those subjects which the committee desires to see again, amongst which, by the way, we see the grand *Deutzia Lemoinei*.

The Garden of Love.—They were talking of figures of speech. "Have you ever noticed," said one, "how fond people are of vegetable metaphors when they are dealing with a woman? Her cheeks are 'Roses,' her lips are 'Cherry,' her hands are always 'Lily' hands, her mouth is a 'Rose-bud,' her complexion is like a 'Peach,' and her breath is fragrant of 'Honey-suckle.'" "You have forgotten one," said the cynic. "What's that?" "Her tongue—it is a 'Scarlet Runner.'"—*Pick-Me-Up*.

Mr. Robert Brown, who has been for some years foreman to Mr. Mackinnon at Terregles, and Ayton Castle Gardens, has been appointed gardener to Sir Emilius Laurie, Bart., of Maxwelltown House, Dumfries. Mr. Brown has had an exceedingly good training in some of the best places in England and Scotland, and although comparatively a young man, he is an accomplished practitioner in all departments connected with horticulture. Mr. Brown will no doubt prove a worthy successor to the very able men who have conducted gardening operations at Maxwelltown House for so many years. He enters on his duties early in April.

Ealing and District Gardeners' Society.—On the 8th instant, the president, J. Harris, Esq., F.R.H.S., in the chair, there was a very good meeting of this society. The occasion was a paper by Mr. F. Read, on "The Gardener and his Work," a subject very fertile in suggestion, and one which may be treated in a variety of ways. Mr. Read took rather a philosophic than a practical mood, quoting old saws and treating the gardener generally, rather than specifically, as he is most accustomed to. Mr. Read, however, thought the gardener was often in the same position as a tradesman—he embraced too many occupations, sometimes even saving his own seed and propagating his own trees. Mr. Read and the president received hearty votes of thanks, the latter assuring the members that he was greatly interested in the society and its work.

Epping Forest.—The Epping Forest Committee made its annual report to the Court of Common Council on the 10th inst. The report referred to the judicious thinning of trees and undergrowth which had been carried on in some parts of the Forest, and stated that other parts were in need of similar treatment. Arrangements were in progress whereby the people of Ilford would obtain access to the eastern side of Wanstead Park by a new roadway and bridges. A large ornamental pond that had been made at Leytonstone cost £1,228, of which sum the corporation had voted £750. The receipts of the committee for the year amounted to £6,832, inclusive of £4,000 from the grain duty. The expenses of maintenance and management came to £237 in excess of the receipts, and amounted to £7,069. The estimated expenses for this year were £5,600, and the estimated income £1,600. The Court adopted the report of the committee, and agreed to place £4,000 to the credit of the Forest for the expenses of the current year.

The National Carnation and Picotee Society (*Southern Section*).—The twenty-first annual report of this section of the National Carnation and Picotee Society for 1897 lies before us. The report of the committee congratulates the society upon its continued prosperity. No fewer than 78 new members have joined its ranks during the year, and the interest displayed in the Carnation and Picotee seems in no danger of abatement. This progress is in a great measure due to the untiring energy and generosity of the president, Martin R. Smith, Esq. Amongst other things he contributed £19 7s. in special prizes last year. The total receipts for the year, inclusive of a balance from 1896 of £238 rs. 3d., have been £493 14s. 9d. The expenses have been £284 17s. 11½d., of which a sum of £132 9s. 6d. has been distributed in prize money. A balance of £208 16s. 9½d. is thus carried forward to 1898. The exhibition for 1898 will be held at the Crystal Palace on Wednesday, July 20th. The directors of the Crystal Palace have promised £50 towards the prizes. The names of the winners, and the varieties shown in each class at the 1897 exhibition is appended. The hon. secretary and treasurer of the society is Mr. T. E. Henwood, Auricula Villa, 16, Hamilton Road, Reading.

The Largest *Rhododendron Catawbiense* is probably the plant at Balynie, Scotland, according to the defunct *Garden and Forest*. It is 20 ft. in height, 172 ft. in circumference, and 100 years of age—a grand specimen altogether.

Syndical Chamber of Belgian Horticulturists.—At the monthly meeting of this society on the 6th inst., in the Casino, Ghent, Certificates of Merit were awarded to *Didymospermum porphyrocarpum*, *Phoenix histrix* and *Anthurium rothschildianum excelsior* (with unanimity) all presented by M. L. De Smet; to *Azalea Madame Louise Cuvelier*, shown by MM. Haerens frères; to *Vriesia Rex*, shown by M. L. Poelman-Maenhout; to *Cymbidium grandiflorum var. punctatum*, shown by MM. Versypt frères et soeurs; to *Aechmea pulchella*, presented by MM. Duriez frères; and to *Selaginella emmelliana aurea*, shown by M. Szewezik. A few other certificates were awarded for flowering and culture, and some Honourable Mentions made.

The following curious mode of planting Apple trees I cull from Chambers' *Edinburgh Journal*, dated February 10th, 1844, which may prove of interest to the many readers of your valuable paper:—"New Mode of Planting Apple Trees: A horticulturist in Bohemia has a beautiful plantation of the best Apple trees, which have neither sprung from seeds nor grafting. His plan is to take shoots from the choicest sorts, insert them in a *Potato* and plunge both into the ground, having put an inch or two of the shoot above the surface. The *Potato* nourishes the shoot whilst it pushes out roots, and the shoot gradually springs up and becomes a beautiful tree bearing the best fruit without requiring to be grafted.—*Canada Newspaper*." It would be interesting to know if any of your readers have heard of such a thing.—*D. W. Mitchell, Edinburgh, 12/3/98.*

Fatal Fall from a Tree.—A shocking accident occurred last Thursday afternoon in the yard attached to the board school in Bolingbroke Road, Bridge Road West, Battersea. A man named Robt. Batchelor, aged 60, of 16, Thibet Street, about half-past twelve was engaged in lopping a tree. While some 25 ft. up, he slipped and fell to the ground. He was picked up and immediately taken to the Bolingbroke Hospital. On examination it was found that his skull was smashed. In spite of the attention of Dr. Lyster, the superintendent of the hospital, the poor fellow died at seven o'clock in the evening. Batchelor was in the employ of Mr. Neal, nurseryman, of Trinity road, for whom he has worked many years. In these days of "Myticuttahs," &c., surely men's lives should not be risked in attempting to prune trees in the old fashioned way!!!

The Beginnings of Plants.—On Tuesday, the 1st inst., Professor Ray Lankester, reached that highly interesting point in his lectures on the "Simplest Living Things" where plants and animals divide. The real difference, he said, is based upon what they are able to eat. The true animal must have the food made up for him into albumens, sugars, starches, etc., all of which are necessary to his existence, although the crude elements from which these are composed are useless to him. Plants, on the other hand, can extract the carbon from carbon dioxide by means of their chlorophyll and the action of light, and from the various salts which are taken up in solution through the root hairs, they can supply themselves with the elements of food they need. Some plants can even, by the aid of certain fungi parasitic upon them, take in free nitrogen. Some plants seem to have assumed an intermediate form—a sort of compromise between the strictly animal and strictly vegetable kingdom. The *Euglena*, for instance, had a mouth like an animal, and yet had the chlorophyll corpuscles which would cause it to be classed as a plant. Among the flagellata or "whip swimmers" there were, continued the Professor, several which would be classed as animals which have chlorophyll corpuscles. This was, therefore, one reason why it was believed that the vegetable kingdom first found its origin among the "flagellata." Broadly speaking, one might say that if in the beginning a group of flagellata joined themselves end to end so as to form a thread they turned into a plant, whereas if they followed more complex courses and joined together in more elaborate structures and households, they became animals.

A Blotter and Diary for a Postcard.—The Anglo-Continental Guano Works have issued a very neat and handy blotter and diary for 1898, in strong, crimson and gold, board covers, which we are requested to announce will be sent free to any of our readers who will forward a postcard to "30, Mark Lane, E.C." This diary is not a toy, but a really serviceable article.

The Mora Nut.—At a meeting of the Linnean Society of London, on March 3rd, Mr. Thomas Christy, F.L.S., exhibited specimens of the Mora Nut of British Guiana (*Dimorphandra Mora*, Schomb.), of which some had been lately introduced into London by Colonial brokers as the Kola Nut (*Cola acuminata*). It appeared, however, on analysis that the former contains no Caffeine, a product for which the latter is of definite commercial value. It remained to be ascertained whether the Mora Nut has any economic value.

Devon and Exeter Gardeners turned up in strong force at the Exeter Guild Hall on the evening of Monday 11th inst., to hear the lecture on "Variety in the Flower Garden" delivered by their old fellow-countyman, Mr. J. W. Moorman, now superintendent of Victoria Park, London, E.C. Mr. Moorman dealt in an able manner with the various phases of modern decorative gardening. The main object in view should be to secure as great a variety, and as complete a succession, as possible. A mere flash of summer beauty should not be striven for, but continuity of effect. Fashion governed in the flower garden, and fashions were continually on the change. From 1870 to 1885 carpet bedding was at the zenith of its popularity, but nowadays it was in disrepute. Despite this, he thought a bed or two treated thus might be in every garden of any size. During the last summer he made a special feature of a scroll bed in which a medallion, crown, and the letters V.R.I. were holdly brought out, and he found that it proved a lively source of attraction to many. Speaking of the numerous varieties of Begonias and Fuchsias, he extolled these plants highly for their beauty and usefulness, and mentioned numbers of other plants that might be turned to good account, and which would add not only the charm of beauty, but the charm of variety to the garden. Moderation and simplicity were the chief ends that should be borne in mind in the arrangement. Overcrowding must be strictly avoided. Mr. Moorman paid special attention to the effect obtained by a free distribution of spring-flowering bulbs amongst the grass, which are such a conspicuous success in the London parks.

Do Pot-plants in Rooms Disseminate Fever?—The *Florists' Exchange* has taken a commendable action in endeavouring to answer this question. A report was circulated that pot-plants in dwelling rooms do assist the spread of scarlet fever, and as a consequence, the principal of a public school ordered all such plants to be removed from the school. The *Exchange* sought the advice of Mr. J. M. W. Kitchen, M.D., whose reply, in substance, was as follows:—That he doubted the accuracy of the report, and that if the pedagogue in question believed that plants were an immediate cause of scarlet fever, he was not fit for his post. If, on the other hand, these plants had been in direct contact with fever cases, his action was right and commendable. Dr. Kitchen further stated as a matter of common knowledge that the presence of a limited number of plants in a room could have but a very slight influence on the health of the human occupants. On an average they cleansed the air of deleterious gases, excreted by human and other animals. Malarial germs might be propagated in the soil in which plants were grown, and he would not care to live in close proximity to a large number of plants grown continuously in a high temperature and in a soil largely composed of decomposing vegetable matter. He would, moreover, not advocate the close connection with a dwelling of a hothouse conservatory. A cool-house conservatory was not objectionable from a sanitary point of view. It might be a wise precaution to use purely chemical compounds of nitrogen, phosphoric acid, and potash as manures for such plants. He concluded by saying that where there was one point against house plants in connection with health, there were, relatively, hundreds in favour of their employment. It would be a good thing if all the schoolhouses in the land contained growing plants.

The Chestnut Tree in the gardens of the Tuilleries, Paris, so remarkable for its exceptional precocity in flowering on the 20th March, has just died. The tree formerly enjoyed great popularity amongst the Buonapartists, for from it they conceived the idea of celebrating the anniversary of the King of Rome.

Children's Flower Fund.—Two years ago it occurred to a few friends residing in Oxford that boxes of wild flowers sent regularly to the London schools would be acceptable to both teachers and children, and the experiment of sending a limited number was made. This experiment met with so much success that last year a small fund was started to defray the expenses of postage, etc., and the work was extended to twenty-nine schools, about 274 boxes of flowers being sent to them during the spring and summer. Many letters have been received from teachers, speaking of the value of these flowers in various botany, drawing, and object lessons. There are 973 public elementary schools in the metropolis, and twenty-nine is but a small percentage of these. With a view to the further development of the good cause, help is solicited. The president of the movement is Mr. F. G. J. Reay, and the honorary secretary, Miss M. S. Beard. Subscriptions in aid may be addressed to the latter, 36, Ridgemount Gardens.

Scottish Horticultural Association.—The "majority" supper of this association mentioned by us some time ago, was held in the Windsor Hotel, Edinburgh, on the 8th instant. The chair was taken by the president, Mr. M. Todd, and Mr. Malcolm Dunn and Mr. R. W. E. Murray acted as croupiers. They were supported by Bailie Hay, Bailie Mackenzie, Messrs. W. S. Melville, Dundee; Robertson Munro, Glasgow; James Grieve, D. P. Laird, W. McKinnon, A. Milne, D. T. Fish, Loney, Robert Laird, Secretary, and others. The usual loyal toasts were proposed from the chair, after which Mr. R. Laird proposed the "Navy, Army and Reserve," Mr. Mackenzie proposed the "Lord Provost and Magistrates," whom he considered a body of intelligent, patriotic and far-seeing men. Bailie Hay replied, stating that they had done much to cultivate a taste for flowers, and the taste was growing. The Corporation were gratified that their services were appreciated. Later on, he proposed the toast of the evening, namely, "The Scottish Horticultural Association." Twenty-one years ago the association began in a very small way by holding meetings in the Bible Society's rooms, where they read and discussed matters pertaining to horticulture. It was all the more gratifying to know that after all these years they had lost none of their vigour, but were strong and healthy. They had been most successful, and he felt sure that the citizens of Edinburgh owed them a deep debt of gratitude for the privilege of visiting their Chrysanthemum show, which was the admiration of all classes of people. He hoped the Corporation would always be in touch with others, and not stint their donations to that and similar useful associations. He hoped the Corporation would give them every facility and assistance to further their success and progress. He considered that the association had done much good, and was capable of doing more in the future than it had done in the past. They had reason to take courage and endeavour to make the society second to none in the world. The chairman in reply, said they had done their best to deserve success, which was insured by their efforts being backed up by the public. There had been no retrogression; while they had added to their membership and increased their usefulness. Since the establishment of the Chrysanthemum show, they had gone on with unvarying success, one success leading to another. They were grateful for the encouragement they had received from the Corporation of Edinburgh. The public had come to look upon the Chrysanthemum show as one of the most attractive entertainments of the year in the city. They had been led to strengthen and widen their sphere of action by bringing together the very best in the way of Chrysanthemums and other winter floral products, which culminated at their last show. They had wisely and generously devoted part of their abundance to works of charity. Mr. D. P. Laird then proposed "Gardeners and Gardening," to which Mr. M. Dunn responded. Mr. A. Johnstone proposed the "Nursery and Seed Trade," to which Mr. A. Milne responded. Bailie Mackenzie proposed "Kindred Societies," to which Mr. W. S. Melville responded. The chairman presented the association with an album of photographs of all the presidents. A most enjoyable evening was spent.

HINTS FOR AMATEURS.

THE ANNUAL POTTING.

THE shifting of plants from one pot to another is practised during every month in the year in the larger and busier establishments, for, with the multitudinous requirements of such places, the preparations for supplying them can never be laid aside entirely, although there are seasons when the tension may be somewhat relaxed. In the face of this, the phrase "annual potting" may require a little explanation. In large nurseries where the raising of stock is the main business, a plant is potted when it wants it with comparatively little regard to the time of the year, although matters are so well managed as to the striking of cuttings and raising of seedlings, that the most favourable seasons of the year are taken the fullest advantage of. In private establishments, whether large or small, a different system prevails. The object aimed at in a private garden is, of course, different to the nurserymen's, for particular care and attention have to be given to old plants and there are indeed many which may be called "permanent" plants on the place, in addition to the young stock which is being reared to supply smaller plants for furnishing purposes, as well as to fill up gaps, should these occur, among the old ones.

Under this system, the usual custom is to give all the plants a thorough overhauling once a year, and this is what is meant by the "annual potting." True, in every case it does not mean a shift forward into more roomy quarters for each plant. On the contrary, each plant receives treatment according to its special condition, and this of course varies with the plant. Thus, some vigorous subjects will have made so much roots that the outside of the balls next to the pots is nothing but a network of thick fleshy roots. In such cases it becomes almost impossible to reduce the old balls much, for to attempt it would mean certain destruction to a large proportion of these roots; the plants would receive a correspondingly severe check and no improvement; rather the opposite would have been effected. In such cases, the only thing possible, if it is decided to give it a shift, is to give a good one, and not to attempt to interfere with the ball beyond loosening gently the tips of the roots. The alternative policy is to leave the plant as it is, and to endeavour to make up for the lack of nutritive soil by feeding with manures. Some plants, such as Palms, for instance, answer admirably to this treatment.

Then, again, we may come across a plant which seems to have had a bad season last year. We turn it out of its pot and find that it has very few roots, the greater part of them having rotted off in the sour sodden soil, and possibly it contained worms, with which the pot is filled. The only thing to do with such a subject is to transfer it to a much smaller pot, after removing all the old soil and cutting away any roots that are injured or appear to be in the first stages of rotteness. In more confined quarters, and in new, sweet soil the plant will have every chance to develop its root system, and to make up for lost time, whilst another few months in the old quarters would have finished it off completely.

These two plants represent the extremes, but in any ordinary collection they are sure to be seen in all intermediate stages.

We may perhaps mention another set of typical conditions as one that is very frequently met with. A plant on being turned out of its pot shows that the drainage is in good working order; and the lower strata of soil sweet and good, whilst the roots are only just beginning to make their appearance round the sides of the ball. Such a plant does not stand in need of a shift, but a sort of compromise may be decided on, viz., a top-dressing. To give this, the plant should be returned carefully to its pot in such a way that the drainage is not disturbed at all. This done, remove with a pointed stick, keeping a sharp look out meanwhile for any roots, the soil to a depth of 2 in. or 3 in. according to the size of the pot. The vacancy thus caused may be filled up with fresh soil, which should be worked all round the spread-out roots which have been laid bare during the removal of the old soil.

Top-dressing does not find general favour with cultivators who frequently change their young men assistants, because the top-dressing does not give an

idea of the true state of the plant for water when the pot is tapped in the usual way: the top-dressing is invariably drier than the lower layers of the old soil, and the plant is consequently in danger of being consistently over-watered by a young man who does not know that it has been only top-dressed and not potted.

These reasons are certainly valid enough in such cases, but they do not apply to the average amateur who looks after his plants himself, and knows what has been done, and, consequently, the true inwardness of affairs. It may be well to give the hint, however, to test the plants as to their need for water by their weight, and not by the hollow sound emitted from the pot of a dry plant when the pot is "tapped" or "rung" in the usual manner.

Shall We Pot Firmly or Not?—There is nothing that has caused brisker discussions than this, and even now the controversial spirit is at large. Some growers eschew the rammer as the devil is said to hate holy water, whilst others will ram anything and everything, no matter what it is, or what its condition may be. The latter policy is obviously a mistake when we come to take a closer view of the effects on plant life of ramming the soil, whilst the former system is too much that of an extremist to find favour with an enlightened cultivator.

The exact amount of firmness imparted to the soil, whether by means of the rammer or of the fingers, must depend not only upon the condition of the soil, whether light, heavy, damp, or dry, but also the plant operated on. We may lay down the broad general rule, however, that when the soil is of medium texture, and not too damp, a vigorously growing plant may, with advantage, have the rammer used pretty freely upon the soil in which it is to grow. Firm potting tends to check over-luxuriant growth, and to promote the production of sturdy short-jointed shoots, and leaves of firm texture, thus keeping the proportions of the plant within due bounds, and thereby increasing its usefulness for decorative purpose whether in the conservatory or dwelling house.

On the other hand, naturally, weak growing subjects, or those that are in a weak condition through ill-health, should not be potted too firmly, for, so far from requiring a check put upon their growth, they must have every inducement given them to grow. In every case, therefore, such plants should be potted rather loosely, no more firmness being given to the soil than can be imparted with a moderate pressure of the operator's fingers; indeed, for plants that are apparently at the last gasp, it is often good practice to lay them loosely in a bed of cocoanut fibre refuse in a warm house. Under such circumstances they will often come round, and the lives of valuable plants will be thus spared. Of course, after a nice few roots have been made, the plants may be removed from the cocoanut fibre and potted up in ordinary soil.

We have said enough to show that in going through a collection of stove plants, there is a wide field wherein the operator must exercise his discretion. The broad general rules that we have given are the only ones which can safely be laid down, and they must be applied according to the particular set of circumstances which have to be dealt with.

The present time is a most favourable one to make a start with the potting of the plants, attention being first of all paid to the occupants of the stove and the warmer houses. We thus take advantage of the increase in light, whilst the worst part of the job is got through before the sun becomes so powerful as to try the shifted plants to any serious extent. With the cold winds that have been prevalent of late, it will not be advisable to take the plants out of the warm house to the potting shed, but to rig up a potting-bench within the stove, and complete the work there. A capital potting-bench may be improvised by knocking one side out of a large shallow box, and placing this on the stage in the required position. The three sides remaining serve to keep the soil from spilling about, and economises the space.—*Rex*.

Potato Early Rose.—American Potatoes, do not, as a rule, succeed well in this country; but a few of them gain a footing. Early Rose is the oldest of these and is still planted at many places. Beauty of Hebron is of more recent introduction, and enjoys a considerable amount of favour.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Propagating Heliotropes.—*Rob.*: The reason why your plants do not make haste to throw up side shoots is first of all because you have not taken off the tops, consequently the efforts of growth made by the plants are all in an upward direction. Secondly, you are not giving them sufficient heat. Remove the plants to a shelf in a warm house, and take off the tops and put them in at once as cuttings—also in heat. The old plants will not be long in throwing out side shoots which may be taken off for cuttings as soon as they get long enough. You will have to hurry your plants up or you will never get a sufficient stock by bedding-out time.

Window Facing North.—*T. T.*: It will be of little use attempting to grow flowering plants in a north window. Of course, plants that were already in flower might be removed to it for a time, but it would not suit them as a permanent home. Ferns and greenhouse Selaginellas would do very well, also such foliage plants as *Aralia Sieboldii*, the elegant *Araucaria excelsa*, and the hardier Palms, such as *Kentia fosteriana*, or *K. belmoreana*.

Back Wall of Vinery.—I have at present nothing growing upon the back wall of my vinery. Would it be possible to utilise this space for anything? I have been advised by a friend to devote it to Figs, but they are no favourite of mine, and I would rather have something else—a decorative plant for preference.—*Stolon*.

Hoya carnosus would do fairly well upon the wall, unless the shade from the Vines is too great. *Asparagus plumosus* will, however, do even better. It would grow quickly enough, and would soon cover the wall if you procured strong plants to start with. The fronds, moreover, would come in handily for cutting. Why not try the *Aparagus*?

Shading for Greenhouse.—*Leonard E.*: If you have plants in flower such as *Primulas*, *Cinerarias*, and bulbs of various kinds, you will do well to fix the shading at once, for the bright sunlight will shorten the lives of your flowers to a great extent, and this should be avoided.

Fumigating Freesias.—*Leonard E.*: You have been somewhat negligent in allowing your plants to get so badly infested with greenfly before taking remedial measures. Certainly the plants may be smoked or vapourised whilst they are in bloom, but it would have been better gardening to have seen to this before the flowers made their appearance. You must exercise great caution in giving the smoke or vapour, and it should not be too strong; indeed, it is preferable to give three weak doses rather than one strong one.

Fertilising Peaches.—I have a good sized Peach house in which the trees are coming into bloom. A friend of mine has advised me to put a hive of bees into the house and thus assure the proper fertilisation of the flowers without the necessity of the lengthy and tedious operation of going over and brushing each flower separately. Would you also advise the use of the bees in this way?—*P. IV.*

If your friend is willing to lend you a hive of bees for the purpose, or if you can find another friend equally accommodating and foolish, you may act as you suggest by all means; but it is a sad experience for the bees. Poor things! they are lured out of their hive by the warmth and brightness, and in attempting to stretch their wings by a good long flight, dash themselves to death against the glass—it is almost sure to weaken and spoil the hive. If you cannot find somebody else's property to experiment with, don't do it.

Feeding Bees.—*Apiarian.*: Candy is all right for feeding strong stocks, but from the description you give, your stocks are anything but strong, and would be likely to starve to death on the candy. Instead, give them some properly prepared syrup which they will be able to take even if they are at

the last gasp. You may try the candy when they are stronger.

Cabbages Running to Seed.—G. T.: To use a technical phrase which is well understood amongst gardeners, the cabbages are "bolting." Pull them out, they are of no use for cutting as they will never heart in. Your best plan will be to get some early spring raised plants and fill in the gaps. They will turn in very soon after the autumn plants, and will thus form a good succession.

CYCLAMENS AT READING.

FOR months past three span-roofed houses have been gay with a profusion of blossom of Cyclamens in the Portland Road Nursery of Messrs. Sutton & Sons, Reading. High-class cultivation upon the best of modern principles enables a grower to get a greater quantity of flowers, extending over a longer period of time from the best strains of Cyclamens than, perhaps, from any other flower. The better he grows them and the more he pulls the flowers, the greater the total quantity obtainable from a given number of plants. Needless to say there is no lack of flowers on the plants at Reading, as the accompanying illustration lent us by Messrs.

flower is different, the form being normal to the genus. Size leaves nothing to be desired for any ordinary purpose. From this we get a distinct and pleasing variation in Giant Crimson and White, the base being the dark portion of the flower according to a characteristic that is prevalent in the genus. It would be an innovation and an acquisition to the race if a variety could be obtained having the dark colour confined to the apex of the segments. Possibly this may be realised in the near future, but the basal colour is indeed hard to eliminate without obliterating all colour except white.

The custom of growing Cyclamens in batches of a variety, at Reading, and persistently weeding out the intermediate colours, has the effect of making the varieties distinct and decisive in tone. There is no insensible gradation of one colour running into another. By this means a hatch of seedlings can be calculated to give any required hue by sowing seeds of the variety furnishing it. A pleasing light hue is furnished by Giant Rose, whose flowers are of a uniform soft rose and freely produced. In like manner Giant Purple produces dark purple flowers that develop a considerable amount of blue when fading, after having been open for a considerable time. Whether a blue Cyclamen can ever be raised from this is a question; but the fact remains that the

colour, as in the giant strain. Very free flowering is that named White. Salmon Queen is one of the most distinct and attractive colours that has been raised for many a year, being of a handsome salmon-pink, the salmon being so conspicuous that it can be singled out by the eye at a glance amongst a houseful of many varieties. A giant form of this is being evolved, and, when fixed and obtainable in quantity, it will be another triumph of the cultivator's art. Purple is a very dark variety, and decidedly of that hue indicated by the name. In the matter of fragrance, we often meet with the same peculiarity amongst the improved types as in the wilding. Amongst Crimson, with White Base, we met with individuals in a batch that were distinctly and deliciously scented, while others of the same variety, and grown under the same conditions precisely, were altogether scentless as far as we could discern. The stage of development of the flower and the degree of temperature may have some influence upon the scent; but all the same, there are individuals in the batch that betray no evidence of this desirable quality. Cherry Red presents the same dark but brightly coloured flowers as in the giant strain. All the above and other colours may be obtained in mixture, which many growers prefer, who like as much variety as possible in the small space at their



HOUSE OF CYCLAMENS AT READING.

Sutton will show. "Thick as autumnal leaves that strew the brooks in Vallambrosa" is hardly sufficiently expressive of the appearance of a houseful of bloom, for the foliage is entirely hidden by the flowers to the eye of the spectator who takes his stand at one end of a house and looks along the benches.

The giant strain is no longer characterised by the paucity of flowers which signalled the race when it first made its appearance, for the flowers are now profusely produced, although, as might be expected, the great size of individual blooms precludes the possibility of numbers being so great as in the old persicum strain. The massive, pure white flowers of Butterfly and the spreading character of the segments continues to make the variety one of the most popular amongst gardeners and growers generally. The dwarf and compact habit of the plant, and the effect produced by a mass of it, places the variety in the front rank as a decorative subject. No staking nor tying are requisite to keep the flowers erect. The contrast between Butterfly and Vulcan is immense, the former being notable for the snowy purity of its flowers, the latter for the intensity of its dark crimson colour. Giant White may be likened to Butterfly in hue, but the form of the

flowers are striking in their way when on the wane. Brilliance is the striking feature of Giant Cherry Red. The great size of the individual flowers, and the freedom with which they are produced, make the varieties of the giant strain indispensable in any well regulated establishment where flowers of beautiful form and colour are always in demand.

What is known as the persicum strain is as replete in colour as the giant types, or even more so, as might be inferred from its being cultivated for a longer period of time. Even here, the improvement upon the wild original is immense, as may be seen from specimens raised annually from the seeds of the wild type recently imported from Palestine. By the way, the hotanists tell us that no Cyclamen grows wild in Persia, and that the plant grown as Cyclamen persicum is really *C. latifolium*. The flowers of this as seen at Reading are characterised by long and narrow segments. In any case, this wild plant is a most interesting illustration of what the cultivator has been able to effect by long continued crossing and selection. Many of the plants are deliciously scented, but not all. Could the characteristic be perpetuated with certainty, the value of Cyclamen flowers would be greatly increased.

The varieties are mostly named according to

command for this particular class of winter flowers. For profusion of bloom, it would be difficult to surpass the persicum strain.

CLIMBING FRENCH BEANS.

THE section of Climbing French Beans is a notable addition to our list of easily grown vegetables. It may be said to bridge over the gap between the dwarf French and the Runner Beans, and is intermediate in character between the two extremes. Thus the habit of the Runner Bean is associated with the earliness of hearing, and the shape and general characters of the pod of the dwarf French varieties.

Of the several sorts which are offered for the choice of the cultivator, Sutton's Tender and True is one of the most conspicuous. The long, prettily-shaped pods are produced along the whole length of the haulm in great abundance, a continuous supply being afforded over a long season. Crops will turn in as early as those of that well-known dwarf form, Canadian Wonder. Tender and True does not lack honours, for it was awarded a First-class Certificate by the R.H.S. in 1891, and in the following year's trials received the high cultural qualification of XXX. Confirmation of its good qualities was again given

by the inspecting committee at Chiswick in August, 1895, when a number of Beans were put to the cultural test. Excelsior was introduced by the Reading firm last year, and marks the highest development in this particular direction. It was highly spoken of in various influential quarters as a heavy and continuous cropper, with pods of splendid flavour. It forces well.

MUSA CAVENDISHII.

I ENCLOSE herewith photograph of a cluster of Bananas (*Musa Cavendishii*) grown here this last season. There were altogether 189 pods on the cluster, and the plant was grown in an ordinary stove. The stove is a lean-to structure, and we grow a row of them along the back. They seem to thrive admirably along with ordinary stove subjects. When shading has to be resorted to during summer, we only apply it half way up from the bottom, thus allowing all the sunshine possible to play upon the Bananas. To keep up a more constant supply of fruit I detach the suckers when ready, and pot them into 12 in. pots, plunge them in bottom heat, and grow them on as rapidly as possible, afterwards transferring the plants into 18 in. pots and keeping them growing till a vacancy occurs in the bed, when they are placed in their fruiting quarters.

Our former practice was to plant the suckers right away in the bed at once, sometimes simply removing the parent plant after the fruit was gathered, and allowing the strongest sucker to take its place. They can be successfully cultivated either way, although the method of growing them to a large size in pots has the advantage of getting through a larger number of plants in a given time. I have at present a fruiting plant, which has evidently been kept too long in the pot before it was planted out; the cluster is much smaller than any I have ever had, although there are 130 pods on the cluster. The fruit stalk is only 3 ft. from the surface of the bed; and I have no doubt but it would have fruited quite as well if it had been allowed to remain in the pot, when it could have been removed to a cooler structure after the pods had commenced to ripen, or utilised as a plant for the drawing-room in the mansion, where it would have been both ornamental and useful.

We grow our plants in rough, fibrous loam and fresh manure, with a liberal addition of coal cinders and lime rubbish to keep the compost open. I have also used tiers of drain pipes at intervals around the plant to allow the heat from the pipes underneath to get more equally about the roots. Surface dressings and frequent supplies of liquid manure are given during the later stages of growth.—*A. D., Dankeith Gardens, Kilmarnock, N.B.*

PLANTS RECENTLY CERTIFICATED.

ON the 8th inst., the undermentioned certificates were awarded by the Royal Horticultural Society.

Orchid Committee.

ODONTOGLOSSUM WILCKEANUM PITTIAE.—This grand natural hybrid has been immensely improved since its cultivation was taken in hand by Messrs. McBean & Sons, Cooksbridge, Lewes, Sussex. A long and vigorous spike carried many flowers of greater size than those carried by the scapes when we first described the plant. The sepals are very broad and heavily blotched with large chocolate areas on a clear yellow ground. The petals are jagged at the edges, and the blotches upon them are smaller. There is a large horseshoe-shaped blotch on the lip. It is the largest and finest of the forms of *O. wilckeanum*, and has for its nearest relative *O. w. Queen and Empress* in Baron Schroder's collection. The owner, H. T. Pitt, Esq. (gardener, Mr. R. Aldous), Rosslyn, Stamford Hill, may well feel proud of it. First-class Certificate.

CATTLEYA MIRANDA. *Nov. hyb.*—The seed parent of this fine *Cattleya* was *C. Trianaei*, and the pollen parent *C. guttata* Prinzii. The soft lilac sepals are shaded with purple, while the petals are splashed with deep purple towards the apex. The lip is intense crimson-purple, the crimson in the throat almost obliterating the orange; the outer face of the tube is lilac. The hybrid is both distinct and handsome. Award of Merit. Messrs. J. Veitch & Sons, Ltd., Chelsea.

DENDROBIUM AINSWORTHII WOODHATCH VAR.

Nov. var.—The flowers of this variety are large, creamy-white, chaste, and very handsome. A large crimson blotch on the lip is slightly rayed at its edges. Award of Merit. T. B. Haywood, Esq. (gardener, Mr. C. J. Salter), Woodhatch Lodge, Reigate.

PHAIUS NORMAN. *Nov. hyb.*—The parentage of this hybrid was *P. sanderianus* and *P. tuberosus*. The sepals and petals of the flowers are of a soft brownish salmon-red. The lip is large, deep purple



MUSA CAVENDISHII.

on the upper half, and furnished with three golden ridges. The side lobes are brown with pale yellow veins. It is a robust grower. First-class Certificate. Messrs. Charlesworth & Co., Heaton, Bradford.

PHAIUS NORMAN ROSEA. *Nov. hyb.*—The sepals and petals in this case are much paler and rosier. The lip is slightly lighter in colour than that of the previous hybrid, though the parents were the same. First-class Certificate. Messrs. Charlesworth & Co.

PHAIUS NORMAN AUREA. *Nov. hyb.*—The sepals and petals in this instance are creamy-yellow externally and tinted with rose on the inner face. The lip is rosy on the upper half and otherwise lighter than the two previous forms. Award of Merit, Messrs. Charlesworth & Co.

DENDROBIUM ASTRAEA SUPERBUM. *Nov. Hyb.*—Though not stated the parents of this hybrid would seem to be *D. superbiens* and *D. wardianum*. The sepals and broader petals are creamy and tipped with deep amethyst purple. The lip is similar in hue, and has a blotch at the base consisting of brown lines. Norman C. Cookson, Esq. (gardener, Mr. Wm. Murray), Oakwood, Wylam-on-Tyne.

ODONTOGLOSSUM NEBULOSUM PARDINUM. *Nov. var.*—The flowers of this magnificent variety are of large size, and heavily blotched with brown for three-fourths of the length of the segments. Award of Merit. Messrs. Hugh Low & Co., Clapton, N.

LAELIOCATTLEYA WARNHAMENSIS. *Nov. hyb.*—This is a beautiful and very striking flower, with orange sepals and darker petals, which are much shaded with carmine overlying orange. The long tube of the lip is similar in colour. The lamina is crimson-carmine. The pseudobulbs are slender, and together with the colour of the flowers recall *L. cinnabarina*. Award of Merit. C. J. Lucas, Esq. (gardener, Mr. G. Duncan), Warnham Court, Horsham.

SPIRANTHES COLORATA MACULATA.—On a tall scape this bears a dense bead of red flowers that are soft rosy-pink internally. The dark olive-green leaves are 6 in. to 8 in. long, and blotched with light green. Botanical Certificate. M. Otto Froebel, Zurich, Switzerland.

Floral Committee.

AMARYLLIS NAVALA.—The plant is dwarf in habit and produces short and wide, campanulate, and well-shaped flowers of great substance. The

segments overlap one another considerably, being of great width, and of a bright salmon-orange. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

AZALEA GRANDIFLORA ALBA.—The flowers of this hybrid variety are of great size and pure white with the exception of a pale lemon blotch at the base of the two upper segments. It will be useful for greenhouse decoration. Award of Merit. The St. George's Nursery Co., Hanwell.

AMARYLLIS PRINCESS OSRA.—Here we have a short and widely funnel-shaped flower of a brilliant crimson-scarlet with a white base and a six-rayed white star running out almost to the apex of the segments. Award of Merit. Captain Holford (gardener, Mr. A. Chapman), Weston Birt, Tetbury, Gloucester.

BRYOPHYLLUM CALYCINUM.—This singular member of the Crassulaceae produces a panicle of pendulous, rather interesting flowers. The inflated subcylindrical calyx is greenish-yellow, while the petals are reddish. The leaves produce buds on the margins by which they may be propagated. Botanical Certificate. Mr. W. Neild, Horticultural College, Holmes Chapel, Cheshire.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Dendrobium Venus.—The parentage of this hybrid is an indication of the beauty of the progeny, which was raised from *D. Falconeri* crossed with *D. nobile*. The cross was made on the 15th May, 1884, and from the sowing made on the 18th July, 1885, 100 plants were raised. One of these at least has found its way to Falkland Park, South Norwood Hill, the residence of Thos. McMeekin, Esq. The plant carried thirty-four of its large and showy flowers, the longest stem being 3 ft. 6 in., thus indicating good treatment on the part of the gardener, Mr. A. Wright. The long sepals and petals are white, and heavily tipped with purple on both surfaces. The broadly ovate, acuminate lip is tipped in the same way and furnished with a large, circular crimson blotch on the disc.

A Blue Cattleya Trianaei. *Nov. var.*—The sepals, and triangular, crisped petals of a variety that has been flowering for a month past in the collection of Mr. Thomas Rochford, Turnford Hall Nurseries, near Broxbourne, Herts, are pure white thus affording a fine contrast with the beautifully distinct lip. The lamina and the side lobes at present are lilac-blue, this colour being separated from the orange blotch in the throat by a transverse deep blue band, of undulated outline, but well defined on both edges. When the flower first expanded the lip was much darker. In any case it is a chaste, beautiful and distinct variety. The last blue *Cattleya* spoken of was a variety of *C. Mossiae*.

Dendrobium nobile Segerae.—The sepals and petals of this pretty variety are pure white, but faintly tipped with purple at times. There is generally a little more colour on the back of the sepals than elsewhere. The lip is creamy-white, with a dark purple blotch on the disc. The variety was first described about four years ago. About three years ago Mr. A. Wright, The Gardens, Falkland Park, South Norwood Hill, obtained a small piece of an old stem and managed to coax this into life, and the piece is now flowering on the second young growths made.

Odontoglossum crispum Baroness Schroder. *Nov. var.*—A most remarkable *Odontoglossum* was exhibited under this name by Baron Schroder (gardener, Mr. H. Ballantine), The Dell, Egbam, at the meeting of the Royal Horticultural Society on the 8th inst. The plant was a very small one carrying two flowers of beautiful round shape, and very highly coloured. Both sepals and petals were of a dark violet-purple except at the margins, the colouring being lighter and darker in places giving the impression of blotches, which almost entirely hide the white ground. Many remarks were made concerning the variety, and four figures were mentioned as the value of it.

The soil and climate of Scotland are well adapted for the profitable cultivation of Gooseberries, Strawberries, Black and Red Currants, and Raspberries.

CHINESE PRIMULAS AT SWANLEY.

AMONGST the various flowers which the Messrs. Cannell have taken under their wing, Chinese Primulas have been one of the most conspicuous successes. Year after year of patient labour, and skilful intercrossing and selection of superior forms has been necessary before the flower has been able to reach the height of excellence to which it has now attained. The man in the street can have but a very faint idea when looking at the highly developed modern Primula of the vast amount of work that is there represented. He may be pardoned, perhaps, for being content to take the plants upon their merits, for they are certainly beautiful enough, but the consideration that each of these highly bred Primulas is the outcome of a long line of ancestry covering a considerable range of years, through which the race has been guided by the hand of man, makes each plant vastly more interesting. In this important work no one has played a more brilliant part than the Messrs. Cannell, and we are fain to acknowledge the indebtedness of the modern gardener to them.

The huge glass establishment at Swanley, supplemented by the smaller glass department at the seed farm of the firm at Eynsford offers to the Primula a large share of its protected area, for house after house is filled with plants which, in their zenith of floral excellence, constitute an effect which, from a spectacular point of view alone, is magnificent.

As our visit to the nurseries did not take place until the beginning of the present month we were too late to see the plants in the first flush of their virgin glory, but we reaped the compensating advantage of being able to judge better of the ultimate habit and general characteristics of the several varieties. This was important, however, because a large number of the Swanley varieties are of pyramidal habit of growth when fully developed, and thus it is not until the more mature stages of their existence that their full beauty stands revealed.

For many, many years now the objective of the florist has been to produce a stubby dwarf plant with large umbels of fine flowers, and the more this dwarfness was apparent the better the strain in his estimation. The result was a plant handsome enough from his point of view, but almost worthless when put to the severe utilitarian test for supplying cut flowers. Something to cut, and something that will stand for a fair length of time when cut was what was wanted, and in his attempts to produce this Mr. Cannell gave us the well-known "Lady" Primula, than which there has been no more startling or complete break away from preconceived notions, and precedent during the century. The Lady Primula is all that the other type was not. Instead of a plant about 8 in. in height, we get one about 2 ft., which throws umbel after umbel of stellate flowers, one above the other, and the leaves, until we have a towering mass of flowers and foliage that is truly grand.

Mr. Robert Cannell has taken "The Lady" under his own wing, as it were, at Eynsford, and has used it extensively for the purpose of working up a strain of plants which shall have the larger flowers and varied colours of the dwarf type, and the distinctive growth and pyramidal habit of the Lady. In this laudable enterprise he has nobly succeeded, although we look for even more remarkable results in the near future.

In the variety Lady Emily Hart Dyke, of which the kindness of the Messrs. Cannell enables us to give our readers an illustration we have one of the most valuable of the new race—for so we may term it. The habit is somewhat shorter and rather more compact than in the Lady, and the flower stems and leaf petioles instead of being black are pink. The pure white flowers, too, are larger and rounder, but "The Lady" blood is distinctly evident. This variety will be welcomed by all lovers of the Chinese Primula.

The "Purple Lady" is the counterpart of the type of the race with regard to habit, and the characteristic black stems may also be noted. "Another dip or two," said Mr. H. Cannell, senr., as we were admiring this form, "and we'll have a scarlet, and a crimson." Without doubt this will be the case, for we noticed that the shade of purple varied considerably on the plants, thereby giving evidence that there were one or two more colour developments ready to make their appearance in the next generation. Once we have scarlet and crimson-flowered varieties there

will be no class of plants more largely deserving of extensive recognition than the Lady strain of Primulas. Probably, too, we shall be presented a little later on with the much sought after "blue" and then the triumph will be complete.

Lady Marcham is yet another variety that we must not forget to mention. It closely resembles Lady Emily Hart Dyke in habit, but the white flowers are occasionally blotched and mottled with cerise.

In addition to the Lady race, the ordinary dwarf varieties are grown in great numbers at both Swanley and Eynsford, and a fine show they make. Notwithstanding the fact that pollination is commenced soon after the first flowers have expanded, and is continued without cessation as the subsequent flowers continue to open, and until each plant is loaded up to the full extent of its capability with seed pods, there always appears to be plenty of bloom, and such bloom too. Said Mr. Cannell to us, as we were passing through, "we make no pretence

whittle." "Another dip," if we may use Mr. Cannell's phrase, and this margin of white will have disappeared, and we shall have a grand yellow form.

In conclusion, we may well bestow a word of praise upon the cultivation, to which every individual plant with its sturdy foliage and full complement of brilliantly coloured flowers, bore eloquent testimony]

THE SPARROW.

AT our Mutual Improvement Society meeting a few weeks ago, the discussion, as that of all craftsmen does at times, turned upon the subject of this note. It was concerning his doings or supposed doings to the buds of the Red Currants that we expressed ourselves. Some of us spoke with repressed feelings; one member being invited, declined, being unable to speak or think with unruffled feelings, and feared to give vent to them. Another, a young member, spoke a kind word for the d—, I mean sparrow and asked



PRIMULA SINENSIS LADY EMILY DYKE.

of displaying the flowers, although visitors always find plenty of them to see, but the plants are grown solely to produce seed."

Of the varieties that most took our fancy we may mention Her Majesty (fern-leaf) and Cannell's White, as two of the finest whites in existence. Duchess of Fife, which has large rosy flowers, is distinct by reason of the fact that its foliage is an evident compromise between the so-called palm leaved and fern leaved sections. It possesses the bad quality however, from a seedsman's point of view, of being a bad seed setter. Cannell's Pink is a pink of pinks, and Glowworm is one of the finest scarlets. Swanley Giant is well named, for its rosy cerise flowers are of truly giant proportions. Swanly Blue is a real blue in colour as well as in name, and not a half-toned nondescript. Eynsford Yellow is a remarkably distinct flower in which the yellow eye has been so strongly developed as to cover the whole of the limb of the corolla, with the exception of a narrow marginal border, which is scarcely wider than the edge of the historic "parson's

whether he was not too hastily judged, suggesting another as the culprit. I wish my kind-hearted friend had been with me the other morning. I think I should have convinced him of the error of leniency and misplaced sympathy. I have a range of Peach houses apart from any other buildings, in fact situated in the pleasure grounds quite 100 yds. away from the kitchen garden and other houses, and having trees now in bloom, both trained and pot plants. We have been troubled during the past week with these demons entering as soon as the ventilators are opened and picking and tearing off the blooms wholesale. This occurred persistently every day last week, as soon as the man in charge left the houses. I determined to make an example of some of them and was successful, after a time, in making a capture. We opened the top light (a slide down), and secreted ourselves and waited, when in a few minutes Cock Sparrow was busy tearing off the flowers and dropping the pieces. As the Yankee would say, "darned cussedness" seems to possess them. I dissected one wretch this morning and could dis-

cover no trace of his having swallowed any portion of flowers.

Last year they repeatedly attacked a batch of Germania Carnations in the same houses just as they were starting into growth, entering through a hole in roof; even when a man was in the house they attempted to carry on their pranks. This year they have played sad havoc with our outside border varieties, nipping off the tops of young leaves.—*A.P.*

THE UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

MR. GEORGE WYTHES, of Syon House Gardens, Brentford, presided at the annual general meeting of this society, which took place at 8 p.m. on Tuesday last, at the Caledonian Hotel, Adelphi Terrace,



MR. GEORGE WYTHES.

Strand, W.C. After the minutes of the last annual general meeting had been read and signed, the secretary was called upon to read the report and balance sheet.

REPORT FOR 1897.

In presenting the annual report and balance sheet for the year ending January 10th, 1898, the committee have great pleasure in stating that the society continues in a prosperous condition.

Sixty-eight members joined during the year, twenty-one lapsed, and three died, one being a lapsed member, and the amounts standing to their credit in the ledger have been paid to their nominees. The membership is now 680.

The amount of subscriptions paid by members to the Benefit Fund, including arrears for 1896, was £1,064 14s. 2d.

The amount paid to sick members was £232 9s., there having been forty-six members on the fund.

The amount of subscriptions to the Benevolent Fund from honorary and benefit members was £129 1s., and £23 10s. has been granted in small amounts to four members from this fund.

The Convalescent Fund is progressing favourably. It is suggested that this fund should now be incorporated in the rules. The amount received for this fund, including donations at the annual dinner, was £28 0s. 8d. Two members received £1 10s. each from this fund.

The Management Fund shows a balance of £77 15s. 7d., having benefited to the extent of £10 10s. by donations at the annual dinner; also £10 6s. 6d. by advertisements in the annual report.

The annual dinner was again held at the Holborn Restaurant. H. B. May, Esq., occupied the chair, and fulfilled his office in the best manner possible, and everyone present thoroughly enjoyed the evening's entertainment.

The accounts were audited by Messrs. W. Gunner and Geo. Dixon, and found correct.

The committee again invite members of the craft to join this society, and so lay by something for a

rainy day, taking for their motto, "Union is Strength."

The statement of accounts read by the secretary showed that in the Benefit Fund the total receipts for the year, including a balance of £8,834 5s. 5d., were £10,155 8s. 11d. The expenditure for the year was £297 17s. 6d., thus leaving a balance of £9,857 11s. 5d.

The Benevolent Fund receipts were £2,828 13s. 9d., including a balance brought forward of £2,604 0s. 5d. The disbursements were £23 10s., and the balance, £2,805 3s. 9d.

The Voluntary Convalescent Fund showed receipts £341 3s. 8d., including £304 6s. 6d. brought forward. The amount paid out was £3, and the balance in hand £338 3s. 8d.

The Management Fund brought forward a balance of £44 14s. 7d., the total receipts being £175 1s. 9d., as against £97 6s. 2d. expenses, the balance in hand being thus £77 15s. 7d.

The treasurer's statement of accounts was presented by Mr. J. Hudson. The total receipts for the year had been £1,749 14s. 9d., obtained from members' subscriptions, donations, advertisements, and dividends on investments. The expenditure totalled to £1,677 10s. 3d., of which £232 9s. had gone in sick pay, £23 10s. through the Benevolent Fund, £97 6s. 2d. from the Management Fund, and £1,305 10s. 3d. in investments and the charges consequent thereon. There was therefore a cash balance in hand of £72 4s. 6d.

The statement of Liabilities and Assets declared liabilities amounting to £13,078 14s. 6d., and assets in the shape of various investments taken at par valuation of £13,100, but which at present actual value represented £14,742 10s., plus the cash balance above referred to of £72 4s. 6d., or a total balance of assets over liabilities of £1,714 14s. 6d.

The Annual Dinner Account declared receipts of £41 11s. 10d., and expenditure of £40 5s. 6d., leaving a balance of £1 6s. 4d.

In rising to move the adoption of the report and statement of accounts, Mr. Wythes spoke of the great pleasure it had given him to listen to the most satisfactory accounts of the progress of the society. It was a matter of some surprise to him that the number of members had not increased more rapidly. This could not be due to the fact that there was any hesitancy as to the society being on a sound financial basis, when they had £14,742 10s. invested in sound stocks. There were about 720 paying members at the present time, so that the average amount lying to the credit of each member would be £20 10s. Mr. Wythes warmly complimented the management of the society, and said that he was very gratified to learn that the working expenses for the past year were only 6 per cent. of the income. The annual investments averaged £1,100 for the last two years, and a total of over £10,000 had been invested during the last thirteen years. He was surprised to find, however, that 3 per cent. could have been paid for so long to the members on the monies standing to their accounts, as at the present time sound trustee stocks only realise from 2½ per cent. to 2¾ per cent. In conclusion, Mr. Wythes spoke of the indebtedness of the society to the Horticultural Press, and advised all, young gardeners especially, to join the "United" without delay.

Mr. W. Marshall seconded the adoption of the report and balance-sheet, saying that the society had made great progress since it was first started by eight or ten members. The motion was duly carried.

It was resolved, on the motion of Mr. Cole, that 2,500 copies of the report and balance-sheet should be printed and circulated.

At the election of officers, which followed, Messrs. W. P. Thomson, Wheeler, E. T. Cook, and Wood were unanimously re-elected to serve upon the committee, whilst Mr. W. Collins received quite an ovation when the chairman proposed and Mr. Hudson seconded that he should be asked to continue the secretarial duties he had so worthily performed.

Mr. Hudson proposed that, according to the rules, Mr. Collins should receive a salary for 1897, £20, and 6d. per head for each member on the lists over the number 300, together with a special bonus of £5.

This was carried unanimously and responded to by Mr. Collins.

Mr. Cole moved that a vote of thanks be given their esteemed treasurer, Mr. J. Hudson, who had

stuck to and done such good work for the society. The meeting signified its complete accord and received Mr. Hudson very heartily when he responded.

Votes of thanks to the trustees, the committee, the Press, and the chairman were subsequently moved, seconded, and carried. Mr. Cole replied for the committee, and Mr. C. H. Curtis for the Press.

THE SPECIAL MEETING.

This meeting was called for the purpose of considering certain alterations in and addition to the rules governing the society, and followed immediately upon the heels of the "annual."

Mr. J. Hudson proposed that Rule VIII., affecting the secretary's salary should read £30 instead of £20.

Mr. Burge proposed and Mr. Cole seconded that to Rule XIV., after the words "lower scale" should be added the words "with the privilege of increasing this to."

Mr. W. P. Thomson proposed, and Mr. Winter seconded, that in that part of Rule XIV., dealing with the time for which full sick pay should be paid to members, the word *successive* after the word "twenty-six" should be struck out. Mr. Thomson showed how necessary this was in the case of a man going on the funds for, say twenty-four weeks, declaring off, and going on again, since as the rule stood he would be eligible on the second occasion for the whole series of twenty-six weeks.

All these alterations were duly carried, the last one after some lively discussion.

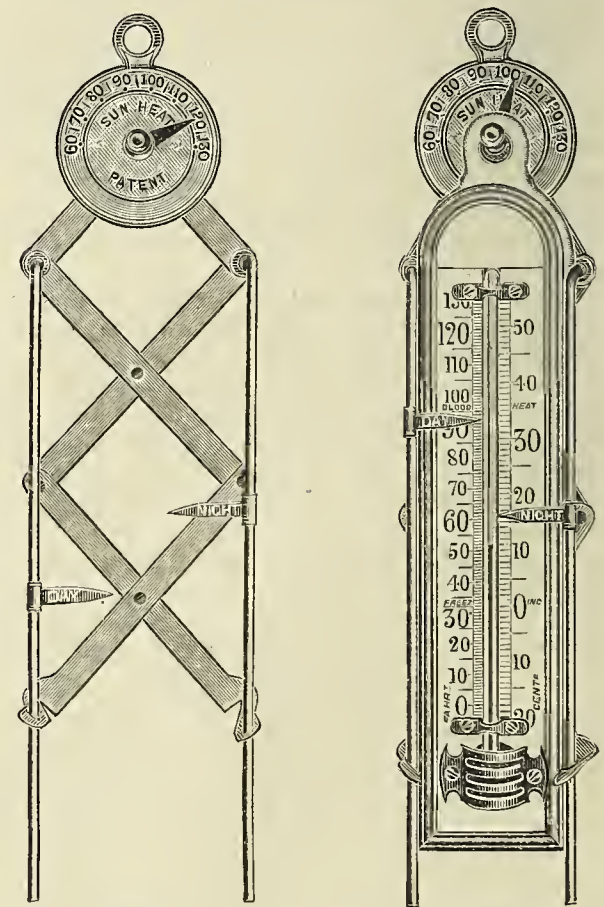
Mr. Cole proposed, and Mr. Marshall seconded, that a new rule, to be called Rule XVIIA., *re* the Convalescent Fund, should be added. It ran as follows:—

Voluntary Convalescent Fund.—The object of this fund is to give members a change of air during convalescence. The committee of management to have power to relieve members of this society from this voluntary fund as they may deem advisable. All cases must be recommended by a duly qualified medical practitioner.

With the adoption of this rule, the proceedings terminated.

SIMPLICITY HOLDER AND INDICATOR.

THIS is an ingenious but simple invention for hanging thermometers in glasshouses, dwelling rooms,



EMPTY. FULL.
SIMPLICITY HOLDER AND INDICATOR.

infirmaries, hospital wards and other places where the maintenance of the temperature at any given figure is a matter of importance. By the employment of them in gardens, they save the gardener a considerable amount of trouble and attention in keeping

the stokers, temporary or permanent, correctly informed as to the degree at which each and every house should be kept. In Vineries and Peach houses that are being forced, the temperature varies from week to week as the Vines or Peaches advance, and in relation to the outside temperature.

The accompanying illustrations show the Simplicity Holder, both when empty and when full, that is, with the thermometer placed in position. The holder consists of an expandable ladder, the pivots and sockets at the joints being of brass. It is made in this particular fashion so as to take in thermometers of different sizes which may already be in use. The pointers on the side wires are made to move up and down so that they can be placed at any given point to show the stokers what the night and day temperatures are to be. All the gardener has to do is to move these pointers to the desired figure and the thing is done. This saves him all the time and trouble of writing labels or cards every week, or even at shorter intervals, when the houses being forced are rapidly advancing. The men in charge of the houses have no need to trouble the gardener about the desired temperatures, as they can, while passing through the houses, merely look at the pointers which indicate what the gardener desires the temperature to be.

To fix the thermometer in position, the operator lays hold of the sides of the ladder and draws it out to the requisite width. Then the thermometer is hung upon the projecting knob of the brass disc at the top, and the ladder pressed against its sides to adjust the width; last of all the brass pointers are turned over the face of the glass and pulled up or down to the desired places. The brass disc is for indicating the temperature to which the house may be allowed to rise by means of sun heat. The Simplicity Holder and Indicator may be obtained from Mr. A. Outram, F.R.H.S., 7, Moore Park Road, Fulham, London, S.W., who is also the agent for the Indispensable Sweeping and Collecting Machine, patented by Messrs. Sutton & Pull.

Kitchen Garden Calendar.

SEED SOWING AND PLANTING at this time of the year are such important operations that no tiller of the soil can afford to neglect them, but, momentous as these are, the preparation of the soil previous is of quite as much consequence, for it is useless to sow or plant unless the ground has been previously well tilled. All growers of first-class vegetables should know that much depends on the state of the soil at the time the crops are put in; and those who produce the finest samples spare no pains to thoroughly work the ground so as to get it in the finest possible condition. The present season has been an exceptional one for outside work, so that there ought not to be any difficulty in getting in the crops. Transplanting those that have been raised under glass will now be occupying the attention of many gardeners; but such work must be done with discretion or failure will be sure to follow. There is nothing gained by hurrying on such work simply because the time of year has arrived when certain things are usually done. If the soil cannot for some reason or other be got into proper condition, better defer the work for a few days than to sow or plant when in such a state. Those that have been raised under glass being more tender than plants grown in the open, every care must be taken to thoroughly harden them off before planting, and to afford them protection afterwards, till such times as they are able to take care of themselves.

ONIONS that have been growing on hot-beds will require special care; they must be carefully lifted with all the roots possible attached, and planted sufficiently deep to keep them in an upright position. Cauliflower ought to be lifted with balls of earth attached and planted carefully with a trowel, pressing the soil firmly round the roots. Those that have been potted will suffer less than any lifted from the frame, but care must be exercised to prevent the balls of earth from getting dry after planting.

PEAS that were raised in pots should be allowed ample room when transferred to the open ground, a space of 6 in. being allowed between the clumps in the row. It is a good plan to put stakes to them as soon as planted, and protect with evergreen boughs placed alongside the rows to keep off the cold winds.

Lettuce must be watched closely, as both birds and slugs are fond of the tender leaves, and will clear off whole breadths almost as soon as planted. Leeks, in some places, are in great demand. When well grown and properly blanched, they are a fine wholesome vegetable. To obtain large stems early in the season, it is necessary to raise plants under glass, and these must be planted out at suitable distances apart, on well prepared ground, that they may become developed; if not liberally treated, plants so raised are liable to run to seed.

FRENCH BEANS are very troublesome just now, especially when grown in houses with other things. The bright sun in the daytime, accompanied with cold winds, prevents sufficient air being admitted to keep the plants healthy, and the cold nights necessitate more fire-heat, which encourages the production of red spider. A close watch must be kept to prevent this troublesome pest from making headway.

POTATOS that are growing in frames should have sufficient space allowed to prevent the foliage from coming in contact in the glass, for when this happens the frost often does considerable damage. It is not advisable to cover with mats more than can be avoided, as they prevent a free circulation of air. Peas that are showing flower must on no account be allowed to suffer for want of water at the roots. As soon as the pods begin to swell liquid manure should be afforded. Asparagus in frames will be greatly benefited by a dressing of artificial manure to be washed into the soil with water heated to a temperature of 85 or 90 degrees Fahr. Pay attention to collecting and preparing manure for Mushroom beds; those that are becoming exhausted should have a slight sprinkling of salt and be afterwards watered with tepid water.—*Kitchen Gardener.*

The Orchid Grower's Calendar.

ONCIDIUM VARICOSUM ROGERII.—This beautiful Oncid is, we are pleased to see, being again imported in large quantities. The condition, too, of the consignment introduced by Messrs. Lewis & Co., is simply grand, the plants being plump and beautifully leaved, and in excellent trim for putting into baskets or on rafts, as the nature of the plant suggests. As very little compost is necessary for their requirements it is advisable to fix the plants firmly to the rafts by some thin copper wire, after placing a few lumps of peat and live sphagnum moss thereon for the plants to rest on and root into. After they become established and are rooting freely, it may be necessary to add a little more of the compost along the sides of the rhizomes without covering the same. The best position for them is a shady position in the Cattleya house. At any rate this is the place for them in winter, but during the summer months they will do well in the moist atmosphere of the cool house. For such small plants they carry enormous scapes of their bright yellow flowers, which if left on until they fade takes a great deal of the vigour out of the plants, so that it is as well to bear this in mind, and to relieve the plants by cutting the spikes as soon as the last flower expands. This will save a lot of after trouble and annoyance, for with every care and attention it is exceedingly difficult to keep them in good condition for long.

ODONTOGLOSSUM PESCATOREI.—Although we do not think this Odontoglossum will ever be so popular as *O. crispum* amongst amateurs, it is nevertheless a very good companion, and one that does well under similar treatment. There appears a growing desire to grow it specially for cut flowers. The grand, branching spikes of a well-grown specimen are very taking, but the individual flowers are flimsy by comparison with those of its rival.

POLYPODIUM FIBRE.—I mentioned some time ago that we were giving this new substitute for peat a trial. It may, therefore, be interesting to readers of THE GARDENING WORLD, if I say what we think of it. At first I was prejudiced against it, even for Odontoglossums, but on giving it a fair trial we find cool Orchids are rather fond of it. There is one objection to it, and that is that after a time it becomes through the constant watering covered with a kind of Liverwort, which, if allowed to grow, shoots the water off, and leaves the compost underneath the surface dry; but as we repot all our cool stuff each season it does not affect us much. There is no question about the Odontoglossums rooting in it, and the foliage of the plants is of a deep green hue.

We used some for Cattleyas, but with very little success, in fact, we are replacing it with peat. It seems too close and spongy for all large-rooting plants, but for such things as Miltonias, Tricopilias, Odontoglossums, &c., it does very well. When received it is dust-dry, so that it is advisable to damp it, and pick as many of the rhizomes out as possible before using it.—C.

HARDY FRUIT GARDEN.

APRICOTS.—The sharp frosts have tried these sorely of late, and there will be little chance of a crop of fruit unless the trees are properly covered each night. Permanent covering in the shape of branches of evergreens or heather inserted between the boughs of the trees will keep off a lot of frost, and are much in favour with many gardeners. Where the walls are furnished with good copings, which facilitate the fixing of rollers and the use of blinds, there is no doubt that it pays to give protection in this way. A few light spars of wood placed against the wall at a sufficient distance to clear the trees and to allow the rollers to work with freedom will be necessary. There is thus no great expense of fixing, and the blinds can be rolled up or down at will, thereby giving the trees the full benefit of the sun and light.

PRUNING AND TRAINING.—All pruning, tying, and nailing should be pushed on vigorously and completed at an early date, for the buds have swollen to a good size, and many of them will not be long in bursting after the advent of more genial weather. The planting season, too, is practically at its end, and any odd jobs that still remain should be finished as soon as possible.

BUDDING BIRDS.—Bullfinches are often designated thus, but the epithet "budding" includes other birds as well, not the least of which is the ubiquitous sparrow. The latter feathered marauder is always with us, but at no time of the year is he a greater nuisance than now. He seems to delight in mischief for mischief's sake, and buds of all sorts of fruit trees fall under his busy bill. It is an impossibility to kill all the sparrows, and a seeming impossibility to frighten them, consequently the gardener is at a loss for really effectual means of protecting his plants. A few threads of cotton twisted about Currants, Gooseberries, Plums, etc., will, however, be of some service, and an occasional shot may assist in the good work. It is the sparrows and tits that generally do the mischief, for bullfinches are not often present in sufficient numbers to do a great deal of harm.—A. S. G.

SOCIETIES.

PRESTON AND FULWOOD HORTICULTURAL.—

March 9th.

THE annual spring show of the above society held in the Public Hall, Preston, was opened on the 9th inst. by the Mayoress, in the absence of the President, Alderman Wood. There were present the Mayor, Alderman Dunn, several members of the Corporation, and other gentlemen and ladies.

In the centre of the hall was J. B. Dixon, Esq.'s first prize group formed in a circle, and beyond this, but separated by cross tables, two oblong groups by Messrs. Payne, Morley & Co., nurserymen, were tastefully arranged, and the prizes were awarded in the order named. On the platform, in front of the orchestra, were the Palms and a collection of foliage plants sent by the Corporation; and in front of these on the floor of the room, the Azaleas, the small stove and greenhouse plants, pot Roses, Cinerarias, Deutzias, Dielytras, &c., were arranged round the sides of the hall. In the nurserymen's class, Mr. Payne, Fulwood, took the lead in the Hyacinth classes, also with Azaleas. He also exhibited a neat collection of Orchids, not for competition, Messrs. Morley & Co. taking first for Roses. The honours in the bouquet classes were equally divided between Mr. Troughton, nurseryman, and Mr. Payne.

In the amateurs' class J. B. Dixon, Esq., Ribblesdale House, Preston, took the lion's share of the prizes, especially in the bulb classes, and out of forty-six entries he secured 23 first's, 18 second's, 3 thirds. Mr. Dixon, who is the treasurer of the society, is his own gardener, and his exhibits are always creditable, his Hyacinths being always up to the mark. He

was first with Azaleas, three pans Lily of the Valley, Amaryllis, Spiraea, Dielytra spectabilis, and stove and greenhouse plants. Mr. Lamb, gardener to R. Smith, Esq., Dillworth House, Longridge, had forty-five entries, securing 15 first, 19 second, 8 third prizes. His Cinerarias were very good, also his table plants, and stove and greenhouse fine foliage plants. Mr. W. Gillet, gardener to M. B. Copland, Esq., Farington Lodge, entered in twenty-one of the classes and gained first for a bouquet, a single pan of Lily of the Valley, three Roses in pots, and a single specimen, taking 7 first prizes in all, 10 second, and 3 third. Next to him was Mr. Pius Rigby, gardener to J. Smith, Esq., Whittingham House, with seventeen entries, but securing 11 first prizes for Roses in pots, cut flower ditto, a collection of vegetables, twenty pots of bulbs, etc., not mentioned in the schedule, and hanging basket, of which there were four suspended from the sides of the front gallery. His other prizes were 5 seconds and 1 third. Mr. Parkinson, gardener to J. Whitaker, Esq., Wellington House, Leyland, was the winner of 6 first prizes for Tree Ferns, Cyclamens, hardy Azaleas and Dracaenas. He was also awarded 1 second and 5 thirds. Mr. Woolan, gardener to Mrs. Birchall, Ribbleton Hall, was first with Primulas, and he had the best specimen Orchid, a *Cypripedium villosum*, with forty-four flowers in the pink of perfection. There were no entries in the other Orchid classes.

Other prizetakers were Mr. Wood, florist, North Road, Preston; Mr. Sykes, who also had a collection of succulents, staged near the entrance, not for competition; on the opposite side to these Mr. Troughton had a display of novelties, representing gates, steps, and arches, in metal. They had tubes to hold water, and small sprays of flowers were arranged in these.

In the cottagers' class Mr. Morris had excellent stove and greenhouse plants grown in a back yard in the town. The R.H.S. medal was awarded to Mr. J. B. Dixon for six Azaleas, being the most meritorious exhibit in the show.

GARDENING MISCELLANY.

LILY-WHITE SEAKALE.

MENTION has been made twice lately of this variety of Seakale being as easily cultivated and as profitable as the older variety—viz., on pp. 408 and 445. After four years' experience with this, I cannot endorse the above opinion. I find it more delicate and more disposed to disease. I cannot obtain such large roots, in fact I have a difficulty in keeping the stock alive. My soil is a light loam or gravel. I am trying it this year in a piece of well-worked, good soil, rich in vegetable matter. There can be no two opinions as to the appearance of this variety being superior to that of the type. I only wish it grew with me as kindly and vigorously as it appears to with others.—A. P.

MESSRS. A. W. YOUNG & CO'S CINERARIAS.

CINERARIAS are grown in some quantity at the nurseries of Messrs. A. W. Young & Co., Stevenage, Herts, and a box of flowers to illustrate the quality of the strain was recently forwarded to us from thence. Having regard to the fact that pure white flowers of good form and size are but rarely seen, special attention may be called to a white form that possessed a remarkably regular outline. The flower was of medium size, but good substance. The Stevenage strain is evidently strong in bicolor varieties with the broad white central zone, and a margin of varying width of some shade of purple or blue. In this section of Cinerarias alone, there is a good deal of variety. We may make mention of one flower with a narrow central white zone, and a broad margin of rosy-magenta. The largest flower of all had a broad margin of deep rose-cerise, and was a fine flat and well outlined flower. Two self-coloured varieties, the one deep blue with a suspicion of purple, and the other a rich crimson-purple were of medium size and good quality.

NARCISSUS VICTORIA.

THIS fine bicolor Daffodil which received a Floricultural Certificate from the Royal Botanic Society on March 30th, and an Award of Merit from the Royal Horticultural Society on April 27th, both of last year, appears to behave admirably when grown as a pot plant, and subjected to a moderate amount

of forcing. We recently saw it in capital condition with Mr. T. S. Ware, of Hale Farm Nurseries, Tottenham, N. The flowers did not appear to have suffered a whit from the forcing, the difference in substance between the underglass flowers and those produced out of doors in the ordinary way being very little. The plants were, as usual, remarkable for their vigorous growth, and the way in which they were developing offsets. Mr. Reuthe informed us that this variety is the most liberal in the matter of offsets of any variety with which he is acquainted. This being the case this lovely Daffodil will not be highly priced for very long, but will soon be well within the reach of everybody. At present the price is rather high for a strictly limited purse.

EUONYMUS RADICANS VARIEGATA.

WE have no prettier edging plant than this brightly-hued trailing shrub, and as a rock garden subject it has few to equal it. It stands cutting about with almost perfect equanimity, and trails of it are of considerable use for decorative purposes. It is a rather rare occurrence, however, to find it used for clothing a wall, although we have no doubt it would do as well thus as in the other positions indicated. A recent issue of *American Gardening* illustrates this phase of its usefulness by the picture of part of a wall covered with it, and draws attention to its value for winter effects in the garden.

LAW NOTE.

THE RATING OF MARKET GARDEN BUILDINGS: APPEAL ALLOWED.

IN the Appeal Court on Friday, the 11th inst., the Master of the Rolls and Lords Justices Rigby and Vaughan Williams gave judgment in an appeal from a decision of Justices Collins and Ridley, of August 2nd, 1897, exempting greenhouses, used in market gardens, from the full rating of farm buildings. The case was a test case, and concerned forty or fifty tenancies. The application was originally made to the Divisional Court by the overseers of the parish of Worthing, the surveyor of taxes being the respondent.

The Agricultural Rates Act of 1897 grants the privilege to agricultural lands of paying only half the rate per pound which is payable on buildings and other hereditaments. The question in the present case was whether the greenhouses and glasshouse forcing beds used by market gardeners and nurserymen came within this exception. The surveyor of taxes had decided that in a holding of four acres, where two acres were covered with glasshouses for the better cultivation of Tomatos, Cucumbers, &c., the tenant was not entitled to the exception in respect of the two acres.

In the Divisional Court, Mr. Justice Collins decided that the glasshouses came within the description of market gardens specifically included in the relief. Mr. Justice Ridley thought that they were buildings within the meaning of the Act, but he withdrew his judgment, and an order was made that the two acres of glasshouses were entitled to be half rated. Mr. Richmond, the surveyor of taxes, appealed, and on his behalf it was contended that as barns, stables, and cattle sheds on agricultural land were full rated, and assessed separately, the glasshouses in question, to which the whole value of the occupation was due, ought not to have the relief.

The Attorney-General (Sir Richard Webster, Q.C.) and Mr. Day appeared for the appellant; Mr. Joseph Walton, Q.C., and Mr. Salter for the overseers of Worthing.

The Master of the Rolls, in giving judgment, said he was of opinion that the glasshouses in question were clearly within the ordinary meaning of the word "buildings," and ought to be rated as such, and not as agricultural land; and he added that he could see nothing to justify a distinction between one class of buildings and another.

Lord Justice Rigby delivered judgment to the same effect.

Lord Justice Vaughan Williams differed, and thought the judgment of Mr. Justice Collins was perfectly right. The Act was difficult to construe, and it was not clear what the Legislature intended. In such a case one must be guided by the words of the section, and not by balancing the difficulties of results one against the other. He thought that the part of a market garden which was covered by glasshouses was within the exception.

The appeal was allowed, with costs.—*Daily Chronicle*.

QUESTIONS AND ANSWERS

* * * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Carex japonica variegata.—North: There are at least three plants in cultivation under the above name, and neither of them is correct. The specimen you sent was *C. Morovii variegata*, the same as you sent on a previous occasion. We have little doubt that the species you require is *C. brunnea variegata*, but whether anybody would supply you with the right plant by your asking for it under that name is more than we could say. There are cartloads of it in several of the London Nurseries, but why you have been served with the stiff and ungainly *C. Morovii variegata* from two large nurseries is a puzzle to us. The plant is about a foot high or a little over, with long, slender, and graceful leaves with white margins. It is largely used for greenhouse and conservatory decoration, both the green and the variegated varieties. You might use the above description, in applying to any of the nurserymen again; send a piece of the plant of *C. Morovii variegata*, and tell them you do not want that. Messrs. Veitch & Sons, Chelsea, London; and Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton, London, would have it for certain.

Fruits, Flowers, and Vegetables.—B.: (1) It is just possible that you would be able to get a cottage and two acres of land in the south eastern districts of Cornwall, where some one has been working on similar lines to what you propose, but at such a distance we have no means of being certain. In that part of the country they grow various kinds of marketable produce in the way of Grapes, Tomatos, Melons, Cucumbers, Strawberries, Gooseberries, and the choicer vegetables that will pay for carriage. (2) For markets, you have London, Birmingham, Manchester, and various other large northern towns. For this reason you should endeavour to settle down within easy reach of some or other of the branches of the London and South Western Railway, so that the goods may be conveyed quickly and at relatively small cost. (3) For the above and various other reasons that might be given, the best way would be to ascertain whether you can get employment in a market garden down in Cornwall and the possible remuneration, which would not be great in that part of the country. Ground might vary from £1 to £12 per acre, according to its quality and the demand for it; therefore, the best plan would be to get employment in the district, and take time to gain experience and look about you. Daffodils, Polyanthus, Narcissus, and similar bulbs are very extensively grown in the Scilly Isles for the early supply of cut flowers to London and the northern markets.

Begonia Ensign.—Ensign: The variety is a new one belonging to the winter-flowering section, and requires resting from now till August or September when it may be re-potted and placed in heat, to urge it into good growth, so that it may flower during November and December. You may rest the tubers by keeping them dry and in an intermediate house or pit. It is more than likely that the stem will die down, and the young shoots come from the tuber. The variety may be propagated by cuttings when making growth and beginning to branch. You cannot expect the old plant to be very shapely or flower well if many shoots are cut off to get up a stock quickly. Keep the tubers as well until you have worked up a good stock. Some of these winter-flowering varieties, such as *B. socotrana* and *B. Winter Gem* can only be propagated by tubers, but others of the style of *B. John Heal* and *B. Ensign*, that take largely after the summer-flowering tuberous race, can be increased by cuttings.

Horticultural Examination.—Fern: The initial step is to apply to the Secretary, Royal Horticultural Society, 117, Victoria Street, London, S.W. This should have been done not later than the 1st of March; and we cannot say now that you will be able to go forward this year; but there can be no harm in applying. There is no necessity to come to London to pass the examination in question. What you want to do is to get the consent of a clergyman, schoolmaster, or some other responsible person in your neighbourhood to superintend the examination on the 5th April. We fear you have no time to make arrangements this year, but at all events you could ask the secretary's opinion at the above address.

Swollen Apple Boughs.—J. T. Thurston: The shoots you sent were very badly affected with American Blight, or Woolly Aphis (*Schizoneura lanigera*). We doubt whether cutting off the swellings would be of any real advantage, as it might lay the tree open to an attack from canker. Your best plan, if the tree is really worth saving, would be to commence now and give the branches a thorough scrubbing with Gishurst Compound, in lather from the cake, rubbing it well into the cracks and

crannies of the tree with a half-worn painter's brush. It would be more troublesome to do this in summer when the leaves are on, but you cannot be too persevering about that time when the aphids is multiplying fast, and can easily be seen by the naked eye.

Imported Odontoglossums—E. L. Brown: The flower you sent us was Odontoglossum triumphans, which must have somehow got mixed with O. crispum. We consider it a very good variety on account of its bright golden yellow colour, and the distinctness of the blotches.

Begonia Gloire de Lorraine.—Ensign: This hybrid is of Continental origin, and its parentage does not seem to be known in this country. Judging from its appearance we should say it has been obtained by crossing B. parviflora with B. socotrana. or B. John Heal.

Weed Killer for Walks.—Glasgow: There are various preparations for this purpose, but all contain dangerous poisons so that you would have to exercise very great caution to keep the poisons out of the way of animals and children so as to avoid accident. You must not let the Weed Killer near grass or box edgings, or any plant for which you have any care for their safety.

Flowers of Dendrobium nobile.—David May: With 200 blooms of the same character as those you sent, the plant must indeed be grand. The flowers are notable for their size and substance, the surface of the segments having a glossy and waxy appearance. If it had had more depth of colour, it would have taken high rank amongst the varieties of the species.

Names of Plants.—E. Morris: Pittosporum undulatum (very sweetly scented).—A. L.: 1, Boronia megastigma; 2, Pelargonium fragrans; 3, Pelargonium denticulatum; 4, Begonia semperflorens var.; 5, Aspidium angulare proliferum.—J. C.: 1, Scilla sibirica; 2, Chionodoxa sardensis; 3, Pulmonaria saccharatum; 4, Oncidium spillopterum.—H. W.: 1, Odontoglossum Cervantesii Morado; 2, Odontoglossum nebulosum; 3, Sibthorpia europaea variegata; 4, Ruellia Portellae; 5, Strobilanthes Dyeri (off colour, but will come all right when it grows).—Cristata: 1, Scolopendrium vulgare; 2, Pteris cretica; 3, Asplenium bulbiferum; 4, Pteris cretica albo-lineata; 5, Pteris cretica; 6, Pteris cretica cristata; 7, Onychium japonicum; 8, Pteris serrulata cristata; 9, Pteris cretica cristata; 10, Selaginella Braunii; 11, Davallia Tyermanni; 12, Aspidium (Cyrptomium) Fortunei; 13, Adiantum hispidulum; 14, Polemonium caeruleum; 15, Lychnis diurna; 16, Doronicum (send this when in flower); 17, Maranta bicolor; 18, Streptocarpus Rexii var.; 18, Carex brunnea variegata; 20, Carex Morovii variegata; 21, Ophiopogon Jaburan variegatus.

Communications Received.—H. Cannell & Sons.—R. Dean.—Horticultural Club.—W. P. R.—J. Lister.—W. B.—G. W.—D. C.—J. B.—H. K.—R. J. R.—H. G. S.—W. Horne.—W. P. B.—L. Nolas.—E. Ewart.—Carnation.—C. T.—Union.—Oral.

COVENT GARDEN MARKET.

March 16th, 1898.

FRUIT.—AVERAGE WHOLESALE PRICES.

Table with 2 columns: Fruit name and price. Includes Apples, Cobbs, Grapes, Pine-apples, St. Michael's.

VEGETABLES.—AVERAGE WHOLESALE PRICES.

Table with 2 columns: Vegetable name and price. Includes Artichokes, Beans, Beet, Brussels Sprouts, Cabbages, Carrots, Cauliflowers, Celery, Cucumbers, Endive, Herbs, Horse Radish, Lettuce, Mushrooms, Onions, Parsley, Radishes, Seakale, Small salad, Spinach, Tomatoes, Turnips.

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

Table with 2 columns: Flower name and price. Includes Aium Lilies, Asparagus Fern, Azaleas, Bonvardias, Carnations, Daffodils, Eucharis, Gardenias, Geranium, Lillam longiflorum, Lily of the Valley, Lilac, Marguerites, Marienbal Fern, Mimosa, Narcissus, Orchids, Pelargoniums, Red Roses, Roses, Tea, white, Perle, Safrano, Pink Roses, Primroses, Smilax, Snowdrops, Tuberoses, Tulips, Violets, Wallflowers.

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES.

Table with 2 columns: Plant name and price. Includes Arborvitae, Aspidistra, Azalea, Cineraria, Cyclamens, Dracaena, Erica, Ficus, Foliage Plants, Hyacinths, Lillium, Lycopodium, Marguerite Daisy, Myrtles, Palms, Pelargoniums, Scarlet, Tulips, Geranias.

A Special Offer to Readers of THE GARDENING WORLD 25/- BOOK for 8/-

NO HOME SHOULD BE WITHOUT ONE.

Ogilvie's Encyclopædia OF USEFUL INFORMATION AND WORLD'S ATLAS.

19398. COUPON. OGILVIE'S ENCYCLOPÆDIA OF USEFUL INFORMATION, AND WORLD'S ATLAS, (Published Price 25s.). 16 COUPONS, AND 6d. WITH EACH. Name Address

Postal and money orders should be made payable at the East Strand Post Office to F. A. COBBOLD

"GARDENING WORLD" Office, 1, Clement's Inn, Strand, London, W.C.

"Eureka" Weed Killer

is a safe and effective preparation for keeping Roads, Drives, and Paths clear of Weeds; one dressing in the Spring will keep the Gravel bright and clean for the rest of the year. This Powder mixes with Cold Water, as a trial we will send a Tin, containing sufficient to dress 100 square yards of Paths, Post Paid, on receipt of Stamps 2/-. On application we will send our Price List for Powder and Liquid Weed Killer, also copy of Testimonials received from the Royal Horticultural Society and some of the largest Estate Owners, &c. One trial will fully convince Gardeners that the "Eureka" Weed Killer is effective and safe. Sold by Chemists.

ONLY ADDRESS:— TOMLINSON & HAYWARD, Mint St. Chemical Works, LINCOLN, [Est. 1842.]

FIXTURES FOR 1898.

MARCH.

- 21.—N.C.S. Adjourned Annual Meeting at Anderson's Hotel. 22.—Royal Hort. Society's Committees. 23.—Torquay Dist. Gardeners' Assoc. Spring Show. 29.—Shropshire Hort. Society's Spring Meeting; Royal Hort. Society, Southampton (2 days); Brighton Spring Show (2 days). 30.—Liverpool Show. 30.—Royal Botanic Society's Spring Show. 31.—Falkirk Spring Show.

APRIL.

- 1.—R.H.S. of Ireland Show. 6.—Royal Cal. Hort. Society Show (2 days). 12.—Royal Hort. Society's Committees. 20.—Newcastle-on-Tyne Show (2 days). 26.—Royal Hort. Society's Committees; Auricula and Primula Show.

MAY.

- 10.—Royal Hort. Society's Committees. 18.—York Florists' Exhibition. 25.—Temple Show (3 days); Bath and West of England at Cardiff (5 days).

JUNE.

- 8.—Royal Botanic Society's Summer Show. 14.—Royal Hort. Society's Committees. 15.—Grand Yorkshire Gala (3 days). 20.—Royal Agricultural Show, Birmingham. 22.—Jersey Rose Show. 23.—National Society's Rose Show at Bath.

INDEX TO ADVERTISEMENTS.

Table with 2 columns: Category and price. Includes Auction Sales, Catalogues, Chrysanthemums, Climbers, Florists' Flowers, Flower Pots, Fruit Trees, Garden Sundries, Hardy Plants, Heating Apparatus, Horticultural Builders, Insecticides, Manures, Miscellaneous, Netting, Orchids, Publications, Seeds, Situations, &c., Societies.

AMATEURS

Who follow the instructions given in

'The Amateur Orchid Cultivators' Guide Book.'

By H. A. BURBERRY, F.R.H.S., ORCHID GROWER TO

The Right Hon. JOS. CHAMBERLAIN, M.P.,

CAN GROW ORCHIDS

In Cool, Intermediate, or Warm Houses,

SUCCESSFULLY

There is a Calendar of Operations for each month, and full information as to the treatment required by all Orchids mentioned in the book.

With some fine coloured illustrations

Second Edition.

5s. od.; post free, 5s. 3d.

"GARDENING WORLD" Office, 1, Clement's Inn, Strand London.



TRADE CATALOGUE RECEIVED.

THE SURREY SEED CO., Redhill, Surrey.—Farm Seed Annual.

DIRECT FROM COLLIERY. PATRONISED BY HIS GRACE EARL WINCHILSEA.

GUARANTEED 25 PER CENT. MORE DURABLE THAN CHEAPER SORTS.

Used at the Mansions and Gardens of the NOBILITY and GENTRY, and at the principal Maltings in United Kingdom.
(DOWSON'S PLANT) AND WATER GAS FOR STEAM. HOP AND ORCHID GROWERS AND NURSERYMEN.

ESSERY'S ORIGINAL ANTHRACITE.

Machine Cut. Three sizes ready for use. Hard and Large, entirely without Smoke, superseding Coke in every respect. Effecting a very important Saving by constant combustion. Much greater Heat, Durability, Cleanliness, and Diminution of Labour. Autograph Certificates. References. First Cost Prices.

Can be had only from **WILLIAM H. ESSERY, Pantyffynon Collieries, SWANSEA.**
Established 1848. N.B.—Not my Coal unless delivered in trucks painted "William H. Essery."

W. COOPER, Ltd., Horticultural Providers, 755, OLD KENT ROAD, LONDON, S.E.

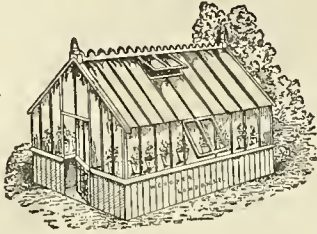
AMATEUR

SPAN-ROOF

GREENHOUSE.

Everything Complete, and Ready for erecting.

From £2 16s.



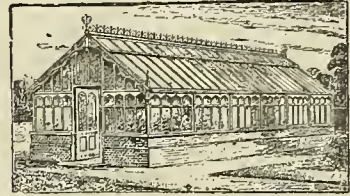
"COOPER" CYCLES.



Twelve Months' Warranty.

Latest design frame, large weldless steel tubes, ball bearings, tangent wheels, and break and mudguards. Gent's from £5 10s; Ladies', with dress and gear guards, from £6.

AGENTS WANTED.



Span-Roof Conservatory. Substantially and Handsomely Built.

See No. 19 in List.

Improved Poultry House.



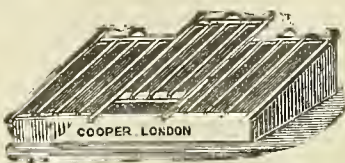
5 ft. x 4 ft. ... 35/-
6 ft. x 4 ft. ... 40/-
For other Sizes see List, Post Free.

Span-Roof Poultry House.



5 ft. x 4 ft. ... 22/-
6 ft. x 4 ft. ... 25/-
7 ft. x 5 ft. ... 30/-
9 ft. x 6 ft. ... 36/-

Estimate for every description of Horticultural Work Free on Application.



Cucumber Frames.

One Light.
4 ft. x 3 ft., 17/-
6 ft. x 4 ft., 28/-
Two Lights.
6 ft. x 4 ft., 30/-
8 ft. x 6 ft., 50/-

Safety

Chicken Coop.

Coop only, 4/3 each, 6 for 24/-; 12 for 46/-; 3 ft. Movable Wire Run, 2/3 each extra.



Latest Designs in Rustic Work



Made in Sections complete, £3 5s.

Large Variety in Stock.

This House £4, Complete.



Illustrated Catalogue, containing 364 Pages and 1,200 Illustrations, post free on application.

"VINES AND VINE CULTURE,"

By ARCHIBALD F. BARRON.

Price 5s.;

Post Free 5s. 3d.

Late Superintendent of the Royal Horticultural Society's Gardens, Secretary of the Fruit Committee, &c.

Third Edition, Revised and Enlarged. "The Best Book on Grapes and their Culture."

THE "GARDENING WORLD," 1, CLEMENT'S INN, STRAND, W.C.

The Gardening World

ESTABLISHED 1884.

Price One Penny; Post Free, Three-halfpence.

Subscription (including postage): 3 months, 1s. 8d.
6 months, 3s. 3d.; 12 months, 6s. 6d., prepaid.
Foreign Subscriptions to all countries in the Postal Union, 8s. 8d. per annum, prepaid.

SUBSCRIPTION FORM.

Please send me "THE GARDENING WORLD," for _____ months, commencing on _____

for which I enclose _____

Name _____

Address _____

Handsomely bound Volumes, I to XIII., 6s. 6d. each. Covers for binding, 2s. 6d. each.

Advertisements for the current week, and also "Stop Orders," must reach the office not later than the first post on Wednesday Morning.

"GARDENING WORLD" Office, 1, Clement's Inn Strand, London, W.C.

"GARDENING WORLD,"

SCALE OF CHARGES FOR ADVERTISEMENTS

Small Advertisements, solid type, 1s. for first line, and 6d. for every nine words after. Displayed Advertisements, per inch 6s. per column (12 lns. long), £3 5s.; per half-page, £5; per page £9. Special quotations given for a series. Gardeners and others Wanting Situations thirty words for 1s 6d., prepaid.

SANKEY'S famous GARDEN POTS
* Bulwell Potteries, Nottingham. *

Messrs. Dicksons, Limited, Chester, write: "The Flower Pots you have so largely supplied us with are light strong, and well made, and in every respect highly satisfactory."

Messrs. Richard Smith & Co, Worcester, write: "We beg to say that we are highly satisfied with your Garden Pots. They are well made, light, yet strong, and we like them better than any other we have ever used."

Messrs. Fisher, Son & Sibray, Ltd., Handsworth Nurseries, Sheffield, write: "We have pleasure in testifying that after having used your pots for the past twenty five years we have found them all that could be desired."

WHISKERS AND MOUSTACHES

(Luxurious Growth and Heavy) Rapidly produced. Invaluable in the Nursery. Baldness positively cured by using

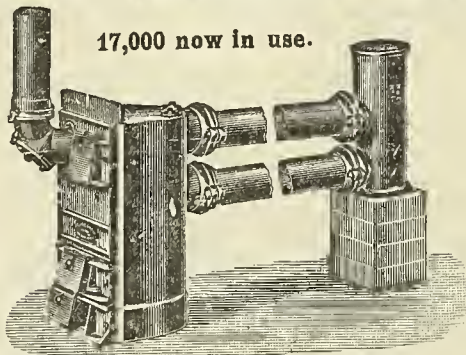
"MEDICA" HAIR FORCER.

Post Free, securely packed under cover, 1/6 and 3/- per bottle, from the sole proprietors:—

The "MEDICA" Manufacturing Co., CARDIFF.

THE "LOUGHBOROUGH" PATENT GREENHOUSE BOILER.

17,000 now in use.



The most economical, cheapest, and easiest to manage.

No. 1, £2 17s. 0d.; No. 2, £4 2s. 6d.;

No. 3, £5. 10s. 0d.

Also made in larger sizes.

Complete Apparatus from £4 16s. 0d.

MESSENGER & COMPANY,

Horticultural Builders and Heating Engineers,

LOUGHBOROUGH, LEICESTERSHIRE.

LONDON OFFICE: 96a, Victoria St, Westminster, S.W.

"AMERICAN GARDENING."

An illustrated Journal of Horticulture, published in the interests of the amateur in the Garden, the Conservatory, the House, the Fruit and Vegetable Grower, Trees, Shrubs, and Flowers.

The Leading American Horticultural Authority. Issued weekly, and mailed, postage paid, to English subscribers for a 6s. money order.

Address, "AMERICAN GARDENING," 170, Fulton Street New York, U.S.A.

READ THIS!

RUBBER STAMPS
WITH A MOVEABLE LINE.

SPECIALLY DESIGNED OUTFIT

FOR

Seedsman and Florists. COMPLETE FOR 7/6.

The Outfit consists of Rubber Die (any wording) mounted on Special Air Cushion Rubber (1/4 inch thick) so as to neutralise any inequalities of surface in Seed Bags, &c.; a Font of Solid Rubber Type, containing 74 Letters, Points, and Ornaments. These are simply pressed into designs, and can be altered at will. In addition a Type Holder is enclosed for marking single lines of moveable type only. For 1/6 extra we include 21 figures, so that it can also be used as a dating stamp.

All sorts of Rubber Stamps made to order at short notice and low prices.

F. A. COBBOLD.

1, Clement's Inn, Strand, London, W.C.

WEBBS'



GOLDEN KING CALLIOPSIS.

A most effective variety, its bright golden yellow flowers being very useful for cutting. 6d. per packet. Post free.

The Queen's Seedsmen,
WORDSLEY, STOURBRIDGE.

NEW DOUBLE VIOLET, MRS. J. J. ASTOR.

This beautiful Violet, of a deep rosy-heliotrope is meeting with a most cordial reception, and as the stock is getting very limited, and we have already many orders booked for April and May, we beg all intending purchasers will please apply at once to prevent disappointment.

The Managers, Hood Gardens, Totnes.

HARDY CLIMBERS. FINE COLLECTION.

FOR PILLARS, ARCHES, WALLS,
PERGOLAS, TREES, &c.

GEO. BUNYARD & CO.

Beg to say their List of the above may now be had free, from

THE ROYAL NURSERIES, MAIDSTONE.

1898. FORBES' CATALOGUE 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants

is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and price of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other Valuable Information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,

ESTABLISHED 1870.

Nurseryman, Hawick, Scotland.

JADOO FIBRE FOR CARNATIONS.

Important Certificate from Mr. ALBERT M. HERR, the Secretary of the American Carnation Society.

"LANCASTER, PA.,
February 11th, 1898.

I have experimented with Jadoo Fibre in a small way for propagating Carnations, and find that they root with ordinary care 100 per cent. Next season I shall use it almost exclusively for propagating my Carnations.

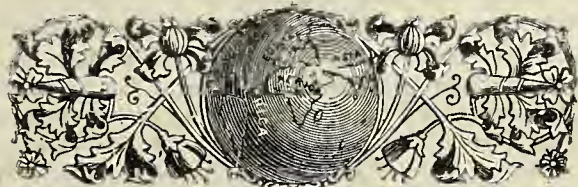
(Signed) ALBERT M. HERR."

Jadoo suits all kinds of Plants.
Testimonials and directions for use post free.

Price:—Bushel, 3/6; 3 Bushel Sack, 8/-.

Obtainable through any Nurseryman, or from

JADOO, LIMITED, EXETER.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, MARCH 26th, 1898.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, March 29th.—Shropshire Horticultural Society's Spring Meeting.

Royal Horticultural Society of Southampton's Show (two days).

Brighton Spring Show (two days).

WEDNESDAY, March 30th.—Liverpool Show.

Royal Botanical Society's Spring Show at Regent's Park.

CONTINUITY IN THE SPRING GARDEN.—

Within the four corners of this island, and the smaller islands immediately adjacent, we have, on the average of winters, an opportunity for a lengthened display of bulbs and other early flowers in the open ground that greatly excels the blaze of summer bedding for durability. This would, of course, include both winter and spring-flowering subjects, which, when analysed, really amounts to a question of temperature, and not to a difference in the subjects themselves. The greatest differences between the early spring and the summer display proper consists of a difference of kind, and a more limited range of colour and quantity of bloom at any given time in the spring garden. Another and, perhaps, the greatest drawback to the spring, or shall we say winter and early spring, bedding is that it is limited to the more favoured parts of the south and west coast including the islands, all of which are more or less directly influenced by the warm waters of the Atlantic. As we approach the Midland and northern parts of the island as well as the east coasts we find the spring creeping gradually onwards, it may be months after the inhabitants of the more favoured parts have been enjoying it. Winter and spring flowers are liable to injury from frost and snow; summer flowers are also liable to injury, but happily such an occurrence is more rare.

Should autumn and early winter prove mild the flower buds begin to make their appearance during October and November in the Scilly Islands. The more favoured parts of the mainland are distinctly behind this, although decidedly early compared with more inland parts, unless we take into account the prolongation of the previous season's flowers, particularly Tea Roses, which may and are often prolonged till Christmas, at various points along the coast from Devon and Cornwall almost to Cape Wrath. The great production of flowers in the Scilly Isles consists almost solely of Narcissi, and that of very few varieties; for although something like a hundred sorts are grown under trial to determine their capabilities, the bulk of the produce sold consists of about six varieties. Three of these are varieties that originally grew wild in St. Mary's, and were troublesome weeds to farmers on whose land they occurred, till the islanders began the cultivation of Daffodils for a livelihood. It may be doubted whether they are really natives; but all the same their long sojourn has enabled them to get so thoroughly acclimatised that they hold their own against most comers for hardiness and general utility. The season is of about three months duration, and during that period about 400 tons of flowers are sent over to the mainland. The industry commenced about thirty-two years ago, and ousted the Potato which had become unprofitable owing to the competition with the more favoured Channel Islands.

In the counties around and within easy reach of London Daffodils are by no means the earliest of flowers, though a few straggling members of the large Daffodils may have been seen in gardens for some weeks past. The smaller Daffodils of the Hoop Petticoat section as well as Narcissus minor and N. minimus have been flowering for a month past or more. The Truro Daffodil show of last week will indicate the climax of the display in Cornwall; very soon it will be here. Independently of Christmas Roses and wall shrubs, the spring season in the London district is ushered in by the Snowdrops, which are really effective when planted in sufficient quantity either in borders or on the grass. They may commence flowering in January or February, according as the winter is mild or otherwise, the latter month being usually spring-like in several respects.

The Snowdrops are quickly followed by the Winter Aconite, Chionodoxa sardensis, Scilla bifolia, and the Dutch yellow Crocuses. Some weeks ago one of our daily contemporaries was led into error by the blue Squills and their allies, which were described as Bluebells. That name, however, is more correctly applied to Scilla nutans, which usually keeps very quiet and undemonstrative till May. The above delight in mild but essentially cool weather, which we have had for weeks past. As soon as really warm weather arrives their flowers quickly pass off the scene. Besides being lovers of cool weather, each well developed bulb, corm or tuber gives rise to a number of flowers which follow one another in succession. The Daffodils will be in full bloom in the course of a few days forming a succession to the early ones, as well as to the varieties of the vernal Crocuses, Scilla sibirica, Chionodoxa Luciliae, &c. Primroses and Polyanthus have been flowering all the winter, but will reach their climax in a few weeks. Hyacinths and Tulips will follow in this order, the different sections of the latter keeping up a display till the end of May. The latest forms of the Poet's Narcissus also bring the display of the latter genus up to that period, or even to the beginning of June. Inter-

spersed amongst Hyacinths and Tulips, we have Myosotis, Arabis, Wallflowers, Daisies, Phloxes, and other subjects which link late spring with early summer and its own particular phase of bedding.

Leven and District Horticultural Society.—The annual display of fruits, flowers, and vegetables held by this society is fixed for August 20th. Prizes are offered in 169 classes for garden produce and wild flowers in addition to the industrial classes, which are to be made a special feature. Mr. John Lister is the Secretary, and he is assisted by a capable committee.

Revue de L'Horticulture Belge.—The publication of the number of this monthly journal for the 1st April next, is to be delayed till the 16th April, in order that its pages may contain a report of the forthcoming international and quinquennial horticultural exhibition. The number for the 1st May will also deal with the great show, and contain historical information upon the origin of the society which organised the quinquennial.

The Shamrock.—St. Patrick's Day was duly celebrated in London and the suburbs by the wearing of bits of Clover. On former occasions we have had *Medicago lupulina* from Dublin as the true Shamrock. On the 17th inst. we had the so-called true Shamrock from two different sources, one of them, reputedly at least, being from Cork. Both these pieces were *Trifolium minus*, of Smith. Another species being sold for Shamrock was *Trifolium repens*, which certainly had the merit of being larger and more easily seen. Which is the true Shamrock?

Early Spring Bulbs at Reading.—Some time ago we had the pleasure of inspecting a border filled with spring bulbs in the Portland Road Nursery of Messrs. Sutton & Sons, Reading. Such things as *Galanthus Elwesii*, and the beautifully striped *Crocus versicolor* and *Crocus biflorus* cloth of Silver put in their appearance in the earliest days of February and continued to develop for weeks afterwards. The variable character of *Galanthus Elwesii* was very apparent, some having long and others globular flowers, while some had almost green foliage far removed from the ordinary glaucous hue. *G. E. unguiculatus* was notable for its long and clawed segments while the green markings were smaller than in the type. The beautiful new *G. Ikariae* has found its way here in some quantity, its large snowy-white flowers being very conspicuous. The double *G. nivalis* fl. pl. was only then showing a few stray flowers, as the variety usually brings up the rear of the Snowdrops. Amongst the large and improved varieties of *Crocus vernus*, *C. v. Inimitable Blue* was handsome and showy. Many others are yet in full bloom.

The History of a Chrysanthemum.—Under this title Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey, gives the eventful history of a yellow sport from *Chrysanthemum Madame Carnot* which he first exhibited on November 18th, 1896, at a meeting of the N.C.S.; again, at the R.H.S. on the 24th of that same month, and, subsequently, under the name of *G. J. Warren*. This name appeared to be accepted with full complacency till the mid-winter exhibition of the N.C.S., when flowers were put up under the rival name of Mrs. F. A. Bevan, which was supplanted by that of *Yellow Madame Carnot* later on. Apparently, the sportive nature of *Madame Carnot* was responsible for a similar condition amongst its admirers, but, of course, we do not profess to see through this particular phase of plant life. In any case, it seems to be admitted that all three are equal to the same thing and therefore equal to one another. Amongst fruits and flowers, the best varieties are generally encumbered with a lengthy synonymy. *Piper Findlater*, lately so prominently before the eyes of the world, has been claimed by most nations of the Old World as their countrymen. We regard these as instances of intense popularity, arising from a desire to acknowledge the worth of a good thing or a hero. It will be interesting to know by what name the N.C.S. will register the variety, when the next supplement to the Catalogue is published.

A Tyburn Snuff-box.—A curio, in the shape of a snuff-box made from the last century Tyburn triple gallows, painted by Hogarth, in his picture entitled "Execution of the Idle Apprentice," was sold recently in a North London auction room for 15s. The gallows was taken down in 1783, and part of the timber used for making snuff-boxes.

Chiswick Gardeners' Mutual Improvement Association.—On the 17th inst., Mr. James Hudson, of Gunnersbury Park Gardens, read a paper on "Alpine Strawberries." He said that this race of Strawberries was little known in many gardens, but owing to their continuous fruiting character, the produce, weight for weight, would equal the well known garden varieties. The subject was dealt with in a very practical manner, Mr. Hudson giving the details of his own practice. They might be propagated by runners or seed, the latter method having come into vogue during the last few years, and seeds are now catalogued by some of the more enterprising seedsmen. Alpine Strawberries like a light soil and partial shade, such as they would get beneath standard Apple trees. Two of the best varieties were *Royal Amelore* and *Sutton's Large Red Alpine*, the latter being of handsome shape and colour, though smaller than the former. There was a fair amount of discussion, the subject being new to many of the members.

Scottish Horticultural Association.—With the confidence born of continued success the Scottish Horticultural Association has again issued a large and comprehensive schedule of prizes to be given for Chrysanthemums, miscellaneous plants, fruit, and vegetables at the huge exhibition, to be held on November 17th, 18th, and 19th, at the Waverley Market, Edinburgh. There are 113 classes in all, of which 55 are devoted to Chrysanthemums. The premier class is for 20 vases of 3 blooms each, the first prize, known as the City of Edinburgh prize, being a piece of plate, value £20, presented by the Lord Provost, Magistrates, and Town Council. We notice from the list of judges given that the two gentlemen who will decide upon the relative merits of the cut Chrysanthemums both hail from the south of Britain, whilst all the rest are northerners. We have no doubt that the exhibition will prove as great a success as in previous years, and may say that the Scottish Horticultural has deserved it all, for the services it has rendered north of the Tweed in popularising the Autumn Queen have been immense. Mr. Robert Laird is still in his post of secretary where may he long remain.

The Cactus Journal.—This, the latest addition to the horticultural press of this country, is a monthly six-penny publication devoted exclusively to succulent plants. In the circular accompanying the issue of No. 1 the aims of the paper are set forth. After dealing with the fact that Cacti and succulent plants generally have become favourites with amateur plant growers, which is further supplemented in the journal itself by an article from the editorial pen, it is stated that it is proposed to give the publication as much of an international character as possible, and articles are promised from the principal authorities all over the world. Correspondence is invited from all. An exhaustive list of all succulents is in process of preparation and will appear in instalments in the paper. New and rare plants will be described, and, with good specimens of well known plants, illustrated. The first number, which was issued in February, contains articles from Mr. W. Watson, of Kew; Professor Luis Murillo, the Rev. C. Spencer Budd, and other authorities. Full page illustrations are given of groups of "rare *Opuntias*," and "beautiful *Mammillarias*." The general get-up of the paper is good, but the number of typographical errors is regrettable, and the systematic misspelling of such words as *Mesembryanthemum* a grave fault. This is particularly marked in the first instalment of the Botanical List before referred to, where, moreover, specific names have been given capital letters indiscriminately. We welcome the *Cactus Journal*, and trust that it will accomplish good work, but if it is to come up to the standard it has set for itself it must be more carefully edited, otherwise its value will be seriously discounted. The publisher is Mr. E. W. Allen, 4, Ave Maria Lane, Paternoster Row, E.C.

The Most Impudent of Fruit Trees.—The "Medlar."—*Sniggs*.

Highgate and District Chrysanthemum Society.—A committee meeting was held on Thursday the 17th inst, when the dates of the Floral Committee meetings for this year were settled, viz., October 31st, November 8th, and 14th. The Floral Committee was then elected, viz., Mr. T. Bevan, Mr. J. Brooks, Mr. J. Brooks, Jun., Mr. Burt, Mr. Mathews, and Mr. Turk, with the president, the treasurer (Mr. J. McKerchar), and the secretary (Mr. W. E. Boyce) as ex-officio members.

Juno Cycles.—These well-known machines are now found in the new "Juno" show rooms on Piccadilly Circus, and we are sure this will be found highly convenient to numerous West End cyclists and would-be cyclists to whom the name *Juno* is a household word, and synonyms of all that a cycle should be. The 1898 Junos are up-to-date in all points, and perhaps there is no machine on the road to-day so often met with as a Juno. It is known for honest sterling workmanship and great elegance of finish.

Horticultural Education in Fife.—Whilst county councils in this country have generally taken up the cause of horticultural education, this has not been the case north of the Tweed. Consequently, we are pleased to learn that the county of Fife appears to have taken a conspicuous lead in this direction. Acting on the initiative of the Leven Horticultural Society, through its able and energetic secretary, Mr. John Lister, a meeting to discuss the question of horticultural lectures was recently held at Ladybank. Representatives were present from various parts of the country, and there was a goodly muster of secretaries of horticultural societies, and upwards of 1,500 members were present. The Rev. Mr. Brunton was called to the chair. Mr. Mitchell, organising secretary of the county council, spoke at some length upon the subject at issue, and it was evident to all that it would not be his fault if the council failed to take the matter up. He expressed himself to be greatly in favour of educating the working classes in the cultivation of fruits, flowers, and vegetables, and suggested that a petition should be sent to his committee stating how many lectures they desired to have, and how they were to be distributed. The following gentlemen were appointed to frame the petition:—Provost Anderson, Newburgh; Rev. J. Brunton, Monimail; Mr. D. M. Dingwall, North Fife; and Mr. Lister, Leven. The last named gentleman acts as secretary.

Ware and District Horticultural Society.—Mr. Fulford, gardener to R. Walters, Esq., presided at the fortnightly meeting of this society on Tuesday, 15th March, when Mr. Challen, nurseryman, Stanstead, gave a very interesting account of the construction of the "Hot Water Apparatus," wherein he described a system of heating adopted by him, minimising the cost of fixing boilers, and placing the pipes to ensure efficient circulation, in those districts adjacent to streams and subject to floods. In such places, in the ordinary way, the stoke-holes frequently get submerged with water, rendering the stoking and keeping up the necessary heat matters of no little difficulty and discomfort, apart from the detrimental effects of dampness acting on the boiler. Mr. Challen had occasion to fix a boiler in a place where it would be altogether impossible to get a dry stoke-hole by sinking the boiler some distance below the level of the ground, unless he went to the expense of having the sides and bottom cemented so as to make the hole water-tight; and even then he would have been rather doubtful of its keeping out the water, as the cement would be liable to crack with the action of the heat under the boiler. He determined to fix his boiler on the ground level (the ashpit only being dug out); he then connected the flow pipe to the top of the boiler, but instead of taking the pipes on the rise to the extreme end of the houses, he fixed them so as there would be a gradual fall, graduating it right round the houses and back to the boiler, connecting the return pipe to the boiler at the ordinary place. He had used this boiler for two winters and found it answer very well, the heat being distributed evenly over the houses. After some discussion, a vote of thanks to the lecturer and chairman terminated the meeting.—A. W.

Erratum.—On p. 462 in the thirty-sixth line from the bottom of the first column for "My soil is a light loam or gravel" read "on gravel."

There is no Lake of Haarlem now, the site having been drained and cultivated. A great canal alone remains which runs through seventy square miles of the best bulb-growing soil in the world. Fifty years ago the great Lake of Haarlem covered all this.

Daffodils at Regent's Park.—At the spring exhibition of the Royal Botanic Society on the 30th inst., Messrs. Barr & Sons, 12 and 13, King Street, Covent Garden, London, offer (for competition by amateurs and gentlemen's gardeners) a Silver Daffodil Cup, designed by Mr. H. G. Moon, a Silver and a Bronze Medal, as prizes for the finest display of not less than forty varieties of Daffodils, comprising representatives of the large, medium, and small crowned sections.

Cause of the Potato Disease.—Between the years 1801 and 1846 the cultivation of the Potato increased nearly a hundredfold in the North-western Highlands, and became not only the staple but almost the only food of the inhabitants, with the result that they were reduced to a state of famine in the latter year just as much as the inhabitants of Ireland. A writer in the *Witness* had the effect of bringing that paper under the eye of Mr. Punch, who represented the Irish famine as a "judgment on the Maynooth Endowment." This was resented by another writer, who said that the Scotch Highlanders, though opposed to Maynooth, suffered as much as the Irish, and considered that the famine was a judgment upon both the Irish and the Highlanders for their homicidal efficiency as soldiers in the wars of the empire—an efficiency almost equally characteristic of both nations. Hugh Miller dissented from both of the above opinions, and said, "For my own part I have been unable hitherto to see the steps which conduct to such profound conclusions, and am content simply to hold that the superintending Providence who communicated to man a calculating, foreseeing nature, does occasionally get angry with him, and inflicts judgments upon him, when, instead of exercising his faculties, he sinks to a level lower than his own, and becomes content, like some of the inferior animals, to live on a single root." This must be another injustice to the botanists, as well as to the Phytophthora, which was made the punitive agent, willy-nilly we suppose.

Botanical Studies.—The current number of *Knowledge* contains the second of the series of articles on Botanical Studies contributed by Mr. A. Vaughan Jennings, F.L.S., F.G.S. The first article was devoted to *Vaucheria*, of which the life history and mode of a reproduction were lucidly detailed. The genus *Coleochaete* is the subject of the second article. There are three species of this genus of fresh water Algae common to this country, and although the plants are frequently sterile the nature of their reproductive process is of considerable importance. The commonest species are *C. scutata*, and *C. orbicularis*. An examination of either of these will show that the plant consists of a flat plate of cells arranged in radial rows all in one plane and never superposed on each other. In *C. soluta* the rows of cells are separated for a great part of their length, whilst in *C. pulvinata* the cells are no longer in one plane, but grow up straight or obliquely, forming a cushion. The genus, therefore, contains plants showing a series of stages connecting the flat cell plate with the tree-like growth of such types as *Bulbochaete*. With regard to reproduction in *Coleochaete*, there are, as in *Vaucheria*, two distinct methods. In one case the protoplasm of some of the cells of the thallus contracts, rounds off, separates from the main body, and develops a pair of cilia, to form a free swimming zoögonidium. In the second case the contents of some cells form an oösphere, the female element, whilst other cells divide into four and produce antherozoids, the male element. The sexual fusion of these two elements results in the fertilization of the oösphere and forms fruit. This fruit remains quiescent during the winter, but in the spring rapid division of cells takes place, forming carpospores, which in their turn develop into new *Coleochaete* plants. We have thus in *Coleochaete* an early illustration of alternation of generations. A capital illustration shows the different processes referred to.

Presentation at Dunoon.—On Saturday evening, 12th inst., Mr. John Fraser, gardener, Ardenlee, Dunoon, was waited upon in the George Hotel by a number of friends, on the occasion of his leaving the district. After the usual loyal and patriotic toasts had been duly honoured, Commissioner Crosbie, who presided, in making the presentation, which consisted of a gold Albert and pendant with suitable inscriptions for Mr. Fraser, a gold brooch for Mrs. Fraser, and a purse containing money for each of their children, said they had now come to a very important part of the programme, namely, the part which had brought them together that evening—of presenting Mr. Fraser with a small memento of that happy evening and the many friends he was leaving in Dunoon. While they were sorry to part with him, he assured him, they would also rejoice at his success. In the more sunny south Mr. Fraser was sure to make his mark. (Applause.) Mr. Fraser feelingly replied, thanking all present for the kindness shown towards himself and family. Several toasts followed, including "The Town and Trade of Dunoon," proposed by Mr. McGilp and responded to by Commissioner Shields; "The Presentation Committee," by Bailie Millar, and replied to by Mr. McLeod, Hafton; "The Host and Hostess," by Commissioner Shields, and acknowledged by Mr. Charles Smith. Among those contributing songs were Messrs. Dewar, Speirs, McLeod, Currie, McGilp, McTavish, and Allison, altogether a very happy social evening being spent. Mr. Fraser, who has gone to a situation near Newport in Monmouthshire, is followed by the hearty good wishes of his numerous friends in the Dunoon district.

THE WEeping WILLOW.

SALIX babylonica, although it has a competitor for favour in the American Weeping Willow, is still to most people The Weeping Willow, and has a just claim to the title of the queen of Weeping trees. Anyone who has seen fine specimens of it planted where they have ample room to develop by the side of ornamental water with its long drooping branches falling down like sprays from a fountain into the water, will readily concede that it is a thing of beauty worth a considerable journey to see. A possible drawback to it is that to see its full beauty, a fairly large specimen is requisite; so that since the advent of the American variety which is better adapted to the requirements of villa gardens, it has not been so extensively planted as formerly. This seems regrettable, because the Babylonian Willow is a far more beautiful tree. The poet Pope is credited with its introduction to English gardens, for, being with Lady Suffolk at the time, her Ladyship received a parcel from Spain bound with withes, and thinking they might grow took one home and planted it in his garden at Twickenham, where it grew and became well known as Pope's Willow. It has a wide distribution, being a great favourite with the Chinese, and there is little or no doubt, but it was on its branches that the daughters of Zion in their exile hung their harps.—*W. B. G.*

BLUE AND GOLD.

Two of the most effective colours in nature are blue and gold, both of which are very much in evidence just now at Kew. The former is represented by *Chionodoxa Luciliae* var. *sardensis*, which was the other day a blaze of blue, a sheet of the most exquisite of cerulean tints. Some large beds have been filled entirely with this variety of the "Glory of the Snow," and the result is remarkably pleasing. As, however, the term "snow" is inappropriate this year, I would submit that the "Glory of Kew" would be more descriptive. Certainly it has added to the attractiveness of the Gardens, and caused many a visitor to utter exclamations of unbounded delight.

The "gold" is represented by a very fine form of the Dutch Yellow Crocus (*Crocus aureus*), which has been freely planted in several places, but in no place so effectively, or conspicuously, as on the mound beneath the Turkey Oak in the broad walk. A visitor to Kew could hardly miss them; they are a beacon, and send their light shimmering through the trees for quite long distances. They are a veritable bit of the field of the "Cloth of Gold," only better and brighter; in fact they look like brilliant sunshine

on the ground. Yellow is characteristic of warmth it is fiery or flame-like. This circumstance, I think, was noted by Tennyson, for he makes Ænone say:—
"Naked they came to that smooth-swarded hower,
And at their feet the Crocus brake like fire."—
C. B. G., Acton, W.

ROSE PAULINE LABONTE.

THIS is a grand Tea Rose for climbing in the greenhouse or conservatory, and practically unknown to most of our growers, unless they have it under a synonymous name, as I have hunted up several trade lists but fail to find it catalogued. Given a light position near the glass it is scarcely ever out of flower, and is of robust constitution. Lady Gertrude Rolle brought it from France just thirty-two years ago, and the original plant is still thriving at Stevenstone, North Devon, the seat of the Hon. Mark Rolle. We have a fine bush of it here under glass, which has been loaded with flowers the past six weeks. It roots freely from cuttings, and is worthy of extended cultivation. It is good in the bud and holds on well when expanded; the colour, a deep flesh, is most pleasing. I am sending a few blooms for you to see.—*J. Mayne, Bickton.*

[The variety is recorded in books as a flesh-coloured Tea Rose of moderate vigour with flowers of the third size; but after searching about a dozen catalogues of Rose growers we fail to find it mentioned by any of them. The flowers you sent us were large for this season of the year, firm in texture and durable. The salmon-flesh colour was slightly tinted with yellow in the centre, and the flowers being scented and handsome for cut flowers or other purposes, and the variety having been cultivated so long in Devon, we fail to understand why it should have been neglected so long by cultivators generally. The foliage sent was also of good texture, and of a rich dark green.—*ED.*]

READING AND DISTRICT GARDENERS.

"COMMON MISTAKES IN FRUIT CULTURE," was the subject of an exceedingly practical and instructive paper given by Mr. George Bunyard, of Maidstone, before the Reading and District Gardeners' Mutual Improvement Association, on Monday evening last in the Club Room, British Workman, Reading. Mr. C. B. Stevens presided over a large attendance of members, including a contingent from the Wargrave Gardeners' Association.

Mr. G. Bunyard in introducing his subject, said that his reason for taking up this particular one was that he, as an expert, had been very often called in to report on certain failures in fruit culture, and that if these failures were embodied in a sort of talk together, it would, he felt, be practical as well as being profitable to each one. The whole routine of the cultivation of Apples, Pears, Peaches, Nectarines, Gooseberries, and similar fruit was touched upon, including planting, the cropping of the fruit borders, summer pruning, root pruning, soils, labelling, importance of the early thinning of fruit, ingathering of the fruit, fruit trees in pots, grafting old trees, artificial manures, obtaining trees true to name, differing seasons, and the literature of the day as regards fruit culture.

The paper was followed with the closest attention, and at the close many questions were asked, and an interesting discussion took place, in which Messrs. Parfitt, Martin, Turton, Webb, Woolford, Neve, Hobbs, and Hinton took part. At the close a very hearty vote of thanks was accorded to Mr. Bunyard by the members as well as their congratulations on his and his family's escape from the terrible epidemic that has so recently visited his neighbourhood.

A great feature of the meeting was the magnificent exhibit of Orchids made by Mr. Woolford, gardener to Alfred Palmer, Esq., of East Thorpe, including some splendid forms of *Dendrobium nobile*, and *D. wardianum*, two pieces of the latter in four inch pans, carrying eighty and seventy-eight blooms. On behalf of the members the president tendered to Mr. Woolford their thanks for the trouble he had taken in bringing such a fine exhibit to the meeting, especially with regard to *Dendrobium nobile*, as at their last meeting a controversy had arisen as to the advantages and disadvantages of pruning *D. nobile*. Mr. Bright, of Whiteknights Park Gardens, showed a splendid head of a hybrid *Clivia*, and Mr. Neve, of Sindlesham House Gardens, varieties of Apples.

HINTS FOR AMATEURS.

THE ANNUAL POTTING.

LAST week we discussed the necessity of an annual clear out, and spoke of the broad general rules that must govern the work. This week we may go a little more into detail, and point out some of the special needs of the more important plants or classes of plants that find a place in the majority of collections. We must first of all, however, say a word or two about the condition of the soil. It should not be too wet when it is used. Too wet soil is a fruitful source of evil, especially if the bulk of it is loam, which has not too much fibre in it. Such soil is inclined to cake into a clay-like mass under moderate pressure, and the result is that plants whose root systems are not so vigorous as could be desired at the time of potting are scarcely given a fair chance to improve themselves in this respect. A good guide as to the condition of the soil is that a small quantity of it squeezed together in the hand should be sufficiently adhesive for the particles to cling together, but on being thrown back again on the bench should be friable enough to crumble. Soil in this condition will never "cake," except under exceptionally heavy ramming, to such an extent as to give the roots a bad time of it.

Pots.—All pots used should be clean, both inside and outside, and dry, not only for appearance sake, but for the good of the plants that are to be placed in them. If new pots have been obtained, these should be soaked for a few hours in water, and allowed to dry before it is attempted to put plants in them. To do so, before the pots had undergone this soaking, would have been very prejudicial to the roots, for new pots are of a harsh, thirsty, and unkindly nature. In ordering or choosing new pots, by-the-way, we may caution the amateur against the glazed pots which local dealers are so fond of pushing off upon amateur gardeners. Professional gardeners have a great dislike to these glazed pots, for the plants never do really well in them.

Palms.—Of all the plants which are grown in greenhouse, stove, and conservatories, warm and cool, Palms hold the highest rank. Year by year, they increase in favour and in numbers in the collections of those who love plants. As much of their value lies in their suitability for decorating rooms and passages in the dwelling house, when required, it is obvious that it is advisable to keep them in as small pots as possible. If proper attention is given, it is quite easy to have good sized plants with a considerable sweep of fronds in comparatively small pots. Under such conditions potting every year can be done without in many cases, and when a shift is given it should only be a small one, i.e., there should be just enough room in the new pot to work in a little soil between the pot and the old ball. Everybody must have noticed that many Palms, more particularly the Phoenixes, have a habit of throwing out a lot of roots at the base of the stem, and at the bottom of the pot; in other words, the root system is predisposed to vertical instead of lateral expansion. The effect of this is to raise the plants out of the soil so that a large cluster of roots at the base of the stem is here. Now, if we take the ordinary make of pot, we shall find that if we employ one deep enough to allow such a plant to be sunk sufficiently low to cover these exposed roots, the diameter of the pot is much too great, and the whole thing too big and very clumsy. To meet the case, therefore, a special kind of pot should be procured, having the depth very much greater in proportion to the width than the ordinary make.

In potting Palms, the staple of the compost should consist of good loam, the more fibrous the better. The best material will be furnished by loam that has been stacked for a few months, with alternate layers of fresh cow manure. If some of this can be obtained, it will be found invaluable for pot plants. All the addition it needs is a sprinkling of coarse river and silver sand, with perhaps a piece or two of fibrous peat worked in to lighten it a little if the loam itself is not very fibrous—if it is, the peat is not required.

For the guidance of those who have never attempted to pot a Palm (those of my readers who are comparatively experienced will kindly pass over this part if it bores them) we will go through in detail the operation.

Let us take such a plant as we have mentioned above, say a Phoenix rupicola, which has not been potted for several years, and which has been lifted out of the soil by the vertical extension of the root system. If it is a big plant, we shall probably find some difficulty in getting it out of the old pot. The first step in doing so must be to cut off the roots that have grown through the drainage holes in the pot. If the plant even then refuses to come out, the old pot must be broken. At the bottom of the ball we shall find a mass of thick fleshy roots. These it will not be wise to disturb to any extent, for all the liveliest roots are here, and the plant will suffer enough from the check of shifting, no matter how carefully it is performed, without breaking and injuring these roots. By means of a stout-pointed stick the ends of these roots may be loosened. Then turning attention to the upper part of the ball, we may remove all the soil that we conveniently can; any dead roots that are observed may be taken away at the same time. The preparation of the plant is now complete.

Now for the new pot. A large flat crock should be laid over the central hole of the pot, and others against the side holes, if there be any. Other smaller crocks may be laid carefully round to the depth of about an inch. It is not necessary to put in a lot of crocks, for in the first place there is not room for them, and in the second they are not needed as the network of roots at the bottom of the old ball will act as efficient drainage. Upon the crocks should be placed a layer of the roughest and most fibrous part of the compost, and then if there is room, which can be ascertained by trial, a little of the body of the compost may follow. Ram this firmly with the modern rammer we have previously referred to. Next place the plant in its new quarters in such a way that the stem is as nearly as possible in the centre of the pot. Once this has been achieved, the next process is to fill in the vacant space between the old ball and the side of the pot, and this part of the operation will require the utmost care and some patience, otherwise there will be hollow places with no soil, and the roots in the vicinity, having nothing to feed on, will perish. To perform the filling up properly, only a little compost should be put in at a time, working this down firmly all round with a thin lath in much the same way as an engineer packs the joint in a pipe. Continue the work until the top is reached, when the surface may be levelled down, and a little sharp sand sprinkled over to give it a finish.

Small plants and young seedlings in various stages come in very handy for a variety of decorative purposes, and some very pretty plants may be grown in large thumb pots, and from that size on to large sixties. It will be found advisable in these cases also to use the relatively deep, narrow pots for them. They can be obtained in all sizes. The young plants will not need to be potted quite so firmly as the old ones, but still the soil should be made fairly firm so as to put a check on gross growth.

Aspidistras.—Like the Palms, these may be grown for a number of years in the same pot, but there comes a time when a shift is necessary in the best interests of the plant, and the present is the most suitable time in the whole year to give it. Any large plants that are observed to have deteriorated in the size and substance of the leaf will be improved by a change to more roomy quarters. Propagation by division, too, may be best carried on at this season of the year. When it is desired to divide a plant into a number of pieces, a good deal of the soil should first of all be carefully shaken from the ball, and then by means of a sharp knife the division may be made. The pieces should be potted up singly into as small pots as will comfortably contain them, and placed in a warm house to give them a start. Aspidistras will do well enough in a cool house or room, and, indeed, in the more southern counties, they are nearly hardy, but after the check given by division a little coddling will enable them to pick up and make plants much more quickly than would otherwise be the case. The soil should consist of two-thirds of good loam and one part of leaf-soil, with plenty of sand and a few nodules of charcoal to keep it all sweet. The charcoal is an important item for Aspidistras, as, indeed, it is for all plants that require plenty of water, and that are likely to stay for a considerable time in the same pots. The drainage, too, should be liberal, and it is better to err on the side of giving too much rather than too little.—*Rev.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Starting Gloxinias.—*Reader*: You need not pot up the backward Gloxinias for the present if you do not wish it. Keep them well supplied with water and place them on a shelf near the glass. Those tubers that have made shoots an inch in length should be potted up at once.

Peas in Pots.—I have raised a lot of Chelsea Gem Pea in pots. Please tell me when it will be safe to plant them out, and also the best position in the garden for them. I have a vacant part of a border facing to the south. Would this do? Please tell me also what room to allow between the rows.—*L. L. Norman.*

You may plant out the Peas without delay, the sooner the better, in fact, unless the weather brings us something unexpected in a heavy fall of snow. The south border will do capitally. As Chelsea Gem is a dwarf and compact grower, 15 in. will be ample space to allow between the rows. You will have to provide coverings so that they may easily be spread over the Peas if frost comes, which is more than likely.

Tuberous Begonias.—*Thos. Rood*: Prick the young seedlings out into shallow pans or boxes filled with light soil. The practice of elevating the surface of the soil above the rim of the pots in the way your friend does is amusing to him, perhaps, but otherwise of no value.

Tomatos.—*C. L. James*: You are late with the Tomato seed, for it should have been sown in January. Sow it at once in a brisk heat, and hurry up the plants.

Campanula Medium calycanthema.—*C. R. Cheyne*: The 7-in. and 8-in. pots will be quite large enough to flower the plants in. You may commence to feed when the flower spikes commence to make their appearance. It will be better to withhold stimulant until then.

Hyacinths Failing to Bloom.—*C. E. N.*: There has been a very general complaint about Hyacinths this year. The fungus which you speak of as being present in the undeveloped spikes may be the cause of the mischief, the bulbs having contracted the disease during their growth last year. It will be well to throw away the old bulbs at once as they will be of no service after this, and will only spread the infection. In any case they will not throw any more flowers after the central spike has gone off.

Erica hyemalis.—I bought three plants of this Erica in flower this winter. The flowers are, of course, all dead now. How must I treat the plants? I suppose they want trimming.—*N. Nolan.*

Yes, the plants will certainly want pruning. Cut them back nearly to the old wood. This will make them rather unsightly looking objects for a time, but they will soon grow out of that if you treat them well. They will require to be kept rather close in a gentle heat for a while after the pruning, in order to stimulate growth. You must not be surprised if you fail with them, however, for Ericas are ticklish things to manage, and this is a very critical season of the year.

Acacia cordata is the name of the plant you speak of, *C. T.*: It makes a good pot plant for the greenhouse, and usually flowers very freely. It is a somewhat slow grower, and it takes a few years to make a decent specimen.

Chionodoxas.—*G. T.*: You may shift the Chionodoxas if you like after flowering is over and the foliage has died down, but leave them alone unless you feel obliged to shift them. You may see the results of this in the way that clumps flower in the same place year after year. Their flowers are always finer and better than those produced by the plants that are constantly being shifted.

Passiflora Constance Elliot.—*Union*: You may certainly grow this pretty Passion flower in a pot or

a tub, but you will get better results if you plant it out. Why not make up a little border expressly for it? it would not take much trouble and would repay you. The border should be from a foot to fifteen inches in depth at least, and should be well drained. The soil may consist of equal parts of loam and leaf soil with sand.

APPLE ROYAL SNOW.

COMING as it does from Canada, this handsome Apple should succeed in this country. The high encomiums with which it has been spoken of by those who know it in the country of its origin, and the few who know it in this country, give cause for wonder why it should have so long remained a stranger to our gardens and orchards. In the matter of flavour it is compared to Cox's Orange Pippin for which it is contended to be the most likely rival for some years to come.

The fruit is conical, about 3 ins. high and nearly as wide below the middle. The greater portion of the skin is of an intense but lively red, and streaked with red on a yellow ground on the portion less exposed to direct sunlight, while the basal area is russety. The eye is closed and set in a wide cavity of moderate depth; at the opposite end the slender stalk is set in a deep and relatively narrow cavity. The flesh is white, hence the name "Snow." It is firm, but crisp and juicy, with a pleasant aroma and a flavour recalling that of the Pineapple according to those who have tasted it; or it is sweet and vinous according to others. Needless to say it is classed as a dessert Apple of the first-class, and comes into perfection for the table about Christmas.

In the autumn of 1896 the Canadians, by way of congratulating the Queen on the approaching completion of the 50th year of her reign, sent a magnificent consignment of this Apple, which they considered the very best they could offer for her acceptance. The fruit, including Apples, Pears, Quinces, and Grapes, duly arrived on the 18th November, and presented an attractive and tempting appearance. They were grown by the fruit farmers of Hamilton, Ontario, Canada. A stock of the Apple Royal Snow has been got up by Mr. W. Horne, Perry Hill, Cliffe, Rochester, Kent, who placed the accompanying illustration at our disposal.

THE BOTANICAL GARDENS, GLASGOW.

FOUR score years ago the Glasgow Botanical Garden was originated at the west end of Sauchiehall Road, where it flourished for a quarter of a century before it was deemed expedient to remove it to its present site in the Hillhead district. Like many a good old institution the garden had its vicissitudes. It would seem that the first twenty-five years of its existence were, until recently, the most notable period of its history. This will not be a matter of astonishment when we see that no less a savant than Sir Wm. Hooker, at that time Professor of Botany in the University, was at the head of the affair. Sir William was doubtless the chief spirit in its foundation; and from what can be gleaned from the history of the garden, he took more than the ordinary professorial interest in its welfare. He introduced many new plants which were at the time unknown in Britain. And we can easily conceive how interestingly botanical the garden at Sauchiehall Road would be under the zealous eye of an enthusiastic botanist like Sir William. There is reason to think that at this eventful era the garden attracted no small attention from all parts of Britain. It evidently attracted Kew, for ultimately Glasgow lost her revered professor, who was translated thither in 1841.

The following year the garden was removed to its present quarters. The necessity for this was occasioned by the ever-increasing growth of the building industry on all hands; and again there would be much benefit derived by removing the site further out from the unpoetical association of sooty walls and the din of street traffic. Yes, the garden once again is encircled with bulwarks of stone and lime with the exception that this time the area is more extensive, and consequently less liable to the injurious effects which would accrue from a closer contiguity to the carbon-laden atmosphere.

The situation of the garden for its natural beauty cannot be surpassed in the immediate vicinity of the city. The area within the walls is nearly forty acres,

twenty-two of which only were acquired in the formation of the garden previous to 1891, when the Glasgow Corporation rescued it from an impending decay. The remaining acreage was added to the garden recently and is now in process of being laid out by the curator, Mr. Dewar. This increment is a most judicious acquisition, inasmuch as it perfects the garden. Hitherto it was bounded on the north by the classic Kelvin, and contained but one side of the beautiful Kelvingrove, celebrated in the song "Let us haste to Kelvingrove, bonnie lassie O." Now the other side belongs to the garden and is connected by bridges. Moreover, this addition is very probably the actual scene round which the poet depicted the sentiments of his song. There are still the remnants of the "Three Pear Tree Well," the famous trysting place of lads and lassies. It is much to be regretted that when the underground railway was pierced through the bowels of the garden a few years ago, the well which had become well-nigh sacred had been almost obliterated. The "mill," too, disappeared some years ago, though it might, as an old ruin in the valley and having a classic connection, contribute a charm peculiar to itself to the landscape. Yet, perhaps, its demise is not a matter of regret. Again by the acquisition of this ground, many of the remnants of the Kelvingrove old forest trees will be preserved from the ruthless hand of the unsentimental huilder.

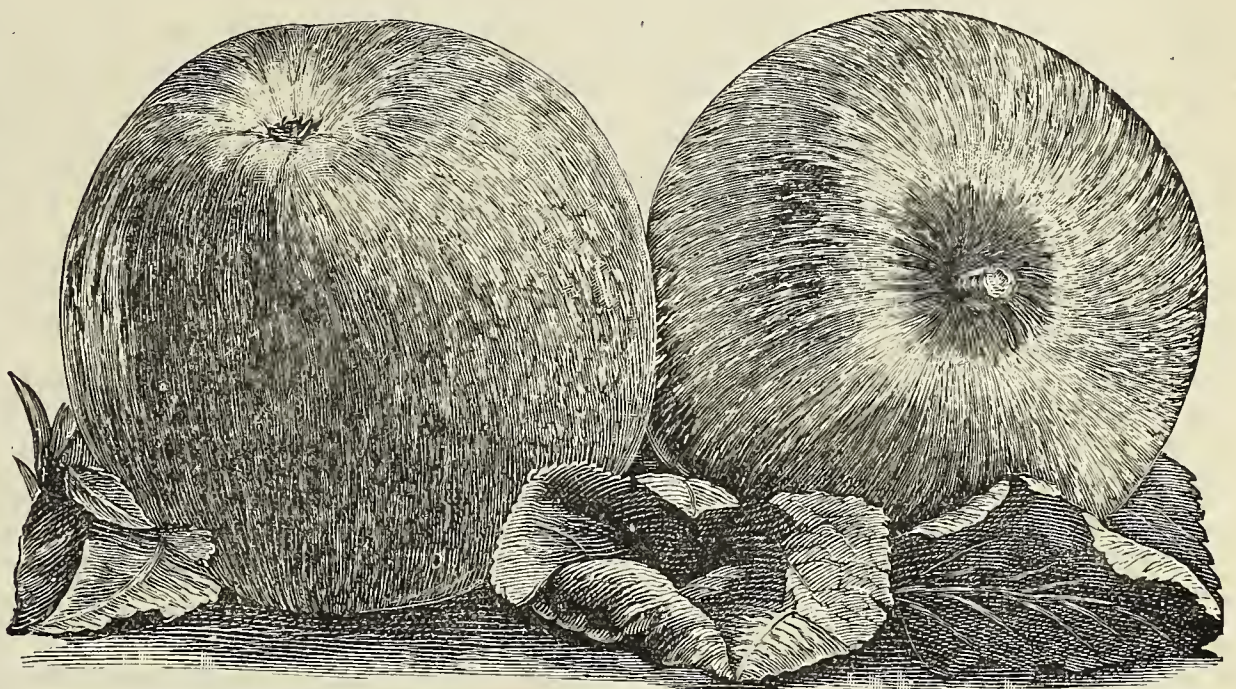
The uneven nature of the garden, though an invaluable merit from a picturesque point of view

form of a waterfall, and falls down a very pleasing bit of artificial rock work. On both sides the new rockworks, also the creation of Mr. Dewar, flank a walk which runs at right angles to the cascade and water course. This rockery was constructed with very much difficulty, due to the little or no help afforded by nature, as well as the artificial excavations necessary to make the idea of a waterfall possible, the pond and the original surface being level. The rockeries are well stocked with rare Alpines, and since their completion they command, along with the ponds, perhaps, more of the public attention than any other department of the gardens.

There have been many other improvements of no less importance made by the curator in the short time he has discharged the responsible duties of his office, and no doubt many more would have been, did the nature of the soil lend more kindly aid.

The soil, it may be said, is extremely bad, a feature which could never have been taken into account when the site was agreed upon. Clay, clay, wherever the spade is put into the earth, and what is worse it is that impenetrable boulder clay with a substratum as impervious to water or air as rock itself.

Only those who have had the unfortunate experience of the working of such soils as the Botanical Garden is composed of, know how discouraging are the results of the horticulturist's labours under such conditions. In ordinary cases, the rule "stick a



APPLE ROYAL SNOW

presents a standing difficulty in successfully overcoming the introduction of a body of water of any appreciable extent. There is always much peculiarly interesting attached to aquatic denizens, let them be vegetable or piscatorial. They seldom fail to attract the attention of many who are otherwise incapacitated for admiring all round natural beauty. However small, therefore, the provision for water may be in a public garden, the common good which it serves is undoubtedly incalculable.

Mr. Dewar, the able curator, on being appointed, evidently saw the drawback of the want of a pond for hardy subjects, set to at once to construct such, and with much difficulty successfully managed to form two circular ponds. Though, perhaps, not so spacious as the extent of the garden demands, yet they give a totally new character to the former monotonous aspect of that part of the garden. These have been filled with their several plants according as they were made to suit.

The one is entirely a Lily pond, and is a beautiful sight in the summer months, notwithstanding the illicit appearance of a patch here and there of the dreaded "Elodea canadensis," better known as the "Anacharis alsinastrum." The other is a semi-marsh and contains a capital collection of natant and semi-natant plants, native and exotic, among which may be seen with its beautiful flowers, "Aponogeton distachyon."

The excess water is very artistically utilised in the

plant in an 'it 'll grow' will not hold good in such soils. Everything has to have prepared for its reception an artificial soil; and even then the uncongenial quality of the natural soil somehow infects the artificial with its deleterious constituents, with the result that few things can be got within the range of our expectations. With unremitting energy and determination to overcome this insuperable defect, Mr. Dewar has, as far as his experiments have extended, almost entirely achieved his expectations.

The flower garden, which confronts the visitor on entering the gate, is amply sufficient to testify to his success in that direction—the luxuriant foliage and inflorescence, for instance, of Fuschia Mrs. Marshall, are each summer and autumn a decided treat to witness, and enough to show art triumphant.

The exposure, to add to the difficulties to be contended with, if not bad, is, to say the least, not good. The west, east, and south winds sweep with considerable force on the elevated sides of the gardens, with the result that many plants, from this reason alone, cannot survive the trying ordeal. But one of the most pernicious, perhaps, of any evils, is the precipitation of soot, no doubt strongly impregnated with noxious effluvia from the abundance of chemical works in the city. Recently, our attention was directed to the had effects of this atmospheric poison. The Holly trees in all parts around the city, inclusive of the Botanical Gardens, were almost denuded of all their foliage in a week. From

beneath some trees we observed over a barrow-full of green leaves being gathered.

Coniferae do not succeed in the gardens. This is a matter to be greatly regretted, for the wealth of species included in this interesting order, is, of itself possible to make a public garden generally attractive and admired. Doubtless much of the reason for the failure lies in the united action of the triple causes already alluded to as being so inimical to vegetation. Yet, in spite of all these seeming defects, they are to a very great extent neutralised by the adjoining woody "Grove." This, no doubt, would weigh greatly in the selection of the site, and unquestionably redeems any fault otherwise committed in this duty of importance. The romantic glen through which the winding "Kelvin" flows is a steep declivity adorned with grand specimens of old Beeches, Oaks, and Elms, that must have waved their ponderous heads in the gales of centuries. Every attempt is made to preserve this truly delightful grove in its most natural character. With meandering walks traversing each shady bower and ferny "neuk" the effect is intensely pleasing. Here is a spread of scented Bluebells, whose fragrance fills the summer air; there the olive-green mantle of the bracken; while overhead the leafy canopy of the wide spreading giants of the grove bids defiance to the penetration of a single solar ray.

But, alas! where beauty is greatest, lies unnoticed to the general eye the effects of the "cankering worm." Amid all this scene of pleasure and animation (for the thrush and her sister songsters pipe their tunes from early morn till late at night here, unmolested), the practised eye will discern the fast falling inroads of decay upon the old remnants of the "Grove" forest. What it is owing to is not very clear. It certainly cannot be due to old age, nor does it appear to be on account of the subsoil. What is a very probable cause is an atmosphere surcharged with chemical poisons escaping from the factories. In point of fact, it is nothing more nor less than a similarity to decline in the human race—the lungs are affected in both cases. Deciduous foliage is short-lived in the vicinity of Glasgow, and it invariably never gets the ordinary opportunity to ripen. The leafage falls from the trees in a sickly green state, consequently much of the wonted elaboration of the sap is not being performed, and as a rule, on the approach of very little frost, the young twigs die back to half their length. Year after year, the trees being subjected to such treatment, must in due course give way to decay and death. The Birch, Ash, in varieties of which a good many are here represented, and strange to say *Acer occidentalis* [? Ed.] do well here. The Tulip-tree, and *Dimorphanthus* do well also, and several varieties of Juglans and Cotoneaster. The Spanish Chestnut to all appearance succeeds well.

There is a very elaborate natural arrangement in which the orders are well represented, mostly, however, of a herbaceous character. Carices and grasses are, too, well to the front, while, as already hinted, the aquatic section is well in evidence. The curator is specially favourable to the development of herbaceous subjects, and has been putting forth much energy in renovating the extensive borders with good results despite the perverse character of the soil. In the spring months the *Narcissi* family make a fine display in the beds and borders; they agree with their conditions remarkably well. Most herbaceous plants do take kindly to the soil. It is of course well prepared for their reception, and as they do not as a rule penetrate to the cold subsoil the danger of failure is kept at bay. Carnations, in especial, make a magnificent show, and considering the heavy texture of the soil, however much it is artificially made up, this is somewhat astonishing. One would almost expect that the high average rainfall in this locality would annihilate them in the winter. On the contrary this queen of flowers seems to enjoy the cold, sodden soil such as a Glasgow winter produces. At all events they luxuriate here in a manner that takes the admiration of all. We refrain from mentioning the inside department meanwhile. To give it anything like justice, it demands a separate notice.—*D. Chisholm.*

Vineyards occupy about 19,000,000 acres of the earth's surface, and France owns about one-third of that area. Before the advent of phylloxera she possessed more, but planting is again being extended.

ELAEAGNUS PUNGENS VARIEGATA.

This is a capital plant when grown in pots. It yields well to training, and when grown freely in small pots, and not too formally, does good service for table and room decoration. When grown into large specimens with abundance of long shoots it is valuable for cutting. I have not been successful in growing it in ordinary shrubberies, but I think (even in cold districts) it would do well. On walls we have had it very beautiful with its pale yellow variegation well developed. About a quarter of a century ago I purchased large specimens in a Middlesex nursery, thinking the plants were suitable for greenhouse purposes only, and there cultivated as such for some years, and was well rewarded with a good supply of shoots for cutting during winter, as well as by the telling appearance they displayed among Camellias, Azaleas, Myrtles, Oranges, &c. I fear we have drifted too much into the practice of growing tender plants only, and many species (hardy and beautiful) are excluded.—*M. Temple, Carron, N.B.*

HORTICULTURAL SUNDRIES.

Not having previously inspected the new premises of Mr. H. G. Smyth, Clark's Mews, High Street, Bloomsbury, London, W.C., we proceeded there the other week, and found everything in excellent working order. The block of buildings in which the premises are situated, as well as other surrounding blocks, having been recently rebuilt, Mr. Smyth had an eye to the suitability of the place for his own particular stores and directed the arrangements accordingly.

Commencing in the basement, which has a concrete floor, we found a huge pile of the best Orchid peat so full of fibre that when grasped by the hand it had the consistency of shag tobacco, and the colour of that article as well. Orchid peat is one of Mr. Smyth's specialties, and he takes the trouble of making certain he gets the very best to be had. Here also were stores of brown fibrous peat for ordinary purposes, and peat mould for Ferns. Horticultural charcoal, made from the stems, roots and branches of trees by a smouldering fire, is in excellent condition.

Manures of various kinds are kept in stock including bone meal for lawns, and other purposes and $\frac{1}{4}$ inch and $\frac{1}{2}$ inch bones for vine borders. Smyth's Fertiliser is one of the best all round manures for lawns and grass land generally. It may be used as a powder and scattered in the dry state, or dissolved in water and distributed by means of the watering can. It is also useful for Tomatos, Potatos, Onions, Chrysanthemums and other garden plants, for which it is gaining in popularity. It is displacing the A 1 Peruvian or Government guano for the reasons just given. The latter is still kept in stock, however. Thomson's Manure and Clay's Fertiliser receive due attention, and are supplied to customers.

On the next floor, slightly above the level of the pavement outside, great brick bins have been built for the accommodation of other, but no less essential, requirements of the garden. One was occupied with sphagnum, and another one with cocoanut fibre refuse. A third was filled with leaf soil, and a fourth with silver sand. The best yellow fibrous loam is stacked on the floor, and shows its valuable character by the quantity of fibre which it contains.

Articles of a lighter nature and for all sorts of purposes are stored upon the next floor above, where we found tackle for hoisting or lowering, according to requirements, the packages of all sorts of goods. Round, dressed and pointed stakes, 5 ft. 6 ins. to 5 ft. 10 inches are meant for staking Dablias, Roses, herbaceous plants or anything of that sort, and meet with a ready demand amongst gardeners. Durable and neat bamboo stakes ranging from 4 ft. to 7 ft. in length are meant for staking Chrysanthemums. Nothing lighter and more durable could be used. Branching bamboo twigs, the tops of the stems, are handy for supporting such things as French Beans, Sweet Peas, Smilax and many other things of a climbing nature. Deal sticks are not overlooked but kept in quantity, in sizes ranging from 1 ft. to 5 ft. in length. Here also are broad wooden labels for the naming of vegetables, plants in the herbaceous border, etc. They have a soft, smooth surface, easy to write upon. Aspen wood wool for the packing of fruit is pure white, as soft as silk, and as a matter of fact free from every taint of turps, being made from

the wood of the Aspen Poplar. Nothing is more suitable for the packing of fruit and flowers that have to travel by rail or post.

Sussex trugg baskets, the handiest and most useful article in the garden for collecting and carrying all sorts of things, may be seen in eight sizes. Quite of another kind are the two-handed cane baskets for cleaning out stokeholes, carrying coal, coke or anything of that nature. They are made by the blind, we were informed. Strong garden sieves with meshes of different sizes are made to meet every requirement. Close by them a pile of Archangel and heavy Petersburg mats caught our eye, but such familiar things need no description nor detailed account of their uses for gardeners. Racks and shelves serve as stores for a varied assortment of hair brushes and bass brooms, and Horsey's patent brooms, the fibre of which is put in with wire and not glue, so that neither wet nor heat will ever cause the fibres to fall out. The pot-washing brushes should prove a boon to the modern apprentice or garden boy. They are furnished with a short handle, and the brush end is conical. Formerly the pot-washing brushes were of a most uncouth shape, and their use reminds us of the proverbial square peg to be put in a round hole. They are made in sizes to suit pots up to a certain dimension, where they are not particularly required of this shape. Other requirements of a miscellaneous character are bouquet and stub wire, Wolff's garden pencils, thermometers, gardener's gloves, budding and pruning knives, vine scissors, shred scissors, syringes of first class manufacture, raffia for tying, secateurs, etc. Tar string, plain string, as well as a strong and specially made material for garden lines, have all their uses in every garden.

Blue serge and shalloon supply the best materials for gardener's aprons. Tanned netting for the protection of fruit trees and bushes will be in requisition presently. Shadings of various description are supplied, but the making of blinds has become quite an industry. They are made of any size or shape according to order. The material consists of something which looks like soft, white string that is woven so as to form small or close meshes that admit the light while breaking the force of the sun's rays. They are bound round the edges with a strong cloth, and by this they are attached to the rollers. They are strong and extremely serviceable.

Garden tools of all kinds are supplied, including spades, forks, hoes of various kinds, and lawn mowers bearing any maker's name. Haws's Patent Watering Can is made in eight different sizes, the two smaller sizes, holding two and three quarts of water respectively, being shelf cans for watering Strawberries and plants on shelves generally. Being specially made for the purpose they are very handy. Then come the propagating and greenhouse cans, holding two and three quarts respectively. Four sizes of the nurseryman's cans hold six, eight, ten and twelve quarts of water respectively. These are very strong, and bound with galvanized iron hoop round the bottom, while the bottom itself is strong and calculated to last much longer than those of the ordinary cans. All are furnished with strong brass sockets and unions, together with roses and other useful appliances. Special features of Haws's cans are that a rim round the top prevents them from spilling, while they may be lifted by a rod-like handle fastened to the spout at one end and to the top of the can at the other. Square teak Orchid Baskets range in size from 3 in to 12 in. square, and are furnished with copper wire hangers. Mr. Smyth has also stored and sold pot-shaped teak Orchid baskets for many years. They are very serviceable for Cattleyas, Phalaenopsis, &c., and may be had of any size to order.

Smith's Weed Killer for walks, &c., may be had in quantities ranging from four to forty gallons. Akin to this are the insecticides, including Lemon Oil, XL All insecticide, flowers of sulphur, soft soap, Gishurst Compound, and the XL All Vaporising Fumigator; also tobacco rag, tobacco powder, tobacco juice, and Appleby's compound tobacco paper in packets. Though not an insecticide, gishurstine, useful for softening and preserving gardeners' boots, may also be mentioned here.

All these and many more things we saw, and had evidence that Mr. Smyth not only caters for every want of the garden, but takes great care to keep good articles of every description. On the walls of the office hangs the Royal Warrant which authorises and acknowledges him as a Purveyor of Horticultural Sundries to Her Majesty the Queen.

DAFFODIL SHOW AT TRURO.

15th and 16th March.

THE Cornwall Daffodil Spring Flower Society held their second annual show in the Concert Hall, Truro, under the auspices of genial and glorious weather, where the full tide of floral beauty arranged on long lines of tabling and coming from brilliant enthusiasts on the Cornish coast, resulted in a keen competition. The secretaries and Truroites must be congratulated on the way they have encouraged the love of culture of Daffodils to such perfection and to have made such a glorious exhibition of the same.

For Barr's Daffodil Prize Cup, the Rev. J. T. Boscawen, Buckland Monachorum, Truro, came in first with a splendid assortment of fifty varieties of magnificent flowers, in which figured Mrs. J. B. M. Camm, R.P. Barr, Mr. Camm, and some really beautiful C. J. Backhouse, with the largest and deepest stained cup that has been seen for a long time; Little Dirk and Sir Watkin were also fine. C. E. Tregoning, Esq., was a very good second, showing Henry Irving, Emperor, Maximus, Mrs. Langtry, Queen Bess, and Queen of Spain, and the Sulphur Hoop Petticoat (*Corbularia citrina*), very large. Very close to the above was D. H. Shilson, Esq., of Trewiddle, with Santa Maria, Mr. and Mrs. J. B. M. Camm, Empress, Katherine Spurrell, Minnie Hume, and fine specimens of *Barrii* Conspicuous.

For Mr. T. S. Ware's (of Tottenham) Cup for thirty varieties, distinct, P. D. Williams, Esq., took the Cup. This was a keen class of six entries. Mr. Williams had some grand specimens of Mrs. Thompson, Henry Irving, Sir Watkin, Cernuus, Capax plenus, C. J. Backhouse, specially fine, also *Barrii* Conspicuous. Chas. Dawson, Esq., was second, Sir Watkin in this group was certainly the finest in the show, the flowers measuring quite 6 in. across. He also had Emperor, Leedsii *amabilis*, Beauty, Empress, *Barrii*, Orphee, and Little Dirk, both very good. The third prize went to Miss Curry, of Lismore, Ireland, who sent a charming collection consisting of about sixty varieties, and well grown.

For ten distinct varieties of Magni-Coronati, C. E. Tregoning, Esq., was first with magnificent flowers of Golden Spur, Bicolor Empress, Horsfieldi, Queen of Spain, Maximus, Princeps, W. P. Milner, Major, and Emperor. The second prize was taken by Mr. D. H. Shilson, in which group Mrs. J. B. M. Camm and Santa Maria were good. For five distinct varieties of Magni-Coronati, Mr. J. C. Williams came to the front; W. Cole Pendarres, Esq., was second, Mrs. Thompson and Golden Spur being exceptionally fine. For ten distinct varieties of Medio-Coronati, the Rev. J. T. Boscawen was first, in which group C. J. Backhouse, *Barrii*, Orphee, and Duchess of Westminster were most conspicuous; Mr. D. H. Shilson was a good second. For five Medio-Coronati, Mr. J. C. Williams took first, *Barrii* Conspicuous and Katherine Spurrell being very good. Lady Margaret Boscawen, of Tregye, was a close second.

For not less than four varieties of double Trumpet and Incomparabilis varieties, Lady M. Boscawen was awarded the second prize, having flowers of good form and fully double. The same exhibitor took first for four distinct varieties of Polyanthus Narcissus, Soleil d'Or, and Grand Monarque being exceptionally good. Miss Paull was second. For fifteen distinct varieties of any section, Mr. Chas. Dawson took the lead; Lady M. Boscawen was second. For the finest single specimen, Jonathan Rashleigh, Esq., was awarded first with *N. bicolor* Horsfieldi. For the finest in the Medio-Coronati section, Mr. Chas. Dawson was first with an enormous flower quite 6 in. across. For the finest seedling Daffodil, not in commerce, Mr. J. C. Williams took the palm with a finely formed flower, having a pale sulphur, long, and beautifully frilled trumpet, and good perianth segments of the same colour.

The second prize for Daffodils in pots was awarded to Mr. C. E. Tregoning. For Polyanthus Narcissus in pots, Mr. J. H. James got a second prize. For a bouquet of Daffodils, foliage optional, Mrs. M. Tucker was first with a very artistic arrangement; Miss Catherine Boscawen was second; and Lady M. Boscawen, third. For a bowl of Daffodils with their own foliage, Miss M. E. Williams was a good first with a large bowl of choice Daffodils loosely arranged. Mrs. Powys Rogers was second; and Miss Gatley came in third. In a similar class open to all exhibitors, Mr. C. E. Tregoning was second.

Table decorations were all very beautiful and light. In this class the Hon. Mrs. Gilbert, of Penhale, took the first prize with an elegant mirrored centrepiece and corner sprays of the Daffodil, resting on the foliage of Asparagus. The second prize went to Miss M. Gatley, Tresillian, being a close second; but perhaps too heavily arranged in a huge basket with the foliage of Daffodils planted or draped in orange and sulphur-coloured Pongee silk. The third prize went to Mrs. Powys Rogers.

In the classes for spring flowers the beautiful scarlet *Anemone fulgens* reigned supreme; indeed, the size of these flowers is wonderful, measuring 3½ in. to 4 in. across, and of the rich, brilliant scarlet so telling in gardens. Mr. M. H. Williams was

that one has been accustomed to see in the bulbous favourites. Mr. C. E. Tregoning was a good first, and Mr. T. H. James a close second. In the class for six pots of Hyacinths Miss Paull and Mr. C. Hill were first and second respectively. Entries were very weak in the Tulip class, Mr. C. E. Tregoning taking first.

Violets are certainly at home at Tregye, Perranwell. Lady M. Boscawen took first with some marvellous specimens of Marie Louise and the old Neapolitan. Miss Sybil Wingfield was a close second with Lady Hume Campbell, Marie Louise, and Comte Brazza.

The president of the society gave a special prize for a group of Rhododendrons, any variety. These were showy, many new and beautiful hybrids being represented. The prize goes to Mr. D. H. Shilson, of Rhododendron fame. In the class for six distinct varieties of Rhododendrons Mr. Shilson is first with *Arborescens*, and *Javanicum*, a beautiful orange and terracotta, *Veitchianum*, and others. Mr. Jonathan Rashleigh was second. Mr. Shilson is again first in the class for cut Sikkim Rhododendron, and again first for cut Ghent Azaleas. Mr. J. C. Daubuz takes first for the finest specimen *Camellia*, Mrs. Powys Rogers being second. For the best six *Camellias* Mr. W. Cole Pendarres was first, and Mr. J. C. Williams second. For the best group of hardwooded outdoor flowering shrubs Mr. M. H. Williams came in first with some well-furnished sprays of blooms, such as *Spiraea hypericifolia*, *Berberis Darwinii*, *Ribes sanguinea*, &c. Mrs. John Williams took the second place.

The trade exhibits were excellent, and filled the upper room with their contributions in fine style, many being of sterling merit. From Messrs. Barr & Sons, of Long Ditton Nurseries, Surrey, came a grand display of Daffodils, for which the firm is famous. One variety amongst their group, introduced by them last year and named "Victoria," seems larger than we saw it here last year. Their collection consisted of such varieties as *N. Barrii* conspicuus, very fine; Sir Watkin, Sulphur Phoenix, Orange Phoenix, Cernuus, a beautiful white, and Cernuus pulcher. Of the Ajax section Emperor and Henry Irving were good. In addition to Daffodils Messrs. Barr had a very prettily arranged group of Alpines, such as *Cyclamen Coum*, and *C. ibericum*, *Fritillaria pluriflora* and *ruthenica*, Wilson's Blue Primrose, and many other interesting flowering plants.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, also contributed an extensive group of Daffodils, in which the flowers of *Narcissus spurius coronatus* were fine, also *N. Cynosure*, *N. obvallaris*, *N. scoticus*, *N. Golden Spur*, and *N. bicolor* Horsfieldi. Mr. Ware also had arranged as a border to his Daffodils a number of Anemones, Saxifragas, *Chionodoxa Luciliae*, and *Primula denticulata*.

Messrs. Dickson, of Chester, sent a very good group of Daffodils, in which figured *N. tortuosus*, Queen of Spain, Campernelli, Jonquils, bicolor Horsfieldi, Empress, Emperor, and *Chionodoxas* in variety; also a specimen of a new *Crianium* named *yemense*. Its flowers are a pure white, with delicate pink tips, dark brown peduncle, and very sweet scented.

From Messrs. R. Veitch & Son, Exeter, came a collection of plants, such as Rhododendrons, *Pernettya atrococcinea*, a nice plant of *Eurya angustifolia* variegata, Azaleas, Magnolias, Prunus, Acacias, *Olearia stellulata*, and some fine plants of *Cyclamen persicum*.

T. A. Dorrien Smith, Esq., of Tresco sent (not for competition) a very unique collection of *Narcissus* and Polyanthus *Narcissus*, amongst which *N. incomparabilis* Princess Mary was very fine, also *N. Barrii* conspicuus, and many other good varieties.

Capt. Prinwell, of Trehane, contributed (not for competition) some very fine varieties. *Narcissus maximus* was exceedingly fine, its large, bold flowers towering on stems like walking canes about 3 ft. long.

The general effect of the show was far in advance of last year, and promises to be a very thriving one. Rev. Mr. Engleheart, of Daffodil fame, acted as judge, in which position he had some hard tasks.

Iris Kaempferi by the Acre.—In Floral Park, N.Y., U.S.A., there are four acres filled with this grand section of Irises. When the plants are in flower the sight is simply magnificent.



FRITILLARIA PLURIFLORA.

first, and Lady M. Boscawen second. For *Anemone coronaria* Mr. P. D. Williams was first with enormous flowers, the colour being very bright; Mr. R. Nowell Ustiche was second, and Miss C. H. Rogers third. Mr. P. D. Williams is again winner in the class for Polyanthus, the Rev. J. T. Boscawen being second, and Mr. Chas. Hill third. In Primroses Mr. P. D. Williams gained first; Mr. D. H. Shilson was second; and Miss C. C. Rogers third. For twelve distinct, cut, tuberous plants Mr. D. H. Shilson took first with some wonderful specimens of *Scilla hispanica*, *Leucojum aestivum*, *Doronicum plantagineum excelsum*, *Helleborus colchicus*, &c. Mrs. Powys Rogers was second. Hyacinths were fairly good, but lacked the strength and character

FRITILLARIES.

FRITILLARIES rank amongst the most graceful and interesting of our Spring flowers, and are worthy a place in all choice borders and rockeries; in grass they are quite at home, especially where they can get a little shade. At present, in Messrs. Barr & Sons' Nurseries, at Long Ditton, two very beautiful species are in bloom, one—the first to open this season—*F. oranensis* from Algeria, with very striking, handsome bell-shaped flowers, of a rich maroon, with bright green midrib. This first opened its beautiful pendant flowers on February 8th.

Next to it is *Fritillaria pluriflora* (see illustration, p. 475), a species recently introduced from California, and as yet little known. The flowers are of a beautiful soft rosy Lilac, and borne in the axils of the leaves, on stems 12 in. to 15 in. high. It appears to be quite hardy, and is being cut from the open at Messrs. Barr's Nurseries. There are many other beautiful Fritillaries which have yet to open and charm our vision, to wit, the dainty *F. armena*, covering the ground with its quaint yellow flowers; *F. aurea*, with its large golden bell-flowers, which are beautifully tessellated; *F. persica* from Mount Ararat, with handsome pyramidal spikes of dusky brown bell-flowers; and the rare and beautiful *F. Walujewi*, with flowers blood-red inside and silvery on the back of the petals. Then comes the well known Snake-head *Fritillaria* (*F. Meleagris*), so-called from its tessellation resembling that of a snake. Perhaps the most beautiful of all is *F. latifolia nobilis*, introduced by Messrs. Barr a few years ago. It has the largest bells of all; the colour is a rich deep blood-red, and the segments are beautifully tessellated.

Fritillaries can be strongly recommended to all who have shady nooks, and shady parts on their rockery and gardens, and they are most effective. When associated with such charming spring flowers as *Chionodoxas*, *Muscari*, *Anemone blanda*, *Narcissus minimus*, the Hardy *Cyclamen*, and Winter *Aconite*. The best soil, however, for Fritillaries is equal parts of loam, peat, and sand, with a little mortar rubbish, well mixed with the whole, if at hand. If the bulbs are lifted after flowering, never allow them to get dry; they should be kept in silver sand in a cold house free from frost until planted.—*Hardy Plantsman*.

THE NATIONAL CHRYSANTHEMUM SOCIETY.

THE adjourned annual meeting was held at 6 p.m. on the evening of Monday, the 21st inst., at Anderton's Hotel, Fleet Street, E.C. The chair was again filled by Mr. T. W. Sanders, who had an onerous task in view of the stormy character of the meeting.

The principal business on hand was the formal adoption of the report and balance sheet for 1897. Before this came on for consideration Mr. B. Wynne said that as Mr. Gordon had spoken at the last meeting of medals having been awarded which had not been paid for, he felt constrained to return the one voted him by the society for service rendered. Mr. Gordon explained, however, and discriminated between the medals, of which Mr. Wynne's was one, that had been paid for, and the gold medals, and illuminated addresses costing £22, which had not been paid for at that time. Mr. Wynne accepted Mr. Gordon's explanation.

The minutes of the February meeting having been read and adopted, after an error in the figures given as the result of the voting upon the amendment to the report had been rectified (the exact figures were 82 for the amendment and 6 against), the revised financial statement was brought out. Some further corrections were made in this. As it stands now it shows a totality of expenses amounting to £1,171 5s. 2d., and receipts £1,123 9s. 10d. There is thus a deficit on the year's working of £47 15s. 4d. £50 has been withdrawn from the reserve fund, as the bank will not allow a less sum than £50 to be drawn from deposit. The deficit of £47 15s. 4d. has been made good out of this £50, and the balance £2 4s. 8d. has been transferred to the current account of the reserve fund, making this item £8 17s. 8d., and the whole reserve fund £58 17s. 9d.

The value of the prizes in money and medals given during the past year has been £533 16s., and the whole of the liabilities of the society, especially items of £42 8s. to Messrs. H. M. Pollett & Co., and £41 16s. to Mr. J. A. Restall have been cleared off,

so that the society has now a clean sheet and a fresh start. Mr. Cholmeley asked why the financial statement did not bear the auditors' signature, and it subsequently transpired that the auditors had refused to recognise the alteration, a written statement from them to this effect being read by the chairman, and this was supplemented by *viva voce* remarks from the gentlemen themselves, who it will be remembered are Messrs. H. J. Cutbush and A. E. Stubbs.

Several items in the statement of accounts were explained by Mr. Dean, who also made answer to Mr. Gordon's comparison of the show expenses of 1897 with those of former years made at the last meeting. Mr. Dean denied most emphatically that they were heavier. They only appeared so because he had not followed the practice of his predecessor in splitting up the items under various heads. If they added the whole of the costs of cartage, hire of plants, and avowed "show expenses" they would find that in 1889 the total expenses for three shows were £53 1s. 10d.; and in 1891, for the same number of shows, £42 12s. 6d.; whilst the Jubilee shows of last year, five in all, only cost £59 15s.

Mr. Moorman passed strictures upon the extravagant items for printing and medals, and advocated the invitation of tenders for each. He deprecated the way in which they had gone to the world as a flourishing society, when in reality they were not so. He thought they ought to place the £50 for "stamps, telegrams, etc." under show expenses. This Mr. Dean made haste to refute, saying that the postal charges for various things were very heavy and made a big aggregate. Mr. Dean's answer was satisfactory and to the point on this head.

Mr. Starling again referred to the alleged balance of £10 10s. 8d. at the beginning of the year, which, he said, ought never to have been placed as a balance in hand. They ought to have a reserve fund of £300 or £400, and instead of that they had only a paltry £50.

Messrs. Newall, Spicer, Waterer, McKerchar, Willis, Mills, Rundle, Tagg, Gordon, and Bevan all joined in the discussion, which was exceedingly animated, and even incisive at times. Both Mr. Starling and Mr. Willis were emphatic in saying that, despite assertions to the contrary, the auditors must have known of the liabilities of the society, since the very bills that they were supposed to have scrutinised bore receipts for payments on account.

Finally on the motion of the chairman, seconded by Mr. W. B. Beckett, the financial statement obtained the formal sanction of the meeting and it was decided that it should be printed and circulated among the members.

Next came an estimate of the minimum receipts which the society might expect to have during the coming year, and the maximum expenditure for the same period. It was found that the total receipts would probably be £1,066 11s., and the expenditure £1,115 1s. 6d., or a balance of £48 10s. 6d. against the receipts. Proposals were mooted whereby the expenditure would be reduced to £1,044 3s., which would leave a balance in hand of receipts over expenses of £22 8s. This met with the approbation of the meeting.

The report was the next item of contention. Mr. Wilkins drew attention to the incongruity of the report and financial statement, and Mr. Cholmeley ridiculed the "high falutin" phrases about the society's undiminished prestige, and financial soundness. The report was, however, carried, with the exception of the paragraph referring to the special class for twelve vases of Chrysanthemums, which has been abandoned. The belated report did not reach its haven, however, until it had received a good deal of criticism from all parts of the room.

The election of officers was the next item on the agenda.

Mr. H. Cannell, senior, proposed, and Mr. Langdon seconded that Sir E. Saunders should be re-elected president. This was carried unanimously, whilst a vote of thanks was subsequently passed to Sir Edwin for the support he had given the society.

The committee recommended that Mr. J. R. Starling, the retiring treasurer, should be made an honorary fellow of the society, and should be presented with a letter of thanks signed by the president, and a small gold medal. Mr. Beckett proposed this, Mr. Ballantine seconded it, and the whole course applauded. Mr. Starling replied in suitable terms.

Mr. Moorman proposed, and Mr. Rundle seconded that they should have a paid secretary who should have no vote. This was carried with unanimity.

There were two candidates for the treasurership, Messrs. Ballantine and Gordon, and two for the general secretaryship, Messrs. R. Dean and G. W. Cummins, also a goodly number of nominees for the committee. The ballot was resorted to in order to decide the question satisfactorily.

The results were that Mr. Ballantine was chosen treasurer, and Mr. R. Dean general secretary, the latter by 63 votes to 43. The following gentlemen were asked to serve upon committee:—Messrs. T. Bevan, G. Langdon, A. Taylor, W. Howe, W. Wells, W. Higgs, J. P. Kendall, T. L. Turk, F. Gilks, J. T. Simpson, R. Fife, W. Daniels, and A. Outram—13 in all.

Mr. T. W. Sanders takes the office of chairman, and Mr. P. Waterer that of vice-chairman of committee for another year, whilst there was no mistaking the cordiality of the invitation extended by the assembly to Mr. C. Harman Payne to continue the duties of foreign corresponding secretary, which he has performed so well.

Monsieur Ernst Calvat and Mr. J. R. Starling were admitted honorary fellows of the society on the proposal of Mr. C. H. Payne, seconded by Mr. D. B. Crane.

The new rules were next brought under discussion, after the old ones, hitherto operative, had been formally rescinded. There was a good deal said, and some alterations were made.

Mr. J. W. Moorman proposed that a sub-committee of five members (exclusive of ex-officio members) be appointed to enquire—

(a) What places can be obtained for holding future exhibitions, either by a subsidy as now, or in reliance upon the society's own resources.

(b) To closely examine the whole question of minor shows with the object of ascertaining their advantage to the society or otherwise.

(c) To fully consider the question of selling the floor space, and to report the result of their investigations to the general committee, who are now requested to formulate such recommendations to a general meeting of members to be held on the first day of the November show, and that no further fixtures are to be made before that date.

This was carried unanimously.

A vote of thanks to Mr. Sanders for his excellent performance of the arduous duties of chairman brought the meeting to a close not long before midnight.

EALING GARDENERS' MUTUAL IMPROVEMENT SOCIETY.

THE grand spring flower show, promoted by this society in aid of the Gardeners' Royal Orphan Fund was held in the Victoria Hall, Ealing, on the 15th inst., the results being highly satisfactory. Lady Nelson, who was supported by the President, J. Harris, Esq., F.R.H.S., Mrs. Harris, W. Marshall, Esq., F.R.H.S. (Chairman of the Fund), Mr. A. F. Barron (Secretary), and others, made some sensible remarks concerning the object of the show, and alluded to the pleasing circumstance that all the exhibits were informal and honorary. Notwithstanding the fact that the weather, for a fortnight previous to the show, had been of a very retarding character, the colour and general effects were very fine.

The central and most commanding group was furnished by Messrs. de Rothschild, Gunnersbury Park, Acton (gardener, Mr. Geo. Reynolds). The formation was a series of beautiful curves which, for want of a better name, may be described as a square without angles, the corners being extended and rounded off. The effect was unique. The centre-piece of this much-admired arrangement was a tall specimen *Grevillea robusta*, about 12 ft. high, surrounded by Palms, *Dracaenas*, *Clivias*, *Richardias*, etc., the so-called "corners" being set off with nice plants of *Cocos weddelliana*. These formed what may be termed sub-centres, round which were grouped such things as *Azalea mollis*, *A. sinensis*, *Eulalia japonica variegata*, *Richardia elliptica*, *Amasoniana punicea*, *Narcissus in var.*, *Dendrobium wardianum*, *Sophronis grandiflora*, and *Lily of the Valley*, the whole being edged with *Isolepis gracilis*.

A prominent place was also accorded Lady Nelson, Hanger Hill House, Ealing (gardener, Mr. D. Cooper),

who sent a beautiful group consisting of Palms—notably *Kentia fosteriana*—Azaleas, Deutzias, Richardias, *Spiraea astilboides*, and bulbous plants. The design was oval in shape, the whole being encompassed with dwarf variegated plants like *Panicum*, *Pelargonium*, *Madame Sallery*, etc., which produced a very pleasing effect.

The point of vantage of the third group was well occupied by E. H. Watts, Esq., Devonhurst, Chiswick (gardener, Mr. James Gibson). The arrangement here was quite different to those already described, although Palms, like *Kentia fosteriana* and *Cocos weddelliana* received a fitting place. Other noticeable plants, in addition to spring-flowering bulbs, were *Euphorbia jacquiniæflora*, *Begonia Glorie de Sceaux*, Azaleas, *Cinerarias*, *Solomon's Seal*, etc., the edging being composed of a blending of *Adiantum cuneatum* and *A. Capillus-Veneris*.

The plants which adorned the stage came from Gunnersbury House, Acton (gardener, Mr. J. Hudson), and consisted principally of *Cordyline australis*, *C. indivisa*, *Dracaena sanderiana*, *Clivia miniata*, and *Narcissus poeticus ornatus*, bordered with the beautiful drooping fronds of *Asplenium flaccidum*.

The president contributed a very pretty semi-circular group which the hon. secretary, Mr. W. Roberts, his energetic gardener, well set up. The most conspicuous plants were Palms, *Dracaenas*, *Cinerarias*, *Pandanus Veitchii*, Azaleas, *Croton Victoriae*, Ferns, and Flowering bulbs.

Mrs. Willey, "Savernack," Aston Road, had a neat collection of plants, which Mr. G. Woods, the gardener, manipulated to advantage. Among these, we noted *Boronia elatior*, *Begonia Gloire de Lorraine*, and *Chysis bractescens*. Miss Collinson, The Haven (gardener, Mr. Cox), sent a fine lot of *Richardia africana*. These were nicely grouped together, and fronted with *Veltheimia viridifolia*, the whole forming a very striking scene.

Colour and character were well represented in the group which came from E. P. Oakshott, Esq., "Orchardene," Montpelier Road (gardener, Mr. C. Long). Small Palms, Deutzias, *Cinerarias*, *Narcissus*, Hyacinths, Tulips, *Veltheimias*, *Lachenalias*, *Marantas*, and *Funkias*, &c., gave great variety and a fine effect.

A similar collection was also lent by H. W. Peal, Esq., "Oakhurst," St. Stephen's Road (gardener, Mr. C. Edwards). Mr. Edwards, however, had a nice piece of *Dicentra spectabilis*, edged with the Star-flower (*Treteleia uniflora*).

C. T. Sutton, Esq., The Beeches, East Acton (gardener, Mr. J. W. Simpson), was in evidence with a collection of foliage and flowering plants, such as *Ficus elastica*, *Dracaenas*, Azaleas, &c.

E. Hyde, Esq., Hill Crest, Castle Bar (gardener, Mr. Holloway), occupied a similar position with a predominance of *Primula sinensis* and *obconia*.

W. Owen, Esq., The Elms, Castle Bar (gardener, Mr. R. Green), must be complimented on the well-grown collection of *Cyclamens*, Hyacinths, Tulips, *Narcis*, *Primulas*, *Cypripediums*, Azaleas, &c., which he sent. These were staged in contra-distinction to all the other groups, which were put up on the floor.

The trade, also, was largely represented, a fine lot of *Cyclamen latifolium (persicum)* coming from the Church Road Nursery Co., Hanwell. These produced a bright and interesting show, and were greatly admired. Messrs. Hart Bros, The Grove Nursery, Ealing, had a good representative group of Palms, *Araucarias*, *Aspidistras*, *Adiantums*, and bulbous subjects. Mr. A. Hawkins, Gordon Road Nursery, replied with another group of an interesting character. His Azaleas, *Dendrobes*, *Astilbes*, *Primulas*, double *Daffodils*, &c., meriting comment. Last, but by no means least in importance, came a noble collection of plants from Mr. Geo. Cannon, St. John's Nursery, a well-known name in Ealing. Here we had a large specimen *Araucaria excelsa*, flanked on either side by huge examples of *Dracaena indivisa Veitchii*, Palms being employed to fill the intervening space. *Lilium Harrisii* stood out well against this background of foliage, while such things as *Astilbe japonica*, *Eulalia japonica variegata*, Azaleas, *Cyclamen*, Ferns, and bulbous plants generally, contributed to produce a picture worthy of record.

In addition to the sixteen groups of plants already mentioned there were some specimen plants also, which were kindly lent for the occasion.

The exhibition itself was a decided success, and, therefore, great credit is due to all concerned. If,

then, the financial result is in any proportion to the floral aspect, we may look for a substantial benefit to that deserving charity, the Royal Gardeners' Orphan Fund.

THE FLOWER GARDEN.

As was usual, March brought with its early days a snap of cold weather which, although it has done some damage to early subjects, will yet probably prove a real blessing in that it will serve to keep things back in their proper place. The growth of the grass, which has been phenomenal for winter-time, has been checked considerably, and this must prove a distinct advantage, as it will obviate the early use of the mowing machine, and give the sward something of the rest that it requires. But if the mowing machine is not wanted, the roller should be kept often at work, and if the frost is allowed to go properly off the grass before the operations are commenced, no harm will be done. The continued mild weather proved very favourable for the burrowing of worms, and thus where the pests appear to have been especially busy, it may be advisable to give the grass a watering with lime-water, which will quickly bring all the worms to the surface. As water can only take up a fixed quantity of lime in solution, there is no need to measure out the lime. A quantity should be placed in a coarse canvas bag, and plunged in a tank of water. In applying it, one third of the clear solution of lime should be mixed with two-thirds of clear water, and sprinkled over the lawn by means of a large rose-can. A little attention given to the worms now may save a lot of trouble presently, and will directly do the grass no harm whatever.

EDGINGS TO TURF.—Most people prefer to walk on the grass rather than on the gravel during the dry weather, and no one would blame them for the preference if only they would not insist upon walking on the edge. The result of this habit is that the grass edges are worn down, and are not only out of line, but become difficult to work the edging-shears upon. The grass edges to paths that carry, or rather are supposed to carry, a good deal of foot traffic will thus require cutting at least once a year, and the present is a capital time to get this seen to before the season's routine work commences. In dealing with straight edges, it is an easy matter to lay a line down, stretch it taut, and work by its guidance, but the proper negotiation of curves is a matter of much greater difficulty. Instead of fiddling about with stakes round which the line may be stretched to form a curve, it is far better to lay the line loosely down to form a guide, and to cut round it, taking care, meanwhile, not to force the line at all. In this case the iron must be clean and sharp, and must, moreover, be in practised hands.

ROSES.—When the cold weather overtook them, these were in a very forward condition, having shoots on them several inches in length. The result has been that plants which were not protected were sadly nipped, and have thus sustained a severe check. Of course, the autumn pruned plants with their more advanced growths have been the greatest sufferers. Material need not now be kept to hand for covering, unless frosty nights make it necessary, especially in the case of the Teas. Planting should, by this time, be practically finished, and likewise all alterations of or additions to the beds. If a sufficiency of short half-rotten stable manure is available, all plants that have been newly planted or disturbed in any way should receive a liberal mulching—the others were attended to in this respect at the beginning of the winter.

CARNATIONS.—Within the course of the next week the border Carnations that have been wintered in pots in cold frames must be consigned to the open ground. The plants, like other things, are showing signs of the mild January and February by the quantity of growth they have made. It will thus be inadvisable to delay putting them in their flowering quarters for the pots in which they are now are small, and should be well filled with roots. The plot of ground chosen for the Carnations may receive another light dressing of soot at once, and a sprinkling of wood ashes, if they can be spared, will not come amiss. Fork this well in, choosing a bright, dry day for the operation. The ground has now

recovered from the effects of the rain and snow and is in capital working condition. It will thus not require any great amount of labour to break it up finely, and put it in its final stage of preparedness to receive the plants.

PLANTING.—The exact way in which the plants are put out will of course depend upon circumstances, but where large quantities are grown as much for supplying cut flowers as anything there is nothing to beat planting in beds 3 ft. wide, with narrow alleys between each. Each bed will hold three rows of plants which may be from 10 in. to a foot apart in the row. This system admits of attention being given to the plants as required without the necessity for trampling on the loose surface.

AUTUMN PLANTED CARNATIONS.—These have had a fine time of it this year, and are looking exceptionally well; indeed if only they could be depended upon to do as well each season there would be very few who would recommend the common practice of wintering the rooted layers in frames. There are very few vacancies indeed, but the few there are remind us of the necessity for having some pot plants in reserve to fill them. This should be done as soon as occasion offers. If the late frost has lifted any of the plants partially out of the ground this too should be attended to. It will also do no harm to run a hoe lightly through the beds to check rising weeds. This should be frequently repeated, and there will be no difficulty in keeping the beds clean.—A.S.G.

GARDENING MISCELLANY.

LILY-WHITE SEAKALE.

I AM greatly surprised to find your correspondent "A. P." does not succeed as well as he could wish with the above variety. With us it does remarkably well. I have grown it for the past seven years with every satisfaction, as it forms good crowns and exhibits no signs of disease. I have found it more amenable to force into growth in the month of November than the old kind which is always of a smoky-looking colour before, as well as after cooking, while Lily-white is as near perfection as the name implies. We discarded the old variety several years ago, and rely solely upon the newer kind. We give it a deeply dug rich plot in which to grow, and it has two dressings of salt during the season in showery weather. I should add our soil is a sandy loam resting on the old red sandstone, and evidently favours the growth of this vegetable.—J. Mayne, *Bicton*.

GOLDEN PRIVET.

WHAT a beautiful plant this is when grown luxuriantly; and among dark foliaged evergreens it is charming. We could not get the plants to succeed well on heavy, cold, and wet ground; but in a sheltered position where the soil is drier and lighter, the plants have grown several feet during the past seasons. For flower garden work bands (by pegging down and stopping) can be formed round large beds. For decorative purposes specimens of any form do well in pots, and are beautiful among flowering plants. For covering old walls it can be trained as easily as Honeysuckle or Ivy, and mixed with such plants as the hardy *Garrya elliptica*, *Cotoneaster microphylla*, *C. Simonysii*, variegated, and other Ivies, the Golden Privet is most useful. Its propagation is as simple as that of any of the Privets.—M. T.

SOCIETIES.

ROYAL HORTICULTURAL.—March 22nd.

THE Drill Hall was well filled with a great variety of plants on Tuesday last, including large exhibits of Orchids, *Amaryllis*, *Roses*, *Cinerarias*, *Clivias*, *Cyclamens*, Tulips, Hyacinths, *Daffodils*, stove and greenhouse plants, Ferns, and other smaller lots.

A very showy group of Orchids was put up by Messrs. Hugh Low & Co., Clapton. *Cattleyas*, *Odontoglossums* and *Dendrobiums* were the leading features of the collection, which was interspersed with Palms and Ferns. Amongst other things we noted

Cymbidium eburneo-lowianum, *Odontoglossum Edwardii*, *O. triumphans*, *Dendrobium splendidissimum grandiflorum*, and the beautiful *D. Boxallii*, all in fine condition (Silver Banksian Medal).

Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking, staged an interesting little group of Orchids, including *Epidendrum Endresii*, *E. varicosum*, *Sarcophilus Hartmannii*, *Masdevallia Pourhaixii*, and *M. Veitchii grandiflora*, a small piece bearing a grand flower.

Messrs. B. S. Williams & Son, Upper Holloway, London, showed a group of Orchids consisting largely of *Coeloglyne cristata alba*, with smaller pieces of *Phaius Norman*, *Zygopetalum Perrenoudi*, and *Cypripediums*. *Odontoglossum crispum flaveolum* with its yellow flowers was also very distinct.

E. Ashworth, Esq. (gardener, Mr. H. Holbrook), Harefield Hall, Cheshire, exhibited a beautiful white variety of *Dendrobium nobile* named *D. n. ashworthianum*, also *Odontoglossum Rossii aspersum violaceum*.

Mr. Thos. Rochford, Turnford Hall Nurseries, near Broxhourne, exhibited *Dendrobium nobile* Rochford's var., and the beautifully blotched *Odontoglossum rochfordianum*, a natural hybrid.

Mrs. Laura C. Joad (gardener, Mr. Standing), exhibited *Cymbidium eburneo-lowianum* and *C. eburneum*. Baron Schroder (gardener, Mr. H. Ballantine), The Dell, Egham, exhibited the grand variety *Odontoglossum crispum Princess Christian*, splendidly blotched with brownish purple. A Cultural Commendation was accorded to H. T. Pitt, Esq. (gardener, Mr. R. Aldous) for *Odontoglossum excellens Rosslyn* var., a splendid variety in grand condition. Dr. Frederic F. Hills (gardener, Mr. Wise), Campbell Road, Croydon, exhibited a fine flowering piece of *Odontoglossum brevifolium* Dr. Hill's var. grown in a basket. *Odontoglossum crispum roseum* was shown by Mr. J. Drew, gardener to J. B. Brookes, Esq., Finstall Park, Bromsgrove.

On the right hand side of the doorway, Mr. H. B. May, of Dyson's Lane Nurseries, staged a semi-circular group of Clematis in pots. Miss Bateman, Lord Londeshorough, Albert Victor, and Lord Nevill were some of the best forms (Silver Flora Medal).

On the opposite side of the doorway there were three circular groups of pot Roses from the nurseries of Messrs. Wm. Paul & Son, Waltham Cross. *Enchantress* and *Sylph* were especially well shown, and the plants were in remarkably fine condition. A splendid display of Hyacinths in pots was made by the same firm. There were in all 250 plants, in 100 choice varieties. The spikes and bells were large throughout and the colours first-class (Silver-gilt Flora Medal).

A neat group of dwarf and showy Cinerarias was put up by Mr. John R. Box, West Wickham. Some very fine dark, nearly black, forms were very noticeable here.

The hardy flowers sent by Messrs. Paul & Son, The Old Nurseries, Cheshunt, formed a showy little group and included fine clumps of *Saxifraga Stracheyi*, *Anemone Hepatica*, and *A. Pulsatilla*.

Messrs. Barr & Son, King Street, Covent Garden, had a magnificent display of Daffodils for which a Silver Banksian Medal was awarded. There were about fifty in all, of which such varieties as *Wear-dale Perfection*, *Golden Spur*, Mrs. J. B. M. Camm, Henry Irving, and *Empress* were the cream. Varieties of *Narcissus poeticus* were likewise well shown. Messrs. B. S. Williams & Son, Upper Holloway, N., showed *Azalea mollis*, *Staphylea colchica*, and several fine forms of *Amaryllis*. Messrs. Hugh Low & Co. sent a hatch of *Carnation Winter Scarlet*.

Messrs. J. James & Son, Woodside, Farnham Royal, are renowned for their grand strain of Cinerarias, which on this occasion was illustrated by a splendid array of well grown and flowered plants. The dwarfness of the plants, and the size, substance, and brilliancy of colour of the flowers was as great as ever. A Silver-gilt Flora Medal was awarded.

The cut Roses contributed by Mr. George Mount, Canterbury, were simply perfection. Of a surety such varieties as *Catharine Mermet*, Mrs. John Laing, and *Ulrich Brunner* have never been better shown. Size, colour, and form were all remarkably good, even for Mr. Mount's Roses, which is saying a good deal (Silver-gilt Flora Medal).

Messrs. John Laing & Sons, Forest Hill, S.E.,

bad a display of florists' devices in the shape of wreaths, floral harps, etc., the whole set up in a very attractive manner.

A comprehensive display of about 200 cut Roses came from Mr. W. Rumsey, Joyning Nurseries, Waltham Cross. There was a capital stand of the new variety, Mrs. Rumsey, and Comte de Raimbaud, Baron de Bonstellan, Niphotos, and Beauty of Waltham were all represented by good samples (Silver Flora Medal).

Messrs. Wm. Cuthush & Son, Highgate, N. had a miscellaneous group of plants in which the pretty *Thyrsacanthus* figured conspicuously.

The St. George's Nursery Company, Hanwell, received a Silver Gilt Flora Medal for a superb lot of *Cyclamen*. The plants were large and well flowered specimens, and the flowers too, were of great size. White, crimson, pink, and rose varieties were all in capital condition.

Messrs. R. & G. Cuthbert, Southgate, had a big group of Tulips in pots, of which such varieties as *Ophir d'Or*, *Joost Van Vondel* (white), *Toreador*, and *Adeline* were especially good. No less than forty varieties in all were shown.

A Silver Gilt Medal went to Mr. A. Chapman, gardener to Captain Holford, Westonhirt, Tetbury, Gloucester, for a splendid lot of *Amaryllis*, certainly the best ever sent from Westobirt. Deep crimson varieties were particularly strong, but all the flowers were large and good.

A Bronze Banksian Medal went to Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., for a collection of hardy flowers, in which *Narcissi* were particularly strong.

Messrs. John Laing & Sons sent up a very showy group of miscellaneous flowering and foliage plants, for which a Silver Banksian Medal was voted. *Leea amabilis* was a central and chief feature here in a glass case, and *Crotons*, *Caladiums*, *Dracaenas*, *Ericas*, and *Clivias* were all well in evidence.

Messrs. J. Hill & Son, Lower Edmonton, repeated their previous exhibits of exotic Ferns, a Silver Banksian Medal being this time awarded. The plants all through the collection were in capital condition.

From Messrs. J. Veitch & Sons, Ltd., Chelsea, came a fine lot of *Clivias*, the umbels of flower being characterised by tremendous size. *Pyrus florihunda atrosanguinea* was also well shown (Silver Flora Medal). Several fine forms of *Amaryllis* were submitted by the Chelsea firm, together with a batch of plants of the new *Dracaena Exquisite*.

A hatch of the variegated Wallflower *John Watts* was contributed by Mr. Hoath, gardener to J. Watts, Esq., Hamilton House, Newmarket.

At a meeting of the fruit committee a Cultural Commendation was given Mr Wythes, gardener to Earl Percy, Syon House Gardens, Brentford, for *Strawberry Royal Sovereign*. Nine dishes of Apples were submitted for the Veitch flavour prizes, Mr. J. C. Tallack, Livermere Park Gardens, was placed first with *Lamb Abhey Pearmain*. Mr. C. Herrin Dropmore, was second with *Sturmer Pippin*. Five dishes of Pears were staged, the first prize going to Mr. C. Ross, The Gardens, Welford Park, Newbury, with *Ne Plus Meuris*.

QUESTIONS AND ANSWERS.

* * * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

St. Brigid Anemones.—B. T. W.: You cannot now sow them too soon in seed pans or boxes, placing them in a slight heat to hasten their germination, if you can find room for them. In the absence of artificial heat either from hotwater pipes or fermenting manure, you can place them in a cold frame facing south, keeping the frame close till they have germinated. As soon as this has taken place, whether in a hothouse or frame, the seedlings must be kept cool and well ventilated to prevent the drawing and weakening of the plants. They should come on slowly in the early stages, and the natural heat of the sun will hasten them later on. Use light sandy loam in which there is a good quantity of leaf soil by way of compost. Before the seedlings get in any

way crowded you must prick them off singly in other boxes or in a cold frame, in lines about 1½ in. apart each way. This will facilitate their removal when being transplanted to their permanent quarters in the open ground. This may be done at any time after the plants attain some size, provided you take care to lift them with the roots intact, and choose a dull day for the operation. If you attend to shifting and watering whenever that becomes necessary, many of the the plants should bloom in the autumn.

Ringed Ficus elastica.—B. Walker: If you had done this last autumn the plants would have been in better condition for planting out in the flower beds, than they would be if the ringing is done now. It might be worth while trying, however, for the sake of dwarf plants near the edges of the beds. Small pots will be quite sufficient for plants with a few roots. Pot firmly when the shoots have rooted and have been cut from the mother plants. Plunge pots and all in the soil so as to avoid disturbance to the roots. These plants would be useful for the centres of beds next year.

Yellow-flowered Shrub.—J. B.: The specimen you sent was *Forsythia suspensa*. Its propagation is very easy. Before the leaves fall in the autumn, or even after that event, you can cut the moderately strong shoots into lengths of 6 in., and insert them firmly in pots of light, sandy soil. To insure the safety of the cuttings in winter they should be placed in a pit or cool house with just sufficient heat to keep out frost. Rooted plants are perfectly hardy, but cuttings are liable to perish until they have emitted sufficient roots to take hold of the soil. In the case of large bushes you can often cut off rooted suckers. Long shoots often bend down to and root into the soil. These, if taken off now and planted out, will make good growth before the coming season is over.

Saxifraga oppositifolia and its Varieties.—W. Cooper: As a rule, these mountain Saxifrages prove easy of culture and very hardy. They are more likely to lose in condition during summer than during the winter, whether frosty or otherwise. The reason is that in their native habitats they enjoy a cooler and moister atmosphere than they do in gardens which are seldom much above sea level. The relatively dry and hot atmosphere in June, July, and August checks the free growth which they would produce if more moisture were present. As a set-off against this, you should select positions on your rockwork that are sufficiently shaded to keep the plants cool during the long summer afternoon. They must at the same time be freely exposed to light: and if you can insure the soil being comparatively moist during the summer months, *S. oppositifolia* and its forms will enjoy full sunshine.

Late Planted Rhubarb.—T. W.: Begin by trenching the ground about 2½ ft. to 3 ft. deep, incorporating with the soil, as you proceed, a considerable quantity of well fermented manure, some of which will be as serviceable at or near the bottom of the trench as at the top. It is a gross feeder and should be treated liberally. If you use good crowns with plenty of roots, you will obtain very good results the first year of planting. You should allow the plants to grow at will, merely removing any flower stalks that may appear, but encouraging the growth of leaves.

Japan Maples.—W. H.: *Acer palmatum* is the correct botanical name of the species, which is often grown under the name of *A. polymorphum*. All the varietal names should be grouped under *A. palmatum*. There are many synonyms, and it is difficult without a reliable list to get at the correct names. A few of the forms grown as Japanese Maples do not belong here, but to other species, some of which, like *A. circinatum*, do not come from Japan.

Names of Plants.—A. C.: 1, *Arabis lucida variegata*; 2, *Aubrieta deltoidea* var.; 3, *Arabis alba*; 4, *Corydalis solida*; 5, *Narcissus pseudo-Narcissus* fl. pl.; 6, *Primula denticulata*; 7, *Sisyrinchium grandiflorum*.—J. C.: 1, *Asplenium flaccidum*; 2, *Jasminum nudiflorum*; 3, *Viburnum Tinus*; 4, *Ribes speciosum*.—J. Hood: 1, *Elaeodendron orientale*; 2, *Fittonia argyroneura*; 3, *Oplismenus Burmanni variegatus*; 4, *Ficus repens minima*; 5, *Ficus harbatus*.—D. C.: 1, *Odontoglossum crispum andersonianum*; 2, *Dendrobium crassinode*; 3, *Oncidium crispum*; 4, *Dendrobium primulinum*; 5, *Odontoglossum Edwardii*; 6, *Sarracenia Drummondii*.

Communications received.—W. Napper.—E. Paragreen.—A. P.—H. G. Smyth.—E. K. (next week).—C. Mackenzie (next week).—J. M.—R. B.—W. P.—T. Hardy.—C. T. B.—Aloe.—M. N.—A. C. L.—Lentil.—Rob.—Cabbage.

TRADE CATALOGUES RECEIVED.

BARR & SONS, 12 and 13, King Street, Covent Garden, London.—Barr's Hardy Perennials and Alpines.

HARRISON & SONS, Seed Growers, Leicester.—Harrisons' Farm Seeds.

JOHN LAING & SONS, Forest Hill Nurseries, London, S.E.—Special List of New and Rare *Clivias*, also *Streptocarpus*.

WEBBS'

BEAUTIFUL FLOWERS.



WEBBS' KINVER FAVOURITE WALLFLOWER,
6d. per packet, post free.

WEBBS' CANARY BIRD WALLFLOWER,
1s. per packet, post free.

Charming varieties of this favourite flower.

WEBBS', WORDSLEY, STOURBRIDGE.

NEW DOUBLE VIOLET, MRS. J. J. ASTOR.

This beautiful Violet, of a deep rosy-heliotrope is meeting with a most cordial reception, and as the stock is getting very limited, and we have already many orders booked for April and May, we beg all intending purchasers will please apply at once to prevent disappointment.

The Managers, Hood Gardens, Totnes.

HARDY CLIMBERS. FINE COLLECTION.

FOR PILLARS, ARCHES, WALLS,
PERGOLAS, TREES, &c.

GEO. BUNYARD & CO.

Beg to say their List of the above may now
be had free, from

THE ROYAL NURSERIES, MAIDSTONE.

1898. FORBES' CATALOGUE 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants

is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and price of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other valuable information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,

ESTABLISHED 1870.

Nurseryman, Hawick, Scotland.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, APRIL 2nd, 1898.

NEXT WEEK'S ENGAGEMENTS.

WEDNESDAY, April 6th.—Royal Caledonian Society's Show in the Waverley Market, Edinburgh (2 days).

HORTICULTURAL SOILS.—Each succeeding year sees greater interest taken in the questions of soils and manures. The latter, of course, are merely intended to supplement, artificially, the deficiencies of the former, whether natural or induced by the removal of the crops which grow upon them. The question of horticultural soils was taken up at the meeting of the Royal Horticultural Society on the 22nd ult., by Mr. J. J. Willis from the famous laboratory of Sir John Bennet Lawes, Bart., Rothamsted, Herts. Mr. Willis commenced his lecture by stating that the fertility of soils for horticultural purposes depended upon the rocks from which they were originally derived by disintegration. This would apply to the mineral ingredients of plant food, and the nature and relative quantity of the materials in which the valuable elements were primarily locked up. The finer the rocks are broken up the more plant food they are able to supply; but at the same time these soils must be well drained and contain sufficient granular matter to render them sufficiently porous for the free admission of water and air, so that the excess of the former may pass freely away, and the latter gain ready access to the roots of plants. During heavy rains a soil gets its store of water replenished, but it depends entirely upon the character of a soil as to its holding capacity for water and its capability of bringing any given crop to maturity by furnishing the supply for the immediate necessities of the plants. Porosity also allows of the slow ascent of water from the lower reaches of the subsoil by the process known as capillarity, and this, too, at a time when sandy, gravelly, or impermeable clay soils may be suffering for want of water at and near the surface in times of severe and prolonged drought. The temperature of a soil is very largely dependent upon its porosity, and at no time is this more evident than in spring, just when the sun is beginning to warm up the earth after the departure of winter. Upon the nature of a soil depends, also, its capability of absorbing and storing up of the heat of the sun. All these facts are of primary importance to the cultivator, because the earth, as a laboratory for a complicated series of chemical changes for the preparation of plant food, can only accomplish its task properly in the presence of a sufficiency of moisture, air, temperature, and the elements necessary for plant life. They were dealt with by Mr. Willis in his own particular way as a student and conductor of experiments.

One of the essential ingredients of a fertile soil is humus, consisting of decaying vegetable and animal remains, the former

being the more important of the two. The lecturer went on to describe how a soil, originally poor in humus, may and does come to contain sufficient for the support of the higher plants and cultivated crops. Very poor or thin soils are capable of supporting only the lower types of vegetation, but as these decay and add their quota of humus to the originally barren ground, the latter becomes proportionally enriched, and capable of supporting a higher vegetation. Virgin soils, that is, those which have never previously been placed under crops by man, owe their fertility to the accumulation of decaying and living vegetable matter, the latter being added to the former by the breaking up of the soil by settlers or pioneer cultivators. A soil that is rich in humus contains all the elements of plant food, including nitrogen, the most important and valuable of all. This nitrogen, being practically locked up in the humus, is gradually released on the decay of the latter, and otherwise made available for absorption by living plants. The permanent fertility of a soil is largely dependent upon its capability of retaining plant foods. The peaty and fibrous soils and decaying leaves, so largely utilised by horticulturists, owe their fertility to the fibre and other organic matter which they contain, and with which nitrogen is always associated. As this important element is liberated, it undergoes the process known as nitrification, after which it is capable of absorption and assimilation by living and growing plants. In proportion to the amount of nitrates and ammonia contained in the soil of a garden, so will it be fertile. The operations of tillage are directly conducive to the activity of the microbes which are the nitrifying agents, and gardeners cannot be too well acquainted with this fact. The stirring of the surface of soil under crop keeps down weeds and aerates the soil, but it does more in stimulating those lowly but all important helping organisms, which are present in all soils in proportion to their fertility, and whether under cultivation or otherwise. Potting soils owe their fertility to the quantity of fibre they contain; and the rapidity of the liberation of plant food is dependent upon the porosity of the materials employed. Temperature bears strongly upon the process of nitrification in the soil, so that vegetables in the open garden in early spring have a difficulty in procuring the requisite amount of nitrogen. Here the cultivator will find it to his advantage in coming to their aid with some readily available nitrogen in the form of nitrate of soda, sulphate of ammonia, guano, fowls' dung, or something of that nature. The question of soil nitrogen is always one of the burning topics of the cultivator; hence it is in no way surprising that Mr. Willis dealt with it rather fully.

The material known as Jadoo was passed in review, because, though not a soil, it had been recommended as a substitute for it in potting and other garden operations. The body or matrix of it consists of peat moss, with which phosphoric acid, potash, gypsum, bone meal, soot, and other ingredients had been brought together, forming a handy or convenient concentration of plant food. A most important subject for horticulturists to consider is the amount of immediately available plant food a soil may contain, not merely the total quantity which is locked up in it, and which plants are unable to appropriate. The growth of a plant is absolutely dependent upon the whole of the elements of its food being present in an available condition, and is regulated by that one which is to hand in the smallest quantity. It is the duty of the cultivator to ascertain which element is deficient in any given soil, and to supply it.

To get a full crop the defective element or elements must be supplied, and the mechanical condition of the soil made perfect by efficient tillage, so that everything may be placed on a properly working basis. Should moisture be deficient, artificial means must be taken to amend the want, as it is the vehicle for carrying all plant foods obtainable from the soil. Summarising the most important elements of plant food that were liable to be present in insufficient quantities in soils, he named nitrogen, potassium, and phosphorus, the peculiarities of which he explained, and the forms in which they might be supplied.

The Flower Gardens of Grasse and Cannes occupy an area of upwards of 60,000 acres, and annually produce flowers to the value of over £600,000. It is from these quarters that many of the leading flower markets are supplied. Paris alone draws immense quantities, despite the fact that the distance takes fully twenty hours to cover by fast express.

The Royal Gardeners' Orphan Fund.—We are reminded that the annual festival dinner of this most deserving charity will take place on Wednesday, April 20th, at the Hotel Métropole, under the presidency of C. E. Keyser, Esq., of Aldermaston Court, Reading, and late of Stanmore. Mr. Keyser is so well known as a patron of horticulture, that we hope there will be a large number of gardeners present to give him a cordial reception.

Mr. David Wilson, for many years gardener to Hugh Stevens, Esq., Westmount, Kelvinside, Glasgow, has been appointed foreman in the Tollcross Park, Glasgow. Mr. Whitton, the superintendent, has a great belief in placing practical gardeners in every responsible position in the Glasgow Parks, and we consider his plan not only thoroughly practical, but to be recommended. We are afraid, however, that Mr. Wilson will miss his favourite Orchids for a time, but as there is glass upon the place, and the Glasgow people are not averse to Orchids in their establishments, we think it more than likely that Mr. Wilson will be able presently to surround himself again with his favourites. He is succeeded at Westmount by the foreman who was under him there.

Shirley District Gardeners' Mutual Improvement Association.—The annual general meeting of the above society was held at the Parish Room, Shirley, Southampton, on Monday, the 21st ult., the president, Mr. W. F. G. Spranger, presiding. The report showed that twelve lectures were given during the past year, at which 516 persons attended, giving an average of 43 per meeting. The accounts showed a balance of over £3 in favour of the association. The president, secretary, vice-presidents, and treasurer were re-elected, and a committee of 15 was elected by ballot. A hearty vote of thanks to the president, and to the horticultural and local Press closed the business of the meeting. An entertainment was afterwards given by some of the members and friends of the society, which was much appreciated by those present.

A Plebiscite of Chrysanthemums.—The issue of the *Nord-Horticole* for March contains the result of the plebiscite of Chrysanthemums instituted by the *Moniteur d'Horticulture*. The enormous amount of labour involved is commented upon, and it is stated that 8,000 forms were issued, so that in France, at all events, the results of the voting should be conclusive as to the relative degree of esteem in which each variety is held. Exactly a hundred varieties were included in the forms, and Madame Carnot heads the list with 1,011 votes. Le Colosse Grenoblois comes next with 997 votes, Mrs. C. Harman Payne third with 994, Mme. Edmond Roger fourth with 976, and Vivian Morel fifth with 971. If a plebiscite were to be taken in this country we do not doubt that Madame Carnot would be at the top of the list, but neither Le Colosse Grenoblois, Mrs. C. Harman Payne, nor Mme. Edmond Roger would be so highly placed. M. Clénon de Léché, which would also be well up in a British list, is down to the eighteenth place in the French.

Los Angeles Cal., U.S.A., now possesses the proud distinction of owning one of the largest public parks in the United States, in Griffiths' Park, which was formally made over to the city authorities on the 5th ult., by Mr. G. J. Griffiths. The park contains 3015.4 acres.

The Sea Claims Tasmanian Fruit.—The Peninsular and Oriental Steamship Company's ship "China" which was due to arrive at our shores on or about April 9th, was bringing amongst her cargo 16,000 boxes of Tasmanian fruit. The vessel went aground, however, on the 25th ult., at Perim Island. All the passengers to the number of 400 were landed on the island, also the mails, luggage, and specie, but the fruit will probably be a total loss, and it is not yet known whether the ship herself can be saved.

Helping Nature.—The flower growers around Cannes have practised for several years a system of forwarding the blooms of *Acacia dealbata*, which is very largely grown in the immediate vicinity. Flowering branches are cut a week or ten days before the flowers in the natural course of things would open, the ends are placed in water, and warm steam is made to play upon them. From ten to twenty hours of this treatment suffice to open the flowers, which last fully as long as if they had done so under the ordinary influences of unassisted Nature.

Parks and Open Spaces in Exeter.—The Estates Committee of the Exeter City Council have approved the recommendation made by the surveyor that a foreman gardener be appointed to take charge of the public grounds of the City, and to see to all work of a horticultural character. This project now only needs the ratification of the City Council to become a fact. All those who have the welfare of Exeter at heart will support anything that will lead to the maintenance and improvement of the open spaces which, properly cared for, cannot fail to be a great attraction to the City.

Leeds Corporation and its Gardeners.—A deputation of the various gardeners employed by the Leeds Corporation recently waited upon the Leeds Corporate Property Commission to bring before them the conditions under which they worked, particularly those relating to Sunday labour. On weekdays the men work from 6.30 a.m. until 5.30 p.m., and till 4 p.m. on Saturdays. The men ask that they shall not start work until 7 a.m., and that they should leave off at 12.30 p.m. on Saturdays. With regard to Sunday work the men go on by rotation. About a dozen are employed each Sunday, the hours being from 9 a.m. till 9 p.m. For this they only receive 2s. 6d. each. The deputation pointed out that some of the corporation departments are paid time and a quarter, and time and a half, and they think it not unreasonable that they should at least receive a full day's pay for the Sunday. The number of men affected is about 40. The committee promised to give the question their serious consideration, and we hope to hear soon that the Leeds gardeners have obtained their reasonable requests.

Durham, Northumberland, and Newcastle-on-Tyne Botanical and Horticultural Society has just issued, in pamphlet form, the 73rd annual report of the council, together with the balance sheet. The report, which is a brief one, speaks of the proposed amalgamation with the Northumberland Agricultural Society for the summer show, which is to be held in the Recreation Ground, Newcastle, on July 13th, 14th, 15th; thus following the precedent of 1893, which was attended with highly satisfactory results. The indebtedness of the Society to a number of gentlemen, among whom is the ex-Mayor of Newcastle (Councillor John Goolden, J.P.), for their services is pointed out. It is proposed to hold the spring show on April 20th and 21st. The statement of accounts for 1897 shows receipts amounting to £1127 17s. 9d., and expenses of £1127 1s. 7d., so that there has been a working profit on the year of 16s. 2d. The statement of liabilities and assets shows that the society is still in debt to the tune of £25 16s. 9d. A list of the honorary officials, members, and associates is included in the pamphlet, and we notice that there is a black list of members and associates who are in arrears with their subscriptions.

Acacia dealbata thrives wonderfully in the Esterels and on the Gneiss Hills around Cannes, in the south of France. On clay or calcareous soils the plants refuse to grow, and soon sicken and die.

Mr. Henry Eckford.—The issue of *Gardening* (American) for March 15th, contains a portrait and an appreciative notice of Mr. Henry Eckford, of Sweet Pea fame. No one has done more for this handsome flower than Mr. Eckford, and from his establishment at Wem, in Shropshire, numbers of the finest varieties of Sweet Peas in existence have issued. These varieties are as well known and highly prized across the Atlantic as here.

Flowers at Bulawayo.—The public park at Bulawayo, South Africa, is, step by step, being made a paradise under the able superintendence of Mr. W. S. Goodman. The flowers do remarkably well, for Roses flower all the year round. Upwards of thirty-six varieties of Carnations are grown, and grown well. The fruit trees are also doing remarkably well, and Mr. Rhodes' Orange Grove bids fair to become the feature of the place. These Oranges are planted to form a huge avenue 2,540 yards in length. The fruit and Orange trees are the only things that have not been reared on the place.

Appeal to Subscribers of the Royal Masonic Benevolent Institution.—Amongst the members of the horticultural fraternity there are, doubtless, many members of the Royal Masonic Institution who would be willing to help in a good cause. We refer to Mrs. Mary Woodman, aged 60 years, of Hurstmonceaux, Sussex, widow of Dr. W. R. Woodman, P. G. Swd. Br. (Eng.). Votes on her behalf are earnestly solicited from governors and subscribers of the above-named institution ament the forthcoming election of pensioners in May next. Dr. Woodman was initiated in St. George's Lodge, No. 112, Exeter, in the year 1852, and was a P.M. and for eighteen years a member of No. 444, Starcross, Devon. He was a P.M., and for thirty-three years a member of Grenadiers' Lodge, No. 66, London. For six years he was a member of "Britannic," No. 33, London, and also a member of other lodges. His membership of Chapters was equally long and valuable. He was also a member of the K.T. and R.C. degrees. He was a Governor of the R.M.B. Institution, as well as that of the R.M.I. for boys, and a vice-patron of the R.M.I. for girls, having served several stewardships. At his death in 1891, his widow found herself absolutely penniless.

Carex helvola in Britain.—At a meeting of the Linnean Society of London, on the 3rd ult., Mr. G. Claridge Druce, F.L.S., read a paper on the occurrence of *Carex helvola*, Blytt, in Britain, in which he gave an account of his discovery of this plant on Ben Lawers, Perthshire, in August, 1897. He found it growing in some abundance at an elevation of about 3,200 ft. Prof. Blytt and Dr. Christ, to whom specimens had been submitted, both agreed in naming it *C. helvola*, which by many botanists is considered to be a hybrid. Prof. Blytt says that it grows with *C. canescens* and *approximata* (lagopina), but he has never found ripe fruit. Dr. Christ says: "Il me semble d'être une ancienne hybride fixe et plus ou moins stable." Mr. Druce could readily believe that *C. helvola* was a hybrid of which *C. canescens* was one parent, but he had more difficulty in stating definitely the name of the other. From the close resemblance borne by *C. helvola* to *C. Zahnii* (an acknowledged hybrid of *C. canescens*, in one of its forms, with *C. approximata*), this combination might well be the origin of the Ben Lawers plant, but against that was the fact that the presence of *C. approximata* in the Breadalbanes had never been proved. *C. echinata*, on the contrary, was plentiful there, but Mr. Druce could see no positive evidence of the occurrence of that species in the foliage or inflorescence. He would have expected the offspring of two plants with nerved perigynia to have exhibited that character even in young specimens; as is shown in *C. pseudo-helvola*, an acknowledged hybrid of *C. canescens* and *norvegica*. The foliage, too, was slightly glaucous, a character not possessed by *C. echinata*. Although the Ben Lawers plant was less luxuriant than Blytt's Norwegian specimens, Mr. Druce was unable to separate it specifically from that plant. Messrs. F. N. Williams and W. P. Hiern offered some remarks.

The Gardener is a Great Antiquary, for he has in his possession Adam's Needle, Jacob's Ladder, Solomon's Seal, the Tree of Life, the Holy Thorn, Venus' Looking-glass, the Arms of France, and the Crown Imperial—a fine list of treasures.

England's Daftodil King.—Mr. Peter Barr leaves England on Tuesday next, April 5th, for his twenty months journey round the world. We bespeak a hearty reception for him from our many friends in the States, China, Japan, Australia, and South Africa.

Rating of Glasshouses.—Smith and others *v.* Richmond: We are glad to learn that the Market Gardeners' Nurserymen and Farmers' Association—who, it will be remembered successfully fought out the case of Purser *v.* Worthing Local Board—are moving in this important case on behalf of the Trade, with a view to an Appeal to the House of Lords.

Orchidists at Tyneside.—The cultivation of Orchids is fast merging, if, indeed, it has not already emerged, into a popular craze, and the cheapening of many of the most useful kinds has largely assisted the movement. There are located on Tyneside some of the largest and best managed private Orchid growing establishments in the country. First comes that of Mr. Norman Cookson, of Oakwood House, Wylam, whose gardener, Mr. Wm. Murray, has achieved notable successes, especially for home-raised varieties and hybrids. Mr. Fred. Scott, of Preston, near North Shields, has also a fine collection, and his glasshouses are exceedingly well found and managed.

The Dahlia is a Mexican flower, which took the fancy of Hernandez, who visited Mexico in 1615. Hernandez mentions two species, one of which had pale red flowers, and grew wild in the Quauhahuac Mountains, and was called locally "Acocli." A little more than a century after Mr. Thierry Menonville, who was sent to Mexico to filch the cochineal insect from the Spaniards also fell in love with the Dahlia. The first seeds of the plant were brought to Madrid in 1788, and planted in the botanic garden there, where the plants flowered in October of the succeeding year—1789. Lord Bute obtained seeds from Madrid, and in 1890 flowered plants raised from them in England. It was not until 1804, however, when Lady Holland sent more seeds from Madrid, that the Dahlias really did well.

The Flower Faker Again.—Possibly there is no flower of which such numbers are sold in the London streets as the Violet. Wherever one turns, one is greeted with the cry "Violets, sweet Violets." The would-be purchaser is tempted to buy by the undoubtedly powerful fragrance of the flowers. But alas! this fragrance is not all natural, for among the tricks of the flower faker is that of heightening the natural smell of the flowers or imparting it when, as is sometimes the case, it is wanting entirely. A "A penn'orth" of "wood violet" scent, emptied among the damp moss upon which the flowers repose will do the trick, and very few of the purchasers are any the wiser. In the same way a "penn'orth" of "musk perfume" is often employed to improve the selling quality of pots of Musk, and it is even stated that "white Rose" scent has been asked for for doctoring the Queen of Flowers.

Observations on the Codlin Moth.—A bulletin issued from the Agricultural Experiment Station of Nebraska, Lincoln, U.S.A., has been compiled by Professor F. W. Card. The remedies suggested for the Codlin Moth are as follows: "Spray thoroughly with Paris green within a week after the blossoms fall, before the calyx closes. Try kerosene emulsion when the eggs are being laid upon the leaves about the first week in June. If this fail, use Paris green combined with Bordeaux mixture. Keep the tree smooth and use paper bands round the trunk when the larvae are ready to pupate, about the last week in June. Remove and kill the larvae one or two weeks later. Place bands on again until all Apples are out of the orchard, then gather them up and destroy the larvae. Get the balance in spring by screens over the cellar doors and windows." This is a fairly comprehensive programme, and well illustrates the saying that "eternal vigilance is the price of safety."

The Stoats and Weasels introduced to New Zealand for the purpose of keeping rabbits in check have proved a greater pest in many cases than the rabbits. They have overrun the northern island where the genial temperature is conducive to their welfare, even in their interior of the island where there are no rabbits. The supposed natural enemies of the latter seem to prefer sheep, lambs, and poultry, whether the birds are wild or domesticated, to the rabbits. The carcasses of the sheep and lambs show a small puncture behind the ear, thus revealing the work of the weasels.

The "Henry" Strawberry seems to be creating a sensation among our Yankee friends. It is stated to be the most wonderful berry of the age, and individual "berries" are said to measure $3\frac{1}{2}$ in. through each way, four fruits filling up and rounding off a wooden quart measure. The next thing will be to get mouths big enough to fit these Strawberries. Mayhap they have already appeared! We notice that *American Gardening* says that the raiser's description has brought him hundred of inquiries concerning it. That is not a great wonder. The old country seems to be out of it again; but, no, we've got our "Cartwheel Rose."

Potato Tops as Fodder.—In an article dealing with the employment of Potato tops as fodder for cattle, the *Irish Farming World* says that "no doubt the leaves, if offered green and fresh, would, even if it were not dangerous to do so, be rejected by cattle as food." The information possessed by the writer of the article in question, if extensive, is at least faulty on this point, for Potato haulm is not a dangerous food, and neither is it rejected by the cattle to which it is offered. In parts of Scotland it is a common practice for small farmers to thin out the haulm of their growing Potatos, to the detriment of the Potatos, be it said, on purpose to provide green food for the cows. Pigs, again, will eat Potato haulm with all the pleasure in life, and anyone who has visited the agricultural districts of this country must have seen, if he had his eyes open, pigs regaling themselves in this fashion, for it is the common custom to give to the pig each day during the summer the haulm from the plants dug up to afford the daily supply of tubers.

Dendrobium spectabile.—This new Dendrobium was offered for sale for the first time at the sale of Orchids held by Messrs. Protheroe & Morris, for Messrs. F. Sander & Co., at 67 and 68, Cheapside, on the 25th ult. Judging from the appearance of the pieces that were on view the plant is of vigorous habit, and the remains of the flower spikes suggest great freedom of flowering also. The importation consisted of no fewer than 494 lots, each plant realising from £2 5s., to £3 5s., and one fine piece went for 9 guineas. Dendrobium spectabile is a native of New Guinea and the Solomon Isles, but although it has been known to botanists for upwards of fifty years, it is only within the last year that a live plant has been successfully introduced to cultivation. The first one was sent to Sir Trevor Lawrence, from Malaita, one of the Solomon Isles, and although it was four months *en route*, has done well. D. spectabile belongs to the group D. macrophyllum (Rich); and D. atropurpureum (Rolfe), but when first described by Blume in 1848, was placed in a new genus (*Latourea spectabilis*, Rumphia IV., p. 41, t. 195, fig. 1; and t. 199, fig. C.). This description was taken from a drawing made in New Guinea, by M. Latour-Leschenault. Miguel afterwards transferred the plant to Dendrobium (Mig. Fl. Ned Ind., III., p. 645). A plant obtained from the Solomon Isles flowered at the Sydney Botanic Gardens in 1884, and was the subject of a note in the *Victoria Naturalist*, by Sir F. Von Mueller. In October, 1890, specimens were collected at San Cristobal Solomon Isles, by the Rev. R. B. Comins, and from these were described by Mr. Rolfe as D. tigrinum, the genus *Latourea* being overlooked. From this description the plant has clavate pseudo-bulbs, nearly a foot long, four or five terminal leaves, and erect racemes of 20-30 flowers. The sepals and petals are acuminate, $1\frac{1}{2}$ inches long. The base is broad, and much undulated, while the lip is long, and pandurately trilobed. The colour of the sepals and petals is yellow-white, spotted with red-purple, the lip being also prettily veined with the latter colour.

The Skunk Cabbage Flower.—An American who has been "hipped" over politics grumbles that this flower is the only one truly emblematic of American institutions. Perhaps he has only spoken in haste.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Phaius tuberosus.—Notwithstanding the great beauty of this plant it has not become very common since its introduction from Madagascar in 1881. Most cultivators seem to have a difficulty with it; and those plants that find their way into cultivation have a struggle to live, getting beautifully less every year and ultimately perishing. Mr. Howes, gardener to Walter Cobb, Esq., Dulcote, Tunbridge Wells, manages the species very successfully, the plants under his care thriving, increasing, and flowering every year. Some of his plants are now in bloom. Being of terrestrial habit like the other species of Phaius it is difficult to see why it should prove so much more difficult to cultivate. Doubtless it has a way of its own, and Mr. Howes seems to have discovered the secret. It requires plenty of heat, and moisture both in the atmosphere and at the roots. The large flowers are very showy, having pure white sepals and petals, and a gorgeously coloured lip. The side lobes are yellow, blotched with brown, the upper lobe being white, marked with rose and orange. The progeny obtained from it by hybridisation with other species proves very vigorous and of easy culture.

Peloria of Coelogyne cristata.—As far as we have hitherto observed, this species is not given to the production of freaks or sports, as they are termed in garden phraseology. A specimen sent us, however, by Mr. George Russell, The Gardens, Redlands, Glasgow, showed a decided attempt at peloria of the three inner segments. The petals carried a row of golden fringes along their centres like those of the lip, the phenomenon being more pronounced in one case than in the other. We think it scarcely likely that the sport will be repeated another year, but there is no telling what may happen when the rule of constancy has been departed from. We remember a more decided and also permanent case of peloria, in Dendrobium nobile, which occurred some years ago at Redlands, the result being a variety identical with D. nobile Cooksoni, one of the most popular varieties of the species.

ASPARAGUS.

THIS highly esteemed vegetable is often subjected to ill-treatment in the house of its friends, possibly more so in by-gone years than at the present time. The requirements of the plant I believe are more generally and better understood now, than in the days when the old fashioned beds with their four and five rows of plants crowded together were as universal as the annual loading them with the heaviest and rankest manure obtainable. Now there are serious drawbacks to each of these practices. In the first place, the Asparagus, being a strong rooting plant, has not room to develop itself properly when crowded together, and the stronger and longer the roots can be grown, the better will the produce be. The plants should never have less than three feet allowed them between the rows. Six feet would allow better cropping, with low-growing things between the rows. As to whether raised beds should be adopted, or the flat system, must depend partly on the nature of the soil, and if well blanched or green grass is in request. On wet, heavy ground raised beds should certainly be adopted. Now as to manuring. The old practice is certainly often the cause of the decay of many stools and the weakening of others, keeping the soil wet and cold. It is a far better plan to water during the growing season with manure water and give repeated slight dressings of salt, soot and fish guano. Little and often is better than a heavy dose, particularly of salt, one of the best manures I know. An instance came under my notice once, where great expense was incurred in making new beds, in which all prospects of useful results were negated by the too liberal dressing of salt, the soil of the bed being hidden with a thick coat of destructive strength.—W. B. G.

HINTS FOR AMATEURS.

THE ANNUAL POTTING.

Ferns.—While Palms may be looked upon as being the aristocrats amongst the plants which we cultivate, there is no doubt that their strongest competitors are Ferns. There is a curious interest attaching to this class of plants that is almost impossible to analyse as impossible to deny. We find amongst Ferns such a variety of habit and general appearance, ranging from the stately subject of tree-like form and dimensions to the lowly plant that barely lifts itself above the surface of its mother earth, and yet all are pretty and many of them receive attention at the hands of the cultivator.

But it is not of the beauty and usefulness of Ferns generally that we wish now to deal. Rather let us see what attention we can bestow upon the plants at the present time in order to fully develop this beauty, and thus be in a position to take full advantage of the capabilities of the plants for usefulness.

To tell the truth, while almost everybody loves Ferns, and the love of many finds a practical outlet in an attempt to grow them, many people treat their Ferns very badly. To start with there is the mistaken idea that is, alas, very general that Ferns do not want much light and indeed do not like it, and hence the plants are relegated to all sorts of dark corners, and are allowed to stay there until they are hopelessly crippled. Then again some have got hold of the idea that Ferns are not like other plants in that they want very little soil with scarcely any nutriment in it. The idea of a Fern wanting a fat soil, and failing that a little manurial stimulant never seems to occur to them, and the consequences is that the poor plants are absolutely starved to death for want of sufficient food.

The potting of Ferns generally is an operation that requires a great deal of care and careful handling, and thus it should never be lightly undertaken, but this does not mean that it is never to be undertaken. It is true that we often see specimens of such plants as *Asplenium bulbiferum*, *A. flaccidum*, and *A. obtusatum lucidum*, very much pot-bound, and yet in the best of health, when a little judicious feeding has been practised. On the other hand this system of keeping the plants in the same pots year after year must not be carried to the extreme, for there comes a time when a shift into roomier quarters is absolutely necessary if the plants are to be kept in health.

Adiantums.—The Maiden-hair Ferns have always had a particular fascination for the amateur, and often enough do we see a desperate struggle made to keep it alive in windows of dwelling rooms in cottages and villas. It is to be feared that only a very limited amount of success attends these efforts. The plants may do fairly well during the summer months, but as autumn wears on they begin to get shabby, and the fronds go off one by one. The amateur cultivator fondly hopes to resuscitate his plant by giving it copious supplies of water, and the poor plant is practically drowned. As the period of natural rest approaches less water should be given (instead of more), and nothing should be done to disturb this rest through the winter months. The temperatures of winter will then have comparatively little effect, and the plant will start away strongly in the spring. Now that the delicate growths which are to make fronds presently have begun to push up, it will be safe to infer that there is a corresponding activity in the roots. If the plants are knocked out of their pots there will be found live tips of lately formed roots on the outside of the ball. If potting is to be done, therefore, this is just the time to catch the plants. As much of the old drainage should be removed as possible, and by means of a thin pointed stick the roots all round the outside of the ball should be loosened. This part of the programme will require the greatest care, for the young tips are very delicate and easily injured. If the roots at the bottom of the ball are dead, as can easily be ascertained by inspection, they may be pulled away entirely, and the ball may then be much reduced, so as to enable it to go into a smaller pot than the one it is now in. This reduction of the ball should not be attempted, however, if there are living roots at the bottom. The soil should consist of equal parts of peat and loam with plenty of sharp sand, and a little charcoal. Do not attempt to mix arti-

ficial manures of any description or soot with the potting soil. Good leaf soil may be substituted for peat if desired. In this case it should be freed from all sticks and stones, and should be broken up finely by passing it through a sieve. Pot with moderate firmness only. The use of the lath or a thin potting stick that we have previously referred to will be necessary in many cases to work the new soil all round the sides of the ball, but it should not be employed with too much vigour.

For *Adiantum farleyense*, *A. cuneatum* and its varieties, *A. hispidulum*, *A. scutum*, and other forms of similar growth, the ordinary shape of pots will be found the best, but for *A. Capillus-Veneris* and its varieties, pans which give a larger surface area in proportion to the depth and quantity of soil than the pots will be found the proper thing.

In cases where it is desired to split up large plants into a number of smaller pieces, the present is the most favourable time of the whole year to do so. Propagation by division has the advantage that it enables the grower to quickly obtain as many plants as he may want of a useful size without waiting for them to be raised from spores which is, of necessity, a comparatively lengthy process. Apart from this, however, the sowing of spores and the raising of young plants by that means is preferable. Of course, with *A. farleyense* division is the only method of propagation open to us, as the plants do not spore. We may mention in passing that this handsome Fern will need exceedingly careful treatment subsequent to division. Amongst other things a rather high temperature is necessary, and the watering can must be in the hands of one who knows how to use it properly.

Aspleniums.—In this great genus are grouped a number of some of the handsomest of Ferns. Plants like *A. bulbiferum*, and its various varieties, and *A. flaccidum* are very popular plants, inasmuch as they are handsome and easily grown. They are, moreover, vigorous rooting subjects, and an endeavour should be made to keep them within bounds, otherwise their pots will soon be of enormous size. In potting rather more loam should be used in the soil than was advised for the *Adiantums*.

Pterises.—The varieties of *P. cretica*, and *P. serrulata* are well nigh innumerable, and many of them are highly popular. This is not wonderful when we consider the beauty and elegance of some of the crested and tasselled forms. *P. tremula* and *P. argyrea* are among the most effective of the taller growing species, and besides doing well when grown in pots they succeed well when planted out in the under-glass fernery. The compost employed should be strong and rich, and may well consist of two-thirds of loam to one of leaf soil or peat with sand.

Nephrodiums.—Amongst cool house *Nephrodiums* *N. molle* is undoubtedly the favourite. Its long feathery looking fronds are totally distinct from anything else, and the shade of green they exhibit is likewise distinct. The crested form *N. m. corymbiferum* is met with occasionally in collections, and is a handsome Fern, although its beauty is of a somewhat heavy style. The amateur should be on his guard against overpotting both *N. molle* and its crested variety. This is very easily done and the great quantity of cold wet soil lying about the roots in winter time is almost sure to cause many of the roots to rot. Any old plants that are in big pots should therefore be closely examined, and if it be found that too much room has been given, the dead roots should be cut away and a smaller pot given.

Gymnogramme.—That the Gold and Silver Ferns are beautiful there is no denying, but there is also no denying that they are somewhat ticklish subjects to grow. Young plants or sporelings grow away strongly enough, but as they get older if they once get a check all is generally over with them. In potting the plants too much care cannot be given, for if the roots are pulled about too much the plants are almost sure to go home. Give a compost of equal parts of loam and peat with plenty of sharp sand, and a few lumps of charcoal worked in. After potting shade the plants closely, for the sun's rays are bright now and would much distress the plants if allowed to fall directly upon them.—*Rex*.

A Ground Beetle known as *Harpalus ruficornis* proved troublesome to Strawberry fruit in various districts during 1897.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Tomatos under Glass.—*A. C. L.*: It will be best for you to draw back the shingle from the stage for say 15 or 18 ins. nearest the sides of the house. You may then put up a ridge of soil about a foot in depth along the whole length of the house, and plant the Tomatos in this. The soil should consist in bulk of good loam enriched by having added to it one-fourth of its volume of well decayed stable manure, or cow manure if that can be obtained. The plants should then be procured and planted at once. For a considerable time you will still be able to use the house for plants, and if you only plant along one side its value for plants will not be greatly diminished. If you plant along both sides the plants will not get so much light and will of course not do so well.

Asplenium longissimum.—*M. N.*: You will find this *Asplenium* a real beauty for growing in a basket, but it requires a warm house. The temperature you speak of—45° Fahr by night would be much too cold for it. A compost of two-thirds loam, with one-third peat and plenty of sand will suit it well. The wire basket will suit it well enough. You may if you choose line it with moss, but we should prefer to use very fibrous loam for this purpose. Try and obtain some very fibrous turves from the loam heap, and shake the greater part of the loose soil out of them. You will find these answer for lining much better than the moss.

Nerines.—*Alce*: If the foliage is showing signs of going off you may curtail the water supply gradually. Give the plants the benefit of all the sun possible. No more manures should be applied to them now—the season for that is past.

A Good Cineraria.—In a batch of *Cinerarias* which were raised from seed sown last June, I have a very fine deep blue form which I should like to save. Will it come true from seed?—*Rob*.

Seedlings naturally vary a great deal, and you would probably find a grand mixture of varieties spring from the one seed parent. Your best plan will be to cut the plant down after flowering has finished. It will then throw up a number of suckers from the roots, round the base of the old stem. These may be taken off, potted up, and there are your plants. This system of cultivation is extensively followed in cases of specially good varieties.

Adiantum Fronds Going Off.—*Rob*: From what you say we have little doubt that the tips of the tender fronds have been scorched by the sun. You must shade them more closely; also stop sprinkling them overhead, for this is assisting the evil. Either slugs or cockroaches have been responsible for the young fronds that have been bitten through. If you cannot catch the slugs and kill all the cockroaches by poison, stand the plant on a saucer or pot inserted in a vessel of some kind containing water. The cockroaches will not pass the water.

Outback Chrysanthemums.—*Ito*: Those plants that you wish to develop into bush specimens should be pinched or cut back to within three or four leaves of the base of the stem. When the side-breaks begin to make their appearance the plants will be ready for potting.

Primula Seed.—*Enquirer*: In order to "set" the flowers, as gardeners phrase it, you must employ a small, soft, camel's hair brush. The stamens and the pistils are of different lengths, and the anthers and the stigma consequently at different levels. Push the brush gently down the tube, twist it round and withdraw it; some of the pollen will be sure to have been deposited on the stigma by this means.

Anemone Pulsatilla.—*E. Ewart*: This *Anemone* is propagated by seed. Sow the latter as soon as it is ripe in pans or boxes, and cover with a handlight or place them in a frame. This will be all the shelter required.

Young Raspberries.—*E. Ewart*: You should have cut the young canes down to within a few inches of the bottom, and if you have not done it you had

better see to it at once. This would induce the stools to throw up good, stout canes from the bottom and you will get fruit next year. If you do not do this you may have to wait several years for fruit, which would be a pity, seeing that you have the matter in your own hands.

CYPRIPEDIUM VILLOSUM.

THE species forming the subject of this note was originally introduced from Moulmein in 1853, and since then has become one of the most common in collections. It has given rise to only a few striking varieties, even if we include *C. v. Boxalli*, but its hybrid progeny is very numerous indeed. That fact coupled with its easy cultivation has conduced to make it common, and one might almost say popular; but it has never aroused any great enthusiasm amongst cultivators and collectors, because importations do not furnish many unique and striking novelties.

There is another phase of the subject, and that is

used was fibrous peat, sphagnum, silver sand, and charcoal. The plant was kept in the plant stove, with a minimum night temperature of 55°; and a free supply of water was given it at all times. The example might well be followed with other species and in other establishments so that cultural skill might be displayed at exhibitions.

THE FLORISTS' SHOW TULIP.

THE unusually mild winter has so encouraged the growth of Tulips that they began to peep through the ground by the third week in January, which may be considered fully a fortnight earlier than is usual in ordinary seasons; and up to the commencement of last week my beds looked exceedingly healthy, and a few of the earliest kinds showing their buds. What the last few days of cutting north-easterly winds, with frost combined, will result in, I anxiously await with some little alarm, but must hope for the best.

The time having now arrived when the plants

to the bloom against strong winds. Where beds are provided with proper Tulip frames, great protection will be afforded to the bloom by putting some fish netting all round the top of the wire netting, and also over the top of the frames, during the growth and development of the buds, so as to prevent as little damage as possible arising to the bloom from "hailstorms," which generally occur, more less, during that period of growth. Whenever a bud is struck by a hailstone, a brown spot appears on the petal so struck, and immediately the colour and markings begin to show, and before the bloom matures itself, the said spot goes into decay, the bloom becoming spoiled for exhibition purposes.

To protect the blooms intended for exhibition, or to produce them as perfect as possible, a calico awning should be applied, so as to prolong the life of the blooms, and protect them against rain and sun. As much air as possible should always be given to the plants by keeping the calico well up on one side of the bed, where the sun is not upon it; and when the latter gets to the side where the calico is rolled up,



CYPRIPEDIUM VILLOSUM.

the growing of plants to large size so as to furnish a good display of bloom. The large flowers with their waxy, shining segments are not devoid of decorative value, though the dusky yellow colour, more or less heavily overlaid with brown, offers little in the way of brilliancy. There have been some instances lately of an inclination to develop plants to a large size, a feature of Orchid culture to be commended in order to counteract the custom of mincing up the plants into infinitely small pieces. At the spring show of the Preston and Fulwood Horticultural Society on the 9th and 10th ult., Mr. John Woollam, gardener to Mrs. Birchall, Ribbleton Hall, Preston, took the first prize for a specimen Orchid, with a healthy and vigorous piece of *Cypripedium villosum*, carrying forty-four blooms. Mr. Woollam informs us that he has had the care of it for the past five years, but it had never produced so many flowers on any previous occasion. He repotted the plant last spring, after which it grew away vigorously, with the result as shown in the accompanying illustration prepared from a photograph of the specimen. The compost

should have as much protection as possible, and likewise a little attention, it may be information to young growers to know that it is very beneficial to the growth and bloom of the Tulip, to stir up the soil between the rows of plants, care, of course, being exercised in not disturbing any of the bulbs. This can be easily avoided by driving a strong 3 in. or 4-in. nail through the end of a broom-handle, and then by standing on one side of the bed, plunging the nail in the middle of each row on the other side of the bed, and carefully drawing the handle to you. The soil and weeds will be well loosened, and thus the weeds can be easily picked out of the rows, which will give the beds a better appearance; and will also admit of air to the roots of the bulbs, which is most essential.

The next thing to be done is to put some wire netting, 18 in. high, all round the Tulip-bed frames; and where there are no frames, the netting should be supported by iron or wood stakes, the netting being tied to the stakes. This will prevent the trespass of cats and dogs, and will likewise be a great protection

let that side down, and roll up the other side. When it rains the calico should be kept down on both sides, and both sides should be securely fastened the last thing every night, so as to protect the awning from damage by wind, during the night. The awning should not be fixed up until the colours of the blooms distinctly appear. By too early covering the colours or markings have a dull or washy appearance, instead of being bright and vivid. The plants should never be watered during the period they are covered with the awning, or the same washy appearance will present itself.

The best way to produce a bloom for exhibition and to ensure its beautiful lustrous colour, is not to cover it with calico, but by a 10-in. square board, attached to a stake, keeping the board about 4 in. from the top of the bloom.—James Thurstan, Cannock, March 28th, 1898.

12,000 Cases of Apples have been shipped to British shores from Tasmania during the last month.

PLANTS RECENTLY CERTIFICATED.

THE awards mentioned below were made by the Royal Horticultural Society on the 22nd ult.

Orchid Committee.

DENDROBIUM NOBILE ASHWORTHIANUM. Nov. var.—The sepals and petals of this variety are slightly twisted and pure white. The lip is large, rather more expanded than usual, and white, tinted with the faintest shade of lemon, the usual blotch being entirely gone. The variety attracted a great amount of attention, being so unlike the usual forms of *D. nobile*, although the growth was of that species. First-class certificate. E. Ashworth, Esq. (gardener, Mr. H. Holbrook), Harefield Hall, Wilmslow, Cheshire.

ODONTOGLOSSUM HYBRIDUM ASHWORTHIANUM.—This was considered to be a cross between *O. Cervantesii* lilacina and *O. cordatum*, but it has a strong family likeness to *O. Rossii* aspersum violaceum. The sepals are red-brown, with transverse yellow lines. The petals are rose-purple with a few brownish-crimson blotches at the base. The lip is rosy-purple, and the crest creamy. Award of Merit, E. Ashworth, Esq.

ODONTOGLOSSUM CRISpum PRINCESS CHRISTIAN. Nov. var.—The flowers of this variety are of large size and handsome appearance, with acuminate sepals and petals. The former have two large and lobed blotches of a brownish-purple, and often joined into one. The petals have a semi-circular line of smaller round blotches on the centre. The lip has a blotch in front of the crest. The ground colour of all the segments is white. First-class Certificate. Baron Schroder (gardener, Mr. H. Ballantine), The Dell, Egham.

ODONTOGLOSSUM ROCHFORDIANUM. Nov. hybr. nat.—In this we have a natural hybrid apparently a cross between *O. crispum andersonianum* and *O. luteo-purpureum*. The sepals and petals are thickly blotched with crimson-red on a creamy ground. The lip has a few small blotches. Altogether it is a pretty variety. Award of Merit. Mr. Thos. Rochford, Turnford Hall Nurseries, near Broxbourne, Herts.

ONCIDIUM CUCULLATUM PHALAENOPSIS BRANDT'S VAR. Nov. var.—The sepals and petals are white and richly blotched with claret-purple. The lip is of great size for the species and thickly spotted with purple. The markings generally are larger and brighter than the type. Award of Merit. Frau Ida Brandt, Zurich.

Floral Committee.

DRACAENA EXQUISITE.—This showy variety belongs to the broad-leaved section, and is of close, excellent habit, the leaves being placed closely together and arching. They are of a deep green with broad, whitish edges as they first expand, but the colour improves as the leaves develop and ultimately become bright red and handsome. Some leaves have a great extent of colour. Award of Merit. Messrs J. Veitch & Sons, Ltd., Chelsea.

AMARYLLIS IDEALA.—The flowers of this variety are of beautiful form, and creamy-white with deep scarlet tips to the segments. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

AMARYLLIS CLONIA.—The base of this flower is green, and the rest of the body colour white, chastely and beautifully shaded all round the margins with orange-scarlet. The flower is large and open, while the delicacy and combination of its colours is such as we seldom meet with. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

AMARYLLIS TACOLA.—The segments of the large open flowers are very broad, much overlapping, and of a clear bright scarlet, with a white ray running nearly to the apex of each segment. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

AZALEA JAPONICA RUBRA.—The flowers of this Japanese plant are of medium size, something resembling the Carmichael strain of Azaleas, and of a rather attractive red colour. Award of Merit. W. Nicholson, Esq. (gardener, Mr. Wm. Smythe), Basing Park, Alton, Hants.

HYACINTH CITY OF HAARLEM.—This variety produces a dense and massive spike of rather richer and brighter yellow than usual amongst yellow Hyacinths. Award of Merit. Messrs. Wm. Paul & Son, Waltham Cross.

AMARYLLIS BEACON.—The large open flowers of

this variety are of an intense crimson, deepening in the throat to maroon-crimson. As a dark variety it is very telling, and effective by contrast with lighter sorts. Award of Merit. Captain Holford (gardener, Mr. A. Chapman), Westonbirt, Tetbury, Gloucester.

IMANTOPHYLLUM OPTIMA.—In this we have a very large flower with long segments of a rich orange, with a soft yellow throat. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

IMANTOPHYLLUM FAVOURITE.—There are so many orange varieties amongst this class of plants that a change is highly desirable and effective by contrast. The large, well-formed flowers of Favourite are of a soft salmon-pink with a pale sulphur-yellow throat, and at a short distance have the appearance as if approaching yellow. The variety is certainly an acquisition. Award of Merit. Messrs. J. Veitch & Sons, Ltd., Chelsea.

THE VICTORIA AND PARADISE NURSERIES.

DURING the storm of wind and sleet that prevailed last week, we paid a visit to the Victoria and Paradise Nurseries of Messrs. B. S. Williams & Son, at Upper Holloway. Orchids, Palms, Ferns, fine foliage plants, Amaryllis and Clivias are some of the leading specialities of the glasshouses here, spring flowering plants being now in bloom.

ORCHIDS.

Amongst Cattleyas the type now in season is *C. Trianaei* in its various shades of colour. The same may be said of *Cypripedium villosum*, a good old subject not very much given to variation in colour, though its near relative *C. v. Boxallii* shows a greater range of variety in the matter of spotting and the intensity of colour. Considering how many months have elapsed since *Calanthes* commenced to flower, one would hardly expect to find them now, yet many are in full bloom here and others only in bud, including some quantity of *C. sanderiana*, having rosy segments and a deep purple lip. Very pretty is the hybrid *C. Williamsii* with nearly white sepals and petals, and a crimson and rose lip. *C. oculata gigantea* is notable for the great size of its flowers which are white, well set off with an orange, eye-like blotch in the throat.

Coelogyne cristata alba has made wonderful progress here within the last few years, the small pieces having grown to large size and making the baskets conspicuous with their snow white flowers. *Cypripedium chamberlainianum* maintains its old characteristic of never having finished flowering. *C. lathamianum* is notable for the variation amongst its flowers, and we noted a very fine variety here with a yellow lip and richly coloured petals. The fragrant *Cymbidium eburneum* has for its companion at present a nice bit of *C. devonianum* with a distinctly rosy lip, and suspended in an Orchid pan from the roof. *Zygopetalum Perrenoudi* belongs to the same type as *Z. Mackayii* though entirely different from that and notable for its large and showy dark violet lip, and richly blotched sepals and petals. It lasts a long time in bloom. The hybrid Phaius Norman, which was recently honoured with a First-class Certificate by the R. H. S., has found its way here, some of the varieties having large and beautifully marked flowers. In one case the sepals and petals are of a beautiful soft rosy pink, and the lip rose in the upper half, and crimson in the tube, beautifully lined with orange. Numerous plants of *Epidendrum radicans* scattered about amongst Vandas and other Orchids have a very brightening effect with their glowing scarlet flowers. Vandas are well cared for, and thrive well here, and being tall plants occupy the upper shelves of the central staging. *V. suavis* and *V. tricolor* have commenced flowering, and carry numerous spikes in the bud stage. The colour is varied and some of the flowers are unusually large.

The cool houses contain numerous varieties of *Odontoglossum crispum*, *O. Pescatorei*, *O. triumphans*, and *O. Rossii majus*. The orange-scarlet of *Ada aurantiaca* shows a bright bit of colour for a cool house species. In more than one house we came upon *Cypripediums* in great variety, some of which are already in bloom. A fine thing is *C. Gertrude Hollington*. *C. gowerianum superbum* is making remarkably vigorous growth, and the tessellated leaves are ornamental in themselves. Half one side of a house has been filled with *Odontoglossum crispum* in healthy, vigorous condition, and the

other half is to be filled presently with the same species. A glass case contains healthy plants of *Anoectochilus*, including *A. Petola* whose leaves appear to be finely threaded with gold. On the contrary *A. setaceus* is beautifully threaded with red lines, not at all corresponding to the venation, but forming a distinct kind of ornamentation. *A. intermedius* has dark, velvety, olive leaves with a grey venation, making a pleasing contrast. These Orchids are gems of their kind.

CLIVIAS.

This class of plants is now in perfection, as far as the flowers are concerned; the foliage is perennially in splendid condition and never unsightly. A good many of the best varieties and selections of past years are named, a few of which we noted. *Ambrose Verschaffelt* is notable for the great length of its rich orange flowers and the size of its trusses. On the other hand *Prince of Orange* is a finely formed flower, with short, overlapping segments of great breadth, and intense orange colour. This we consider a choice variety. *Aurantiaca* has large, soft orange flowers tending towards the desired yellow hue. The orange flowers of *Martha Reimers* are produced in trusses of great size; while *Surprise* is notable for the great length and boldness of each individual flower. Entering another house we found the wide central staging entirely filled with a large collection of *Clivias* from which the previous lot was an overflow. Amongst the numerous varieties the darkest was undoubtedly *Meteor* with short compact flowers of a glowing orange-scarlet. Another fine thing is *Robusta*, a vigorous growing sort bearing huge trusses of large orange flowers, nearly white in the throat. *Lindeni*, though a good variety in its day, is now far surpassed in colour by many of the varieties. For large conservatories nothing could be more suitable than these *Clivias*, which are of decorative value whether in flower or not.

AMARYLLIS.

Many of the earlier varieties are now in full bloom, but the cold and sunless condition of the weather for some time past has been retarding them, the spikes and flower buds of a large proportion just creeping along slowly. This will have the effect of prolonging the season, however. A bold and handsome flower is *Gerald Balfour*, being large, well expanded, and rich crimson-scarlet with a short green ray. A group of *Dr. Masters* is notable for the dwarf habit of the flower scapes, the blooms themselves being neatly formed, and of a brilliant, glossy scarlet. A light flower is *Sea Breeze*, being delicately and beautifully netted all over with scarlet on a white ground. Many varieties are now in flower in which the blood of *Empress of India* is evident. In its day that variety was one of the finest in cultivation. Seedlings are numerous, and many of them having shapely, richly-coloured flowers, just opening when we saw them, had not then received names. One of the choicest of all the light coloured varieties is *Holloway Belle*, the widely expanded and beautifully formed flower being of a charming soft rosy-scarlet, deepening upon the inner segments, the whole being delicately pencilled with darker veins, giving the flowers a striated appearance. A broad, white ray runs to the apex of each segment. The segments of *Grandidens* are of a uniform crimson, except on the lower half of the midrib, which is darker. One of the best is *Lord Brassey*, the broad segments being of a bright or lively scarlet, with white rays and a green centre to the flower.

Other flowering plants include a variety of Indian Azaleas, also varieties of *Azalea mollis*, white and purple forced Lilac, and hybrid greenhouse *Rhododendrons* in variety. A handsome hybrid is that named *R. Madame Cuvelier*, with huge, pure white, fragrant flowers freely produced. The front of the large conservatory is gay with *Hyacinths*, *Daffodils*, *Lily of the Valley*, and various other spring flowers.

FINE FOLIAGE PLANTS.

Several of the houses are devoted to *Crotons*, *Dracaenas*, and *Aralias*, of which there are good collections here of the leading kinds. The propagating houses and pits are all busy in the getting up of a stock of young stuff of the various fine foliage plants. Small pots of *Cocos weddelliana* are grown in quantity and in fine condition. *Dracaena Doucetti*, with narrow leaves, edged with white, is a beautiful and useful decorative subject. *Marantas*, *Calatheas*, *Pandanus Veitchi variegatus*, *Dieffenbachias*, and various other stove subjects are grown in great variety, including *Anthuriums* now in

bloom. The large Palm house is well filled with all the useful decorative Palms, such as Kentias, Arecas, Phoenix, Livistona, and others in fine condition, and of all sizes. Bamboos in large pots and tubs are most useful decorative subjects that are rapidly becoming common.

DEVELOPMENT OF CYCLAMEN LATIFOLIUM.

WHERE the evolution of the hothouse Cyclamen is going to end it would be difficult or impossible to predict. Several innovations have become more or less common within the last few years. A bunch of flowers comes to us from Mr. A. Pentney, The Gardens, Worton Hall, Isleworth, notable for the multiplication of parts and size of the blooms, and a few have broad, fringed segments. Two stalks each carried twin flowers, which are thus brought together by the union of the peduncles in pairs, as can be seen by their partial separation at the top. In these cases the segments to the number of five or six are spreading instead of being reflexed. A larger number of flowers have eight or nine segments each, greatly overlapping one another owing to their breadth, though the mouth of the flower is wide enough to admit them in a single row. Most of these are of a rich red, one being pure white. Another form of evolution is the fringed form of flower, the segments of which have a line of outgrowths on both surfaces, just within the margin, such as we see in *Scolopendrium*, upon the fronds of some varieties. The colour of this type being light and the petals broad and crimped, the blooms remind us of those of *Lagerstroemia indica*. From a decorative point of view the fringed varieties possess a certain amount of value on account of their distinctness, but their popularity will largely depend upon how they strike the public fancy. They will not displace the smooth-petalled varieties for some time to come, if ever they do; but this will largely depend upon their further development, and the character they assume.

NOTICES OF BOOKS.

MUSHROOM CULTURE. London: Published by George Tucker, 1, 2, and 3, Salisbury Court, Fleet Street. Price 2d.

This pamphlet of thirty-one pages is No. 8 of the "Salisbury" Series of Garden Produce Handbooks, and deals with various phases of Mushroom culture in the open air, in cellars and outhouses, in hothouses, in frames, &c. The introduction having stated that we receive a considerable foreign supply, chiefly from Paris in the shape of "buttons," that is, the young and partly developed stage of the Mushroom, goes on to urge the attempt to meet this demand with home-grown produce. The would-be cultivator is urged to make a speciality of Mushroom culture, including that of the "roon" or early stage, if he would make the business a commercial and financial success. In like manner the highest prices are obtained for Mushrooms produced between October and May, but particularly during December, January and May. Quality and time are the two most important features of "roon" culture, the Paris supply being considered dry and without flavour. Details concerning the cultural treatment are given, as well as short chapters on gathering the crop, preparing for market, and marketing the produce. Paper and type are alike good.

BUSH FRUITS CULTURE.

In this we have No. 9 of the same series as the above. As the name implies the pamphlet deals with Gooseberries, Currants, and Raspberries, and includes Strawberries as a crop that may be grown between the bushes. A considerable amount of attention is paid to Gooseberries, which their importance warrants. In describing the process of making cuttings, the advice given is sound, but we should not practice the method of inserting them. For instance, the ground having been chosen, the operator is advised to dig it all over and then lay the line at the place where the cuttings are to be inserted. This is to be done by pushing them into the ground alongside of the line, and treading the ground after all have been inserted. There is just a little danger of peeling off the bark at the base; but of more importance is the difficulty of pushing the cuttings of

Gooseberries into the ground with the spines upon them. Though every bud intended to be in or near the ground should be removed, the spines need not be so treated, as they serve to hold the cuttings in the ground when frost is likely to raise them out of it. Another fact we should mention is that cuttings taken in September and divested of their leaves before insertion get well rooted before spring, thus gaining almost a season in advance of those put in in winter or spring. The selection of the seven best varieties for market purposes is a very good one. The same number of Lancashire prize Gooseberries is given, but rightly enough their flavour is not recommended. Whinham's Industry is described as the only variety not subject to mildew in America, which is not a little surprising when we remember how few of our Apples do well there, and *vice versa*. The details given respecting the cultivation of the Raspberry are very much to the point, but particularly concerning the preparation of the land. We note that large Currants are recommended irrespective of due regard to flavour, while the opposite idea is applied to the Gooseberry. Early and late Strawberries are urged as the best to plant so as to gain an advantage over competitors who disregard or are ignorant of the value of prolonging the season.

GLASSHOUSE GARDENING.

No. 10 of the "Salisbury" Series deals with the culture of fruits, flowers, and vegetables under glass, and chiefly from a commercial point of view as in the case of the preceding pamphlets. Most attention in this case is given to materials and means rather than the subjects themselves, though a short article is devoted to the most important crops to grow. Tomatoes take a prominent position, followed by French Beans, Grapes, Peaches, Cucumbers, and Mushrooms. Flowers require more skill and knowledge in their successful cultivation than the subjects above mentioned; hence nothing more is said about them in this article, the cultivator being recommended to stick to those things which he understands best. Other articles deal with horticultural glass, bench-box culture, advantages of lean-to houses, ridge and furrow houses, anxiety of the foreign grower, cleanliness, the English grower's position, &c. The author of the book thinks that the failing of the foreigner is chiefly in the quality of his goods. Then let the home producer pin his faith to quality and win his way by dogged perseverance is a proposition that we would second.

CEANOTHUS RIGIDUS.

THERE are numerous very pretty shrubs belonging to the genus *Ceanothus*, but several of them are not very hardy in the midland and northern counties, particularly the small leaved and evergreen species. As far north as London at least, they prove hardy enough against a wall in the open to withstand all but the severest winters which we get at fairly long intervals. The species under notice was introduced from California in 1848, but is not so frequent as we should expect it even in the southern counties. Some branches of it, heavily laden with flowers and flower buds, have reached us from Mr. J. Reynolds, The Gardens, Sidbury Manor, Sidmouth, Devon. The stems are of slow and stiff, sturdy growth, producing a great profusion of short spurs and twigs that are densely crowded with clusters of rich, dark, purple-blue flowers. We should not expect it to flower in the latitude of London for another three weeks. The shoots are covered with dark green, persistent, wedge-shaped leaves, smaller than those of the common Box as a rule, and reminding us of those of *Cotoneaster microphylla*. When in full bloom the shrub is really handsome and supplies a colour that is quite uncommon amongst hardy shrubs. The evergreen leaves, when covering walls, have an interesting and decorative effect even when the shrub is not in bloom.

SOME INTERESTING PLANTS.

A LARGE audience assembled on the 8th March to hear Professor Henslow lecture on some of the plants exhibited. This is the first of the series of six lectures which the Rev. Henslow, as Professor of Botany to the society, proposes to give through the year. J. T. Bennett-Poë, Esq., occupied the chair.

Iris persica was the first of the plants passed under review. This plant had been grown in England for upwards of a hundred years. It was the first plant figured in the first issue of *Curtis' Botanical Magazine* in 1790.

The Sarracenias were the next subject of the Professor's remarks. It was explained that the characteristic "tubes" were formed by the leaves folding over and joining at their edges. The stiff bristle-like hairs which line the interior of these tubes, and pointing downwards prevent the escape of any insect entering were also commented on. As a curious instance of the complex workings of Nature's machine, it was stated that a moth, too wary to be caught in the trap herself, would drop her eggs into the tube amongst the trapped insects, and the grubs would, as a result, feed upon them. Certain birds, however, would find out the presence of the grubs and would slit the tubes with their beaks in order to get at them. The curious morphology of the flower was pointed out, and the position of the stigmatic points shown.

That handsome development, the *Papilio Cyclamen*, then engaged the attention of the lecturer. Hypertrophy of the segments of the corolla had in their case produced a new race of plants, which would probably take a further step and become double. It was incidentally mentioned that an illustration of *Cyclamen Coum* was the fourth plate in the first issue of *The Botanical Magazine*.

Epacris and *Erica* were used to illustrate the idea of "representative" plants, *Epacris*, with its five-pointed corolla coming from Australia, and *Erica*, with its four-pointed corolla hailing from South Africa. An examination of the plants, however, while it would show differences in the flowers of the two, would also reveal a similarity in their vegetative systems. This was due to the similarity of climatal conditions under which the plants were placed.

Bryophyllum calycinum, a curious member of the natural order *Crassulacea*, was mentioned as being remarkable for the way in which the thick fleshy leaves detached themselves from the stem before they were dead, fell to the ground, and, under favourable conditions, rooted. The roots and buds were produced at the notches in the lamina or blade of the leaf. This, the Professor offered as evidence in support of the idea that fruits were only altered leaves, since in a *Pea* pod the seeds were borne on the ridge formed by the unison of the edges of the transformed leaves, or carpels.

Specimens of the modern *Amaryllis* were likewise shown. The forefathers of these handsome plants were early figured in *The Botanical Magazine*, but the modern plants had become very greatly mixed up, and it was impossible to say definitely as to their genealogy. *Hippeastrum pardinum*, a Peruvian species, was shown, but the results obtained by crossing it, and some of the modern forms had, so far, not been satisfactory. The effects of H. Leopoldi upon the race had been to produce the large, flat, open flowers with the short tube. He drew the attention of his audience to the fact that the five upper segments of the flower had each a white stripe running down the centre. The lower segments were much smaller than either of the others, and lacked the white stripe. The stamens, too, arched over or were declinate. He believed this to be due to the effect of insects. This smaller lower segment was always a feature of irregular flowers with declinate stamens. The insects alighting upon the stamens bent them over, and caused them to assume the shape they did.

In conclusion, the Rev. Henslow touched upon hybridity, and brought forward several samples of Orchids to illustrate his remarks, including *Dendrobium wardianum*, *D. japonicum*, and hybrids between the two, also the bigeneric hybrid *Epiphronitis*. The Professor said that some people had the idea that if two plants of different genera would cross, they ought no longer to be kept in different genera on physiological grounds. It was necessary, therefore, to decide whether one would group and classify plants from a physiological or a systematic point of view, in which case there would be divergencies of opinion as to the place certain plants ought to occupy.

At one time, people thought that sterility was the inevitable possession of the hybrid, but this was a fallacy, inasmuch as many of our popular races of plants, such as Roses, and Fuchsias were of hybrid origin, and they were all fertile enough.

Gleanings from the World of Science.

THE undermentioned subjects were brought before the Scientific Committee of the Royal Horticultural Society, on March 8th.

Phytoptus ribis.—An interesting letter was received from Miss Ormerod giving an account of what is being done experimentally at the Duke of Bedford's fruit farm at Woburn, under the direction of Mr. Spencer Pickering, F.R.S. As to the possibility of obtaining "mite-proof" Black Currants, the only result has been some plants received from Budapest, which she has distributed to the Todington fruit grounds, to Mr. Speir Newton's farm, Glasgow, and to Woburn. Miss Ormerod has given as exhaustive an account as she could form of the disease in a special appendix to her twenty-first annual report, from the period of its first appearance until the present time. A series of experiments are now being set on foot at Woburn directed to every point which is open for serviceable action, including chemical applications. These will be followed by expert examinations of the contents of the galled buds treated; and with coincident examination of galled buds under precisely similar circumstances, but *not* treated chemically. These experiments will be found detailed in the appendix, pp. 141-158. A conclusion anticipated is that there should be "a difference in broadscale method of growing."

Scotch Fir, Malformation.—Mr. Veitch sent a curious mass of stunted boughs, the whole resembling a hedgehog, and probably caused originally by a *Phytoptus* or fungus. Dr. Masters observed that short boughs struck from such specimens were used as miniature trees, for rock-work, etc.

Sprouting Broccoli.—A remarkable specimen was received from Mr. W. P. Wright, Willeborough, Ashford, Kent, from the central and much enlarged stem of which a large number of good sized lateral shoots had appeared. It was suggested that if it be capable of being "fixed" it would probably prove a valuable acquisition.

Phytoptus on Hazel.—Mr. G. Gordon sent specimens of this well-known complaint, allied to the Currant mite. The samples were received from Kent, where the Black Currant is badly infested. It was first observed at the locality on the Hazel last year.

Orchid Roots with Fungus.—With reference to the specimen brought to the last meeting, Mr. Murray, of the Gardens, Oakwood, Wylam-on-Tyne, writes to say that he is "convinced that it is from no other cause than from the want of air, or, rather, circulation of air, among the plants." In a previous communication to Mr. Douglas he expressed agreement with Mr. Veitch's interpretation, but not quite in the manner he explained, for he observes, "I ventilate the houses day and night with the ventilators, . . . but the air upon the stages, or, rather, above the stages, when the plants are standing close together, travels very slowly, even with ventilators open, in comparison with that around the centre staging, as plants thereon seldom show signs of fungus."

Two and Three-Spathed Arums.—Mrs. Richards of Westridge, near Ryde, forwarded two flowers, one with two spathes, the other with three, both from the same plant. They were very fine instances, and it was reasonable to expect such might prove constant. If so, a permanent form with two or more spathes would be very desirable.

Azaleodendron.—A hybrid between an *Azalea mollis* or *sinensis* and a *Rhododendron*, received from Sir Trevor Lawrence, was unanimously awarded a Botanical Certificate. It was raised by M. Le Prof. Pynaert, of Ghent.

Large Ivy Stem.—Prof. Henslow exhibited a section of Ivy, some 10 in. by 8 in. across. It grew round a tall Holly, about 50 ft. in height, at Zeals Rectory, Wilts.

Twin Apple.—A remarkable monstrosity was sent from Mr. Bar-at-Gin, 3, Praed Street. Instead of being the result of the fusion of two flowers, as occurs in Tomatos, &c.—i.e., a "synanthic" condition, a vertical section revealed the fact that they were the result of a bifurcation of the axis below, the under side of the Apple giving no signs of its being a twin.

Cypress Diseased.—A specimen received from Dr. Church, having the bark split and detached and infested with fungi, was forwarded to Kew for further examination. The following report was received:—"*Cupressus dolabrata*.—This is a typical example of bark-scorching, the cortex being first killed by exposure to the sun's rays, afterwards splits and forms sun cracks, and finally separates from the wood. The fungus present—*Corticium lacteum*, *Fries*—is simply saprophytic on the dead parts."

Kitchen Garden Calendar.

THE peculiar and ungenial weather of late has somewhat retarded out-door operations, as snow lay on the ground in many places to the depth of several inches, which has lowered the temperature of the soil to such an extent as to check the growth of plants. We may now hope for better weather so that planting and sowing may be proceeded with. Advantage should be taken of the first genial weather to plant Onions that have been raised under glass. These should not be put too deeply in the ground or the plants instead of forming bulbs will be thick-necked. Cauliflower that was raised under glass may also be transferred to the open quarters, and the same may be said of Lettuce, Cabbage and Parsley.

POTATOS.—Towards the end of the second week the planting of these may be general. Those who have to grow a goodly portion of their supply in the kitchen garden, would do well to be careful in their selection of varieties, choosing those that are of medium growth. Potatos are an important crop in some gardens, while in others only a few for early use are planted, those for the main supply being grown on the farm. For earlies the Ashleaf and Sharp's Victor are good, while for a winter supply Windsor Castle is one of the best. Brussels Sprouts, Borecole, and early Broccoli seed may now be sown. The seeds must be well protected from birds, which are very partial to them. Snails are also troublesome, therefore, these must be kept in check.

CELERY for a late supply should be sown on a warm border; the soil for this cannot well be too rich, for the quicker the plants are grown the better the result. Choose a sheltered spot where the ground is level so that watering may be done more evenly than where it is on the slope. Should the weather be dry the ground must be kept moist by frequent though slight waterings. Plants that are getting forward in boxes or on hot beds should be transplanted into the trenches as soon as the weather is favourable, as there is nothing gained by keeping them until they have attained a large size before putting them out. Celery is quite hardy until blanching takes place, which alters its character entirely.

LEEKs that were raised under glass may now be transplanted in the open ground. Where space is limited trenches may be taken out as for Celery, but this is not necessary as blanching can easily be effected by means of drain pipes. We have no preference for the long slender stems. Bulk in these as in Onions is more to be desired; therefore as this can be produced in thickness instead of in length there is a point gained by aiming at the latter, as less trouble is required to effect the end.

PEAS must on no account be neglected now. As soon as those sown in the last month appear through the soil make another sowing of such varieties as Model Telephone, Model Telegraph, Exhibition, Veitch's Main Crop, Danby Stratagem, Invincible, and the like. The boughs should be put to the others as soon as they are a couple of inches high, taking care to use plenty of spray to keep the young plants upright until tendrils are formed, and they can support themselves.

SALSAFY is rather a troublesome vegetable to grow well, but if properly treated there is no reason why every garden should not be able to give a supply of this delicately flavoured winter root. Where the soil is poor and light, holes should be made with a dibber about a foot deep and nine inches apart in the row; these should be filled with light rich soil that has been passed through a half-inch sieve. Three or four seeds should be put in each station, and when the young plants have made the second rough leaf they should be thinned out to one at each place. Scorzonera may be treated in the same way,

or where the ground is suitable may be sown in drills fifteen inches apart.

VEGETABLE MARROWS may now be planted on slight hot-beds where they can be protected until all danger of frost is over. Another sowing may also be made for a later supply. Herbs of various kinds may now be sown, such for example as Thyme, Chervil, Marjoram and Savory. Make a successional sowing of Spinach. The Carter is one of the best for summer use. Small sowings of Turnips must also be made. It is not advisable to sow more at one time than for an immediate supply, as they so soon run to seed during dry weather.—Snowball, Early Milan, and Mouse-tail, are amongst the best. Lettuce should now be sown of the summer Cos varieties, and those already large enough for transplanting should be put out a foot apart each way, or they may be grown between the rows of Peas. Small sowings of Radishes of the early Olive or French Breakfast type should be sown on a warm border. Attend to stopping and regulating the growths of Cucumbers. Those on hot-beds where the heat is on the decline should have a lining put round the frames.—*Kitchen Gardener.*

The Orchid Grower's Calendar.

WARM DIVISION.—At the approach of spring everything begins to burst into new life, so to speak. The *Vandas*, *Angraecums*, *Aerides* and all the distichous-leaved plants have become active. It is easy to see when growth commences in earnest. The new foliage pushing from the centre or head of the plants is of a pale green colour, and the points of the roots assume a delicate pink and pea-green colour. When this takes place it is a good plan to go over the plants, resurfacing them with some live sphagnum moss, previously made warm by placing it in the same house some hours before it is required for use.

In some structures the moss will grow like mad, whilst in others it has to be coaxed considerably, even to placing the growing points uppermost. When the top-dressing is done water sparingly for a time, but keep the moss alive by gently sprinkling with a fine rose can or the syringe, and keep rather shady until a fresh start is made.

DENDROBIUMS.—The heat necessary to properly bring the flowers to perfection after the long resting season naturally causes the plants to start into growth also, and by the time the flowers are either cut or fade will be some inches high. It is a good plan therefore when this stage is reached to afford them some fresh material, for unless other people's plants are different from ours, the moss will have lost all its vitality. The peat should be used in as lumpy a state as possible and without having any of the fine particles shaken out as is usual. The very best results that have come under my notice, have been obtained when very ordinary peat has been used, with a liberal amount of silver sand added thereto, or pieces of charcoal. The system of beating and sifting out all the fine particles is a mistake in most cases, for you get rid of what little nourishment there ever was in the material; and it has to be made up some other way. Do not press the material in too closely, as such a proceeding prevents the air getting at the roots and the water from passing quickly away. The drainage, too, must be ample for a like reason. Keep the plants in position by neat stakes, so that they do not topple over. All the *Dendrobiums* require strong heat in the growing season, such as is given to East Indian subjects. And where a stove exists for growing *Crotons*, &c., no one need fear to take on the culture of this most useful family. The exception is *D. jamesianum* which does best under cooler treatment.

SEEDLINGS.—Most establishments where Orchids are grown can boast of a batch or batches of seedlings of their own raising, in various stages, and to be up-to-date it is imperative that I should devote a small space to their particular requirements. I will say at once that of *Cypripedium* hybrids we have none; but of *Cattleyas*, *Laelias*, and *Odontoglossums* we have about a hundred potted off singly into pots of various sizes from 1½ in. to 5 in. We find it necessary to keep them steadily going at all times, because being small they cannot be allowed much of a resting period. As they are now commencing to grow we shall (when this vile weather is gone) give them a bit of new stuff to grow in. In doing this

turn them out carefully without breaking any of the roots. To do this properly it may be best to break the pot. After well draining the pots place a small quantity of peat in with the plant and finish off with a layer of live sphagnum moss. Hang the plants up where they are out of the way of woodlice and slugs, and carefully examine them every day so that they do not suffer for want of water; for, being in small pots, they dry up quickly. Some plunge the small seedling pot into a larger one, but it is not a good plan, I think.—C.

FRUIT UNDER GLASS.

MELONS.—The earliest plants will now have set a sufficiency of fruits, and every attention must be given, so that they may swell rapidly and regularly. If the positions of the fruits upon the several plants have been carefully chosen there will be little fear of one fruit swelling to an abnormal size at the expense of the others, as is too frequently the case when they are so situated that one gets a larger quantity of nutriment than the others. The number of fruits allowed to a plant must of course depend upon the requirements of the establishment. In cases where very large fruits are in favour, one or two fruits will be quite as much as can be expected from each plant, especially where close planting is practised. Smaller fruits and a greater number are, however, of far more service in the majority of establishments, where a fruit once cut is not sent to the table again.

TOP-DRESSING.—Where the plants were planted on mounds or hillocks of earth the roots should now be making their appearance round the sides. The opportunity should, therefore, be taken to give a good top-dressing. This should consist of good loam, the temperature of which has been raised to the same as that of the house by being placed within it for a few days. See that this soil is not too wet when it is used, or the ramming that is necessary to properly incorporate it with the old material, and to induce the sturdy, short-jointed growth that all Melon growers love, will cake the soil, and render it unkindly.

The night temperature should not now be allowed to fall below 65° Fahr., which temperature may be easily obtained by shutting the house early in the day, thus imprisoning a good deal of the sun's heat, supplementing this by judicious firing. Syringing should be regularly performed twice a day, the first application being given about 8 a.m., and the second not later than 3 p.m.—if half-an-hour earlier so much the better.

SUCCESSION HOUSE.—As the plants for a succession crop have now developed into sturdy little specimens, with two or three rough leaves, and the roots have reached the sides of the pots, a house should be got ready without delay to receive them. The thorough cleansing and sulphuring given the first one should be given in this case also, and then the fermenting material, which should meanwhile have been turned twice or thrice, may be put in, and the beds made up. The young plants may require a little shading for a few days after planting, but they will not need it for long. Once they have got over the check of shifting, and have started to grow, all the light possible should be given them. Keep up a temperature of from 63° to 64° Fahr., if the former, so much the better.—A. S. G.

THE CINCHONA IN INDIA.*

My remarks this evening on the Cinchona industry in India will be chiefly confined to my own experience in British Sikkim, where I held executive charge of the Bengal Government plantations from the year 1865, when they consisted of a quarter of an acre only, till seven months ago, when I retired from active service. For the last twenty years of my service I also had charge of the factory which was started at the plantations for the extraction of the Cinchona products. So I shall have something to say on the manufacture as well as the culture of the Cinchona.

Quinine is principally got from the bark of trees

and shrubs belonging to the genus *Cinchona*. Indeed, till about twenty-seven years ago it was hardly known that it was obtainable from any other genus; but it was then ascertained that the bark of an allied genus, *Remijia*, also yielded it, although in smaller proportion. In 1830, and for several subsequent years, when *Cinchona* bark was scarce and dear, and quinine selling at famine prices, *Remijia*, or *Cuprea* bark, as it was commercially called, was imported from S. America for the European quinine factories in very large quantities; but later on, when the markets became stocked to overflowing with the rich cultivated *Cinchona* barks of India, Ceylon, Java, S. America, and other countries, prices fell, and the importation of *Cuprea* bark became unprofitable, and consequently ceased. The price of quinine is now so low that it would hardly pay the manufacturers to work up *Cuprea* bark, with its small proportion of alkaloids, even if they got it for nothing; for the expensive manipulation of a large quantity of bark, to get only a little low-priced quinine cannot be a profitable operation. Owing to over production, the price of both *Cinchona* bark and sulphate of quinine has fallen so low, that the planters get actually less for the bark than it costs them to grow and market it, whilst the quinine makers can hardly have fared much better; but the fever-stricken millions of the malarious parts of India and other hot countries reap the benefit; and to benefit them, rather than either planter or manufacturer, was the avowed object of our Government in introducing the *Cinchonas* to India and other countries. The results have exceeded the most sanguine expectations, for the introduction has been the means of bringing the price of quinine so low as to place it within easy reach of the very poorest. It is one of the few medicines of foreign manufacture that the natives of the East, almost without exception, implicitly believe in, and their confidence in it is likely to continue whilst quinine remains so cheap that there is but little temptation to adulterate it. Many substitutes have been from time to time put on the market, but not one has stood the trial test, and quinine is likely to remain, as it so long has been, the only safe specific for malarial fevers.

FORMATION OF PLANTATIONS.

First, then, concerning the formation of plantations. The planter in the East has no convenient nurseryman to indent on for his plants as his brother at home has, so must raise his own, and in fact, do everything for himself, from the making of bricks to the building of factories and fixing machinery. In Sikkim there were, practically, but two methods of raising plants practised, viz., by seed and by cuttings. In the earlier years of the enterprise seed was not obtainable, and plants had to be raised from cuttings, which was done in the ordinary way. There were three main species to deal with:—*Succirubra*, or Red-bark; *Officinalis*, or Crown-bark; and *Calisaya* var. *ledgeriana*, or Yellow-bark. Usually ninety-five to a hundred per cent. of the *Succirubra* cuttings rooted without any trouble, but *Officinalis* was not so accommodating, although not very troublesome, and *ledgeriana* was almost a complete failure, but of many and many a batch of it not a single cutting rooted and seldom more than five to ten per cent.

There was nothing peculiar either in the way the seedlings were raised. The seed was sown in long, narrow, terraced beds, protected by low thatched roofs from rain and sun, but open at the sides for free admission of air and light. The seedlings were kept in the same sort of protected beds, with several transplantings, as they grew and required more room, till 6 in. or 9 in. high, when advantage was taken of a spell of dull weather to remove the thatch and get them inured to the weather previous to planting out in the plantation. The sites selected for plantations were on the steep mountain slopes, at elevations lying between 1,000 ft. and 5,000 ft., flatish ground being avoided, as *Cinchonas* cannot long endure stagnant water at their roots; and artificial drainage, however elaborate, does not do much good with a yearly rainfall of 120 in. to 250 in. On the selected sites the jungle, usually consisting of a mixture of trees, hamboos, and shrubs, is cut close to the ground, and great care taken to leave nothing uncut to ensure everything dying and drying together, otherwise there might be an imperfect burn which would entail extra work in the final clearing. The cutting is best done in December, after the dry season has fairly set in, and the burning in the end

of March, when the weather is hot and dry. After the ground is cleared, roads have to be traced and made, and pegs put down in straight rows at the distance apart it is proposed to plant, usually 4 ft. to 6 ft. each way. Then pits of about 2 ft. across and nearly as much in depth are dug out, and afterwards filled in with the same soil mixed with any convenient decayed vegetable matter, and on these little mounds the plants are firmly planted, one at each peg, after the soil has been well saturated with rain, and the sky is overcast. At the time of planting, the seedlings are usually from twelve to fifteen months old, counting from date of the sowing. For three or four years the ground between the plants has to be kept fairly free of weeds, and occasionally dug over. Afterwards but little cultivation is necessary, as the plants will be covering the ground and able to take care of themselves. When the first plants were large enough to yield bark suitable for chemical analysis, it was found that the Red Bark, whether from seed or cuttings was fairly uniform in quality and of the typical character, i.e., rich in the inferior alkaloids, cinchonidine, and cinchonine, but rather poor in quinine. So it was only a question of expediency whether the plants were raised from seed or cuttings, the result in alkaloids being the same. It is not a good bark for quinine making, but is perhaps the most useful to the ordinary druggist for his tonics and other preparations. The crown bark was also uniform in quality and true to type, however raised. It is one of the very best barks for the manufacture of sulphate of quinine, as it is rich in quinine, and comparatively poor in the inferior alkaloids. It thrives to perfection in Travancore, and other parts of southern India, but is rather a failure everywhere in the more northern Himalayan regions. Its stem bark will yield from 3 to 6 per cent. of its weight of sulphate of quinine. The yellow bark behaved quite differently. The cutting-raised plants, of course, yielded bark of exactly the same composition as the parents, but the seedlings differed in the most perplexing way, both from their parents and from each other. The better sorts yielded from 8 to 10 and even 16 per cent. of sulphate of quinine, but the inferior sorts which were quite as numerous, or perhaps more so, less than 2. To make matters worse, the good sorts are quite indistinguishable from most of the bad till the trees grow up and flower, and not always then even. The original seeds, from the Andes, yielded just as mixed a progeny as the Indian grown did in later years. They were collected in Bolivia for a Mr. Ledger by his half-caste servant, who was afterwards killed for having procured them for export, and thus destroyed the monopoly of so valuable a product to its native country. These seeds were first offered for sale by Mr. Ledger to the India Office, who refused them, not knowing that they were of any special value, or that they differed from varieties of *Calisaya* already in India. Ultimately they were divided between a Madras private planter, for his plantation on the Nilgiris, and the Dutch Government for their plantations in Java. Part of the planter's share was afterwards exchanged with the Madras Government for other sorts of *Cinchona* seed, and, through an old friend, I got a very small packet, from which we raised 800 plants. These were the parents of most of the Ledger plants since grown in India and Ceylon, for the species did not thrive on the Nilgiris but speedily died out, and the Dutch were careful to reserve the Java-grown seeds of the better varieties for their own use for many years. But till the first-grown bark was analysed, neither the Dutch nor English had any idea of the value of the prize they possessed, and till the trees flowered the species even was uncertain. The first flowering specimens were submitted to the late John Eliot Howard, the famous London manufacturer of the purest sulphate of quinine ever put on the market. Mr. Howard had made a special study of the genus *Cinchona*, and published extensively on both its botany and chemistry, and was for many years a trusted adviser of Government on the introduction of the *Cinchonas* to India, in which he took the keenest interest. So, altogether, he was in the best position to determine the species. He pronounced it to be a variety of *Calisaya*, and named it *Cinchona Calisaya* var. *ledgeriana*. A few years later Moens, the superintendent of the Java plantations, who was a most excellent analytical chemist, but made no pretence to any knowledge of botany, raised it to

* Paper read at the monthly conversazione at the Horticultural Club, on Tuesday, March 8th, by Mr. J. A. Gammie.

specific rank under the name *ledgerlana*; and Trimen, of Ceylon, agreed with him.

But there can be no doubt, I think, that Howard was right, and his name ought to stand. At any rate, the Government of Bengal adhere to it. It is a most variable plant in foliage and habit of growth, as well as in colouration of the flowers, which vary from pure white to bright pink. After the general flowering of the trees, chemical analyses showed that those with white, nodding flowers, and small seed-capsules, were rich in quinine, whilst those with pinkish flowers, however slightly tinged, or with straight flower-stalks or large seed-capsules, were poor; but as there is rarely a rule without an exception, it turned out that the very richest of all in Java had pink flowers. But with this notable exception, so far as I know, the rule holds good that the white-flowered varieties are rich in quinine, and the coloured poor. For instance, a mixed sample of bark collected under my own personal supervision from twenty trees bearing white flowers, but different or less from each other in foliage and habit of growth, yielded 8 per cent. of crystallised sulphate of quinine; whilst a corresponding sample, collected at the same time and place from twenty trees, with flowers tinged pink, yielded but 2.93 per cent., or nearly two-thirds less; so the formation of plantations, consisting of the rich varieties only, became a matter of the first importance, for it cost no more to grow a rich sort than it did a poor, and the yield of quinine would be more than doubled. But to do this with absolute certainty, some plan of artificial propagation was necessary, as the seedlings often came untrue to type, and sometimes were a very mixed and inferior lot indeed. Attempts at propagation by cuttings had ended in failure everywhere, and layering was a slow and unsatisfactory process. The other obvious plan was grafting, but that in the ordinary way was slow and expensive, as it had to be done under glass-roofs; so in the end, in Sikkim, we had to do the best possible with selected seed, and give up artificial propagation, much to our regret. But in Java, where the climate and soil are both more favourable to *Cinchona* growth, plants grafted under glass, and afterwards planted out in the open, made good growth, and yielded profitable returns on the expenditure.

(To be continued.)

SOCIETIES.

ROYAL BOTANIC.—March 30th.

THE spring exhibition of this society, which was held as usual in the large conservatory and corridor in the society's gardens at Regent's Park, on this date, was favoured by fine spring weather. The competitive exhibits in the classes according to schedule were, however, very few. There were no competitors in the majority of classes, and the competition in the others was not keen, although the exhibits were of high quality.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., had a comprehensive display of bardy flowers. Anemones, Saxifrages, Fritillarias, and Primulas were present in variety, and in capital condition. The first prize was well won by this group.

The Silver Daffodil Cup, presented by Messrs. Barr & Sons for a collection of Daffodils to illustrate the three sections, was won by Mr. W. Grant, Bassalee, Monmouth, with a capital exhibit, in which there were upwards of sixty distinct forms. *N. Emperor*, *N. incomparabilis* Sir Watkin, *N. odorous rugilobus*, and *N. Leedsii* Duchess of Westminster were especially fine.

Messrs. Barr & Sons, King Street, Covent Garden, received first prize for twelve pots of Tulips. Of the varieties shown, *Ophir d'Or*, Keizer's Kroon, Prince of Austria, and Vermillion Brilliant were the best.

Mr. J. Mowbray, gardener to the Hon. H. C. Legge, Slough, staged the first prize lot of twelve *Cinerarias*. Messrs. Morle & Co., Finchley Road, were first for six hardy *Azaleas* in pots; and Mr. W. Kemp, Gungale Nursery, Barnes, second. The St. George's Nursery Company, Hanwell, staged twelve superb pots of *Cyclamen*, and well deserved the first prize which fell to them.

There was only one entry for six *Orchids*, and this was from Mr. G. Cragg, gardener to W. C. Walker, Esq., Percy Lodge, Winchmore Hill, who was awarded the first prize. Messrs. Morle & Co. received the second prize for twelve *Hyacinths*.

The miscellaneous exhibits comprised by far the major portion of the show, for they were both numerous and effective.

Messrs. B. S. Williams & Son, Upper Holloway, N., showed *Clivias* and *Amaryllis* in excellent form (Large Silver Medal). A nice lot of *Orchids* came from the same firm, whilst in other parts of the conservatory and corridor they staged groups of *Azalea mollis*, and various floral arrangements. Amongst the latter a basket of *Narcissi* was splendidly designed and executed (Large Bronze Medal).

A highly effective exhibit of miscellaneous flowering and foliage plants was set up by Messrs. John Laing & Sons, Forest Hill, S.E. The centre piece of this grand group was a large and superbly coloured piece of *Croton Laingi*. *Acacias*, *Caladiums*, *Lea amabilis*, *Dracaenas*, *Streptocarpus* and *Ferns* were all in first class condition (Large Silver Medal). The same firm contributed a number of elegant and recherché floral arrangements. *Roses* were employed very tastefully here, and a good deal of variety was evident (Large Bronze Medal). Mr. W. Kemp sent a group of *Azalea mollis*, and Messrs. Morle & Co., a nice batch of *Mignonette* (Bronze Medal). Messrs. Wm. Paul & Sons, Waltham Cross, were well represented by a fine lot of *Camellias*, both cut flowers and plants being shown.

The Waltham Cross firm also set up a group of pot *Roses* in which the variety *Enchantress* figured conspicuously. The array of *Hyacinths* in pots sent out by the Messrs. Paul was very imposing and included most of the leading varieties. (Small Silver Gilt Medal).

The Church Road Nursery Company, Hanwell, sent a capital lot of *Cyclamen*. The plants were well flowered, and the individual flowers large and substantial (Silver Medal).

The *Cyclamens* sent by the St. George's Nursery Company, Hanwell, were from all points of view first-class. The whites, and crimsons were really superb (Silver Medal).

The *Daffodils* sent by Messrs. Barr & Son were worthy of the firm, for they well illustrated the range of type forthcoming in this genus. *Narcissus Horsfieldi*, *N. Golden Spur*, *N. Victoria*, *N. Emperor*, *N. Leedsii*, *Grand Duchess*, and *N. obvallaris*, were some of the most notable forms (Small Silver Medal).

Messrs. J. Hill & Son, Lower Edmonton, sent a grand lot of *Ferns* both large and small, chiefly of marketable varieties. The plants were in the rudest of health (Large Silver Medal).

Messrs. John Peed & Sons, Roupell Park Nurseries, Forest Hill, S.E., sent a nice group of miscellaneous plants; *Ghent Azaleas*, *Ericas*, and *Clivias* represented the flowering element, and *Ferns*, *Caladium argyrites*, and *Begonia Arthur Malet* were some of the prettiest foliage plants. (Small Silver Medal).

The group of flowering plants submitted by Mr. G. Kelf, gardener to Mr. Abbot, South Villa, Regent's Park, contained some capital *Tulips* and *Hyacinths*, and spoke well for the resources of this town garden. (Silver Medal).

The exhibit coming from Messrs. Wm. Cutbush & Son, Highbgate, N., consisted largely of bardwooded plants; *Acacia Drummondii*, *Eriostemon intermedia*, *Ericas*, and *Boronias* were well shown. *Magnolia soulangeana* in pots was a pretty feature, as was also a batch of *Richardia eillottiana*. (Small Silver Medal).

Messrs. James Carter & Company, High Holborn, displayed their well known strain of *Cinerarias*, for which a Silver Medal was given; whilst Mr. T. Jannock of Dersingham has a superb lot of *Lily of the Valley* (Small Silver Medal). A showy group of *Orchids* was contributed by Messrs. Hugh Low & Company, Bush Hill Park, Enfield (Large Silver Medal).

Mr. W. Rumsey, of Waltham Cross, sent cut *Roses* in first-class condition (Large Bronze Medal). Mr. H. B. May, Dyson's Lane Nurseries, had a nice group of *Ferns* (Large Bronze Medal). Messrs. A. W. Young & Company, Stevenage, sent *Cinerarias* (Large Bronze Medal).

A meritorious collection of *Narcissi*, sent by Mr. T. S. Ware, received a Large Bronze Medal.

QUESTIONS AND ANSWERS.

* * * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as *Carnations*, *Pelargoniums*, *Chrysanthemums*, *Roses*, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Watering Tomatos Overhead—*Bulbs*: There is no necessity for watering Tomato plants overhead, even when established in pots. On the other hand we consider that it often leads to injury of some form or other, though it may be indirectly. A close, moist atmosphere makes the stems thin and leggy, while the lower leaves remain soft and thin, falling before they get very old. This was the cause of the lower leaves turning yellow, and falling last year as you mention. To grow Tomatos sturdily and short jointed they must be placed near the glass, fully exposed to sunshine, and freely ventilated after they have commenced growing, that is, after they have made a start. Plants in pots should never be allowed to get dry at the roots, and while loaded with young fruits, liquid manure at the roots will help them greatly. As for the rest give the plants full exposure to sunlight and plenty of ventilation, according to the season, more being necessary in summer than during the present cold weather. At present the watering had best be done in the morning, but in summer the principal watering should be given before leaving off work. Should any of the plants appear dry in the morning you should water them then, but not otherwise. In cloudy or wet weather comparatively little water will be needed, but in any case every plant should be examined. Overhead watering lays the plants liable to be destroyed by fungoid diseases; a close damp atmosphere has the same effect, particularly in summer. At that time the atmosphere of the house should be kept dry and cool.

Dendrobium nobile var.—*E. K.*: The flowers you sent us represent a very good, light-coloured *D. nobile*, but their stalks are too strong and upright for the variety to be placed under *D. nobile pendulum*. The flowers of that should hang downwards in the type most true to name. Some growers are not over particular in the application of the name, which they will sometimes give to a form whose flowers are only horizontal instead of being decidedly drooping.

The Dum Palm—*A. C.*: It is the *Hyphaene tbebaica*, a fan Palm native of Egypt and the neighbouring countries. We prefer, however, to spell the name *Doum* or *Doom Palm*. It is also known as the *Gingerbread tree* of Egypt. The fruit is about the size of an Apple and the outer portion, surrounding the large solitary seed, is mealy, fibrous and tasting remarkably like gingerbread. It is rather a coarse kind of food by reason of the amount of fibre in it.

Celery Seedlings in Small Trays—*Bulbs*: The reason why the seeds of *Celery* germinate more freely in small or shallow trays is that the soil is not so liable to get sodden as it does in deep ones. A large quantity of soil is quite unnecessary, and even bad for germinating seeds, because there are no roots to keep it sweet. The surface may be dried up by the heat of the sun, while the great body of soil may be quite wet. By the time the seedlings appear their roots are unable to penetrate the sour wet soil; and this is also the reason why they do not attain the same vigour as seedlings raised in shallow trays, but lag behind them in a weakly, sickly condition. Seedlings in shallow trays do better right away, you say; then you should follow up your discovery by employing those only.

Names of Plants—*Mr. J. Reynolds*: 1, *Azara microphylla*; 2, *Hibiscus schizopetalus*; 3, *Ceanothus rigidus*.—*C. Mackenzie*: 1, *Picea smithiana*; 2, *Picea pungens*; 3, *Cupressus lawsoniana* var.; 4, *Juniperus recurva*; 5, *Abies Veitchii*; 6, *Podocarpus andina*, but often called *Prumnopitys elegans* in gardens; 7, *Thuja orientalis*; 8, *Thuja gigantea*; 9, *Retinospora obtusa pygmaea aurea*; 10, *Juniperus chinensis* (female plant); 11, *Kalmia latifolia*; 12, *Piptanthus nepalensis* (Himalayan Laburnum); 13, *Cupressus lawsoniana*; 14, *Cupressus lawsoniana* var.; 15, *Cupressus nutkaensis*; 16, *Kalmia latifolia myrtifolia*.—*B. R.*: 1, *Primula denticulata*; 2, *Iris reticulata*; 3, *Helleborus foetidus*.—*H. J.*: 1, *Odontoglossum crispum andersonianum*; 2, *Dendrobium chrysotoxum*; 3, *Dendrobium devonianum*; *Oncidium spilopterum*.—*W. R.*: 1, *Erica mediterranea*; 2, *Akebia quinata*; 3, *Berberis japonica*; 4, *Saxifraga ligulata*.—*W. L.*: *Cantua buxifolia* (it is variable in the toothing of the leaves and the length of the flower).

Communications Received.—Robert Mason.—F. Tutnail.—J. T. Thurston.—J. Thurstan.—A. F. Barron.—J. Laing & Sons.—Alex. James Monro.—Ludwig Möller.—W. M. W.—T. Hendry.—West.—Nemo.—W. B.—G. Peddie.—T. W.—P. H.—R. W.—X.

TRADE CATALOGUES RECEIVED.

H. CANNELL & SONS, Swanley, Kent.—Illustrated and Complete Floral Guide of Plants for 1898.

J. CHEAL & SONS, Lowfield Nurseries, Crawley, Sussex.—Spring Catalogue of Dahlias.



STOVE AND GREENHOUSE PLANTS.



R. B. LAIRD & SONS,

HORTICULTURAL AUCTIONEERS AND VALUATORS,

BEG TO DIRECT ATTENTION TO THEIR VERY FINE STOCK OF THE ABOVE.

THE BEST COLLECTION IN SCOTLAND.

Their Nurseries, at Pinkhill, Murrayfield,

Will at all Seasons be found attractive and of interest to Horticulturists.
CATALOGUES FREE.

PINKHILL NURSERIES, MURRAYFIELD, MIDLOTHIAN.

DAVID W. THOMSON'S

Vegetable Seed Specialities.

- THOMSON'S IMPROVED PROLIFIC LONG POD BEAN.
- THOMSON'S SUPERB RED BEET.
- THOMSON'S SELF-PROTECTING BROCCOLI.
- THOMSON'S IMPROVED HORN CARROT.
- THOMSON'S MARKET CARROT.
- THOMSON'S INCOMPARABLE WHITE CELERY.
- THOMSON'S MAMMOTH GREEN COS LETTUCE.
- THOMSON'S SUPERB CURLED PARSLEY.
- THOMSON'S EXCELSIOR TOMATO.
- THOMSON'S DUKE OF YORK MELON.

Flower Seed Specialities.

- THOMSON'S DWARF ANTIRRHINUM.
- THOMSON'S DALKEITH CALCEOLARIA.
- THOMSON'S SUPERB BEGONIA.
- THOMSON'S UNRIVALLED CELOSIA.
- THOMSON'S CINERARIA.
- THOMSON'S CYCLAMEN.
- THOMSON'S PANSY.
- THOMSON'S PETUNIA.
- THOMSON'S PRIMULA.
- THOMSON'S EAST LOTHIAN STOCK.

See Catalogue of Selected Seeds for 1898, Post Free on Application.

Forest Trees, an extensive collection of Seedling and Transplanted Forest Trees, comprising Scots Fir, Spruce Fir, Larch Fir, Abies Douglasii, etc., etc.

Ornamental Trees and Shrubs, Rhododendrons, etc., in fine condition for removal, having been all recently transplanted.

Roses and Fruit Trees.—My stock of the above includes all the best varieties grown, in fine condition for removal.

CATALOGUES FREE ON APPLICATION.

Nurseries, WINDLESTRAWLEE, Granton Rd. Seed Warehouse, 24, FREDERICK ST., EDINBURGH.

SPECIALITIES

BEGONIAS, SINGLE & DOUBLE.

Finest Collection in Scotland.

STOVE * & * GREENHOUSE * PLANTS.

Visitors to the Show should not fail to notice my **Circular Table of Spring Flowering Plants.**

JOHN DOWNIE,
144, PRINGES STREET, EDINBURGH.

1898. FORBES' CATALOGUE 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants

is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and price of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other Valuable Information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,

ESTABLISHED 1870.

Nurseryman, Hawick, Scotland.

GLASS MANUFACTURERS TO HER MAJESTY THE QUEEN.



JOHN FORD & CO., 39 & 40, Princes St., EDINBURGH. SHOW VASES and TUBES

AS SUPPLIED TO THE
Royal Scottish Horticultural Association.

Plain and Decorative Flower Pots and Pedestals.

The largest Stock and choicest assortment from all the leading makers. Prices on application.

- ROSES, strong H.P.'s., competition varieties 6/- doz.
- VIOLAS, strong plants, bedding varieties, 1/9 doz., 10/6 100.
- VIOLAS, strong plants, competition varieties, 2/6 doz.
- FANCY PANSIES, best varieties for competition, including many of recent introduction, 3/6 doz.

All Post Free for Cash with Order, from—

J. GRIEVE & SONS,
REDBRAES NURSERIES.
BROUGHTON ROAD, EDINBURGH.

HARDY CLIMBERS.

FINE COLLECTION.

FOR PILLARS, ARCHES, WALLS,
PERGOLAS, TREES, &c.

GEO. BUNYARD & CO.

Beg to say their List of the above may now be had free, from

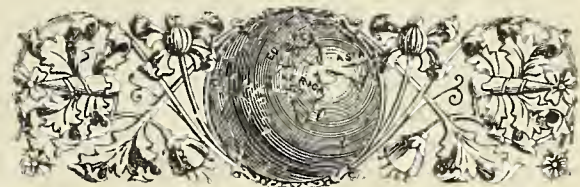
THE ROYAL NURSERIES, MAIDSTONE.

NEW DOUBLE VIOLET,

MRS. J. J. ASTOR.

This beautiful Violet, of a deep rosy-heliotrope is meeting with a most cordial reception, and as the stock is getting very limited, and we have already many orders booked for April and May, we beg all intending purchasers will please apply at once to prevent disappointment.

The Managers, Hood Gardens, Totnes.



"Gardening is the purest of human pleasures, and the greatest retreachment to the spirit of man."—Bacon.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, APRIL 9th, 1898.

NEXT WEEK'S ENGAGEMENTS.

- TUESDAY, April 12th.—Royal Horticultural Society: meeting of Committees at 12 noon.
- WEDNESDAY, April 13th.—Sale of Lilliums, Roses, Gladioli, and herbaceous plants by Messrs. Protheroe & Morris.
- THURSDAY, April 14th.—Sale of stove, greenhouse, and hardy herbaceous plants, and Roses by Messrs. Protheroe & Morris.
- FRIDAY, April 15th.—Sale of Imported and Established Orchids by Messrs. Protheroe & Morris.
- SATURDAY, April 16th.—Opening day of the Ghent Quinquennial Show (8 days).

THE FLORA OF BERKSHIRE.*—We have seen a number of county floras, that is, books on the subject, but must give the palm to this one for completeness and general excellence. The book is very appropriately dedicated to and by permission of Her Most Gracious Majesty,

* THE FLORA OF BERKSHIRE, being a Topographical and Historical Account of the Flowering Plants and Ferns. By George Claridge Druce, Hon. M.A., Oxon. Oxford at the Clarendon Press, 1897.

"MANURES AND THEIR APPLICATION." A Lecture delivered to the Cheshunt Wormley, &c., Horticultural Society, by W. Dyke. 6d. each 1s. 3d. for three.—PUBLISHER, 1, Clement's Inn, Strand, London.

Queen Victoria, as the tribute of a student of the Royal county to his sovereign. The author, Mr. George Claridge Druce, has previously given the *Flora of Oxfordshire* and the *Flora of Northamptonshire* to the world, notwithstanding his regular duties, so that his time for many years past must have been laboriously occupied; and only the pleasure attached to field botany and his love for the subject could have induced him to give such unremitting attention to the subject as he must have done. His leisure time for the past ten years has been devoted to the visiting of every one of the 180 parishes into which Berkshire is divided, for the purpose of noting the wild plants of the respective districts. However minute and assiduous the research of a botanist may be, Mr. Druce wishes to impress upon the mind of his readers that no finality can ever be attained. This would be sufficient to frighten some beginners and would be botanists off the field; but it may be admitted that those lacking a certain amount of perseverance, and a real love for the subject, deserve to be frightened from the domain of botany. Mr. Druce found numerous students, however, of kindred tastes to his own, and enthusiastic helpers, all of whom he warmly thanks. Amongst others, we note Mr. Frank Tufnail, F.L.S., of the floral department of Messrs. Sutton & Sons, Reading, an enthusiastic botanist, who devotes much of his leisure time to hunting up and localising the flora of a wide district around Reading. Gardeners could do much worse than study the flora of the British Islands, which represents nearly the half of the natural orders of flowering plants on the globe. The correct observation to be acquired in work of this kind cannot be otherwise than helpful to cultivators, whichever class of plants they may ultimately be called upon to tend and grow.

The introduction and plan of the flora occupy 200 pages of closely printed matter, and would in themselves constitute a book of many interesting details concerning the county either directly or indirectly in its relation to the wild plants. The flora proper, including an index, runs to another 644 pages, the book being a large octavo size. A considerable portion of the introduction is taken up with the geology of Berkshire, which we consider a most interesting feature in relation to the species of plants which grow upon the different formations. Those which come to the surface within the county are confined to the Secondary, Tertiary and Post Tertiary rocks. The lowest or oldest beds in point of geological time belong to the Oxford Clay. Lists of characteristic plants on the several formations are given. The water supply from different formations has no doubt as much to do with the kinds of plants in a district as the soil itself. We note that the chalk hills of Berkshire give a flora closely similar to what occurs on the North Downs of Surrey and Kent. The botanical districts have been named from the principal rivers running through the county, which we may here indicate as a purely arbitrary arrangement; it could hardly be otherwise when one comes to consider the physical geography of Berkshire. The Thames bounds the county on the north and east, winding about in a most remarkable manner. The flora in several of the bordering counties on the opposite bank of the river must needs be the same or closely similar to that under consideration. Commencing on the northern border of the county we have the (1) Isis, as the Thames is named beyond the city of Oxford. Further south we have the (2) Ock (3) Pang (4) Kennet and (5) Loddon rivers, the general trend of which is east and north-

east till they lose themselves in old Father Thames. The figures indicate the five botanical districts chosen by Mr. Druce under which to classify the stations or localities in which the species enumerated have been found wild. The author's summary gives 893 plants native to Berkshire, 45 which are denizens only, and 56 colonists, making in all 994. To these are added 11 of uncertain record; 4 that are probably extinct; and 199 of casual occurrence, giving a grand total of 1,208 species. The items that strike us as the most remarkable are the four extinct species (we should have thought there would have been 40 at least), and the 200 casuals. We added one to Mr. Druce's record, for we have had *Xanthium spinosum* from the neighbourhood of Waltham St. Laurence, the author of the book mentioning an instance from Wiltshire only. We have also gathered it several times in Kent within the sphere of influence of the London County Council.

The amount of labour which this flora must have cost Mr. Druce is fully brought home to us when we come to consider the names given the species; the authorities, various botanists, writers, books, herbaria, &c., who or which have been consulted; and the information here tabulated for the benefit of future workers in this delightful field of research. Some botanists are contented to go back to Linnaeus, the inventor of the binominal method of nomenclature for their authorities; but Mr. Druce commences with *Turner's Herbal in 1551*, though that refers more to the history of the discoveries of plants in the county than to their names. What little collecting we have done in Berkshire we have been able to confirm in this comprehensive work. Of the genus *Rubus* 58 species, so called, are recorded for the county, independently of varieties and hybrids. This surely must be more than half the number occurring within the British Isles, even upon the computation of those who make a species out of very little. As a passing remark we might here suggest that it would have been a great improvement or at least an advantage to the student if the species admitted as truly native had been numbered under each genus. Botanists in the county must surely be interested in the supposed hybrid Strawberry, *Fragaria bercheriensis*, and *Rubus rosaceus bercheriensis*, both taking their names from "Berkshire" latinised. We are pleased to note that the orange-coloured Balsam from America (*Impatiens biflora*) has got a footing in Berkshire as it has in the Thames from the Bourne Brooke and River Wey, seawards as far as Hammersmith at least, as well as in the tributaries of the river from West Middlesex. After examining a great number of the pages of this book we must say that the record cannot be otherwise than a close approach to the possible total of plants growing wild in the county whether truly aboriginal or introduced. A vast number of them are very characteristic of the flora of the Thames valley as we have observed it both in Berkshire and the lower reaches. This is of course what would be expected, leaving out of account the floras of the chalk downs, and those in the lower reaches of the river from Woolwich to The Nore, where the littoral is under the influence of the brackish waters of the tide.

The greatest fault we find with the book is the extraordinary alteration of the names of species and even genera. To the botanist the alterations offer no difficulty whatever, because the synonyms and authorities are recorded, together with the dates at which the adopted names were first applied. This latter feature is a most valuable one, and should serve as a landmark for all future

workers, beyond which they should not go without quoting authorities and authentic dates. The wholesale alteration of names is, however, a most serious one as far as gardeners are concerned. Whether a uniform level can ever be reached seems on the face of it very doubtful. Much alteration is due to mere matter of opinion amongst different authorities; and, as in all other natural sciences, botany has attained its present high-level platform over the head of the accumulated pile of facts, observations, blunders, errors, misapprehensions, incorrect or imperfect description, &c., of hundreds of workers during past centuries. All this would have been of little or no moment, whatever, if the botanist of the present day could begin with a clean sheet to name and classify plants; but unfortunately that method cannot be adopted, while much that is obsolete has to be worked into the new or modern fabric.

Wasps are the most inveterate enemies of flies. Reaumur says that he has known one wasp to kill a thousand flies a day.

Mr. F. G. Brawer, for the past twelve months gardener to Mrs. Dymoke Green, Oaklands, near St. Albans, Herts., has been appointed gardener to Graham Fish, Esq., at the same place.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, April 12th, in the Drill Hall, James Street, Westminster, 1 to 5 p.m. A lecture on "Blight and Blessing," illustrated by lantern slides, will be given by Mr. Fred Enoch, F.L.S., at 3 o'clock.

National Chrysanthemum Society.—The recent smoking concert held in connection with the National Chrysanthemum Society resulted in a nett balance of £8 9s. 5d., which has been contributed to the funds of the society. The Hon. S. Edwards Committee, through whose efforts the function was promoted, desire to express their thanks to the many friends who assisted in making the concert a success.

Cucumber everyday.—We learn that the new Cucumber "Everyday," raised by Mr. Owen Thomas, of the Royal Gardens, Windsor, and exhibited by him at the Royal Horticultural Society's meetings on December 14th, February 4th, and March 4th, will be sent out next year as a novelty by Messrs. Sutton & Sons, of Reading. On February 4th, "Everyday" Cucumber received an Award of Merit, and on March 8th the Fruit Committee thought so highly of this variety that they awarded it a First-Class Certificate.

Chiswick Gardeners' Mutual Improvement Association.—At the usual meeting of this society on the 31st ult. there was a good attendance to hear a lecture on "Half an hour amongst the Ladies Slippers," by Mr. A. Wright of Falkland Park Gardens. He explained the meaning of *Cypripedium*, and spoke of the enormous increase of varieties and hybrids which had made the genus one of the most important of the whole family of Orchids to the cultivator. Different types were represented by means of cut flowers. Touching upon cultivation he described the *Cypripediums* as terrestrial species which required different treatment from the majority of Orchids in cultivation, and said that the compost might consist of two parts of fibrous loam to one part each of peat and sphagnum with other accessories to keep the soil open. Some of the more difficult species to grow might have less loam. A few species were so hardy that they could be, and have been, grown in a window. The means of destroying insects were commented upon. He advocated the use of something green as a back ground to show off the flowers to best advantage. In some cases it might be necessary to paint the walls with a gray-green to give the desired effect. Mr. Wright also described the process of fertilisation, mentioning the numerous hybrids which he himself had raised and flowered, as well as those that have not yet reached that stage. The difficulty of crossing the Old and New World species was commented upon, and much other information imparted. There was a good discussion.

Colours of the Chrysanthemum.—The Japanese reckon 269 colour varieties in Chrysanthemums, of which 87 are white, 63 yellow, 32 purple, 31 pink, 30 red, 12 russet, and 14 of mixed colours.

Bacteriosis of Carnations.—In a paper recently presented before the American Science Association, Mr. A. W. Woods, of the Agricultural Department, brought forward some observations concerning bacteriosis of Carnations. His opinion is that the disease is primarily caused by the punctures of plant lice and thrips, and that the bacteria are in reality the secondary agents. This statement will be of interest to both the Carnation grower and the scientist.

East London Horticultural Society.—The fourth annual spring flower show, inaugurated by the East London Horticultural Society, was opened at the People's Palace, Mile End Road, E., on Saturday last, April 2nd, the show being continued on the following day after 3 P.M. The opening ceremony was performed by Mr. H. Robertson, who, in doing so, said that he regarded the cultivation of flowers as a most important factor in the social welfare of the people. Flowers had always been sought after and loved by persons of taste, and nations had adopted them as emblems. The exhibition consisted chiefly of Hyacinths, Tulips, and Crocuses, which were all present in great numbers and in capital condition.

Anemone ranunculoides in London Gardens.—A correspondent to the *Times* writes thus:—"Lovers of wild flowers have for several springs past been gladdened by the sight of a fair number of plants of the yellow wood Anemone, *A. ranunculoides*, flourishing in the Embankment Gardens between Waterloo and Charing Cross bridges. They were growing around several of the flower beds, and had most likely been brought thither in the turf used for edging, though so attractive were they that one was tempted to imagine they had been put in purposely, and to thank the authorities for this embellishment to the garden." The writer goes on to deplore the removal and destruction of these pretty, modest little plants, which is all the more to be regretted when we consider its rarity in the wild state and its comparative rarity under cultivation.

Ealing and District Gardeners' Society.—On the 29th ult., this society held its last sessional meeting, when Mr. George Cannon, of St. John's Nursery, Ealing, gave an address on "Landscape Gardening," Mr. C. B. Green presiding. Mr. Cannon dwelt, in a chatty style, on some of the more striking features of large gardens in the neighbourhood, adding, here and there, suggestions for the further improvement of landscape effect. Villa gardens, also, came in for a share of observation, as Mr. Cannon considered that these, when laid out properly and artistically, were capable of affording an immense amount of satisfaction to the occupiers. He recommended the planting of choicer trees and shrubs than generally prevailed, such as Maples, Hollies, Almonds, Hawthorns, and variegated shrubs, which would not be likely so soon to outgrow the requirements of a small place. The art of landscape gardening on a small scale, consisted in so arranging the trees that vistas beyond one's own premises could be obtained. Drainage and other matters received attention, a hearty vote of thanks being accorded. There was an excellent attendance, and a keen competition for the prizes offered for "Twelve Spring-flowering Plants." Mr. R. Green, gardener to W. Owen, Esq., The Elms, Castlebar, Ealing, was the successful competitor, he having a well-grown and very floriferous lot. Mr. Green was further awarded a cultural certificate. His plants consisted of *Azalea indica* vars., *Madame Camille van Langenhoven* and *Madame van den Cruyssen*, *Azalea mollis* in var., *Cypripedium barbatum nigrum*, *Oncidium sarcodes*, *Cyclamen latifolium* (persicum), *Primula obconica* (very fine), *Narcissus princeps*, and *Tulip Keizer Kroon*. Mr. Holloway, gardener to E. Hyde, Esq., Hill Crest, Castlebar, came in second with a nice lot of *Azaleas*, *Deutzias*, *Narcissus*, etc., and two specimen pots of the white Spanish Squill (*Scilla hispanica alba*); Mr. Long, gardener to E. P. Oakshott, Esq., Orchardene, Montpellier Road, was third with a very good collection; Mr. Woods, gardener to Mrs. Willey, being fourth.

The Brabourne Yew in Kent is said to be 3,000 years old, and the most ancient tree in the British Isles.

Cardiff Naturalists had on the 31st ult. the pleasure to hear a very interesting lecture on "Our Native Plants," delivered by Mr. W. W. Pettigrew, superintendent of Parks, of Cardiff. The lecturer first dealt generally with the distribution of plants, and stated that the determining influence of a country's flora were climate, position, and environment. The question of climate was the most important, and the mere size of a country did not determine the size of its flora, for while France had 4,000 native species, Scandinavia, which was much larger, had only a 1,000. Mr. Pettigrew then proceeded to deal with the British flora specially, and illustrated by means of a series of slides the various principles upon which it was constituted. Amongst the photographs that appeared upon the screen were several taken in Rooth Park. At the conclusion of the lecture, a hearty vote of thanks was accorded Mr. Pettigrew, on the motion of Mr. John Storrie, seconded by Dr. Vachell.

The Scottish Horticultural Association.—The monthly meeting was held on Tuesday evening last, when something like seventy members were attracted to hear a paper on "The Supply of Vegetables to the Edinburgh and Glasgow Markets," ably read by Mr. J. W. Scarlett, of Inveresk, who gave some very interesting statistics and information about each item of vegetable used in Edinburgh and Glasgow. The genial president, Mr. M. Todd, occupied the chair, and spoke very warmly of the manner in which the paper was compiled. Mr. Mackenzie, treasurer, made certain suggestions for additions when re-editing, and proposed a most cordial vote of thanks. Mr. W. Carmichael seconded this, and it was unanimously accorded. Mr. Scarlett duly responded to the various remarks made. The secretary, Mr. R. Laird, announced the following exhibits:—Seedling greenhouse Rhododendrons, from Mr. Calder, Trinity, one of which named "Hercules" received a First-class Certificate. Mr. Anderson, Panshanger, Herts, sent a fine clump of blooms of *Beaumontia grandiflora*. The president presented the society with an Album containing a portrait of each of the society's presidents, numbering fourteen. This was done in glowing language, and in honour of the association attaining its majority. Mr. Todd was warmly thanked for his thoughtful and timely gift by Mr. R. Laird and Mr. Grieve.

THE NARCISSUS IN DEVONSHIRE.

I HAVE often heard it proclaimed, if you wish to see the above growing to perfection you must take yourself across the water to Scilly, where no doubt they are grown in immense quantities, and most of the varieties well done. Here let me claim the same for genial Devonshire, as the many travellers can testify who visit the bulb farm of which I am about to speak.

Situated about the centre of the long scattering village of Newton Poppleford, three miles from Sidmouth, a favourite winter resort for invalids, and about ten miles from Exeter, you will find field after field aglow with these lovely flowers. The property is owned and worked by Messrs. Rendall, solicitors, London; and has risen from what was a small plot thirteen years ago to its present proportions of over sixteen acres, the greatest part of which is devoted to the growth of the Narcissus. It was on Tuesday, the 22nd of March, that I found myself among the golden fields, and the day being perfect with a cloudless sky, no doubt showed up the flowers to great advantage nestling among the narrow green foliage, almost blue in some varieties, notably *Maximus*. I found the manager, Mr. Hill (an ardent enthusiast among Daffodils) in the packing room superintending the packing and despatch of a huge pile of boxes, the like of which leaves Tipton Station, L. & S. W. Railway, by the five o'clock train each evening except Sunday, their destination being Covent Garden. As many as 350 boxes, each one containing from two to five dozen bunches according to variety, twelve flowers in a bunch, are sometimes sent off in a week, reaching London in good time for the next morning's sale. I found several pits that are used for forcing purposes, each 17 yds. long by 2 yds. wide. Each pit has a 2-in. hot water pipe running around it. Emperor and Bicolor *Horsfieldi*

are the favourites for this early work. A smaller pit, a span one, was devoted to *Narcissus poeticus ornatus*, just then coming in. These are slightly shaded during the few brightest hours of the day, as I learnt that the sun, if too hot, interfered with the eye of this variety.

Leaving this forcing ground we wended our way to the various quarters outside devoted to these flowers. First we came upon a large breadth of *Narcissus maximus*, a deep golden-yellow of grand form, and very early. The flowers had all been gathered, excepting a stray bloom here and there, which showed what a lovely flower it is. *Princeps*, another early, pale sulphur, flower, runs *Maximus* very close as to size. It takes well in the market and forces well, I learnt; an immense quantity of the variety is cultivated. *Horsfieldi* has a rich yellow trumpet, with white perianth, and is a large flower. This, too, is grown in quantity. *Emperor*, another large flower, was a grand sight at the time of my visit. *Cernuus pulcher* (Swan's neck) has a primrose trumpet, and is very pretty. *Rugulosus* (sweet scented) has a large yellow cup, and is very good. Bicolor *Horsfieldi* is made a speciality of here, and more of this variety is grown than of any other. There is a good breadth of Mr. H. J. Elwes, a large pale yellow trumpet; also of *Nelsoni major* a late variety, and very good; *Maximus*, a rich golden-yellow, large flower, graceful and early; and *Rugilobus*, a good flower, really a small Emperor.

A quantity of the Leedsii type is grown, most varieties of which are fragrant, pale yellow at first, but become white with age, almost resembling the *Eucharis Lily*. They last a very long time when cut and placed in water. *Amabilis* is a good one of this variety, as well as *Argenteus* and *Stella*. *Cynsure* is a showy variety, and a favourite of the writer's; there was a grand show of it. *Obvallaris* (*Tenby Daffodil*) is a distinct variety of fine quality, very early, and one of the best for market purposes; over an acre of it is grown. Bicolor and *B. grandis*, two grand varieties which come in late, have large quarters devoted to them. *Golden Spur* is a well-known kind, large and very early, most of which had been gathered. *Empress*, I noticed, was another good large flower, and of great substance. *Biflorus* or two-flowered is a good late kind, which our grandmothers grew largely in days long since. Bicolor *Horsfieldi* is found in most of the fields, in fact this firm is supposed to hold the largest stock of the variety in Europe. Sir Watkin is fairly well represented, but not such a favourite here as some others noted. Among other varieties grown in less quantities I noticed C. J. Backhouse, Mrs. Langtry, Duchess of Westminster, Sulphur Beauty, General Murray, Maurice Vilmorin, *Incomparabilis* Queen Bess, Marian Barton, Dean Herbert, W. P. Milner, Michael Foster, Minnie Hume, *Exquisite*, Mrs. F. W. Burbidge, F. W. Burbidge, Shirley Hibberd, John Nelson, J. B. M. Camm (scarce as yet), and many others. A large quarter is devoted to *N. poeticus ornatus*, which appeared as though it would be about right for Easter; and quite as large a piece of *N. poeticus recurvus*, a very late variety that carries the supply well into the month of May.

Mr. Hill showed me several of his seedlings which number a score, several of which he thinks and hopes will make good market kinds; one especially he mentioned, which is a cross between Emperor and *Obvallaris*, a very fine bold nearly upright flower, having a long stem, and of great substance. About twenty-five hands are employed during the busy season of flower gathering. Every year as many of the bulbs as can possibly be lifted in June and July, and replanted in August and September, are taken up, left on the ground a few days to dry, and are then taken to the drying-room where they are sorted, and despatched to the trade when the time arrives for this. The soil is of a light sandy nature, and favourable to the growth of the *Narcissus*. Mr. Hill believes in farmyard manure for dressing, worked into the ground the previous year. The *Lily of the Valley* is largely grown as well, and is generally forced and ready for Covent Garden about the middle of December, and continued up to the end of March. The bells were very fine, each spike carrying from eleven to thirteen. Mr. Hill evidently knows how to grow and force these. I was very sorry to leave these most interesting grounds, but the day was fast closing ere I had inspected the many varieties, and listened to the manager's eulogy of those which were his favourite varieties.—*James Mayne, Bickton, Budleigh Salterton.*

HINTS FOR AMATEURS.

BEDDING PLANTS.

YEAR by year the decoration and furnishing of the flower garden becomes more than ever a work of art. The amateur who has leanings towards the aesthetic can here find an abundance of room wherein to exercise his skill and taste in arrangement and association of the immense variety of plants that is now available for flower garden work. At one time we used to see Zonal Pelargoniums, Calceolarias, and Lobelias in almost endless repetition, and to the well-nigh total exclusion of everything else. With the popularising of what may be termed sub-tropical gardening, however, these plants have been confined to narrower limits, and, although nobody wants to banish them entirely, or, indeed, any other plant that is easy to grow and free to bloom, it is a matter of congratulation that they are no longer allowed to monopolise the whole of the space.

Whether the variety of plants that are destined to do duty in the flower garden in the forthcoming summer be large or small the present season of the year is a lively one amongst them, for stock has to be worked up in readiness for the time when the sun, to use a quaint localism, shines on both sides of the hedge. It may be of service if we take a brief glance at what is waiting to be done in this supply department at the present time.

Zonal Pelargoniums.—We may deal with these first on account of their commonness, for the old "Geranium" is the pet of the cottager, who, by the way, is somewhat conservative in his tastes and inclinations, and, moreover, a bed of good "Geraniums" still possesses the power to please those who like bright colours and bold masses. The approved custom is to strike cuttings of the plants in the autumn, placing these rather closely together in pots or boxes. Through the winter months these plants have been practically at a standstill, but lately they have commenced to grow, and, with the inveteracy of the race, to bloom. First of all these blooms and also all bloom buds must be picked off, in order to induce the plants to husband their strength, and not to squander it in producing flowers when they are not wanted.

If, through deaths or other causes, the number of healthy plants is too small for probable needs, the tops should be taken off these rooted autumn cuttings, and placed in pots or boxes to root. Under the stimulating influence of a gentle heat, such as will be obtained by placing them on a shelf near the glass in a greenhouse, they will soon make roots, and may then be separated, potted up, and started on the second stage of their existence. This taking of the tops off the old plants will not in any way hurt them, but will, in fact, do good, inasmuch as it will induce them to throw out side shoots and take on a bushy habit instead of spending all their energy in producing a long, lanky, single stem.

It follows from these remarks that if no more cuttings are wanted the tops of the old plants should be taken out all the same, only in this case just the central bud may be taken out by the finger and thumb. As the old plants have now been in the same soil, and packed closely together for fully six months it is time that they had a shift. This should be given at once. If a sufficiency of large 60 pots are to hand these may well be employed, one strong plant being put in a pot—if space is scarce two smaller plants may be put in a single pot. If pots fail shallow boxes must be used. The soil should consist of two-thirds of loam, one-third of leaf soil, and a sprinkling of coarse river sand, or better still, road sweepings.

Heliotropes.—A bed of the fragrant "Cherry Pie" is a desirable feature to have in a garden, but the plants are occasionally difficult to keep during the winter. The continued low temperatures, and the fogs of the town and city are very inimical to them, and thus it not infrequently happens that the number of plants even out of a batch of strong and healthy autumn cuttings that survive the winter is comparatively small, and insufficient to meet the demand. If the plants have not been placed in heat they should be without delay. Take the tops off as soon as they have commenced to move. These should be from 2 in. to 3 in. in length. Use very sandy soil for these cuttings, and cover

the soil itself with a layer of sand about a quarter of an inch in depth. If there is room for the cuttings on a shelf in a warm house they will strike very readily there, in fact almost as well as if they were in a close propagating frame. If, however, owing to pressure of space they have to be consigned to the stage some distance from the glass, it will be well to cover them with bell-glasses, both to induce speedier rooting and to prevent them from getting "drawn."

Verbenas.—These are even more touchy subjects than the Heliotropes, for a few days thick fog is sure to cripple them, and the old plants generally present a bare and sorry appearance by the time that the winter has passed. If placed in a gentle heat and treated very similarly to the Heliotropes, however, they will soon commence to grow, and will not be long in picking up. As a rule the cuttings are put in very thickly in the autumn, and if a good "strike" was obtained the plants are now considerably crowded. This it will be desirable to remedy as soon as possible by shaking the plants out, separating them from each other as tenderly as possible so as to preserve the greater portion of the roots intact, and potting them up singly into small pots—the size known as small 60's will be found very suitable and convenient. Prior to the potting the tops should be taken off the plants, and if cuttings are needed, inserted as such. Subsequent batches of cuttings may be obtained as desired from the old plants, for once they get a start they will make plenty of growth.

The greatest pest of Verbenas is mildew, and gardeners are chary of admitting them to houses containing plants susceptible to mildew on that account. If any traces of mildew are present amongst them, therefore, the plants should be given a careful picking over; all dead and dying leaves being taken away and burnt. Then, as a final precaution, the plants should be well syringed with water, in which potassium sulphide has been dissolved at the rate of $\frac{1}{2}$ oz. of the sulphide to a gallon of water. This will effectually destroy all the spores of the fungus, and prevent them from spreading further in search of new hosts. At the same time it will be well to shield the plants as far as possible from draughts.

Tuberous Begonias.—Year by year the value of the tuberous Begonia for bedding purposes becomes more fully demonstrated. Given a fairly favourable season the Begonia will hold its own against anything else both for freedom and continuity of flowering. One of its greatest recommendations from an amateur's point of view is the ease with which it may be kept during the winter. It is this item of wintering that gives the amateur more trouble than anything else, perhaps more than all put together, for in the majority of cases available space suitable for wintering bedding plants is exceedingly limited. The tubers of the Begonias, however, can be placed in bags or light boxes, covered with a little sand or soil, and stowed away in any odd corner: the exclusion of frost being really all that is necessary. It is high time now to hunt these tubers up and to start them growing. They should be carefully looked over first, and any that are unsound thrown away—it is no use wasting time with these. Last autumn the tubers were placed together according to the colours of their flowers, and care should be taken not to disturb this arrangement now. Shallow wooden boxes should be procured, a few crocks strewn over the bottom for drainage and covered with a little soil, and on this the tubers may be laid, an inch or two of space being allowed between each. A light covering of soil may then be given. A few boxes will suffice to start a considerable quantity of tubers, for it must be remembered that as soon as they are in active growth, a further shift into roomier quarters will be necessary. The boxes should be placed in a temperature of from 58° to 60° Fahr., and then if a moist kindly atmosphere is maintained, the young shoots will not be long in making their appearance. Shade from the direct rays of the sun will be then necessary as the young growths with their delicate leaves scorch easily, and the check sustained thereby is severe.—*Rex.*

A Chameleon amongst Flowers.—There is a Chinese flower that is red in sunlight and white in moonlight.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Chrysanthemums.—Would you tell me if it would injure Chrysanthemums to place them out of doors, as I have had them in a greenhouse all the winter also whether I should cut them down again, as they have made a lot of growth.—*H. B.*

We presume yours are old plants that flowered last autumn. If you do not intend to flower them again in pots you may plant them out at once so as to set the pots free. The foliage of Chrysanthemums is fairly hardy although the flowers are tender, and the little frost we are likely to get would not hurt them. It would be best to cut away a few of the most straggling growths so as to give a chance to the stronger ones beneath them. Old plants invariably throw up a lot more shoots than are wanted, so that you need not be afraid of thinning them a little. If intended for pots cut away last year's stems and thin out the others.

Early Flowering White Chrysanthemums.—*Amateur:* Lady Fitzwygram is certainly a very handsome and free, September flowering, white variety, of very compact and bushy habit, but you will find that Queen of the Earlies will suit your purpose better. The flowers, which are also white, are borne on stiff, wiry stems and raised well above the foliage, which they are not in Lady Fitzwygram. For supplying flowers for cutting Queen of the Earlies is infinitely superior. The height is from 3 to 3½ ft.

Incurved Chrysanthemum, Mrs. R. C. Kingston.—*Amateur:* Seeing that your cuttings were not put in until the beginning of February you should secure the first crown bud. Cuttings rooted earlier, say at the end of December, should have been stopped not later than the middle of March. The second crown bud should be taken on these plants.

Weevils on Peach Trees.—*C. T. B.:* The little holes in the leaves of your Peaches are caused by the Weevils. In order to catch them, you must visit the trees at night with a lantern. By carefully and quietly peering among the leaves without causing any disturbance, you will be able to catch the depredators. A pinch between finger and thumb is the readiest means of disposing of them.

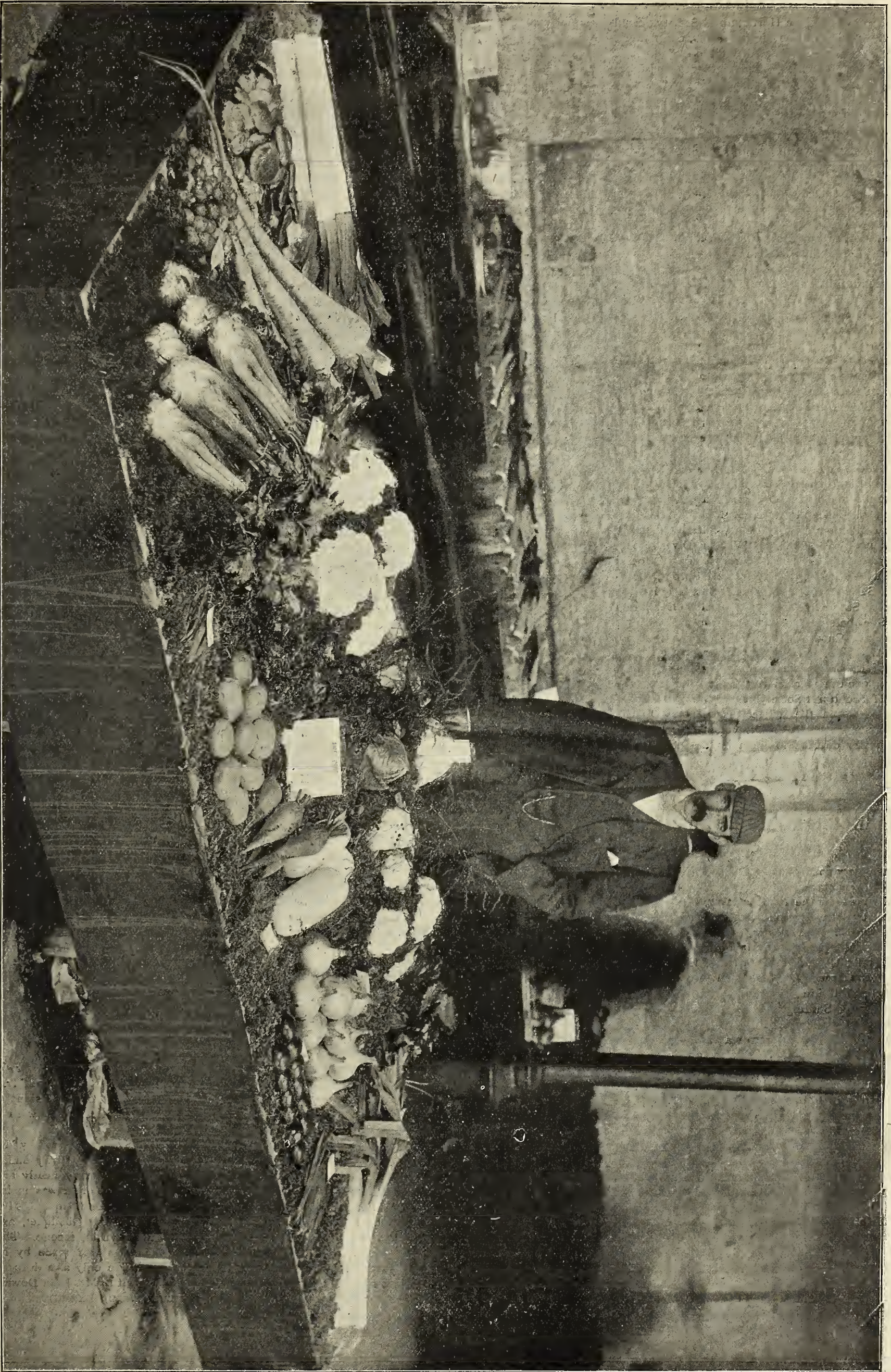
Forced Asparagus Roots.—*Cabbage:* The roots of Asparagus that have been lifted and forced are of no further use, and may be thrown away at once.

Roses.—*Rosa:* Continuing the syringing of your Roses until the buds begin to show colour, then stop it. A little sulphur mixed in the water used for syringing is a capital preventive of mildew.

Ill-Shaped Camellias.—*Lentil:* The only way to reduce the Camellias to something like symmetry is by hard pruning. This is best done just after flowering is over, as the bushes are beginning to make their growth for the season. Cut them well back into the old wood. Never mind if they look stubby and ugly, but keep the syringe well at work amongst them in a gentle heat, and they will soon be clothed with verdure.

Melons Damping Off.—*L. E., Reading:* The rot may be checked by dusting powdered charcoal and lime round the collars of the plants, i.e., that part of the central stem close to the ground. In watering refrain from wetting this part of the bed, leaving a dry circle of 3 ins. or 4 ins. in diameter. If the rot appears on any of the branches higher up, you must give a daily dusting with the lime and charcoal until the wound dries up.

Lettuces in Onion Beds.—*Vegetables:* It is a fairly common practice to sow a pinch of Lettuce seed with the Onions, but the idea is not one that carries with it a particularly strong recommendation. A few Lettuces scattered here and there do not work any appreciable amount of harm, but the thing may easily be overdone, and then the Onions suffer through the loosening of the ground, caused by the pulling up of the Lettuces. We should advise you, therefore, not to leave many of them.



DIAMOND JUBILEE TABLE OF VEGETABLES (See p 506).

DIAMOND JUBILEE TABLE OF VEGETABLES.

THE Royal Caledonian Horticultural Society offered very valuable prizes for fruits, plants, cut flowers, and vegetables to be competed for on September, 8th and 9th last. The Victoria Diamond Jubilee Prizes in all the four classes brought out a lively competition for the respective honours. The vegetable class was open to gardeners and amateurs only, and the exhibitor had to select twenty-five dishes of not less than sixteen kinds, which had to be correctly labelled and tastefully arranged on a table 12 ft. long and 5 ft. wide. Surely all these requirements were sufficient to test the capabilities of the British gardener, as the arrangement had to be accomplished by himself or his regular assistant. The first prize offered was ten guineas and the Veitch Memorial Trustees' Large Silver Medal.

On the day appointed, the judges unanimously awarded the place of honour to Mr. James Gibson, gardener to E. H. Watts, Esq., Devonhurst, Chiswick, London. The accompanying illustration (p. 505) shows the table as it appeared when ready for the judges. Mr. Gibson, who effected the arrangements himself, stands behind the table. The vegetables were raised to a ridge in the centre of the table, the more bulky being placed there, while the others sloped to the edges in each direction. Only a portion of the vegetables, therefore, is visible, the isolated table being meant to let the public have a good view on all sides.

The varieties of vegetables used were The Lyon and Dobbie's International Leeks, Ailsa Craig, and Cranston's Excelsior Onions, Satisfaction and Sutton's Reliance Potatoes, Autumn Giant and Autumn Mammoth Cauliflowers, Sutton's Best of All Runner-Bean, Canadian Wonder Dwarf Bean, Giant White and Standard Bearer Celeries, Autocrat Pea, Sutton's Dwarf Gem Brussels Sprout, Mushrooms, Sutton's Perfection and Sutton's Eclipse Tomatoes, Student Parsnip, Pragnell's Exhibition Beet, Snowball and Goldenball Turnips, Sutton's Prizewinner Cucumber, Webbs' Emperor Cabbage, Globe Artichoke, and Vegetable Marrows.

All of the vegetables were grown in a garden which at one time formed a portion of that of the Royal Horticultural Society at Chiswick, and therefore fully within the deleterious influence of the London smoke. This speaks volumes to the care and industry devoted to them on the part of the cultivator.

EDINBURGH SPRING SHOW.

BY TELEGRAM.

It was a very good show. The Waverley Market was admirably staged, and the general arrangements capitally made by the new secretary, Mr. Thomson, assisted by Mr. Bryson and the council. The judges were Messrs. Dewar, of Glasgow Botanic Gardens; Mackinnon, of Melville; Paterson, of Salton Hall; Pirie, of Preston Hall; Lunt, of Keir; Moir, of Carnock; Mackinnon, of Terregles; Thomson, of Philip; Cook, of Gosford; McBean, of Craighend; Shillington, of Penicuik; and Dale, of Aikenhead.

Round the band-stand were staged the entries for hardy Rhododendrons, making a pretty picture. The first award went to Mr. Downie, of Beechill; the second to Messrs. R. B. Laird & Sons, Pinkhill.

For ten forced plants in bloom Mr. Malcolm McIntyre was an easy first with remarkable specimens of *Genista andreaana*, *Cytisus albus*, and *Kalmia latifolia alba*. The second prize exhibit consisted of Roses and Azaleas from Mr. James Bald, of Canaan House; Mr. Wm. Bennett, Hanley Lodge, came third.

Mr. Wm. Bennett was first for six forced plants; Mr. McIntyre, second; and Mr. Alex. Brown, of Craighend, third.

Mr. John Downie secured first prize for twelve forced plants, comprising *Genistas*, *Staphyleas*, and *Lilacs*; Messrs. R. B. Laird & Sons came second with *Kalmias*, *Azaleas* and *Deutzias*. The latter firm also scored first for eighteen forced plants, which made a grand display; Mr. John Downie made rather a poor second.

The premier competitive exhibit was made by Mr. Malcolm McIntyre on a twelve foot circular table. It consisted of *Dendrobiums*, *Amaryllis*,

Clivias, *Liliums*, and a remarkably fine specimen of *Genista andreaana*, with a bordering of *Smilax* and *Ferns*, dotted with *Cyclamen* and *Lily of the Valley*. This award carried also the Silver Cup presented by Messrs. T. Smith & Sons, Edinburgh. Mr. Geo. Wood, of Oswald House, took second; and Mr. James Cocker, of Chester's Hall, third. The judges had no difficulty in judging this class.

Messrs. Laird & Sons, and Mr. John Downie were first and second respectively for twelve hardy *Azaleas*. There was more variety of colour in the exhibit of the first named.

The class for six foliage plants in pots not exceeding 9 ins. in diameter, brought forth Mr. Malcolm McIntyre, Mr. D. Mackay, of Liberton; and Mr. James Macartney, of Liberton, who took awards in the order named.

Twelve Japanese Maples, exhibited by Messrs. Laird & Sons, took an easy first. Mr. John Downie was second.

For a table of Orchids, 5 ft. by 4 ft., there were two entries. The first prize went to Mr. Nicoll, of Craighowan who exhibited some fine pieces of *Cattleyas*, *Dendrobies*, and *Odontoglossums*, nicely arranged. Mr. Malcolm McIntyre came second.

Messrs. Laird & Sons took firsts for twelve hybrid *Azalea mollis* and for four *Azalea indica*, with Mr. John Downie as second. Mr. John Downie was first for six alpine *Auriculas*.

Some excellent Roses were shown by Mr. George Manson, of Wallhouse, and Mr. Wm. Galloway, of Fernieside, who each took a first. The two seconds went to Mr. D. Kidd, of Carberry, and the third to Mr. Geo. Manson.

Mr. McDougal, of Ascot Hall, was first for twelve *Gloire de Dijon* Roses, Mr. Geo. Manson, second; and Mr. Robert Lawrie, of Inveralmond, third. Mr. A. Dickson, of Glenormiston, was first for twelve excellent *Maréchal Niel* Roses, with Mr. J. Pearson, second, and Mr. George Manson, third. Mr. Malcolm McIntyre took first for twelve cut trusses of *Rhododendrons* containing not less than six varieties. Mr. Alexander Calder, of Calderbank, was second. A fine box of cut Orchids secured the first prize for Mr. David Wilson, of Westmount, Mr. M. McIntyre, being second, with Mr. John Mitchell, of Bantaskin, third.

For one hand bouquet, Mr. James Cossar, of Spott House, was first, Mr. James Bald second, and Mr. John Mitchell third. For ladies' dress spray, Mr. A. Dickson was first, Mr. John Mitchell second, and Mr. J. Cossar, third.

The only shower bouquet exhibited was by Mr. William Smale, of Blackford Park.

A class for three *Lycopods* brought forth Mr. George Chaplin, of St. Leonards; Mr. Thomas Gibb, of Redacre House; and Mr. George Wood, of Oswald House, who took awards in this order.

Six dwarf British Ferns were best shown by Mr. Wm. Anderson, of Woodcroft; Mr. John Pearson, of Rockville, was second; and Mr. James Preston, third. Mr. John Pearson was the only exhibitor of three exotic Ferns, Mr. James Cocker and Mr. J. Pearson were second and third for three *Adiantums*. Mr. Malcolm McIntyre was first; Mr. George Chaplin, second; and Mr. James Shearer, of Ratho Lodge, third, for six hardy *Azaleas*. For three hardy *Rhododendrons*, Mr. George Chaplin came first; and Mr. Malcolm McIntyre, second. Mr. John Cumming, of Liberton, was first; and Mr. James Bald, second for two *Pelargoniums* in flower, the first being very fine specimens.

The competition in *Hyacinths* was very strong. For twelve distinct, Mr. John Meiklem, of Sunnybank was first; Mr. Adam Brydon, of Tweedbank came second; with George McDougal, third. For six distinct, Mr. Meiklem was again first; Mr. R. M. Reid, second; and Mr. Robert Lawrie, third. Mr. Adam Brydon was first for six pots of *Tulips*, showing exceptionally good *Couleur Ponceau Keizer Kroon*, and *Wouverman*. Mr. A. Farquhar was second; and George McDougal, third. For six pots *Polyanthus Narcissus*, Messrs. J. Pearson, G. Wood, and J. Shearer divided the honours. Messrs. James Bald, A. Farquhar, and John Cowan took this order for six pots of garden *Narcissus*. Mr. John Pearson, of Beechwood, took first for six pots of spring bulbs, in which *Iris reticulata* and *Fritillaria pyrenaica* were well grown, Mr. John Pearson, of Rockville, and John Meiklem follow in this order. Mr. Wm. Galloway was first for four pots; and Mr. Malcolm McIntyre for two pots *Amaryllis*; the seconds were reversed.

Mr. McIntyre scored first for twelve *Cyclamens*; Mr. Alexander McMillan, of Douglas Castle, was second. For six *Cyclamens* the foregoing decisions were reversed. Mr. D. Mackay was first for six *Roses* in pots; and Mr. S. Abbott, of Prestonfield House, first for three, with Mr. Mackay as a third winner. The special training of the judges was fully required to make the awards for two *Crotons*, distinct, which went in order to Mr. James McCartney, Mr. M. McIntyre, and Mr. D. Mackay.

Mr. Alexander McMillan was first, Mr. James Cocker, second, and Mr. M. McIntyre, third, for two *Dracaenas*. Mr. James Wood was first, Mr. M. McIntyre, second, and Mr. D. Wilson, third, for a single specimen *Orchid*. The first-named presented a magnificent pan of *Cymbidium lowianum*. For four *Orchids*, distinct, Mr. David Wilson, Mr. Malcolm McIntyre, and Mr. F. Nicoll were first, second, and third. Mr. Alex. Campbell, Cove Gardens, took first for twenty-four *Hyacinths*; Mr. W. J. Watson was second. In the class for six pots of *Tulips* the same competitors take first and second respectively.

For twelve plants for table decoration Mr. John Downie and Messrs. Laird & Sons are first and second. Mr. D. Kidd was first; Mr. James Cossar, second; and Mr. Wm. Bennett, third, for six *Cinerarias*. Mr. John Cumming was first; Mr. Chas. Comfort, second; and Mr. D. Kidd, third, for three *Cinerarias*. For three *Azalea indica* there were two equal first prizes awarded to Mr. Malcolm McIntyre and Mr. Jas. Bald; the latter was first for two plants of *Azalea indica*; Mr. Wm. Murray being second; and Mr. Geo. Wood, third. Mr. Geo. Chaplin took first for four specimens of *Azalea indica*; and Mr. Wm. Murray was third. For a single specimen of *Azalea indica*, Mr. William Murray, Mr. James McCartney, and Mr. Malcolm McIntyre followed in this precedence. Mr. McIntyre led for four stove or greenhouse plants; Mr. Geo. Wood and Mr. James Cocker followed. Messrs. Calder and McIntyre were first and second for two greenhouse *Rhododendrons*, all very good plants. Mr. McIntyre, Mr. James Cocker and Mr. Bald were keen competitors with six stove and greenhouse plants; the judges decided in this order. Three exotic Ferns brought awards to Mr. George Wood, Mr. John Pearson, and Mr. James Cocker. The first named had a good tub of *Davallia dissecta*.

For four *Astilbes*, Mr. George Wood was the only exhibitor. For six *Astilbes*, Mr. T. C. Sutherland led; Mr. William Armstrong followed; and Mr. George Chaplin came a good third. For a tree Fern, stem not less than 3 ft., Mr. Andrew Pryde, of Newington House, was first; and Mr. James Bald, second. *Deutzia gracilis* was in fine form; Mr. Alexander Brown, Mr. J. Pearson, and Mr. Malcolm McIntyre took in order for a single specimen.

For two plant entries, Mr. Malcolm McIntyre was first; Mr. Alexander Brown, second; and Mr. John Pearson, third. Mr. D. Kidd took first; Mr. James Wood, second; and Mr. David Matheson, third, for six *Primula sinensis*.

Mr. McIntyre, Mr. Chaplin, and Mr. Pearson succeeded each other in the awards for six pots of *Primula obconica*; whilst for six *Primula Sieboldi*, Mr. Adam Brydon, Mr. W. Galloway, and Mr. Thomas Gibbs followed in this order. Six pots of single *Primula vulgaris* were exhibited and the prizes taken by Mr. P. Joseph Holmes, of Winton Castle; Mr. R. Reid, of Ashiestiel; and Mr. Thos. Shortreed, of Venlaw. The prize for double *Primulas* were taken by Mr. R. Reid and Mr. Adam Brydon. Mr. Robert Stuart, of Thirlestane Castle, and Messrs. Shearer and A. Dickson were victors with six pots of *Polyanthus*.

An excellent floral design was entered by Mr. John Downie, who secured first prize. Mr. John Lawson, of Bruntsfield Place, with a very neatly arranged harp, was second. The same order was maintained in the awards for one shower bouquet. Mr. John Lawson was first for one hand bouquet, and Mr. Wm. Johnson, of Murrayfield, second. The only entry for twelve *Camellias* was made by Messrs. R. B. Laird & Sons. The only award for twelve *Maréchal Niel* Roses went to Mr. John Downie.

MISCELLANEOUS EXHIBITS.

Messrs. R. B. Laird & Sons' non-competitive exhibit attracted many onlookers. This exhibit was in the form of a large circular table, sufficiently low to enable one to examine it comfortably. The outstanding features of this exhibit were *Amaryllis*, some seedlings of Messrs. Lairds' raising showing

great promise. Cliveias—to the hybridisation and improvement of this flower Messrs. Laird are also devoting attention, and that successfully—Azaleas, Lilacs, Japanese Maples, Acacias, and other seasonable plants in flower, as well as some fine Palms and foliage plants. The arrangement of the well-grown and well-flowered plants reflected great credit on Messrs. Lairds' skill as tasteful decorators.

They also exhibited a large selection of Alexander Shanks & Sons' lawn mowers. This exhibit comprises all the favourite patterns, including the British, Britannia, Standard Gear, and Caledonia Mowers, and is the largest show of the sort in the Waverley Market.

Mr. John Downie, 144, Princes Street, Edinburgh, has, in accordance with former precedent, a most impressive display. Mr. Downie's exhibits have for a good many years been one of the outstanding features of the Edinburgh shows; and his handsomely arranged circular table forms a most attractive exhibit. It includes a choice collection of all the best spring flowering and foliage plants, which, being admirably grown, bear evidence of successful cultivation; and the tasteful manner of staging was much admired.

Messrs. James Grieve & Sons have on exhibition a very nice table of fine foliage and flowering plants, including *Araucaria excelsa*, *Pandanus Veitchii*, choice *Dracaenas*, *Pteris cretica cristata*, *P. Wimsetti*, *P. tremula*, *P. major*, *P. straminea*, *Adiantum farleyense*, *A. Williamsii*, *A. Mariesii*, *Gymnogramme Mayii*, *G. Alstoni*, *Rhododendron Cunninghamii*, *R. M. Wagner*, *R. Jacksonii album*, *Epacris Deutzia*, *Azalea*, *Hyacinthus*, *Tulips*, *Narcissus*, including *Hersfieldi*, *Emperor*, *Sir Watkin*, and *Empress*, *Genista fragrans*, *Palms* in variety, and finished off with a fine edging of *Panicum* and spring flowering plants. We also observed a handsome wreath of choice flowers arranged with taste and skill.

Messrs. Dicksons & Co., 1, Waterloo Place, Edinburgh, filled a large table with a comprehensive exhibit of 150 species and varieties of Conifers, including *Abies excelsa pyramidalis*, *A. findonensis variegata*, *A. pungens glauca*, *Picea bifolia*, *P. Veitchii*, *P. Mariesii*, *P. subalpina*, *P. Pinsapo glauca*, *P. homolepis*, *P. nobilis glauca*, *Cedrus atlantica fastigiata*, *Pinus sylvestris aurea*, *P. s. globosa*, *P. insignis*, *P. rigida*, *P. pallasiana compacta*, and *P. umbraculifera*. They also had fine trees of *Cupressus lawsoniana caerulea*, *C. l. Kramerii*, *C. l. filifera glauca*, *C. l. argentea variegata*, *C. l. Triomphe de Boskoop*, *Retinospora squarrosa glaucescens sulphurea*, *R. filifera aurea*, *Juniperus canadensis aurea*, and *Thuja occidentalis lutea*. Other flowering and otherwise ornamental subjects were represented by *Andromedas*, *Pernettyas*, *Ligustrum aureum marginatum*, and *Ivies* in variety. Peaches and Nectarines, grown in pots, were in full bloom. They also showed Vines and various other useful subjects of which the firm makes a speciality.

Messrs. Barr & Sons, King Street, Covent Garden, London, exhibited a magnificent array of Daffodils from their Long Ditton Nurseries, Surrey. The public could not omit seeing such grand things as *Narcissus Madame de Graaff*, *Glory of Leiden* and the handsome new *Victoria*. Other trumpet Daffodils of leading importance were *Emperor*, *Captain Nelson*, *John Nelson*, *Golden Spur*, *P. R. Barr*, *Maximus*, *M. J. Berkeley*, *J. B. M. Camm*, *Madame Plomp*, *Her Majesty*, *Henry Irving*, the graceful *N. Johnstoni Queen of Spain*, *Mrs. Walter Ware*, *Duchess of Connaught*, *Lady Grosvenor*, and *Cernuus*, the three latter being white or sulphur coloured. *Capax Plenus* or *Queen Anne's Double Daffodil* was quite unique in form. The *Incomparabilis* section was well represented by *Princess Mary*, *Gloria Mundi*, *Beauty*, *C. J. Backhouse* (with its orange-scarlet crown), the giant *Sir Watkin*, *Queen Sophia*, &c. Other sections were represented by *N. Barri conspicuus*, *N. Leedsii Minnie Hume*, *N. L. Grand Duchess*, *N. triandrus albus*, *N. poeticus ornatus*, *N. p. grandiflorus*, &c. They also had an exhibit of many new and rare double and single Tulips—such as (singles) *Bride of Haarlem*, golden, beautiful rich scarlet, shot with gold; *Nelly*, handsome pure white; and *La Riente*, large bright rose. Doubles included *Couronne des Roses*, *Gladstone*, a beautiful cherry-scarlet; *La Grandeesse*, large rose flushed white; *Prince of Orange*, rich apricot-orange with yellow centre, &c.

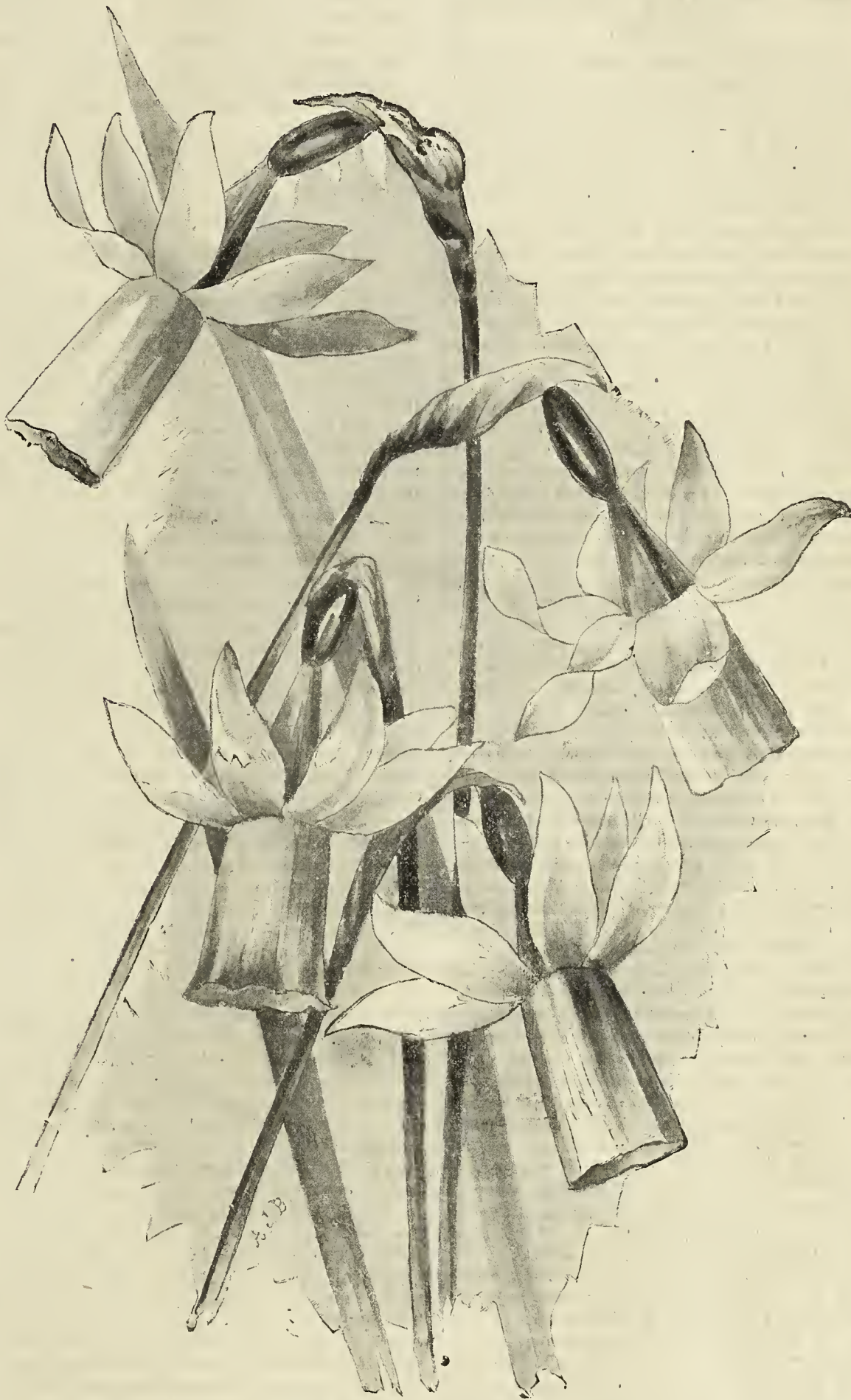
Messrs. Ford & Co., 39 & 40, Princes Street, Edinburgh, have again ornamented the west end of

the Market with a very neat exhibit of pots and pedestals for the decoration of entrance halls and corridors. The designs are entirely new and *recherché*, whilst the colours are sweetly pretty. This firm also show a dessert table dressed in a most tasty fashion, the service being hand-painted; also a suite of cut glass, beautifully etched, a new table decoration comprising nicely-cut thistles, and their new ribbed glass flower tubes. The whole exhibit displayed much taste and attractiveness.

Messrs. T. Methven & Sons, of Warriston and

NARCISSUS JOHNSTONI QUEEN OF SPAIN.

The typical *N. Johnstoni* is a native of Portugal, and by the botanists is reckoned a variety of *N. Pseudo-narcissus*, that is of the smaller type of trumpet Daffodil. Though small in size it is for that reason one of the most graceful of all the Daffodils, for being highly poised on its stems it swings and dances in the slightest breeze. What applies to the type is even more applicable to *N. J.*



NARCISSUS JOHNSTONI QUEEN OF SPAIN.

Leith Walk Nurseries, staged a fine display of Clivias, Azaleas, Crotons, Guelder Roses, Lilacs, and other forced flowers, tastefully arranged with Palms, &c., occupying one of the three large tables allotted for non-competitive exhibits.

Flowers in the Arctic Regions number 762 species, all of which are said to be either white or yellow.

Queen of Spain, which is characterised and recognised by its pointed, reflexed, and more or less twisted segments, which give it a quaint and charming appearance. Amongst the first introductions of the type the trumpet was more or less truncate or clipped straight across the mouth, but Queen of Spain includes many variations in which the trumpet is widened at the mouth and more or less crenate or cut. The colour of both segments and trumpet is of a clear, soft lemon, and most refined in aspect.

The accompanying illustration, lent us by Messrs. Barr & Sons, of King Street, Covent Garden and Long Ditton, Surrey, shows the general features and conformation of this beautiful Daffodil. We have seen it grown in vast beds by thousands with Messrs. Barr, and shall never forget the sight. It should be grown in beds by itself to show off its graceful beauty properly.

THE NURSERYMEN, MARKET GARDENERS' AND GENERAL HAIL-STORM INSURANCE CORPORATION, LIMITED.

THE third annual general meeting of the shareholders of this Corporation, took place at Simpson's Hotel, 101, Strand, W.C. Mr. H. J. Veitch occupied the chair, and proceedings commenced at 3 p.m. precisely. After the minutes convening the meeting and those of the last annual general meeting had been read and duly passed, the report and balance sheet for 1897 were presented.

The report commented upon the violent hail-storms of 1897, which had done damage to upwards of eighty nurseries, the damage to glass and crops in Essex alone being estimated at £50,000. All the claims made upon the Corporation were assessed and paid within six days of the application. Attention was again drawn to the special advantage of insuring with this body, viz., that those insured can replace immediately their own glass broken by hail, payment according to the rate per square foot at which the glass is insured, being made by the Corporation.

Owing to the number of claims paid, and the large reserve set apart for unexpired risks (£500), it was not proposed to declare any dividend, although the directors were of opinion that the Corporation was at the present time in a much stronger position financially than ever before. The directors further expressed themselves fully satisfied with the results of last year's business. No directors' fees had been paid. The revenue account for the year showed that the total income from premiums to have been £1,360 17s., which, with interest, £45 7s. 3d. from investments, and transfer fees, 7s. 6d., made a total income of £1,406 11s. 9d. The total sum charged against the revenue was £2,228 11s. 11d. £1,532 17s. 5d. had been paid away in claims. The reserve for unexpired risks set aside last year was £300, so that the year's revenue had been drawn upon under this item to the tune of £1,232 17s. 5d. In addition to paying the working expenses, £261 11s. 2d., £80 had been written off the formation expenses, and 10 per cent. off the initial cost for office furniture and fixtures, whilst the large reserve of £500 had been set aside to meet unexpired risks.

In moving the formal adoption of the report and balance sheet, Mr. H. J. Veitch gave some further information as to the workings of the Corporation. This, he said, he was led to do because it might be thought that the two statements that it was not proposed to declare any dividend, and that the directors were thoroughly satisfied with the results of the last year's business might be considered to be conflicting and contradictory. The premium income was £681 1s. 9d. in 1895-6; £889 11s. 5d. in 1896-7; and £1,360 17s. in 1897-8, so that the premiums last year were 53 per cent. more than in 1896-7, and more than 100 per cent. than in 1895-6. At the end of 1895-6 there were 235 policies in force, covering 10,408,161 sq. ft. of glass, and representing a money value of £132,215 16s. In 1896-7 there were 346 policies, and 13,886,095 sq. ft. of glass insured at a value of £179,366 11s. 1d.; whilst they now had 550 policies, and 20,098,104 sq. ft. of glass insured at a value of £263,590 19s. 1d. With regard to the claims paid since the formation of the society, two claims amounting to £283 17s. 4d. had been met in 1895-6. There were no claims in 1896-7, but in 1897-8, thirty claims had been paid representing a value of £1,532 17s. 5d., as per revenue account. Of the formation expenses (£399 4s. 4d.) £239 4s. 4d. had been written off, leaving £160 for the next two years. The £500 reserve for unexpired premiums was £200 more than the reserve of the preceding year, owing to the increase in premium income. Mr. Veitch also read letters from various policy holders, whose claims had been settled, expressing their gratification at the prompt way in which it had been done. In conclusion, Mr. Veitch paid a high tribute

to the business acumen and industry of their manager and secretary, Mr. A. J. Munro.

Mr. Tillman seconded the adoption of the report and balance sheet, which was carried without demur.

On the motion of Mr. Hollis, seconded by Mr. Geo. Munro, junr., the retiring directors, Messrs. R. Piper, E. Rochford, W. Sams, F. Sander, N. N. Sherwood, and P. C. M. Veitch, were unanimously re-elected.

Votes of thanks to the agents and representatives of the Corporation, and to the Press were proposed respectively by Mr. Piper, and Mr. A. J. Munro, and carried with unanimity. Mr. A. J. Munro was also cordially thanked for his unremitting labours for the welfare of the Corporation, whilst Mr. Backhouse reminded the meeting how much they owed to the genial chairmanship and influence of Mr. H. J. Veitch. It is scarcely necessary to add that this found abundant echo in the hearts of Mr. Backhouse's hearers. Mr. Veitch suitably responded and averred his willingness to help in this as in any other good cause.

THE CINCHONA IN INDIA.

(Continued from p. 493).

A good many years ago, a private planter from Java, a Mr. Weinschenk, told me of a discovery he had made in open-air grafting by which, according to his own account, he got excellent results. In fact, he claimed by it to have almost no failures, and very little expense. But to this I cannot further testify than that I tried his plan on a small scale, but under unfavourable circumstances, with results that inclined me to view it with favour. His plan was very simple, but new to me. He commenced by making his graft sick, as he phrased it, by ringing its base, and letting it remain on the parent tree till its leaves became of an unhealthy colour, when he cut it off, and fixed it on the stock in the usual way. His whole discovery lay in making his graft sick beforehand, which, to me, appeared a very absurd procedure, but it really may have some reasonable foundation. Perhaps some one will be good enough to give the plan a trial with fruit and other trees at the proper season of the year, and chronicle the results. It should be done when the plants are in active growth. Mr. Weinschenk was a man of many theories, one of them being that the bark of the Cinchona, and not the roots or leaves, had the predominating, if not the entire, influence in the chemical conversion of the sap into the different alkaloids. Once when I was with him on a visit to the Nilgiri Cinchona plantations he asked the late Mr. M. A. Lawson, the superintendent of the Madras Government plantations, but formerly Professor of Botany at Oxford, and consequently well acquainted with vegetable physiology, where he thought the controlling chemist was located—whether in the leaves, or in the roots, or where? Mr. Lawson answered, off-hand, "In the leaves, of course." "How is it, then," said Mr. Weinschenk, "that if I cut over a succirubra plant and graft on it ledgeriana, which I let grow to some height, then behead and graft on a succirubra top, when I shall have succirubra leaves and succirubra roots, but the bark on the Ledger part of the stem, however many years afterwards, and however much it may have increased, will still be normal Ledger bark, and in the same way the succirubra bark at top and bottom will continue to be of the typical succirubra characters, i.e., the Ledger bark will continue to contain a large proportion of quinine and but little of the inferior alkaloids, cinchonidine and cinchonine, and the succirubra *vice versa*. Therefore, said Mr. Weinschenk, I maintain that the controlling chemist is neither in the leaves nor in the roots, but in the bark itself. Of course, the obvious weak link in this chain of argument is the fact that the bark on the Ledger part of the composite tree was started while it bore Ledger leaves. But I think it is suggestive of possibilities of getting branch sports by the engrafting of other bark, and that the bark may really have a large influence in determining the nature of the alkaloids, or the colour of the flowers, or in other ways. It is just possible that some of the inexplicable branch sports may have originated in the accidental engrafting of bark from kindred species or varieties.

COLLECTION OF BARK.

In Sikkim, the periodical crops of bark will be got

from thinnings and prunings from the fourth or fifth year up to the twelfth year, when the trees will be at their best, and it is then more profitable to totally uproot and plant on fresh land, than to allow them to remain longer in the ground. The plan originally laid down was to plant out 2,400 acres, and afterwards keep up this area after uprooting 200 acres annually and planting as much; but factory demands and other circumstances often compelled modifications, although in the main the plan was adhered to till of late years, when it was found that bark for the factory could be got from Travancore and elsewhere at less than it cost to grow in Sikkim, where planting operations have consequently been restricted of late. So Sikkim is gradually becoming more of a manufacturing than a cultivating centre for the East India Cinchona industry. When the trees are uprooted the bark of the larger roots, stems, and thick branches is collected by peeling or beating off with wooden mallets. The smaller branches and roots are peeled by pulling them smartly through between two upright sticks stuck firmly and closely together in the ground, when the bark comes away in ribbons.

One or two heavy and cumbersome machines have been invented for collecting this small bark, but none has answered better than the two simple sticks stuck in the ground, which reminds one of the old story of the inventor and his cabbage-cutting machine, which, the inventor declared, after all its good points had been explained and praised, cut Cabbages nearly as well as an old kitchen table-knife did. The bark is at once spread out to dry either in open or heated sheds, according to the weather, and when properly dried and protected from damp and rot, will remain chemically unchanged for scores, or perhaps hundreds, of years. Although the total uprootal plan is the most profitable for Sikkim, it is by no means so for countries geographically better situated for the growth of Cinchonas. On the Nilgiris, for instance, where several species thrive to perfection, the usual plan of collecting is that devised by the late Mr. McIvor, the first Superintendent of the Madras Government Plantations, and usually known as the stripping process. By it the half of the stem bark is taken from the standing trees in vertical strips of about an inch and a half in width, from the collar up to the lower branches, or as high as may be thought advisable. If the trees are quite healthy the bark will part from the wood, at the proper season, of course, with the greatest ease, and leave the cambium layer uninjured.

Immediately after the stripping the stem is covered thickly with moss or other soft substances, to exclude the weather. From the edges of the cuts, and all over the surface of the cambium layer, the new bark forms evenly, and with marvellous rapidity. In a year, or less, the renewed bark will be as thick as the original, and the remaining strips of original bark may be taken. Afterwards there may be annual collections of renewed bark for a considerable number of years. It is a curious fact that the renewed bark is much richer than the original in quinine, and consequently more valuable—often to the extent of 25 to 50 per cent. The plan requires generous treatment of the trees in the way of manure and cultivation, as only trees in vigorous growth will stand it; but it well repays the extra expenditure. For this discovery, and many other things, the Cinchona industry is heavily indebted to Mr. McIvor, perhaps more so than to any other man. Several modifications of his stripping plan have been tried, but none has succeeded so well. Perhaps the best of them is the shaving plan of the Dutch in Java. By it the outer half of the bark, all round the stem, is removed with spoke-shaves, and the stem covered up in McIvor's way. As it is well known that the great proportion of the alkaloids is located in the outer half of the bark, and very little in the inner, it is claimed for this plan that the whole of the useful factory bark can be removed by it, and the useless left behind to carry on the life-work of the tree.

It was also supposed to be less injurious to the trees, but, according to my experience, it is quite the other way. McIvor's plan, which was in operation many years before it, no doubt suggested it to the Dutch. Coppicing was tried in Sikkim, but was a commercial failure, as by it we lost the bark from the original roots, which usually amounted to quite one third of the whole out-turn. As the coppice shoots grew they threw out new roots for them-

selves, and the old ones died, and their bark was lost to us for ever.

(To be continued.)

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Dendrobium findlayanum Thwaites' var.—Under its most common form the species is a beautiful and attractive subject, being welcomed in collections during the early spring months. The variety under notice differs from the species chiefly in its size and the wide open and flattened character of the lip. The latter is orbicular, crisped at the edges, and the large golden or orange disc is surrounded by a relatively narrow white border. The ovate petals are also of great width, white in the lower and clear rosy pink in the upper half, the sepals being narrower, but similar in colour. Even after the flower was partly withered and contracted, it measured $3\frac{1}{2}$ ins. across the petals. The variety flowered last year with R. G. Thwaites, Esq., 23, Christ Church Road, Brixton Hill, and being now flowering again it maintains its character for the owner may well be proud of it.

Orchids at Falkland Park.—Many beautiful species, varieties and hybrids, are now flowering freely in the collection of Thos. McMeekin Esq., Falkland Park, South Norwood Hill, under the care of Mr. A. Wright. The fine hybrid, *Cypripedium grande* has petals fully 12 ins. in length. The rich spotting and green lines of *C. Argus* are clearly defined. *C. chamberlainianum* Falkland Park var. is notable for the great size and thickly spotted character of the lip. *C. Sedeni candidulum* and *C. vexillarium* are very fine hybrid sorts to be found in all good collections. Amongst *Dendrobiums* is a very fine variety of *D. Freemani*, with a rich maroon-crimson blotch on the disc of the lip, and very dark blue-purple petals, the colouring being continued to the base. Fine varieties are also to be met with in *Odontoglossum crispum*, *O. triumphans* and *O. Coradinei*, the latter being a natural hybrid between *O. lindleyanum* and *O. crispum*. It has a well defined, rich chestnut-red blotch on each of the segments (including the lip), on a soft, clear yellow ground.

GARDENING MISCELLANY.

AZARA MICROPHYLLA.

In Devon and Cornwall this beautiful evergreen shrub is now in the height of its glory. Usually it commences to flower in November or December, and keeps on opening its flowers at intervals according to the state of the weather till spring permits the free expansion of the remainder. They are small, and yellow, but though produced in myriads they by no means form the most important feature of the plant. The branches give off a large number of side shoots arranged in a double row in one plane. The leaves are small, evergreen and clothe the twigs profusely. Some branches grown in the open have been sent us by Mr. J. Reynolds, The Gardens, Sidbury Manor, near Sidmouth, Devon, that are the picture of rude health, glossy, and altogether clearer than is the case in the neighbourhood of London, where the species is liable to get injured in severe winters. The climate of Devon is, however, favourable in every way to this shrub, which is valuable for mixing with certain kinds of cut flowers, where *Adiantum* would be too frail and perishable.

AMPELOPSIS VEITCHII.

This plant, whose foliage is so justly admired, often (like other creepers) loses its high colouring when the roots make a free run into heavy, rich, and damp soil; but when such is the case, the roots should be examined and cut well back (according to the size of the plant). The heavy soil should be replaced with light, sandy material, well mixed with broken bricks or stones and made firm. Many plant this beautiful creeper in rich soil, where it soon develops a gross habit, and the party who has sold the plants is sometimes blamed for not supplying a genuine article. The Golden Honeysuckle is of this class of

plants, and loses much of its bright golden colour when planted in rich soil where sun does not act freely on the foliage.—*M. Temple, Carron, N.B.*

SEDUM SIEBOLDII VARIEGATA.

This is both an interesting and a pretty plant, well adapted for the cold greenhouse, and grown in pots or wire baskets. When in flower its rose coloured flowers combined with the creamy-white variegation of the leaves have a very pretty effect, hanging over the sides of the pot or basket, when suspended in a window. Give plenty of drainage and a rather loose light soil; avoid over-watering when not in active growth.—*W. B. G.*

THE PLANT HOUSES.

The Stove.

The recent spell of cold weather rendered it a matter of some difficulty to keep up the requisite heat without hard firing, and the watering-can and the syringe have had to be plied freely in order to counteract the drying effects of the hot pipes, but with the advent of April we look for and expect more genial weather when it will be possible to keep the coke hill down a bit. The temperature in the warmest stove should not now be allowed to go below 65° Fahr., even on cold nights, and if it stands at from 68° to 70° so much the better, since the stimulus thus obtained will not come amiss to plants that have been lately disturbed. The syringe must be plied freely and regularly morning and evening, both with a view to the keeping down of insect pests and to the imparting of sufficient moisture to the atmosphere.

SHADING.—The blinds on the south side of the houses were fixed during the second week in March, and now the rest of them should all be got in place without delay, for the sun has acquired considerable power, and scorching has to be feared. Odd corners and angles in the roof should have the glass painted over with "Summer Cloud Shading." Only a light covering should be given at first, except to the most inaccessible parts of the house; a heavier coating may be given in a month's time.

NEWLY POTTED PLANTS will require considerable care when being watered. It is true, that generally speaking, stove plants need abundant supplies of water, but this may well be overdone particularly when the plants, as now, have not fully recovered themselves of the check consequent on shifting. Plants that have been only topdressed and not potted must be watched with especial care, for it is easy to mistake their condition for water. The main watering should now be given in the afternoon sometime between two and four o'clock, another look over being given the following morning. In this way plants that do not need water at the one time may receive it at the next if they need it.

CALADIUMS.—Attend to the supporting of any large and heavy leaves that require it. These are exceedingly liable to be broken or bent under the weight of the water propelled by the syringe plus their own weight, which is considerable. The stakes used should be as thin and neat as is consistent with the required strength and rigidity, for nothing so heavily discounts the decorative value of a plant as clumsy and untidy staking.

TREE FERNS.—Tropical species of Tree Ferns are among the most stately and imposing of stove plants provided they are well looked after and not allowed to become infested with thrips, snowy fly, and mealy bug, all of which are exceedingly partial to them. Just now the roots emitted from the stems are very active, as an examination of the young green tips will speedily show. As it is advisable that these young roots should be encouraged as much as possible, the stems should be syringed at least twice a day with clear water, and an occasional variation with clear liquid manure will render good service. The plants themselves will also be in need of some manurial stimulant, and for the purpose there is nothing better than liquid cow manure and soot, if steps are taken to obtain a solution free from sediment. Pay close attention to young fronds that are being thrown up, and if necessary exercise some pressure upon them downwards to prevent their being crushed against the glass.

THE TALLER-GROWING ADIANTUMS, such as *A. aethiopicum*, *A. trapeziforme*, and *A. polyphyllum* are also now standing in need of staking. This is

especially the case with *A. aethiopicum*, whose numerous growths can only be manipulated at an early stage as they very quickly form a closely interlaced mass, which, as the stipes of the fronds are brittle, it is almost impossible to do anything with.

FERNS FOR CUTTING.—As Fern fronds, particularly those of *Adiantums* are in much request all through the year for making up in all sorts of floral decorations, it is advisable to have a good stock on hand to cut from. If the room can be spared and there is the convenience a small warm house may well be devoted exclusively to this class of plants. If not a bench in the large stove, in the shadiest portion of it, should be cleared and the Ferns placed upon it by themselves. It will then be easy to keep the syringe off them, which it is almost impossible to do when the plants are scattered about the house.

COCKROACHES.—With so many plants making new growths the cockroaches will have a fine time of it unless precautions are taken. The depredators are not at all particular, but seem to wage war indiscriminately upon all young leaves and stems. Ferns especially suffer at their hands. A few boxes of phosphorus paste should be spread on pieces of slate, crock, or cardboard, and laid about the house. The paste is greedily devoured by the cockroaches, and the dead bodies of the victims are likewise eaten by the living, thus helping to swell the list of deaths. No dead cockroaches should therefore be picked up, as they will find convenient sepulture in the bodies of their friends.

COLEUSES.—The earliest struck cuttings have now pretty well filled the 32's in which they were placed at the beginning of March, and should, therefore, be transferred to larger pots without delay. 8 in. or even ten in. pots will not be a bit too large for them if good specimens are required. The soil should consist of two-thirds of good loam, and one of old mushroom-bed manure, with sand. Pot firmly, as this helps to check too gross growth, and thus renders the plants more wiry and fitted for doing duty presently in the dwelling house. Attend to pinching as it becomes necessary. The tops were taken out of the plants soon after they were potted into 32's, and the main side growths should not be allowed to get too long before they are served similarly.

POINSETTIAS.—As soon as the shoots on the old plants have attained a length of 3 in. or 4 in. they should be taken off, with a heel of the old wood, and inserted as cuttings. Use very sandy soil, and plunge the cutting pots in a close propagating frame having a temperature of not less than 70° Fahr. Poinsettias are queer things to root; sometimes 95 per cent. of a batch will root, whilst at others scarcely 5 per cent. turn out well, and this when the conditions under which they are placed are, as far as human eye can distinguish, identical. In the face of this it will be wise to introduce plenty of old plants to treat, so that should a hatch of cuttings go wrong others may be had at once to take their places.—*A. S. G.*

SOCIETIES.

LIVERPOOL HORTICULTURAL ASSOCIATION, March 30th, 1898.

The spring exhibition of this society was held in St. George's Hall, under the most favourable auspices. The exhibition, taken as a whole, was bright and fairly good in quality; the specimen plants were somewhat under the Liverpool average for size; and Azaleas were conspicuous by their absence.

For a group of miscellaneous plants, 12 ft. square, E. Pryor, Esq. (gardener, Mr. E. Taylor), took the lead with a pretty array of flowering plants, in which *Dendrobiums*, *Odontoglossums*, *Amaryllis*, &c., showed to advantage, light Palms being used to break up the formality. W. H. Watts, Esq. (gardener, Mr. J. Bracegirdle), was second with a combination that showed taste, but lacked the quality of the former.

For ten pots of hardy herbaceous and bulbous plants W. B. Bowering, Esq. (gardener, Mr. T. Ankers) took the lead with a good lot, but unnamed. For six clumps of Lily of the Valley, Mrs. Cope (gardener, Mr. T. Carling) was to the fore with well-flowered plants. In a new class for miscellaneous bulbs and foliage plants, W. H. Watts, Esq., had a nice bright lot.

For twelve Hyacinths, distinct, O. H. Williams, Esq. (gardener, Mr. T. Wilson), staged the best, including Schotel, King of the Blues, La Grandesse, Fabiola, &c. For six varieties, J. Smith, Esq., took the lead. For six pots, three bulbs in a pot, W. J. Davey, Esq. (gardener, Mr. T. Leadbeater) won with grand spikes.

A. Earle, Esq. (gardener, Mr. J. Hitchman), had the best six pots of Polyanthus Narcissus; this exhibitor also won for six pots of single Tulips. C. MacIver, Esq. (gardener, Mr. H. Holford), winning for twelve varieties. For six double Tulips, C. J. Procter, Esq. (gardener, Mr. J. Williams) scored. For three Azaleas, in 8-inch pots, T. McClelland, Esq. (gardener, Mr. W. Bustard) won with well-flowered specimens.

The class for Amaryllis brought out a fine lot, the entries in this section showing that Liverpool is fully alive to these charming flowers. G. W. Moss, Esq. (gardener, Mr. T. Johnson) won with as fine a lot as has been seen in St. George's Hall, having strong spikes, large and well formed flowers of grand substance, including Sultan, Ladas, The Gem, Magnifica, etc.; W. J. Davey, Esq., was second. For a basket of cut flowers Col. W. H. Shirley (gardener, Mr. G. Eaton), took the lead, closely followed by Mrs. Cope.

For a single stove plant in bloom A. L. Jones, Esq. (gardener, Mr. A. Randall), won with *Coelogyne cristata*; E. Pryor, Esq., winning with *Acacia armata* for the greenhouse plant. For three Orchids W. H. Watts, Esq., was well to the fore, including a good plant of *Angraecum sesquipedale*, carrying twelve flowers. For two varieties E. Pryor, Esq., took the lead, and for the single plant the same exhibitor won with *Coelogyne cristata*. Col. W. H. Shirley won in the class for two hardy forced plants; W. H. Watts, Esq., leading for four exotic Ferns, with good plants. For a single Azalea A. S. Jones, Esq. had the best. For four hardy Rhododendrons T. McClelland, Esq., won with well flowered plants; E. Pryor, Esq., staging the best single. A. L. Jones, Esq., had the best greenhouse variety with *R. Gibsonii*.

W. H. Watts, Esq., won with good examples of three Palms, Mrs. Cope securing the premier award for the single specimen with *Thrinax elegans*, and was in a similar position for six pots of Lily of the Valley with good spikes. W. B. Bowering, Esq., won with fine plants of *Cyclamen*; W. H. Watts, Esq., for *Callas* (good); C. J. Procter, Esq., for a bouquet.

The exhibits not for competition added considerably to the beauty of the show, Certificates of Merit being granted for floral designs and plants to Messrs. Turner Bros. for *Azalea mollis*; to Messrs. Thomas Davies & Co., for *Mignonette Machet*; to Messrs. John Cowan & Co., for a table of Orchids and miscellaneous plants; to the Right Hon. the Earl of Lathom, for Royal Sovereign Strawberries; to Messrs. R. P. Ker & Sons, for a collection of *Amaryllis*, *Azalea indica*, and *A. mollis*; to Messrs. Dicksons for cut Daffodils and other bulbous flowers; and to Misses Hopkins for mixed *Polyanthus*.

The arrangements were somewhat altered from that of former years, the low tables being a distinct improvement, showing the flowers off to better advantage. The attendance only proved moderate.

BOURNEMOUTH AND DISTRICT DAFFODIL.—

March 30th and 31st.

WINTER was bound to come somewhere in the year, and Bournemouth has felt the recent inclement weather like many other places, but in spite of the clerk of the weather, Lady Willis open their first spring show under very favourable conditions on the first day, and the show was expected to be well attended. J. B. M. Camm, Esq., the president, in a few very appropriate introductory remarks, explained how easily Daffodils can be cultivated, and how beautiful they are when planted in copses, woodlands, in grass, and in the garden borders. He hoped the show would create amongst the residents of Bournemouth a love for the poetic Narcissus. Lady Willis declared the show opened and in a few words hoped the society would be a successful one. T. J. Hankinson, Esq., J.P., proposed a hearty vote of thanks for Lady Willis' kindness in opening the show, which was seconded by Mr. J. K. Ingram, of Parkstone.

In the class for a collection of cut Daffodils open

to all, five blooms of each, Mr. T. K. Ingram, of Bournemouth was first with some magnificent specimens of *N. Emperor*, *Golden Spur*, *Leedsii Amabilis*, &c.; Mr. J. J. Swaffield, was second. For twelve varieties, three blooms of each, the Rev. T. H. Marsh was first. For six varieties, three blooms of each, he was again first; T. J. Hankinson, Esq., being a good second. For three varieties of the large Trumpet type, six blooms of each, T. J. Hankinson, Esq., took the lead with *N. Emperor*, *N. bicolor Empress*, and *Golden Spur*. In the class for six blooms of any variety, T. J. Hankinson, Esq., again led with *N. Empress*; and the Rev. T. H. Marsh was second with *N. tortuosus*.

In the *Incomparabilis* section, T. J. Hankinson, Esq., was first with fine blooms of *Sir Watkin*; the Rev. T. H. Marsh being second; and J. B. M. Camm, Esq., third. For three blooms each of three varieties, T. J. Hankinson, Esq., was first; and the Rev. T. H. Marsh, second. For six blooms of one variety of *Double Trumpet Narcissus*, T. J. Hankinson, Esq., was first; and J. B. M. Camm, Esq., second.

For a bouquet of *Narcissi* (open to all), Miss Piper was first with a very graceful and artistically arranged bouquet, mixed with *Asparagus*, *Fern* and *Narcissi* foliage; Mrs. Lewis was second; and Miss Watkins came in third. For a similar bouquet, T. J. Hankinson, Esq., led the way; and Miss W. Moore came second. For an epergne of *Narcissi*, with *Fern* or other foliage (for ladies only), Miss E. M. Moore came first.

In the class for six pots of *Narcissi*, not less than four varieties, Mrs. Henry Rogers took first with six pots of well-grown specimens, including *N. Barrii conspicuus*, *N. Leedsii Minnie Hume*, *N. P. R. Barr*, *N. Empress*, *N. Sir Watkin*, and *N. Emperor*; T. J. Hankinson took second; and J. B. M. Camm, Esq. came in third. For three pots of *Narcissus*, T. J. Hankinson, Esq., came first.

For a group of flowering and foliage plants in pots arranged for effect, to occupy 30 sq. ft. of space, J. S. Sellon, Esq., was first; and W. H. Dore, Esq., a good second. For twelve pots of *Hyacinths*, T. J. Hankinson, Esq., took the lead. For three pots of *Spiraea astilboides*, T. J. Hankinson, Esq., took first, and also for three pots of *Dielytra spectabilis*. For three pots of *Cinerarias*, J. S. Sellon, Esq., was first with three well-grown plants, of good, decided colours; T. J. Hankinson, Esq., being second. Mr. Sellon was again first with three pots of *Primula sinensis*; while Mr. Dore was a good second. For *Deutzias*, Mr. Hankinson led with three well-grown specimens. For three and one specimen *Azaleas*, Mr. Sellon was to the fore, and Mr. Hankinson came second.

In the non-competitive groups Messrs. Barr & Sons, of Long Ditton Nurseries and Covent Garden, sent a large collection of their well known Daffodils, in which figured prominently in the Ajax Section, *Emperor*, *Queen of Spain*, *Golden Spur*, *Obvallaris*, *Wm. Goldring*, *J. B. M. Camm*, and their new bicolor *Daffodil Victoria* growing in a pot, thus showing its vigorous and sturdy habit. In the *Incomparabilis* and *Barrii* Sections, *Sir Watkin* and *Barrii Conspicuous* were fine; *Leedsii Grand*, and *Duchess of Westminster*, and *Katherine Spurrell* were good. In addition to Daffodils, Messrs. Barr had an assortment of *Anemones*, *Muscaris*, *Erythroniums*, etc.

Messrs. W. Edwards, F.R.H.S., & Son, of Sherwood, Nottingham, sent some very artistic manipulations, showing what can be done with plants of Ferns, Palms, *Selaginellas*, and cut flowers in their Edwardian ware.

Mr. M. Prichard, of Christchurch, sent a very interesting group of Daffodils; very good were *Countess of Annesley*, *Incomparabilis Sir Watkin*, and *Cynosure*; also *Emperor*, *Barrii Conspicuous*, *P. R. Barr*, and *Incomparabilis Titan*, very good. Some very fine specimens were also shown of *Tulipa Greigii*, *Iris reticulata*, some very good pans of *Aubretias*, *Primulas*, *Muscaris*, etc.

Mr. W. E. Tidy, Mr. T. K. Ingram, Messrs. G. Watts & Sons, and Mr. J. J. Swaffield, all of Bournemouth, contributed comprehensive groups of Greenhouse flowering and foliage plants. Mr. T. K. Ingram, of Parkstone Nurseries, exhibited, not for competition, an excellent group of *Lily of the Valley*, with enormous bells and handsome foliage.

The judges were Mr. P. R. Barr, of Barr & Sons, Covent Garden, and Mr. M. Prichard, of Christchurch.

QUESTIONS AND ANSWERS.

Ridge Cucumbers.—*J. T. Thurston*: The character and quality of ridge Cucumbers vary greatly; but their quality largely depends upon good cultivation. They should be grown quickly on vigorous and well fed plants. The fruits should be cut immediately they are full grown. Care should at the same time be taken that they are not much exposed to direct sunshine, as that is liable to make them tough and bitter by unduly drying and toughening the skin and tissues beneath. If protected by the foliage of the plants their safety would be ensured. *Stockwood* and *Pride of Devon* are very good ridge Cucumbers. You might, however, try some of the newer and improved sorts that have been raised by crossing the ridge with the frame (ordinary Cucumber) kinds like *Telegraph*. These crosses have given rise to varieties that are intermediate in length between the parents. They are prolific and of excellent flavour. Two of these newer kinds are *Sutton's King of the Ridge*, and *Baker's Triumph*, both of which are suited for open-air cultivation.

Book.—*F. Saunders*: "Hardy Ornamental Flowering Trees and Shrubs," by A. D. Webster, is priced at 2s., and free by post 2s. 3d.

Crested Begonias.—*W. M. W.*: Whether the name given this garden race of Begonias is *B. erecta cristata* or *B. grandiflora erecta cristata*, they are a strain of the summer flowering race, notable for the peculiar outgrowths on each of the four petals of the male flowers. The crest has already appeared in many varieties, differing chiefly in colour, and the peculiarity may yet be extended to many more, while at the same time we should expect that the crest itself will yet be modified and improved in size and general effect. Their cultivation is similar to that of other summer-flowering, tuberous Begonias.

Kind of Box for Edging.—*T. Brown*: As to what variety will be most likely to give satisfaction depends entirely upon the nature of your soil. The common tree Box (*Buxus sempervirens*) is the most vigorous and rapid grower, and most suitable for planting where the soil is of a stiff or heavy clayey nature. It requires more pruning or cutting in order to keep it within due bounds than the Dwarf Box (*B. sempervirens suffruticosa*); but then it succeeds where the latter is likely to fail or to die out here and there, leaving gaps. If your soil is light or free and easy to work, then you might safely plant the Dwarf Box, which grows slowly and requires little trimming.

Propagation of Lathyrus latifolius.—*H. W. J.*: The most satisfactory method of raising Everlasting Peas is to sow seed. It is not yet too late for the operation, as the plants grow so slowly the first year that they seldom, if ever, flower. Under moderately favourable conditions they would be almost certain to bloom next year. You could not do better than sow the seeds thinly in thumb pots, and place them in a cold frame to be kept close till the seedlings make their appearance. By placing them in a gentle artificial heat you might hasten their germination, but too high a temperature retards them. Artificial heat is, however, entirely unnecessary. When the plants are 3 in. high, and have been hardened by plenty of ventilation, you may plant them in their permanent positions at any convenient time. Here they will make more progress than if kept in pots, as they root very deeply.

Examination.—*D. E.*: We are sorry you were unable to go forward this year, but should advise you to continue your studies, and you will be in a much better position next year to insure success.

Names of Plants.—*C. Mackenzie*: 1, *Fitz-Roya patagonica*; 2, *Abies nordmanniana*; 3, *Pseudotsuga Douglasii*; 4, *Abies firma*; 5, *Thujaopsis dolabrata*; 6, not recognised. Send when in flower or at least when in full leaf.—*W. McIver*: *Cypripedium villosum* Boxalli; the other is *Oncidium aureum*, with more richly-coloured sepals and petals than usual.—*T. B.*: 1, *Asplenium bulbiferum minus*; *Platyoloma rotundifolia*; 3, *Selaginella Martensii*; 4, *Sibthorpia europaea variegata*; 5, *Forsythia suspensa*.—*A. C.*: 1, *Narcissus minor*; 2, *Sisyrinchium grandiflorum*; 3, *Cardamine trifolia*; 4, *Hacquetia Epipactis*; 5, *Anemone ranunculoides*; 6, *Primula rosea*.—*W. J.*: 1, *Odontoglossum crispum andersonianum*; 2, *Dendrobium nobile* var.; 3, *Cattleya Trianaei chocoensis*; 4, *Epidendrum radicans*.

Communications received.—*G. H. Cox*.—*M. Temple*.—*W. L.*—*L. Lubbers*.—*F. G. Brewer* (next week).—*A. B.* (next week).—*Geo. Russell*.—*A. L.*—*S. H.*—*W. M.*—*R. G.*—*C. C. L.*—*B. N.*—*S. Rose*.—*P. E. W. Baston*.—*F. Ames*.

TRADE CATALOGUES RECEIVED.

FREDERICK W. KELSEY, 150, Broadway, New York.—Choice Hardy Trees and Plants.

SUNSET SEED AND PLANT CO.—Sunset Seasonables for Present Planting; Bulbs, Seeds, Plants, Trees, Palms.

WILL TAYLER, Osborn Nursery, Hampton, Middlesex.—Fruit Trees and Roses.

OTTO HEYNECK, Magdeburg, Germany.—Catalogue of Chrysanthemums and Caladiums.

PETER LAMBERT, Rose-grower, Trier (St. Marien Germany).—Newest Roses, and other Sorts.

CANNELL'S VIOLETS.

It is said no variety that we have so long and often recommended has ever given such complete satisfaction as Princess of Wales. We have the largest, most complete, and best kept stock of any in England. We shall be glad to quote special price for large quantities.

Catalogues free to coming customers.

SWANLEY, KENT.

1898. FORBES' CATALOGUE 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants

is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and prices of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other Valuable Information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,

ESTABLISHED 1870.

Nurseryman, Hawick, Scotland.

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER,

Exotic Nurseries, CHELTENHAM.

LAIRD'S

"DEMOTIC"

FERTILIZER

STANDS

UNRIVALLED.

Every Gardener should give it a trial.

PRICE 17/6 per cwt., Carriage Paid.

R. B. LAIRD & SONS,

SEED MERCHANTS,

17a, South Frederick Street,
EDINBURGH.

HOLLYHOCKS.—A large collection of fine named Hollyhocks in strong plants. Absolutely free from disease.

YULE-TIDE is the grandest scarlet perpetual Carnation extant; has been awarded nine F.C.C. and Silver Floral Medal by the R.H.S. Catalogues on application.

JOHN FORBES, Nurseryman, Hawick, Scotland.

HARDY CLIMBERS.

FINE COLLECTION.

FOR PILLARS, ARCHES, WALLS, PERGOLAS, TREES, &c.

GEO. BUNYARD & CO.

Beg to say their List of the above may now be had free, from

THE ROYAL NURSERIES, MAIDSTONE.

NEW DOUBLE VIOLET,

MRS. J. J. ASTOR.

This beautiful Violet, of a deep rosy-heliotrope is meeting with a most cordial reception, and as the stock is getting very limited, and we have already many orders booked for April and May, we beg all intending purchasers will please apply at once to prevent disappointment.

The Managers, Hood Gardens, Totnes.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, APRIL 16th, 1898.

NEXT WEEK'S ENGAGEMENTS.

FRIDAY, April 22nd.—Sale of Imported and Established Orchids by Messrs. Protheroe & Morris.

APPLES FROM AUGUST TO MAY.—The subject of hardy fruits, generally, seems never to lack interest; and it would appear that the consumption of Apples as part of our diet (in North Britain at any rate) is greatly on the increase. Very often we read of great success by cultivators in districts wide apart, but seldom are details sufficient to encourage beginners to embark largely in Apple culture. It is pitiable to see so many old orchards throughout England, as well as in Scotland, in the last stage of decay. In our district (Stirlingshire) many old orchards, which had been famous for producing fine crops of fruit, have of late years, been cleared right away and are now useful pasture. Seldom do we see or hear of any new orchards being formed. When reports of successful Apple culture are given it would be well to note at the same time the elevation of the position, latitude, nature of soil, subsoil, drainage, and the varieties which succeed year after year without fail.

We find it is not necessary to go out of a county to see great diversity of results from orchards and fruit gardens, while the culture in each case is identical; but soil, drainage and exposure generally settle the matter. Large collections, instead of "Suitable Collections for the Situation," too often defeat the aspiration of cultivators. We have carefully noted sorts which have

given good crops season by season for 16 years past, and varieties remaining in good condition till May, which are as follows:—Beginning with Kitchen sorts, say during August, we have Lord Suffield (rather subject to canker in the wood), Keswick Codlin, Golden Spire, Lord Grosvenor, Eclinvill Seedling, Stirling Castle, Warner's King, Seaton House (the most certain cropper we have seen, lasting in use from October to April), Dumelow's Seedling, Northern Greening and Yorkshire Greening. They are kept dark and rather close, and newspapers are spread over the fruits which are in layers of 3 or 4 deep. The soil is wet, heavy, and below the surface of the sea.—*M. T., Carron.*

SHOULD SOIL GET TIRED OF ONE KIND OF CROP?—To agriculturists it is a matter of common observation and experience that Clover crops cannot be obtained from the same land consecutively for more than a few years. Science may yet be able in the near future to explain the reasons why the agriculturist should fail to secure a Clover crop annually from the same piece of ground. As far as we can at present determine, the species of Clover have peculiarities in this respect, that until they are more fully understood, cannot be surmounted. Other crops belonging to the same family do not seem to have given the same amount of trouble. The garden Pea has given successive crops from the same land for a period of fifty years without failure. Nevertheless it possesses the same peculiar faculties of collecting nitrogen from the surrounding soil, and of fixing the free nitrogen of the atmosphere as Clovers have. The inference furnishes no clue to the difference, which must, therefore, be sought for elsewhere. There can be little doubt that proper tillage and an intelligent use of the various animal and artificial manures to soils would help largely to overcome difficulties in the matter of continuous cropping. The more of any given crop that is conveyed off the land, the more the necessity for returning an equivalent in applied fertilisers. The soil is, indeed, an exhaustless store of plant food, but good crops taken off the land always deplete the latter of certain mineral and other ingredients at a greater rate than the forces of Nature can replenish the same in a condition that can be absorbed by plants. This is more particularly the case where land is badly tilled or not tilled at all. Air, rain, and frost are renovators of the soil's fertility; and the sun may also be placed in the same category, in the case of summer tillage at least. In India, the soil is dug up purposely so that the sun may pulverise it and otherwise restore its fertility. Moreover, tillage certainly hastens the solubility of plant food, while in a state of nature these operations proceed more closely.

For many years almost the sole crop of any importance grown in the Scilly Islands was early Potatoes. At length these became unremunerative owing to the competition coming from the Channel Islands, aided by the better climatic advantages. About thirty years ago, the Scillonians commenced Daffodil culture as a means of utilising their land, and affording them a living. In course of time Daffodils completely supplanted the Potatoes, from which we should infer that the crop was proportionately remunerative. This year, however, the islanders are complaining that the bulbs have failed to produce a remunerative crop of flowers. The same ground is continually cropped with Narcissi, which are lifted at intervals of three years or thereby, merely for the purpose of thinning out the bulbs and giving them more room.

When advised to manure the ground they complain that it is injurious to the Daffodils; and certain varieties do indeed dislike raw or little decayed farmyard manure at least. There can be little doubt, however, that the fertility of the soil requires restoring, after such hard and continuous cropping, with the removal of tons of flowers annually. The question arises, in what form may the necessary fertilisers be applied. That would have to be determined by one or more experimenters upon the ground, that is, in the Scilly Isles themselves. Both soil and environment would have a bearing upon the question at issue. Those having the time, the means, and the necessary knowledge of these things, should set apart a piece of land to be divided into plots, each one of which should be treated with a separate manure or a combination of several. Farmyard manure, catch crops for green manuring and the chemical fertilisers, should all be applied to see which gives the best return under the ordinary continuous cropping. The islanders might then be instructed in the method that most deserves to be pursued.

Several instances have come under our notice of continuous cropping, even by good practical gardeners, both in flower and vegetable culture. In many gardens, it happens that certain parts are sheltered, close to the principal walks (the borders of which have to be kept gay), and otherwise suitable for Dahlias, Hollyhocks, Gladioli, Roses, and similar flowers which are accordingly grown there, and successfully, for a great many years. We have also known nurserymen who have grown Dahlias upon the same ground for more than twenty years. We have known Onions being annually sown upon the same soil for more than twenty years in succession, and the crops pulled were heavy and the bulbs large. Successful gardeners often prepare a piece of ground for Carrots, and utilise it for this particular crop for years afterwards. In all these cases proper tillage and manures were solely responsible for continued successful cropping. Many other crops might be grown by the same practice, without raising a hue and cry about the exhaustion of the soil.

The Tobacco Raised in Baluchistan is said to be so exceedingly strong that it cannot be smoked by any but the most vigorous white men, though the natives have no difficulty with it.

The Post Office Authorities have, this Eastertide, contrived to irritate the public to a considerable degree over the carriage of boxes of flowers through the Pattern Post. During the past few years it has been a common practice for people living on the Riviera to send boxes of flowers to their friends and relatives in England by Pattern Post, these flower offerings being especially numerous at Easter. Hitherto the postal authorities have chosen to 'wink the other eye,' and the boxes have been duly delivered. This year a different course has been taken, and without any declaration as to their intentions the postal authorities have returned from Dover all such boxes to the senders. Of course flowers are not millinery or dress fabrics, and could scarcely be classed under the title of 'patterns,' strictly speaking, but in view of the fact that they have been allowed to be sent thus, some warning that they would no longer be received was surely necessary. In the light of the information to hand this latest freak of the Post Office is nothing less than churlish and wantonly disagreeable. Law is law of course, and regulations are regulations, but it is possible for both laws and regulations to fall into disuse by tacit consent, just as the hedge that is often trampled over disappears at last. The cultivation of flowers for *expédition* has been taken up largely in the Riviera district, and it is a thousand pities that these cultivators should be disappointed of the fruit of their labours.

Microbes to the number of 250,000,000 of various species are calculated to be taken into the lungs by a Londoner in the course of seventy years.

No Need for Fear.—The new occupier of a farm went to his Potato field early one morning, and dug up a few of them to see how they were getting on, when his attention was suddenly arrested by the appearance of a couple of strangers at the other side of the field, who were preparing to follow his example. He was about to challenge them, when the reassuring words were wafted to his ear—"Dinna let us disturb ye, we're stealin' a pickle Tatties like yerself."—*People's Journal*.

Fruit Prospects.—As far as the present appearance of our fruit trees goes they are promising well for good crops. The blooms of Cherry trees on walls are just expanding; so are those of Plums and Damsons. I notice some of the Pear blossom just opening, and every fruit tree is bristling with flower buds; and if frosts do not occur there is no reason why we should not have an abundance of fruit of all kinds in this neighbourhood. We escape late spring frosts fairly well, but the expansion of the blossom is taking place rather earlier this season.—*W. P. R., Preston, Lancashire, April 11th, 1898*.

Fires in the Forest of Dean.—On the 3rd inst fires broke out at several points simultaneously at Park-end, Forest of Dean, by which large tracts of forest were destroyed on an area extending over two miles. The simultaneous outbreak of the several fires is held as a true indication that the incendiary has been at work. There is much uneasiness in the district, the belief being held that certain persons are indulging in these acts of lawlessness in resentment at the work of the Commissioner of Woods in enclosing thousands of acres in the Dean Forest that used to be held as common land.

Tunbridge Wells Gardeners.—At a recent meeting of this society Mr. H. H. Cousins, M.A., of the agricultural staff at Wye College, gave an instructive lecture upon "Garden Manures." The lecturer first dealt with the chemical analysis of plant life, and the need of giving soils the benefit of various manures, such as nitrates, sulphate of ammonia, phosphates, and potash salts. He touched upon the needs of plants that were cultivated for their fruit and flowers. He assured his audience of the willingness of the County Council to give gardeners and agriculturists the benefit of the results of scientific experiments carried out at Wye College, and said, moreover, that the staff there would at all times be glad to answer inquiries on matters that required chemical analysis. The meeting followed very closely the various points raised by Mr. Cousins, and not a few questions were asked at the close, to all of which lucid answers were given by the lecturer.

Ealing and District Gardeners' Society.—The tenth annual dinner of this society was held on the 5th inst., in the Princes' Hall, Ealing, the president, J. Harris, Esq., F.R.H.S., in the chair. Nearly fifty persons partook of the annual spread and otherwise enjoyed themselves during the evening. After the usual loyal toasts the president proposed "Success to the Society," and congratulated the members on the solid work done and the excellency of the papers and lectures given during his term of office. Mr. W. Roberts, the hon. secretary, in responding stated that the society's finances were never in better condition; the meetings had also been well attended; and that the recent spring show had resulted in a profit of nearly £15, which would be duly handed over to the treasurer of the Royal Gardeners' Orphan Fund (applause). The distribution of prizes and certificates then took place, after which various other toasts were given and replied to, blended with some capital songs and an original recitation entitled "The Gardens of the Hesperides," by Mr. C. B. Green. Some very sensible speeches were made during the evening by Messrs. A. Wright (Falkland Park), R. Callard, W. W. Richardson, C. Edwards, W. J. Simpson, D. Cooper, C. Long, R. Green, Jas. Gibson (Chiswick), C. F. Harding, H. Burgess, Geo. Cannon, and others. After the chairman had retired the hon. secretary announced, amidst great applause, that he had received promises of £4 4s. from the chairman, and £2 2s. from Mr. Callard, besides other support. Thus ended a profitable as well as a very pleasant evening.

Messrs. J. Laing & Sons, Forest Hill, London, have been extending and perfecting the floral department of their business, that is, the branch which deals with bouquets, wreaths, crosses, anchors, sprays, table decorations, and everything else of that nature. This important department of their business is managed by an eminent staff of west-end lady florists.

A Monmouthshire Daffodil Grower.—Mr. W. J. Grant, who won the Silver Daffodil Cup, presented by Messrs. Barr & Sons, at the spring show of the Royal Botanic Society on the 30th ult., is the zealous organising agent for agriculture and fruit gardening to the Monmouthshire County Council. Mr. Grant's place at Bassaleg, near Newport, has been gay with Daffodils and other Narcissi for some years past, and the present case was his highest flight in open competition. His collection consisted of sixty varieties and over 1,000 blooms, including fine bunches of all the leading and better known varieties in cultivation.

The Alexandra Palace.—This place of amusement and recreation for the people, and where some good flower shows—principally Rose shows—have been held in the past, has been more or less completely closed during the past ten years. It was again opened, however, on Good Friday under new management. Since the closing of the Alexandra Palace a large population has sprung up in its immediate neighbourhood, and on the opening day there was a large attendance of the public. The beautiful grounds presented the appearance of having been hurriedly put into order, but the large staff of gardeners who have been engaged will soon get the place into trim order again, and make amends for the period of neglect.

A New Variety of *Salvia splendens*.—A new variety, since named *Salvia splendens purpurea*, was raised from seeds in 1895, and has since proved constant in colour. It has the habit of *Salvia splendens nana*, its height being about 18 ins., and it commences flowering in July, at least in Italy. The spikes and calyxes are purple, tending towards a chocolate colour, and the corolla is lilac. As a variety of this species it is very beautiful and very interesting. *Il Giardinere*, a Milanese periodical in 1881, gave a coloured plate of the typical *S. splendens* together with four other varieties, including one dedicated to Signor Pirota, and one to Countess Maria Teresa Olgiati. The other two were *S. s. flore albo* and *S. s. violacea*. The variety under notice as well as *S. s. pucciana*, with a white calyx and rosy corolla, are newer and commented upon by a writer in the *Bullettino della R. Società Toscana di Orticultura* for March last. He also describes five others, including *S. s. rosea*, also known as Apple Blossom.

Memorial to the late M. Jean Linden.—On the morning of the death of Jean Linden, some friends conceived the project of perpetuating the remembrance of the celebrated explorer, the learned botanist whose loss the horticultural world deploras, and whose innumerable discoveries have enriched the flora of our greenhouses and gardens with so many marvels. The idea of raising a monument to his memory was bruited and found numerous adherents. The monument would be erected at Brussels, where M. Linden passed the greatest part of his life. To realise this object a committee has been formed under the presidency of M. le Comte de Kerchove de Denterghem, president of the Royal Agricultural and Botanical Society of Ghent. M. Kegeljan, president of the Royal Horticultural Society of Namur, Belgium, was very willing to accept the function of treasurer, and subscriptions in the form of postal orders, payable at Namur, may be addressed to him. M. Lubbers, secretary of the Royal Floral Society of Brussels, consented to become secretary. It has been decided that an appeal should be addressed to botanists, amateurs of horticulture, horticulturists, public establishments, and scientific societies both Belgian and foreign, inviting them to co-operate in the manifestation, and to give it an international character. The services rendered to horticultural science by M. J. Linden are universally known and appreciated, so that those who are interested in botany and horticulture should join in raising a fitting memorial to the great traveller and plant collector.

Erratum.—On page 503, in the 24th line from the bottom of the second column, for "is owned and worked by Messrs. Rendall," read "Messrs. Kendall."

The Peach is said by some authorities to have been originally a very poisonous fruit, but that by long cultivation this quality has disappeared. After being properly matured, however, it is more than likely that the poison, if it existed at all, resided in the embryo or kernel, as in the bitter Almond.

A Pyramidal Lime.—A pyramidal variety of Lime is finding its way into gardens about Darmstadt, namely *Tilia platyphyllos pyramidalis*. The ordinary form of the broad-leaved Lime is a handsome tree, but never looks well when attempts are made to prune it into pyramidal shape by artificial means. The variety under notice might be planted where a tree of pyramidal shape is desired. There is a fine young specimen about 20 ft. high in the Prince Emil garden in Bessurgen, near Darmstadt.

Presentations at Torquay.—At the annual general meeting of the Torquay Gardeners' Association, Mr. F. C. Smale, the hon. secretary, on behalf of 133 members, presented their president, Dr. Hamilton Ramsay, with a magnificently illuminated address, in token of the appreciation in which the association held the valuable services rendered them. The address was an artistic piece of work, executed by Mr. A. Shelly. Dr. Ramsay was much touched by their kindness. Mr. Masterman then presented Mr. Shelly with a souvenir in token of the appreciation of his work in illuminating the address.

Anemone ranunculoides.—The writer of the note under this heading on p. 503 made a mistake in getting the wrong name of the plants growing upon the grass in the Embankment Gardens. They consisted of the Winter Aconite (*Eranthis hyemalis*), and had not come in the turf, but were intentionally planted. The planting having been accomplished at different times by the superintendent, Mr. G. Palmer, the result has been that a continuous succession of bloom has been kept up since February to the present time. We compliment Mr. Palmer on his forethought in planting so as to secure such a lengthened display by so simple a plan of procedure. Gardeners and superintendents of parks generally would do well to avail themselves of the practical utility of this hint.

Leaf-cutting Bees.—Mr. Fred Enock, F.L.S., F.E.S., etc., continues his most interesting essays on "British Bees" in the April number of *Knowledge*. The number of British species is sufficient to astonish all but those having an acquaintance with the subject. The doings of many of them are marvellous, and give the reader an impression that they are possessed of wonderful skill and intelligence—some would say instinct. Many gardeners, and Rose growers in particular, are familiar with the doings of the leaf-cutting bees, much to their sorrow. On the other hand, Mr. Enock, and other naturalists, he admits, are quite willing to allow the bees to cut up the leaves of their Rose bushes that they may have an opportunity of studying the habits of these interesting creatures. Though certain species prefer the green leaves of Roses with which to build the cells for the rearing of their young, Mr. Enock has also watched them cutting circles and oblongs from almost any sound leaf. Amongst others he mentions the leaves of Laburnum, Rhododendron, Laurel, Sweet Pea, Nasturtium, Pelargonium, Laurustinus, etc. Several species of *Megachile* visit London gardens during June and July, and he has watched *M. centuncularis* cutting dozens of pieces from the soft leaves of an edible Pea in a garden that possessed no Roses. In another instance he noted that *M. wilughbiella* always builds its cells with pieces of green Rose leaves, preferably those of *Maréchal Niel*. Gardeners who wish to catch the marauders red-handed must visit their Roses early in the morning, for the leaf-cutters are early risers. They also continue for several hours, however, and may be seen at work later in the day. Mr. Enock watched *M. centuncularis* cutting the leaves of Sweet Peas, and found that the bee required only fifteen seconds to cut out a circular piece and twenty-seven seconds to cut out an oblong piece. Thus a leaf-cutting bee could cut out a section and carry it away while the enraged owner of the Rose is preparing to hit her with his cap.

Aniline Dyes to the tune of 2,000 distinct shades are obtained from the 140 lbs. of gas-tar extracted from a ton of coal.

Royal Botanic Society.—The conservatories and grounds of this society were again opened to the public on payment of a small fee of admission on Bank Holiday. A military band played both during the morning and the afternoon.

Sparrows and Oats.—Miss Ormerod has been threepin' doon Miss Carrington's throat that sparrows destroy 1,500,000 quarters o' aits in Inglan' in the coorse o' a twalmonth. Mighty, me! there widna be muckle left for the horses. Miss O. maun surely be drawin' a lang bow in haste (nae at Hastings), 'cause the spurg only gets ae month's grace amon' the aits, let alane twal'.—*Snaggs*.

Marquetry in Natural Woods.—Her Royal Highness the Grand Duchess of Hesse, has, we understand, been occupied for some days past in working on "Tarsia," the new art inlay work for amateurs. It is well known that Her Royal Highness takes a keen interest in all amateur art work, and this new branch seems to have attracted her particular attention. "Tarsia" is a delightfully simple form of marquetry, executed in natural woods. It was first introduced to the public in the December number of *The House* (the artistic monthly for the home), which is published at the office of *The Queen*. This magazine devotes itself to all branches of amateur art, as well as the furnishing, decoration, comfort and management of the home. It has recently added a coloured plate to its many features. The price is sixpence. The illustrations of the designs in natural woods for the adornment of various articles of household furniture show that Daffodils, Buttercups, Irises, and various other flowers have been imitated.

Reading and District Gardeners' Mutual Improvement Association.—Mr. W. H. Lees of the Gardens, Trent Park, New Barnet, read a paper on "Profitable Orchids" before the members of the above Association on Monday evening, the 4th instant, Mr. C. B. Stevens presiding. The formal business having been transacted and a sum of £5 5s. od. been voted to the Special Fund raised by the Reading Horticultural Society, the president called upon Mr. Lees to give his paper. In introducing his subject, the essayist said that it was not his intention to treat the subject from a market grower's point of view, as the title seemed to imply, but from that of the private gardener, dealing with those varieties most suitable for cutting and decorative purposes. The general routine of the cultivation of *Odontoglossums*, *Cattleyas*, *Laelias*, *Dendrobiums*, *Coelogyne*, *Calanthes*, *Cypripediums*, and *Oncidium*s was briefly dealt with under the following headings:—ventilation, heating, staging, watering, manuring, potting, compost, insects, fumigating, etc. The following genera and their species were recommended for the purpose already named:—*Odontoglossum triumphans*, *O. histrix*, *O. Hallii*, *O. odoratum*, *O. crispum*, *O. Rossii*, *O. Edouardii*, *O. harryanum*, *O. Pescatorei*, *Cattleya percivaliana*, *C. Trianaei*, *C. Mendelii*, *C. Mossiae*, *C. gigas*, *C. dowiana*, *C. gaskelliana*, *C. labiata*, *C. Skinnerii*, *C. Harrisoniae*, *Laelia purpurata*, *L. elegans*, *L. harpophylla*, *L. anceps*, *L. autumnalis*, *Dendrobium nobile*, *D. wardianum*, *D. Phalaenopsis schroderianum*, *Coelogyne cristata*, *C. c. lemoniana*, *Cypripedium insigne*, *Oncidium tigrinum*, etc. An interesting discussion ensued in which Messrs. Martin, Stanton, Turton, Woolford, and Bound took part. A splendid exhibit of Orchids was made which added greatly to the interest of the meeting and helped to illustrate many of the remarks made by the speaker. Those who contributed the plants and cut flowers were Mr. Woodford, gardener to Alfred Palmer, Esq., East Thorpe (*Dendrobiums*, *Cypripediums*, *Coelogyne*, *Odontoglossums*, and *Oncidium*s); Mr. J. Pound, gardener to Dr. May, Caversham (*Dendrobium fimbriatum oculatum*); Mr. G. A. Parsons, Oxford Road (*Dendrobiums*); whilst Mr. Stanton, Park Place Gardens, exhibited some spikes of *Bougainvilleas*. A hearty vote of thanks was passed to Mr. Lees and to those members who had been the means of bringing together such a beautiful collection of bloom.

ORCHID NOTES & GLEANINGS.

By THE EDITOR.

Dendrobiums from Redlands.—In a box of flowers sent us by Mr. Geo. Russell, The Gardens, Redlands, Kelvinside, Glasgow, was a bloom of the sport of *Dendrobium nobile Cooksonii*, which originated at Redlands. It is as fine a form of this remarkable case of *peloria* as we have seen. The petals are nearly as wide as the lip, but they are longer; and the blotch on each of them is precisely of the same shape as that of the lip, though of a shade or two lighter in colour. The pale basal area of the blotch on the petals is broader than that on the lip proper, and the latter organ is more infolded at the sides, otherwise the whole three organs are closely similar in form, colour, and pubescence to the lip as seen in the more typical forms of the species. Accompanying the above were several varieties of *D. wardianum*, one of which Mr. Russell thinks has a dash of *D. crassinode* in it. The flowers are of medium size, and the petals more crisped than in the typical *D. wardianum*. The lip, however, is the most distinct organ of the flower, the two blotches being rather smaller and of a clear brownish-crimson instead of a blackish-maroon. Another flower has the blotches reduced to a few slender lines on either side of the base of the lip, where it envelops the column. The other flowers sent were large and had intense, blackish-maroon blotches.

GARDENING MISCELLANY.

CANTUA BUXIFOLIA.

UNDER unfavourable conditions this greenhouse wall-shrub may exist for years without ever showing a flower. This is particularly the case when grown in pots. The best method is to plant it out in the narrow side border of a greenhouse or cool conservatory, allowing it to grow freely, and ripen the wood towards the end of the season by plenty of ventilation. These facts are recalled to mind by a flowering spray before us, and which was grown in the garden of Lieut.-Col. Tremayne (gardener, Mr. J. Simmons), Carclew, Perranarworthal, Cornwall. The species is variable in the foliage, some of the leaves being entire and others deeply cut. The flowers are also variable if the various figures of the species are correct. Some have a short tube with a wide open mouth; but other plants have a very long orange-scarlet tube, and five rich magenta-rose lobes at the mouth, not spreading very widely. The flowers from Carclew belong to this latter type and are very much longer than those figured in the *GARDENING WORLD*, Vol. III, p. 501.

THYRSACANTHUS RUTILANS.

SOME years back this was much more frequently met with than at present. Like some others of the good old things it has got into the back-ground. At one time it was largely grown and much prized. It is, when in flower, a plant of very distinctive character, associating well with *Begonias*, *Aphelandras*, and *Poinsettias*. Owing to the comparatively great length to which the flower spikes attain it will generally require to be elevated to keep these clear of the benches. There is nothing much prettier at this time of the year than well-grown and flowered plants of this easily-grown and beautiful plant, in 6-in. pots, which should carry at least six panicles of flowers from 12 in. to 18 in. in length. The flowers are bright scarlet. Cuttings should be struck in heat during the spring and grown on, receiving their final shift in June, kept in a cold pit during summer and early autumn, giving plenty of air and sunlight. The thorough ripening of the wood is a most essential condition to procure free-flowering plants. An intermediate house is the best place for the plants during the flowering period, as in this temperature they remain in full beauty for a considerable time. A mixture of loam and peat with some sharp sand suits the plant well; and weak doses of liquid manure may be given occasionally but must not be overdone.—*W. B. G.*

HINTS FOR AMATEURS.

BEDDING PLANTS.

Fuchsias.—When well grown in pots under glass Fuchsias are among the most handsome and floriferous plants we have, and as such are deservedly great favourites with both amateur and professional gardeners—indeed, with any one who knows a good plant when he sees it and knows how to appreciate it. The Fuchsia is a subject of many parts, however, and is not content with simply shining as a pot plant. Planted out like other bedders in the open garden, and consigned to the tender mercies and chances of the weather it acquires itself as few other plants do: indeed, the specimens in pots are not infrequently put to the blush, both for size and brilliancy of flowers and continuity of flowering by the plants growing in the open air. Small wonder is it then that Fuchsias find a place in our flower gardens in increasing numbers year by year. The example set by those in charge of our public parks in London, and other towns and cities has been followed in this case as in others, and no one can deny that the flower garden has been much the gainer thereby. Much of its old time stiffness and monotony have disappeared, let us hope never to return.

Just now it is a busy time with the Fuchsias. Those cultivators who found a necessity for more plants have been busily at work for weeks past, taking off cuttings, rooting them and potting them on. The old plants were put in heat about the second week in January, and kept well syringed, the young growths being taken off when they were about 3 in. in length. The earliest cuttings have now developed into sturdy little plants in large 60 pots. These should be kept growing steadily—a matter of no great difficulty when day by day sees the lengthening days, and the shortening nights. Towards the beginning of May a further shift into 48-pots may be advisable, which size will last the plants until the beginning of June, when they may be transferred to the open.

The tall, sturdy specimens that are so conspicuously handsome and imposing are not, however, to be obtained in this way. The old plants have to be called upon for this, and with anything like ordinary care and attention they will respond readily. These old plants were at the beginning of the winter lifted, potted up loosely into rather dry soil, and placed beneath the bench to hibernate. Through the long winter months no water has been given them, but this treatment, although well enough for winter and early spring, must not be continued longer or the plants will suffer. Even now the buds have broken, and the first delicate leaves are showing themselves from a multiplicity of shoots. The plants are somewhat straggling in habit, where they were not pruned last summer. The first thing to do, therefore, is to prune them. This is a matter of great simplicity, although the pruning given in each case must be ultimately decided by the shape it is desired the plants should assume. Close pyramidal plants, or others with shorter and denser heads must have the shoots cut back rather harder. The loose pyramidal form is, however, the one that seems most natural to the Fuchsia, and the one in which, according to our opinion, it displays itself to the greatest advantage. In such cases the shoots should be shortened to about half their present length.

Bring the plants well up to the light by standing them on the stage in the greenhouse, and, if necessary, temporarily raising it (the stage) so as to lift the plants up quite close to the glass. A temperature not less than 50° Fahr. by night, rising on sunny days to 60° will suit them well, and the syringe should be kept to work regularly night and morning. After the plants have recovered themselves from the pruning they should be shaken out of their pots and repotted. This time rich light soil should be given them. A compost of three-fifths of good loam, one fifth old Mushroom bed manure, or dried cow manure rubbed through a sieve, and one fifth of leaf soil, with a sprinkling of silver sand or road scrapings will make a capital compost, and in this the plants will grow like weeds. Pinching the points of over-gross shoots must be attended to as required, and the result will be dense bushy habited plants, that will render a good account of themselves presently in the flower beds. Anybody can

grow good Fuchsias if they will only try, and surely the reward is worth the little trouble.

Celosias.—Those who are on the look out for rather uncommon effects in the flower garden cannot do better than work up a stock of the handsome, richly coloured *Celosia pyramidalis plumosa*. The plant is frequently met with in the summer months as an occupant of greenhouses and conservatories, and its golden or crimson plumes are always the subject of much admiration. Its employment in the flower garden is, however, comparatively rare, despite the fact that it does fairly well under anything like ordinary weather conditions.

The plants are rather tender, and require a fairly high temperature in the early stages, so that all the work of growing them on has practically to be done under glass. In other words they must be treated as exotics until the summer is fully here when they may be transferred to the open.

The early seedlings raised from the seed sown at the beginning of February are now in small 60-pots. These young plants must be carefully watched in order that they may be kept growing steadily on and that that dread pest, red spider, may be kept off them. As soon as the roots of the young plants have reached the sides of the pots a shift should be given. This time six inch pots may be employed, and the potting should be rather firmer than the first one. The soil should be light, but rich. By the beginning of June the plumes will have commenced to make their appearance, and bedding out may follow in the usual way. A warm spot should be chosen in a border facing south or south-west, and shaded if possible on the north and north-east. Given fine weather the display will then be grand. Those amateurs who are late in getting their seed should lose no time, for seed sown now will produce later plants that will still have time to develop their charms before the frost comes to spoil all. Such seed should be sown in a brisk heat, and germination will then soon take place.

Cannas.—Of late years these have become wondrously popular both for the decoration of the glass-houses, and the flower garden. The queenly *Canna* bears its honours well, however, and it is certain that it cannot be too highly praised for decorative value, since both flowers and foliage are handsome. A bed of Cannas is an exceedingly fine sight, and all the more worthy of striving to obtain, because the foliage has such a distinctly tropical appearance.

The rootstocks of the old plants that did duty in the flower garden last summer were lifted at the approach of winter and stored in shallow boxes in sand or old soil. About the beginning of February a start was made in propagation, the rootstocks being divided up to form independent plants. These divisions were placed, some in four inch pots, and others in shallow boxes. In both cases they have grown well and are now sturdy plants. A further shift on should be given as soon as it is observed to be necessary, and this, in the case of the strongest plants, is now.

By judicious treatment plants may be raised from seed and flowered in the same year. To do this, the seed must be sown early in the year, otherwise the plants do not flower until well towards the end of the summer.

All Cannas, no matter whether the plants have been raised from seed, or obtained by divisions of the rootstocks should be kept growing under glass until the end of May, after which they may be hardened off and planted out. Keep the syringe busily employed amongst them.

Iresines.—These old-fashioned plants have by no means outlived their beauty or their usefulness. Where breaks of permanent colour are wanted in the flower garden, there is nothing that can with greater safety be trusted to produce them than the Iresines. The plants are easy to grow, and will succeed almost anywhere, although they prefer a light rich soil. Both *I. Herbstii* and *I. Lindenii* are grown in great quantities, and there is room for both of them, even although the garden be small, for they are quite distinct from each other. Cuttings were inserted last autumn, and these have passed through the winter in their cutting pots. These autumn rooted cuttings were introduced to heat at the beginning of February, and cuttings taken off them as fast as possible. This cutting about has made the whole plants look rather scraggy, so it will be advisable to take them in hand. Make up a bed of light rich soil in a heated pit, so that the surface of the soil is not so far from the

glass, shake out the old plants, and plant them out in the prepared bed. Water them carefully as they require it, and syringe occasionally to keep them clean. If green-fly makes its appearance, a dusting with tobacco powder should be given before the fly gets a foothold. Treated thus, these old stocks will develop into fine large plants that will come in admirably for filling up the centre of the beds, where the Iresines are to be employed.—*Rex*.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Sweet Peas in Pots.—*E. A.*: You may give the plants a top-dressing of rich soil, but do not fill the pots too full, as in the confined space the Peas will be very thirsty subjects. When the plants are about 18 in. high you may commence to give liquid manure. You should keep the seed pods picked off, for if you allow them to remain on you will lessen considerably the crop of flowers.

Cucumbers and Melons.—Please tell me if it is possible to grow Cucumbers and Melons in the same house. I have a lean-to house that has two beds in it, and I should like, if possible, to grow both Cucumbers and Melons in it.—*C. C. P.*

With care you may plant both Cucumbers and Melons, and succeed, but the Cucumber should be kept to one side of the house—that one next to the supporting wall—and the Melons on the other—the front. In this way the Melons would get as much light as they wanted, whilst the Cucumbers would get the shade they love. We have also seen excellent results obtained by dividing the house transversely between the two subjects. You may follow which method of division you choose, or the one which seems the more suitable to your circumstances.

Myriophyllum proserpinacoides.—*Geo. Willis*: You are quite right, this pretty little plant with the long name is usually treated as a stove subject. For adjoining the sides of Lily tanks in glass houses there is nothing finer, and visitors to the Lily house at Kew always admire it, but the plant may also be grown out of doors in the summer time. In warm sheltered places it does exceedingly well, provided it is given a swampy or muddy corner to root in, and from whence its feathery growths can trail down into the water. It is easily propagated by cuttings taken from the tips of the shoots.

Selaginella to name.—*S.*: The plant is a very strongly variegated piece of *Selaginella Martensii variegata*. This form varies considerably in its variegation, often almost losing it, and thus getting back very close to the type from which it originated.

Rose for a North Wall.—Would you let me know what sort of Rose would do best on a northern wall. I have a white Moss Rose there, and it does not do well—perhaps it is the want of sunshine?—*N. P. J.*

Your supposition concerning the non-flowering of the Moss Rose is probably correct. If the wall in question is very bleak or much exposed to cold winds, *Gloire de Dijon* is far and away the best variety you can have. This grand Rose will grow and bloom even in the bleakest and most wind-swept spots, and the flower itself is of good quality. *Gloire de Dijon* would be our first selection. You might also try *Marie Van Houtte*, also a good Tea-scented Rose, with pretty white-yellow flowers. Amongst Hybrid Perpetuals, either *General Jacqueminot* or *Climbing Jules Margottin* would be likely to give you satisfaction.

Pruning Marechal Niel Rose.—I have a *Marechal Niel* Rose that is growing close to the roof of a cool house. The plant is fearfully straggly. Would pruning improve it? and if so, please tell me if I may prune it now. *C.C.L.*

A hard pruning would be sure to reduce your plant to something like symmetry. Wait until it has flowered, which will not be long, and then slip the knife into it. Cut the growths hard back into the old wood, and remove any branches that are especially

ragged and whose wood is unsound. A season's growth will then put it to rights.

Tree Carnations.—*F. Ames*: The next shift for the young Carnations will be into 5 in. pots which will be large enough for them to flower in, and will thus last them for the remainder of the year. You must pinch off the points, otherwise the plants will never make bushy specimens. This may well be done at once. For the final potting make up a compost of two-thirds of loam, one-third of spent mushroom bed manure, and plenty of coarse river sand. To this add a little soot, at the rate of a 48 potful of soot to a bushel of soil. Mix the whole well together, and pot with medium firmness. If all goes well the Carnations will be ready for standing out of doors by the end of May. You will need to keep a smart look out for green fly which is very often troublesome.

STOCK PRINCESS ALICE.

A BOX of cut flowers of this choice Intermediate Stock comes to us from Mr. F. G. Brewer, gardener to Graham Fish, Esq., Oaklands, near St. Albans. The racemes of blossom, with their stalks, were about 1 ft. long, and admirably suited for filling

NARCISSUS BARRII CONSPICUUS.

THE forms of Daffodil coming under *N. Barrii* are considered hybrids belonging to the *Medio-coronati* section, the type being considered a hybrid between *N. incomparabilis* and *N. Pseudo-narcissus*. Many of the varieties come between *N. incomparabilis* and *N. poeticus*, with the greater leaning towards the former. *N. Barrii conspicuus* is one of the most handsome, vigorous, and easy to grow of all of them. The individual flowers are of great size, and produced singly on the stems. The segments are broad, overlapping, and of a rich sulphur or lemon-yellow, while the crown is beautified with an orange rim. For some time after the flowers are fully expanded the colour is at its best.

Bulbs planted in good, friable loamy soil, well cultivated, and lifted every year, so as to give them plenty of room, will increase very fast. The variety is, therefore, well adapted for planting in beds and borders; also upon the grass and in pots. Under the latter treatment it flowers most abundantly, several years in succession without being repotted, if otherwise given liberal treatment. The accompanying illustration, furnished by Messrs. Barr & Sons, King Street, Covent Garden, gives a view of a field of this useful variety. For cut flower purposes it is admirably adapted.

There were numerous processes tried at the Bengal plantations, but it will suffice to give brief details of the three principal. The first, which was started in Madras, and afterwards tried in Bengal, was supposed to be the process then worked by the European makers of sulphate of quinine, who, however, gave no information on the subject, but jealously guarded their trade secrets which, of course, was perfectly legitimate and business-like, but plainly showed that no help in starting quinine making in India was to be had from them. By this plan the alkaloids were extracted from the bark by repeated hot digestion with water mixed with a little sulphuric acid, and afterwards precipitated from the acidulated liquors with milk-of-lime. The precipitate was collected on calico filters, dried, powdered, and treated with strong, hot spirits of wine to dissolve out the soluble alkaloids from the insoluble sulphate of lime which formed the bulk of the precipitate. Then the alcohol, containing the alkaloids in solution, was mixed with a little dilute sulphuric acid and recovered by distillation for future use, and the remaining acidulated liquor treated in the ordinary way for the recovery of the quinine and other alkaloids. But the plan proved a miserable failure both in Madras and Bengal. It missed more than half the alkaloids, and was tedious and costly to work. This was unfortunate, as the chemicals



A FIELD OF NARCISSUS BARRII CONSPICUUS.

vases, glasses, &c. Every individual flower was 1 in. to 1½ in. in diameter, pure white, with the exception of the clear, soft, green claws of the petals; and when the box was opened a delicious aromatic fragrance of Cloves diffused through the room. The old name of Stock Gilliflower was well deserved, if the varieties cultivated in the olden times were as deliciously scented.

Seeds of Princess Alice were sown in September last, and after the seedlings had attained some strength they were pricked off into medium 60-size pots. From these they were repotted into the 48-size in January, and their points pinched out ten days afterwards. They have been flowering all through March, and promise to continue the display till the end of the present month. After that time the plants will be cut hard back, and when they have been started into fresh growth they will be planted out in a warm border, where Mr. Brewer hopes to have them in bloom again before the spring-sown batch attains that stage. Last year he had a third crop before frost became sufficiently severe in autumn to cut down the plants. The small amount of trouble they occasioned was more than repaid by the large amount of bloom they produced at different times of the year, and under different conditions. The quality of the flowers alone is sufficient recommendation for cultivating the variety.

THE CINCHONA IN INDIA.

(Concluded from p. 509).

FACTORY.

AFTER the collection of the bark its plan of disposal had to be decided. The easiest plan, which also would have been the most profitable for the plantation for many years, would have been to sell the bark in London, and buy back the manufactured sulphate of quinine. But the Government, both in India and at home, were anxious to have it worked up at the plantations, so as to save the heavy transport charges, and at the same time render India independent of other countries for her quinine supplies. The Madras plantations being the oldest, were the first to attempt local manufacture, but after some years of continual failure gave up the scheme as hopeless. Their experiments were conducted by Mr. Broughton, the quinologist to the Madras Government, who did most excellent and useful work in his laboratory, but did not succeed so well in the factory. So his experimental factory was shut up and the bark sent for sale to London, where for many years it fetched most profitable rates. But the Bengal Government, who began their manufacturing experiments a little later than Madras, persevered till success was attained. Now Madras finds it pays better to adopt the Bengal plan of local manufacture than to ship the bark.

required to work it were mostly procurable on the spot, an important consideration in a mountainous country, where carriage is difficult and expensive.

Lime was found and burnt on the place; carbonate of potash was made from the ashes of *Artemisia* and other indigenous plants; and the alcohol from Indian Corn grown by the native squatters. The method of spirit-making adopted was the one in general use among the hill-tribes of the Eastern Himalayas, and differs from the ordinary process for making grain-spirit in dispensing with the malting-step. The Indian Corn is coarsely ground, and heated till soft in as much water as it will soak up; then mixed with a small quantity of powdered ferment cake, and put into baskets lined with bracken fronds to ferment. When sufficiently fermented, the moist mass, with a little added water, is treated in the usual way in an ordinary still. Afterwards, the weak spirit thus got is put through a rectifying still to get it up to 60° over proof, the strength required. The ferment cakes are made on the same principle as Mushroom spawn, and consist of Rice and the fresh, fleshy roots of a rather pretty-flowering Himalayan shrub—*Polygala arillata*—pounded up together. The soft mass is made into round cakes an inch thick, and sprinkled with a little old ferment cake in powder. The cakes are then packed away loosely among Fern fronds in a warm place, and the light excluded till

the ferment fungus has permeated them, when they may be dried and stored for future use. It is a matter of common belief among all the tribes that whoever makes these cakes will be ever after afflicted with sterility, so only women beyond a certain age will make them. I do not suppose there is any real foundation for this idea, but in dealing with Eastern people it is always wise to respect their little prejudices and superstitions.

The second plan to be described was a very simple one, and inexpensive to work, but unfortunately, like the last, missed a large proportion of the alkaloids. For a good many years, however, it did good, useful work, while a better was being devised. It was never used in the manufacture of sulphate of quinine, but only for making the medicine known in India as *Cinchona febrifuge*, which is a mixture of the whole of the alkaloids, both amorphous and crystallisable, found in the red bark. It is not so elegant a preparation as sulphate of quinine, but is an excellent substitute for it in malarial fevers. In fact, some of the best Indian doctors prefer it. For some years it was sold at less than quarter quinine rates, and was a great boon to poor people. In making it the powered bark was repeatedly macerated in wooden tubs, with very dilute muriatic acid, for a few days at a time, and the resulting liquors mixed with a solution of caustic soda to precipitate the alkaloids they had dissolved out of the bark. After standing twenty-four hours, the precipitate was collected on filters, purified, dried, and powdered, which completed the operation.

The third process is the one now in operation in the East. It was started at the Bengal plantations in 1885, and at Madras a year or two later. Now it is being adopted by the Dutch in Java. It is a satisfactory process, as it completely exhausts the bark, and is not very expensive to work. The bark is reduced to an almost impalpable powder by means of disintegrators driven at a high speed by water turbines. The powder is then mixed with water, caustic soda, and shale-oil; heated by steam-coils to about 160° Fahrenheit, and kept constantly stirred by machinery for about an hour, when the stirring is stopped and the mixture allowed to rest quietly for an hour or two to let the oil—now containing the alkaloids—rise clear and bright to the top. The oil is then transferred to another vessel and thoroughly stirred up for a few minutes with sufficient dilute sulphuric acid to remove the whole of the alkaloids from it. After separation, by repose, the oil is drawn off for the next batch of bark, and the acidulated liquor, now containing the alkaloids in solution, is heated in steam-jacketed vessels, neutralised with a weak solution of caustic soda or ammonia, and set aside to cool and crystallise. To purify the crystals thus obtained they are collected, squeezed, redissolved in boiling water, digested for a few minutes with a little animal charcoal, filtered very hot, and allowed to cool, when the sulphate of quinine crystallises out quite white and clean.

How to get the quinine to the very poorest in the outlying fever districts of Bengal at the lowest possible price, without burdening the public revenues, was an anxious question till the happy thought occurred to Sir Chas. Elliott, late Lieut.-Gov. of Bengal, to make use of the Post Office Department for this purpose. He ordered the quinine to be put up in sealed packets of five grains each, an ordinary dose, by jail labour, and sent to every outlying post-office in Bengal for sale at the low price per packet of one pice, which is the lowest coin in ordinary circulation in Bengal, and of the value of about a farthing. Not only is a stock of these packets kept at all the post-offices, but the postmen who visit the outlying hamlets have to carry them in their bags, and sell to anyone who may ask for them. The postmasters and postmen get a small commission on the sale. A better or cheaper plan of distribution I cannot conceive, and the Italian Government have paid the India Government the compliment to adopt it for part of Italy.

Sulphate of quinine, quite equal in quantity to the very best brands in the market, is now turned out by the Government, at the Bengal factory alone, at the rate of about 1,000 lb. a month. Not many years ago, the annual quinine indent of the Government of Bengal was less than this monthly output. Madras will soon be turning out as much as Bengal, and perhaps more. So the Government can take credit for freely accomplishing the task they set themselves when introducing the *Cinchonas* to India, as I trust

I have proved to you without trying your patience over much.

Gleanings from the World of Science.

New Fossil Plant in Hampshire.—At the meeting of the Linnean Society on the 17th ult., Mr. Clement Reid, F.L.S., read a paper on *Limnocarpus*, a new genus of Fossil Plants from the Tertiary deposits of Hampshire. This new genus occurs in the Oligocene Strata of the Isle of Wight and the Hampshire coast. It is closely allied to *Potamogeton* and to *Ruppia*, but has a succulent fruit with two, deeply-pitted, stalked carpels adhering by their ventral edges. The seed is curved round a lateral process from the cell, as in the pond-weeds. So few Tertiary plants can be proved to belong to extinct generic types, that the discovery of this one is of interest. Though clearly allied to the recent pond-weeds, the inclusion of *Limnocarpus* will necessitate a modification of the ordinal characters. The paper was favourably criticised by Mr. Carruthers, F.R.S.

Mimetic Resemblance.—Prof. E. B. Poulton, F.R.S., F.L.S., read a paper entitled "Natural Selection the cause of Mimetic Resemblance and Common Warning Colours" at a meeting of the Linnean Society on March 17th. He remarked that the recent attacks upon the theory of natural selection as the explanation of the above-mentioned phenomena render it necessary to reconsider the whole of the evidence. Alternative hypotheses offered in explanation are—(1) the common result of common forces in a single region; (2) evolution producing the same result independently in different animals; (3) sexual selection. The main general aspects of mimicry, &c., their relation to kindred subjects, the most characteristic features which they present, are therefore to be considered in succession, and the attempt made to ascertain whether they best receive an explanation from natural selection or any one of the alternative suggestions.

The chief heads to be considered are:—(1) The relation of these resemblances to others which occur in Nature. (2) The relation of these resemblances between Classes and Orders to those within the limits of a single Order. (3) Resemblances within the Order entirely independent of affinity. (4) Resemblances not accompanied by any changes in the direction of another species except such as assist in producing or strengthening a superficial likeness. (5) Essential nature of the resemblance: its analysis into the several kinds of effect produced. (6) The forces which act in any animal depend more upon its life-history than upon its locality. Different animals in the same locality are frequently subject to entirely different forces. (7) Resemblances more characteristic of female than male. (8) The space and time relationships of these resemblances. (9) Resemblances between various Orders, etc., produced in the most diverse ways. (10) Resemblances even within the limits of the Order also produced in the most diverse ways. (11) The unproved, improbable hypothesis of the hereditary transmission of acquired characters demanded by the theory of the direct action of external causes.

The discussion of cases under each of these main heads leads to the conclusion that no help is to be derived from any alternative hypothesis, while natural selection in every case offers an intelligible explanation of the known facts. The conclusion to be drawn is that the recent attacks upon natural selection are not warranted by the facts at present known. A discussion followed in which Col. Swinhoe, F.L.S., and Prof. Weldon, F.R.S., F.L.S., took part.

The Orchid Grower's Calendar.

WITH the advent of something like spring weather it is possible to keep the temperature up to the required height without having to fire very hard. This enables us to admit air more freely than hitherto, and an increasing supply of moisture in the air, brought about by frequent syringings between the pots induces a free root action with a corresponding reaction amongst the plants; for the flower buds of

Cattleya Mendelli come popping up through the sheaths, and will be soon making a brave show.

THE SYRINGING or damping down, which is, in conjunction with fresh air and light, so essential for the successful culture of Orchids, must be carefully done at this season, so that none lodges in the hearts of partially made-up growths. *Cattleya labiata* Warnerii I may instance as being in this stage, and it would suffer if not looked after in this respect.

POTTING.—Push along with the work, giving a shift to all plants that to the eye appear to require it, the exception, of course, being those plants that are in bloom or fast approaching that stage. These may be left until the flowers fade or are cut.

PLANTS OF *LAELIA PURPURATA* that have not sheathed up well, may be done now with advantage, for it will be observed that the newly made-up pseudo-bulbs are pushing some fine large roots. *L. elegans* may be also attended to, for if left until after the flowering stage, the season is too far advanced to repot, and you have to be content with simply top-dressing it. A golden rule is to repot or add some fresh material for the new roots to take hold of when they appear. If attention is paid to this, we should have little cause to ask the question "Do Orchids degenerate?" That is, of course, providing proper houses and efficient hot-water appliances are at hand.

ANGRAECUM SESQUIPEDALE.—The spring-flowering variety of this wonderful Orchid is just now delighting all visitors with its great waxy flowers and curious appendages. We grow ours comparatively cool, that is, with the *Cattleyas*. Here they make short, broad leaves, which are much thicker in texture than when grown warm and shady.

COOL HOUSE.—I notice the beautiful autumn-flowering *Oncidium tigrinum* is just commencing to grow, and should be repotted at once, as the spikes appear with the young growths, so that they must be taken in hand early. To keep these in good health for long it is necessary that they should have some fresh material each season. If treated thus the foliage will always remain a deep green colour, so indicative of good condition. As the roots are small pot firmly. *O. macranthum* is a very fine Orchid, which, if the spikes are not too far advanced, will be greatly benefited by some fresh material. We find they do not like their roots confined too much, and neither must the material be pressed about them too firmly. They like moss rather than peat.—C.

Kitchen Garden Calendar.

WORK of all kinds in this department is now very pressing, for during favourable weather everything grows apace. Old plantations of Strawberries should have a top-dressing of artificial manure. The ground between the plants ought then to be hoed that any small weeds may be destroyed, taking care in doing so not to injure the roots of the plants. Any old stools that have become somewhat raised out of the soil will be greatly benefited by having a top-dressing of light, rich soil placed about them, that the young roots may the more readily take hold. So far the prospects of a crop are good, the winter not having been severe enough to do any injury to the crowns. Asparagus beds will be greatly benefited by an application of artificial manure to be washed in by the rains. It is not advisable to water at present, as this has a tendency to cool the soil, and thus retard growth. See that the beds are kept free from weeds, but care must be observed not to injure the crowns of the plants.

Planting out of such things as Onions, Leeks, Cauliflower, Lettuce, and other vegetables that were raised under glass should now be pushed forward with all possible speed, taking care in doing so not to injure the plants more than can be avoided. When plants are some time in making a start into growth after being put out, this is a sign that the work has not been done in a satisfactory manner. Either the soil has not been pressed firmly to their roots or the plants have been hung, as it is termed, that is, instead of filling in the hollow at the tips of the roots the soil has been pressed round the collar of the plants. In planting from the seed bed great care is necessary to avoid making the holes too deep with the dibber, for when this happens the holes are seldom filled in properly.

BROCCOLI seed should be sown towards the end of

the month for mid-season and late supplies; but where the ground is in good tilth the sowing may be deferred a little longer, as it is far better to wait for the plants than that the plants should wait for the ground to be got ready for them; as in the latter case they become drawn and are of little value. In many gardens Broccoli has to succeed some other crop, and when the plants are allowed to stand crowded in the seed bed until the previous crop is gathered satisfactory results seldom follow.

PEAS, to keep up a succession, must be sown as soon as the previous lot appears through the soil. Here let me again caution the cultivator of the error of sowing too thickly, as this is one of the chief causes of mildew later on when the soil becomes hot and dry. See that ample space is afforded between the stakes for the haulm and foliage to develop themselves. Those who are desirous of obtaining fine pods for exhibition purposes should select some of the most promising when they are small and pinch the points out of the plants to throw the sap into

The accompanying illustration represents a thick carpet of Crocuses under tall deciduous trees, and bordering the two sides of a winding walk in the grounds of Potternewton House, Leeds, the residence of J. Rhodes, Esq. The photograph was taken on the 22nd March, when the Crocuses were in full bloom. Mr. Robert Mason informs us that a great number of varieties is grown, all mixed together, but that the yellow and blue colours print black, so that only the white varieties come out prominently. When seen in reality, however, they have an effective and most natural appearance that cannot be gain-said, and furnish proof positive that they are admirably adapted for this kind of work. On a bright morning, says our informant, they act as a tonic to the eye and heart of the beholder, far surpassing any which the physician could administer. As to their ornamental effect there can be no doubt, and their hardiness even much further north than the latitude of Leeds is a strong recommendation for planting them extensively.



CROCUSES AT POTTERNEWTON HOUSE.

the pods. Whenever the weather is suitable the hoe should be run between the rows of Onions, Carrots, Parsnips, etc., which will by this have appeared well through the soil. Make further sowings of Lettuce and plant out the plants from former sowings as soon as they are large enough. Salads will now be in great demand, therefore strict attention must be paid to keeping up a continuous supply.

FORCED VEGETABLES.—As the frames and pits become cleared of these they should again be planted with Cucumbers, Vegetable Marrows, and other tender subjects, as Capsicums, or the beds may be used for pricking out Celery and tender bedding plants. In the former case it will be necessary to put a new lining round them to generate a little more heat. Plants fruiting must be kept pinched and have the growths regulated so as to admit the light and air amongst the foliage. Do not allow the fruit to get too large before removing it as this has a tendency to exhaust the plants. As the roots make their appearance through the soil give a top-dressing to keep the plants vigorous.—*Kitchen Gardener.*

CROCUSES UNDER DECIDUOUS TREES.

WHERE Oak, Beech, Lime, and similar deciduous trees are fairly closely planted, either on lawns or along the sides of drives, there is always a difficulty of getting grass to grow. In such cases the planting of Ivy is often resorted to, with the result of furnishing the ground with a perennially sombre carpet. Certainly this is better than absolutely bare ground, but a much brighter and more interesting effect is produced by planting Crocuses, Daffodils, Anemones, Doronicums, Corydalis, or other spring-flowering subjects which complete their annual growth before the ground gets too thickly overhung by a thick canopy of foliage that obstructs the light and prevents the further development of green verdure, always so refreshing to the eye.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.

"VICTORIAN ERA FUND."

YOUR readers will doubtless remember that this fund was established last year to commemorate the completion of the sixtieth year of Her Majesty's beneficent reign. They will also recollect that its object is to temporarily assist unsuccessful candidates whilst awaiting election who have been (or their husbands) subscribers to, or life members of, the institution. The total amount received up to December 31st last has been invested, and the committee are glad to be able to announce that the income derivable therefrom this year enables them to distribute the sum of £106 10s., the first half of which was sent on April 1st last to eighteen unsuccessful candidates as follows, and has been divided at the rate of 15s. for each year they (or their husbands) had subscribed:—

| | Years self, or husband, subscribed. | Amount sent April 1, '98. |
|-------------------------|-------------------------------------|---------------------------|
| | | £ s. d. |
| Bryan, Andrew | 13 .. | 4 17 6 |
| Nixon, Francis | 13 .. | 4 17 6 |
| Plevy, James | 12 .. | 4 10 0 |
| Staples, George | 11 .. | 4 2 6 |
| Wood, Caroline | 11 .. | 4 2 6 |
| Gibbons, John | 10 .. | 3 15 0 |
| Watt, James | 10 .. | 3 15 0 |
| Hackwell, Elizabeth .. | 9 .. | 3 7 6 |
| Wills, George | 9 .. | 3 7 6 |
| Barnfield, Alfred | 8 .. | 3 0 0 |
| Hatch, Annie | 8 .. | 3 0 0 |
| Mitchell, Lucy | 7 .. | 2 12 6 |
| Shearn, Joseph | 7 .. | 2 12 6 |
| Lee, Alexander | 5 .. | 1 17 6 |
| Evans, Thomas | 4 .. | 1 10 0 |
| Gould, William | 2 .. | 0 15 0 |
| Thomas, William | 2 .. | 0 15 0 |
| Woodward, Emma | 1 .. | 0 7 6 |

From the above it will be seen that the aggregate number of years of subscription is 142, which at 15s. for each year gives a total of £106 10s., the first instalment of which, as already stated, was sent on April 1st last, and the remainder will be sent on

October 1st next. The committee are very anxious to bring up the total amount of this fund to £5,000, to do which they require a sum of £925, and I should like to draw attention to the generous offer made by N. N. Sherwood, Esq., Trustee, to contribute £50 provided the amount required be raised, in response to which the following gentlemen have each kindly promised a similar sum:—

ARTHUR W. SUTTON, Esq., Reading;

LEONARD SUTTON, Esq., Reading;

HARRY J. VEITCH, Esq., Treasurer;

and several smaller contributions have been already received. The committee sincerely hope before the close of the year they may be able to announce that the balance necessary to make up £5,000 has been received. They trust, therefore, that every well-wisher of the Institution will note that the "Victorian Era Fund" is still open, and that donations to it will be most gratefully received. The committee also desire again to emphasise the notice which has already appeared in your columns and elsewhere, that this fund is intended for the benefit of those only who have subscribed to the institution.—*George J. Ingram, Secretary.*

PLANTS RECENTLY CERTIFICATED.

FLORICULTURAL Certificates of merit were awarded to the following subjects at the spring show of the Royal Botanic Society held in the society's gardens at Regent's Park, on March 30th.

HYACINTH BALL OF GOLD.—This is a bright yellow variety of considerable merit, with a larger and more massive spike than is generally seen in the yellow flowered forms. The individual flowers are of good size and substance. Messrs. William Paul & Son, Waltham Cross, Herts.

HYACINTH CINERARIA.—There is a number of blues representing a wide range to be found amongst the Hyacinths, but this variety will be a welcome addition, as it exhibits a distinct shade of rich Gentian blue, with purple-blue tips to the segments. The spike is of medium size, full, and well formed. Messrs. Wm. Paul & Son.

CAMELLIA PRIDE OF WALTHAM.—This is one of the finest Camellias ever shown by Messrs. Wm. Paul & Son, whose reputation for Camellias is so great. The flower is large, full, and of perfect form and great substance. The colour is flesh pink, the edges of the broad, massive petals being prettily tipped with silver.

CAMELLIA BOADICEA.—This is a much looser flower than the preceding variety. The colour is bright pink with silver tips to the petals. The latter are also prettily veined with deeper pink. Messrs. Wm. Paul & Son.

CLIVIA MRS. A. SYKES.—In this new variety we have all the characteristics of a first-class Clivia. The umbel is of immense size, and the scape supporting it of more than ordinary thickness and strength. The flowers are large, deep orange in hue, with a yellow throat. Messrs. John Laing & Sons, Forest Hill, S.E.

CLIVIA O. C. WRIGLEY.—Here we have another exemplification of the immense size of truss and flower that is to be found in our modern Clivias. The colour is rich scarlet-orange, with an orange-yellow throat. The form is good, and the substance of the flowers amazing. Messrs. B. S. Williams & Son, Victoria and Paradise Nurseries, Upper Holloway, N.

Botanical Certificates were awarded to the under-mentioned:—

ASPLENUM MAYI.—A very handsome plant is this, and as distinct as handsome. The deep green fronds are of medium size, and pinnate, but the central pinna is much produced. The margins of all the pinnae are much lacinated. The stipes are purple-brown in colour. Mr. H. B. May, Dyson's Lane Nurseries, Edmonton.

PTERIS GRACILIS MULTICEPS.—Crested Ferns seem to be increasing in favour, and in this case we have a plant that can scarcely fail to become very popular. The pinnae are very narrow, and light green in colour, and have their tips many times divided to form tassels of medium size. The stipes are slender, and brown in hue. The whole plant is a model of elegance and gracefulness. Mr. H. B. May.

ASPLENUM HILLI.—At first sight this Asplenium

recalls the well-known *A. bulbiferum* in general appearance, but the fronds are darker green in colour, and more erect. It should be of value as an addition to the ranks of this very ornamental class of plants. Messrs. Hill & Son, Lower Edmonton.

NARCISSUS MRS. WALTER WARE.—This is a fine bicolor form with a huge open, rich yellow trumpet, heavily frilled at the margin, and considerably reflexed. The segments are white and of good form and substance. Messrs. Barr & Sons, King Street, Covent Garden, W.C.

NARCISSUS J. B. M. CAMM.—This is fairly well known as one of the most refined bicolor Daffodils in cultivation. The corona is large and open, and has a prettily frilled margin. The colour is sulphur-yellow. The segments are pure white. Messrs. Barr & Sons.

ZYGOPETALUM PERRENOUDI.—The sepals and petals of this *Zygopetalum* are narrow and revolute. In colour they are rich chocolate-brown, with one or two narrow yellow transverse bars. The lip is the most conspicuous feature, for it is large, obscurely tri-lobed, and exhibits a mass of rich purple hue that renders the flower at once attractive and distinct. Messrs. B. S. Williams & Son.

PHAIUS NORMAN.—For a description of this handsome hybrid *Phaius* see p. 458, in the list of plants certificated by the Royal Horticultural Society on March 8th. Messrs. B. S. Williams & Son.

CYMBIDIUM EBURNEO-LOWIANUM.—A fine form of this handsome *Cymbidium* was shown on this occasion by Messrs. Hugh Low & Co., Bush Hill Park, Enfield.

ODONTOGLOSSUM TRIUMPHANS INTENSA.—This may be regarded as an improved form of the well-known *O. triumphans*. The flowers are larger, of better substance, and finer altogether, this being particularly noticeable in the width of the segments. The colours are richer and deeper, and the deep maroon blotches larger and more conspicuous. Messrs. Hugh Low and Co.

TO INTENDING EMIGRANTS.

The April circulars sent out by the "Emigrant's Information Office," 31, Broadway, Westminster, S.W., show clearly the present prospects of emigration. This is the best season of the year to emigrate to Canada, where there is a good opening for experienced farm hands.

Persons going to the Klondike gold fields should leave England now, but only those who are strong, experienced miners, or men accustomed to prospecting for minerals in wild and unsettled places, who have at least £300 for the journey and the providing of food, should think of going; all others are strongly warned against going there. The principal mining on these gold fields is "placer mining." Every miner must take out a miner's certificate, which costs \$10. Creek and gulch claims are 250 ft., measured in the general direction of the stream, the side boundaries to extend to the rim of the valley on each side, but not to exceed 1,000 ft. from the centre of the creek. River claims are on one side of the river only, and are 250 ft., measured and bounded as above. Other "placer" claims are 250 ft. square. Every alternate ten claims belong to the government. For every claim an annual fee of \$10 is charged, and a royalty of 10 per cent. on gold mined, but the annual product of any mining claim up to \$2,500 is exempt from this royalty.

Good, practical miners are always in request at the large Broken Hill silver mines in New South Wales, and, in fact, high-class men of all trades have no difficulty in finding employment there, although there is no opening for unskilled labourers. Work has been and is scarce in the New England districts, and Goulbourn has suffered much from drought.

In Victoria there is a full supply of all kinds of labour at the present time. Gold-mining has flourished, and the output was larger in 1897 than in any year since 1883.

There is no demand for more hands either in town or country districts in South Australia.

Queensland has only a fair demand for labour. Gold-mining and other branches of mineral industry have flourished. Agricultural districts are calling for good ploughmen and general farm hands. The sugar industry is in a prosperous condition, and there are good openings for farmers with a little capital.

In Western Australia an Act has recently been

passed prohibiting the landing of illiterates, probable paupers, or convicted felons. Mechanics, miners, and labourers can generally rely on finding work.

Good miners can also find work in Tasmania, but here again inexperienced men are not wanted.

Plenty of work offers itself in nearly all parts of New Zealand to farm labourers, mechanics, and miners.

Cape Colony is well supplied with ordinary labour. Recruiting for the Cape Mounted Rifles has again been started, and as this is a popular body there will probably be a rush. Each approved applicant must deposit £24 3s. for his passage to Cape Town.

The coal industry in Natal continues to progress, and the output of coal in 1897 exceeded that of 1896. The miners are chiefly natives, but about seventy whites are employed, amongst whom vacancies occur occasionally. Female domestic servants are in request, as indeed they are in all the Colonies, but the wages in Natal are not high considering the cost of living.

SOCIETIES.

FALKIRK HORTICULTURAL ASSOCIATION.—

March 31st.

The spring show of this society was held in the Town Hall, and was so far successful that there were fifty entries in excess of last year, while the quality of the exhibits was highly meritorious. Hyacinths and Tulips were not so plentiful as on former occasions, but their standard was very high indeed. Greenhouse plants in pots were plentiful and in excellent form. The show was well patronised by visitors in the afternoon and evening.

The Silver Cup offered for a table of plants arranged for effect was easily secured by Mr. Wm. Robertson, of Bainsford, whose exhibit was most tastefully laid out. Around a *Cocos weddelliana* in the centre he arranged *Acacias*, *Dracaenas*, Palms, Ferns, *Coleus*, *Crotons*, and bulbous plants. He was followed by Messrs. C. Henderson & Co, Camelon. In the class for fine foliage plants, open to gardeners and amateurs, the first award was taken by Mr. John M'Laren, gardener to—Mitchell, Esq., Millfield, with well grown specimens of Palms, Tree Ferns, &c.; Mr. T. Sutherland, Polmont, was second. The same order was maintained for a specimen Palm. Mr. John M'Laren also led the way for table plants, exotic Ferns, *Azalea mollis*, *Deutzias* (which were fine and greatly admired), and *Clivias*.

Mr. Wm. Henderson, gardener to Gray-Buchanan, Esq., Parkhill, staged the best Indian *Azalea*, also the best *Rhododendrons*, *Cytisus*, forced hardy plants, hardy border plants, and a rustic Fern basket. The best Hyacinth in the show was *La Grandesse*, exhibited by Mr. Peter Tait, Grahamston, who was also first for *Mignonette*, *Lily of the Valley*, three Hyacinths, Tulips, Laced *Polyanthus*, double Scotch Wallflower, single *Primulas*, and for a collection of vegetables.

Mr. Wm. Robertson was again the fore in the classes for *Cyclamen*, *Amaryllis*, the larger class for Hyacinths, *Polyanthus Narcissi*, and *Crocuses*. Mr. J. Ogilvie, Larbert, had the best *Dielytra spectabilis*, and *Spiraea japonica*. Mr. T. Sutherland exhibited the best *Cinerarias*, Chinese *Primulas*, and *Primula obconica*. Mr. J. Fleming, Falkirk, had the best border *Narcissi*, and hardy *Primulas*. Mr. Wm. Edwards, Grahamston, took nearly all the leading prizes for bouquets, epergnes, &c., as well as a large number of prizes in the amateurs' classes.

Messrs. Wm. Henderson & Co., Sunnyside Nursery, Camelon, in addition to their competitive exhibits, had also a fine display of wreaths, crosses, bouquets, and other devices in cut flowers. Messrs. Murray & Son, Nurserymen, Parkhall, exhibited two large tables of useful plants suitable for table and window decoration, and for various other purposes.

ROYAL HORTICULTURAL OF IRELAND.—

April 1st.

The annual spring flower show held under the auspices of this society took place in the Royal University Buildings, Earlsfort Terrace, by kind permission of the Senate. The show was opened at 2 p.m. and continued till 9 p.m. The weather was highly favourable and the attendance of visitors was good both in the afternoon and evening. The

arrangements were under the control of Mr. G. M. Ross, M.A., and faultless. Field-Marshal Lord Roberts and Lady Roberts were amongst the distinguished visitors. Music was dispensed by the band of the Queen's Own Royal West Kent Regiment. The recent stormy weather, no doubt, accounted for the display of Daffodils being smaller than usual. *Azaleas*, *Hyacinths*, *Cinerarias*, *Deutzias*, *Spiraeas*, and *Roses*, were the features of the show, the *Roses* grown under glass being in greater quantity than on former occasions.

In the competitive classes Mrs. Goodbody (gardener, Mr. G. Sayers) secured the leading prize for a group of nine distinct flowering or foliage plants. G. Drimmie, Esq. (gardener, Mr. Thos. Byrne) took the second place. The same order of merit was observed in the class for a table of plants arranged for effect. Lord Carew (gardener, Mr. J. M'Lennon), had the best six table plants, and was followed by Lord Cloncurry (gardener, Mr. Wm. Rigg). Mrs. Goodbody took the lead for six *Crotons* in 7-in. pots, and for six specimen *Azaleas*. The Right Hon. J. Meade (gardener, Mr. J. Colgan) had the six best *Azaleas* in 10-in. pots; and was followed by Mrs. M'Cann (gardener, Mr. T. Goff).

F. A. Millar, Esq. (gardener, Mr. D. Colohan), led the way for six *Deutzias*, and was followed by Mrs. M'Cann. *Cinerarias* were good, and for six distinct varieties, J. C. Parkes, Esq. (gardener, Mr. E. Dunne), led the way, Mrs. M'Cann being second. Mrs. Moore (gardener, Mr. M. Kearns), took the premier place for Chinese *Primulas*, which were good. J. C. Parkes, Esq., came in second. Mrs. A. West (gardener, Mr. J. M'Dermott), took the first prize for *Lily of the Valley*; and Lord Cloncurry was second. Mrs. Burrowes (gardener, Mr. G. Carroll), took the lead for six pots of Tulips, followed by Mrs. M'Cann.

The Right Hon. J. Meade took the lead for *Mignonette*. That position for *Freesias* was taken by Mrs. Moore, who was followed by R. Tedcastle, Esq. (gardener, Mr. C. Caldwell). The latter came to the front for a specimen exotic, *Orchids* excluded. Mrs. M'Cann had the best *Arum Lilies*; and G. Drimmie, Esq., the best *Spiraeas*.

Hyacinths produced a fine display, and competition was good. The premier place for twelve varieties was taken by John Miller, Esq. (gardener, Mr. P. Geoghegan), F. A. Millar, Esq., being second. General Sir R. Palmer (gardener, Mr. P. Stringer), led the way for six varieties, followed by George Drimmie, Esq. Lord Ashtown (gardener, Mr. A. Porter), had the best six sorts. The leading prize for a stand of twenty-five blooms of Tulips was taken by the Hon. C. F. Crichton (gardener, Mr. J. Mitchison), who was succeeded by the Right Hon. Joseph Meade, P.C. There was good competition here. For a collection of cut Daffodils, exclusive of *Polyanthus*, and representing the three principal sections, the lead was taken by the Countess of Mayo (gardener, Mr. Doyle). General Sir R. Palmer carried off the leading award for twenty-four bunches of Daffodils, in not less than twelve varieties; Col. the Hon. C. Crichton being second. The latter came to the front, however, for twelve varieties. Lord Cloncurry was second. There was close competition in this class. Col. the Hon. C. Crichton also led for twelve bunches of double Daffodils in trusses of three blooms each, Mrs. Burrowes being second. All these lots made a most interesting display.

Lady E. H. Bury (gardener, Mr. A. M'Kenna) took the premier place for twelve *Maréchal Niel* *Roses*, and was succeeded by Ed. D'Olier, Esq. (gardener, Mr. J. Harvey). The latter had the best stand of Tea *Roses*, and was followed by Lord Ashtown. There were also classes for single and double *Pelargoniums*, *Violas*, baskets and bouquets of Daffodils.

Mrs. Geoghegan had the best dinner table decoration to seat six persons. Another interesting class was that for a stand of twenty-four hardy cut flowers grown in the open, the number of trusses or spikes not being limited. A challenge cup (value £10) has to be won three times by one competitor before it becomes his property. Mrs. Lawrenson, of Killiney, took the lead on this occasion, followed by R. Tedcastle, Esq.

Fruit and vegetables were well represented. Lady E. H. Bury had the best dish of Strawberries. Miss A. Robertson (gardener, Mr. W. Kaye) was second. Mrs. M'Cann had the best baking Pears. Lord Carew took the place of pride for dessert Apples; and

was followed by Lady E. H. Bury. Ed. D'Olier, Esq., had the best baking Apples. Mrs. Burrowes was first for Broccoli, Lettuce, and Cabbages. Lord Carew took the lead for French Beans, and for a collection of ten kinds of vegetables, being followed by Lady E. H. Bury in the latter case. Sir R. Palmer showed the best new Potatoes, and the finest collection of six kinds of vegetables, being followed in the latter class by Mrs. Goodbody.

Amongst the miscellaneous non-competing exhibits was a fine group of flowering and foliage plants from the Royal Botanic Gardens, Glasnevin. Mr. Smith, from the Viceregal Gardens, also exhibited a group of plants. Messrs. Dicksons, Ltd., Chester, set up a beautiful and richly varied collection of Narcissi and other spring flowers, including the new and rare *Crinum yemense*. Messrs. C. Ramsay & Sons, Ballbridge, sent a group of flowering and foliage plants. Messrs. Alex. Dickson & Sons, Newtownards, sent a fine collection of Hyacinths in pots, as well as bouquets and baskets of Narcissi. Mrs. Grogan, Slaney Park (gardener, Mr. Lendrum), staged a magnificent stand of twenty-four bunches of St. Brigid Anemones, arranged with their own foliage, and which was much admired. The same may be said of Bermuda Lilies sent from Lord Cloncurry's garden at Lyons. Mrs. Miller (gardener, Mr. Geoghegan), Baggotrath House, staged Chinese Primulas.

ISLE OF WIGHT HORTICULTURAL.—April 2nd.

This association held its annual spring flower show in the St. Pauls New Rooms, Shanklin, on the above date. The exhibition was opened by Mrs. White Popham under very favourable weather. The attendance numbered many hundreds. Much credit is due to Mr. S. Heaton, the secretary, and to Mr. J. H. Silsbury for the manner in which they arranged the hall.

On tiers in the centre, Messrs. Barr & Sons, of Covent Garden and Long Ditton, Surrey, staged one of their comprehensive collections of Daffodils that are so well known to frequenters of the London shows, consisting of 250 bunches in about fifty varieties. Conspicuous amongst them were a large, finely-formed, trumpet variety, M. J. Berkeley, of a rich orange-yellow; and P. R. Barr, a sturdy variety with golden flowers similar to Emperor, but smaller, which was also shown. In the chalice-cupped section, Sir Watkin was fine; Beauty had large sulphur-yellow perianth and the cup margined with orange-scarlet. Autocrat was very fine, the perianth and cup being full yellow and the latter much expanded. Princess Mary was very beautiful with its perianth creamy-white, and a large, expanded cup, suffused orange. In the shorter cupped varieties, Barrii Conspicuous and Maurice Vilmorin were very fine. Of the Leedsii varieties Mrs. Langtry, Duchess of Westminster, Grand Duchess, and Minnie Hume were all showy and pure white. Messrs. Barr had also some very beautiful sprays of *Iris fimbriata*, also *Muscari*, *Anemone Rose de Nin*, a beautiful double pink and white, &c.

Mr. J. H. Silsbury, Shanklin, sent many varieties of Daffodils. In his collection Henry Irving was exceedingly fine and well coloured, as were Sir Watkin and Obvallaris. Mr. John Gell, St. Lawrence, sent from forty to fifty bunches of well-grown specimens such as Emperor, Maximus, Empress, Sir Watkin, Leedsii Amabilis, Barrii Conspicuous, etc.; also some large flowers of *Anemone fulgens*.

Mr. W. H. Jobling, gardener to Lady Harper Crewe, Spring Hill, sent four boxes of spring flowers such as Anemones, *Chionodoxas*, Scillas, *Doronicums*, and Daffodils; also a beautiful dwarf *Iris palestina*, and Mr. G. F. Wilson's Blue Primrose in large clumps.

Mr. C. H. Snook set up a pretty group of greenhouse foliage and flowering plants. Mr. S. Banks, Landguard Manor, contributed a large and well-arranged group of foliage and flowering greenhouse plants, amongst which figured some well-grown plants of Azaleas. From Mr. F. Woods, Steephill Castle, came twelve magnificently-grown plants of *Cinerarias*, with some very decided shades. Mr. W. Tribbick, F.R.H.S., Brooke House, contributed cut spikes of meritorious *Amaryllis* seedlings, also some beautiful spikes of *Iris fimbriata*.

EDINBURGH SPRING SHOW.—April 6th and 7th.

The classes for fruit did not bring many competitors, and amongst the winners were Mr. Malcolm

McIntyre, who took three prizes, Mr. W. Smith (two), Mr. J. Cairns (two), Mr. Jas. Day (two), and Messrs. P. J. and G. MacKinlay (one each).

Vegetables also were somewhat disappointing, Mr. William Harper, of Tulliebelton House, Perth, being the only exhibitor of a collection containing twelve distinct kinds, for which he was awarded first prize. For two Cucumbers Messrs. D. Kidd, G. McDougal, and J. Grahame took the three awards. Mr. G. McDougal was first for twelve Tomatoes, second for twelve early Potatoes, and third for a basket of Mushrooms. Mr. Wm. Macrobie and Mr. Samuel Tanner were first and second respectively in this latter class, though their baskets were made of pottery, and looked very much like ordinary plates.

The remainder of the prize list was as follows:—For fifty pods of French Beans, first, Mr. James Cossar; second, Mr. A. Dickson. For twenty-five Asparagus, first, Mr. Wm. Harper; second, Mr. G. MacKinlay. For six heads of Seakale, first, Mr. James Shearer; second, Mr. Wm. Harper. For six heaviest stalks of Rhubarb, first, Mr. Wm. Henderson; second, Mr. D. Brown. For twelve early Potatoes, first, Mr. Wm. Galloway; second, Mr. G. McDougal. For three Broccoli, first, Mr. A. Lander; second, Mr. James Cossar. For three Cabbages, first, Mr. W. Galloway; second, Mr. D. Brown. For twelve Onions, first, Mr. J. Laing; second, Mr. J. Ramage. For six Leeks, first, Mr. D. Kidd; second, Mr. James Hall. For six Beet, first, Mr. Wm. Harper; second, Mr. H. Dunsmore. For six Carrots, first, Mr. Wm. Spence; second, Mr. John Waldie. For six Swedish Turnips for kitchen use, first, Mr. Wm. Spence; second, Mr. Adam Brydon.

The Hybrid Rhododendrons exhibited by Mr. A. Macmillan, of Trinity Cottage, were exceedingly beautiful, being of good size and form, and with distinctly fringed edges. A first-class certificate was awarded to Rhododendron "Nathaniel Bryson," a very large and handsome snow white variety, delightfully sweet-scented, and with a decided fringe, its flowers measured $4\frac{1}{2}$ ins. to $5\frac{1}{2}$ ins. across. But the best and most interesting of this exhibit was a new seedling hybrid named "Mrs. Alexander Macmillan," a large white with conspicuous rosy apricot marking on upper segments with fringed edge, and sweet-scented. Mr. Macmillan gained the society's First-class Certificate with this var. He also had many new seedlings of much merit, but which have not as yet been named. Mr. Macmillan has proved a very successful hybridist in the cultivation of these charming greenhouse flowering plants.

A tastefully arranged stand showed samples of "Jadoo" fibre, and Messrs. Tomlinson and Hayward' Weed-Killing Specialities.

The Banquet was excellently served by Host Clark of the Royal British Hotel, in the sumptuous dining hall just completed. The Chair was occupied by C. W. Cowan, Esq., of Penicuik. The diners were naturally anxious to return early to the Show, so the after-banquet speeches were short and sweet, the speakers being Baillies Mackenzie and Robertson, Mr. D. Thomson, of Drumlanrig (the oldest member of the society), Mr. Thomas Methven, Mr. Thomas Dale (Aikenhead), Mr. Mitchell, and Mr. Milne.

ROYAL HORTICULTURAL.—April 12th.

The leading features of the exhibits on Tuesday last were Orchids, Daffodils, *Cineraria stellata*, Roses, Camellias, Azaleas, new plants, etc.

A group of hybrid Orchids, set up with Palms and Ferns, was exhibited by Messrs. J. Veitch & Sons, Ltd., Chelsea. Showy and interesting things were *Laeliocattleya Pallas*, *L. wellsiana*, *Laelia Latona*, *Cattleya intertexta*, *Cymbidium eburneo-lowianum*, *C. lowio-eburneum*, *Dendrobium Cybele*, *D. Euryclea*, *D. Niobe superbum*, *D. Wiganiae* and various others. *Phalaenopsis stuartiana-Mannii* expresses its origin, and both that and *Epidendrum elegantulum leucochilum* were very interesting and pretty hybrids (Silver Banksian Medal).

A large and handsome flower was *Odontoglossum Pescatorei* Prince of Orange, richly blotched on a bright yellow ground, and exhibited by Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking. *Eulophiella Peetersiana*, flowering for the first time in Britain, attracted a great amount of attention from visitors. The mas-

sive, rich purple flowers were very showy. He also showed *Odontoglossum coronarium miniatum*, a magnificent *Cypripedium* named *C. Olenus* Burford var., several *Dendrobiums*, a grand piece of *Epiphronites Veitchi*, and other showy things.

J. Bradshaw, Esq. (gardener, Mr. Whiffen), The Grange, Southgate, staged a group in which *Cattleyas*, *Odontoglossums*, and *Cymbidium lowianum* were conspicuous. The forms of *Odontoglossum crispum* were very varied, and some of them handsomely spotted, including *O. c. Mrs. John Bradshaw*. *Cattleya speciosissima* was notable for the high size of its flower (Silver Banksian Medal).

R. I. Measures, Esq. (gardener, Mr. H. J. Chapman), exhibited a group of Orchids, including healthy pieces of *Cymbidium eburneo-lowianum*, *C. lowio-eburneum*, two large pieces of *C. devonianum*, one of them carrying seven spikes; also a fine bit of *Angraecum modestum*, *Dendrobium nobile Cooksoni*, and several *Odontoglossums*.

Sir Frederick Wigan (grower, Mr. W. H. Young), Clare Lawn, East Sheen, S.W., exhibited a grand spike of *Coelogyne pandurata* bearing ten large flowers.

Major Joicey (gardener, Mr. F. J. Thorne), Sunningdale Park, Sunningdale, Berks, staged a showy and most interesting group of *Epidendrum bicornutum*, a most difficult subject to manage, but which Mr. Thorne grows well. He also had a piece of the handsome *Dendrobium atroviolaceum* Major Joicey's var., and a well-flowered bit of *Cattleya Schroderae* (Silver Banksian Medal).

J. Colman, Esq. (gardener, Mr. W. King), Gatton Park, Reigate, staged a small group of showy and useful Orchids, including *Dendrobium nobile nobilissimum*, *Dendrobium brymerianum*, and the new blue one, *D. Victoriae Reginae* (Silver Banksian Medal).

Messrs. Seeger & Co., Bandon Hill, Croydon, exhibited a piece of *Zygopetalum protheroeanum* with wholly chocolate sepals, and a dark violet-blue lip. C. Hamilton, Esq., Dunmore Park, Larbert, Stirling, N.B., exhibited a fine bit of *Dendrobium nobile* Dunmore Park var. *Laeliocattleya* Sir Wm. Ingram was exhibited by C. L. N. Ingram, Esq. (gardener, Mr. T. Bond), Elstead House, Godalming. H. T. Pitt, Esq., Rosslyn, Stamford Hill, staged the magnificent *Odontoglossum wilckeanum* Pitt's var. with huge flowers. Baron Schroder (gardener, Mr. H. Ballantine), The Dell, Egham, staged several splendid varieties of *Odontoglossum*, including *O. crispum schroderianum*, *O. Osmani*, *O. dellense*, &c. Other exhibitors of Orchids were Walter C. Walker, Esq. (gardener, Mr. Geo. Cragg), Winchmore; M. S. Cook, Esq., Tankerville, Kingston Hill; A. Warburton, Esq., Vine House, Haseldene; and Messrs. Hugh Low & Co., Clapton, who showed the hybrid *Phalaenopsis Schroderae*.

Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton, staged a very showy group of plants. The group was semi-circular in form, and in it some profusely flowered plants of *Rose Crimson Rambler* were greatly in evidence. *Clematis* Miss Bateman and the double *C. Duchess of Edinburgh* were in good form, and a number of plants of *Spiraea astilboides* added to the effect. Ferns in variety and the variegated *Acer negundo* furnished the foliage (Silver Gilt Banksian Medal).

The magnificent strain of *Cinerarias* supplied by Messrs. Carter & Co., of High Holborn, were well represented by a large semi-circular group of plants upon the floor of the hall. The plants themselves were sturdy specimens, and bore large, spreading heads of mammoth flowers. The variety in colour was remarkably great (Bronze Flora Medal).

The hardy flowers sent by Mr. T. S. Ware, of Hale Farm Nurseries, Tottenham, comprised some fine panfuls of *Primula frondosa*, *P. viscosa*, *P. v. nivalis*, and *Ophrys Speculum*. *Tulipa Greigi* in pots was a huge success. The display of Daffodils was likewise very fine. Upwards of sixty varieties were on view, all of them in good form. Some of the best sorts were *N. Victoria*, *N. spurius coronatus*, *N. Barrii* conspicuous, *N. triandrus pulchellus*, *N. Leedsii Grand Duchess*, *N. L. Minnie Hume*, and *N. L. Katharine Spurrell*.

Messrs. J. Hill & Sons, Barrowfield Nurseries, Lower Edmonton, again had a capital display of Ferns. As on previous occasions, the plants were tastefully and well arranged, and there was a great variety to admire. *Adiantum rhodophyllum*, *A.*

scutum, *Pteris nemoralis*, *P. palmata*, and *P. arguta* were a few of the handsomest.

A group of *Azaleas* was set up by Mr. W. Kemp, The Gunyah, Barnes. The plants, which were of the best named varieties, were exceptionally well flowered, and afforded a very pretty picture. An edging to them was furnished by a row of *Lily of the Valley* in pots. (Bronze Banksian Medal).

Messrs. Jas. Veitch & Sons, Ltd., Chelsea, showed a group of varied and handsome hybrid *Cinerarias*, in which the habit of *C. cruenta* was very evident. These plants should become very popular by reason of their free flowering and high decorative qualities. *Deutzia hybrida Lemoinei*, *Rhododendron racemosum*, and *Azalea carminata splendens* were well shown by the same firm in a mixed group staged by the side of the *Cinerarias*. Here too, the pretty *Rhamnus alaternus foliis argenteis* was very noticeable.

Messrs. John Laing & Sons, Forest Hill, S.E., showed a collection of their hybrid *Streptocarpus*. There were some remarkably fine forms among them, and the plants showed to great advantage in a setting of *Maidenhair Fern*.

Messrs. W. Paul & Son, Waltham Cross, Herts, put up a handsome lot of *Camellias*, both pot plants and cut blooms. In the Waltham Cross Nurseries the *Camellias*' wants are evidently well-known and well looked after.

A choice collection of *Erythroniums* was contributed by Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester. *E. revolutum* in variety, *E. Hartwegi*, were some of the gems. *Tulipa Greigi* in pots was remarkable here also for the great size and brilliance of its flowers (Bronze Flora Medal).

Mr. Miller, gardener to Lord Foley, Ruxley Lodge, Esher, sent a lot of *Marie Louise Violets*, and some bunches of capital *Narcissi*.

Mr. H. Walters, gardener to Lord Gerard, Eastwell Park, sent four boxes of cut *Roses*, chiefly of *Maréchal Niel* (Bronze Banksian Medal). A unique exhibit came from Mr. C. Turner, Slough, in the shape of three hanging baskets of the wondrously handsome *Nepeta Glechoma variegata*, which has all the promise of being a grand basket plant. Three boxes of cut *Camellias* came from Mr. R. Brown, gardener to F. T. Barry, Esq., St. Leonard's Hill, Windsor.

Messrs. Wm. Cutbush & Son, Highgate, N., had a fine array of forced flowering plants. In the background was a grand lot of *Cytisus Laburnum* in 8-in. pots, the plants being full of flower. *Staphylea colchica* and *Deutzia Lemoinei* were likewise good.

The *Roses* sent by Mr. W. Rumsey, Joyning's Nursery, Waltham Cross, were another tribute to his skill as a cultivator. *Maréchal Niel*, *General Jacqueminot*, *Comte Raimbaud*, and *May Rivers* were some of the best varieties (Silver Floral Medal).

Ten dozen huge cut blooms of *Maréchal Niel* *Roses* were contributed by Mr. J. Walker, Thame, Oxon, who must grow this charming *Rose* in great quantity (Silver Banksian Medal).

Messrs. Paul & Son, The Old Nurseries, Cheshunt, received a Silver Flora Medal for a capital group of pot *Roses*. *Clara Watson*, *Madame de Watford*, and *Elsie Tugier* were three of the premier varieties.

Messrs. Sutton & Sons, Reading, made an extensive display of their race of hybrid *Cinerarias*, called *C. stellata*. The varying stature of the plants, which ranged from eighteen inches to four feet, was well shown, and this, combined with their elegant habit and large spreading heads of flowers in a considerable diversity of colour, bespeaks a race of plants of great horticultural value. Our plant houses will be all the richer for this notable addition to the gardener's resources.

Messrs. Jas. Veitch & Sons, Ltd., sent a number of new and noteworthy *Amaryllis*. *P. Purnell*, Esq., The Woodlands, Streatham, had an exhibit of *Primulas* and *Auriculas* in considerable variety.

As may be expected, *Narcissi* entered very prominently into the day's show. Messrs. Jas. Veitch & Sons, Ltd., had a large and comprehensive exhibit of the leading forms, of which we may mention *N. Sir Watkin*, *N. Barri conspicuus*, *N. Emperor*, *N. Golden Spur*, *N. Glory of Leiden*, also innumerable fine forms of *N. Leedsii*, and *N. incomparabilis* (Silver Banksian Medal).

A superb display of *Daffodils* was made by Messrs.

Barr & Sons, of King Street, Covent Garden. Upwards of sixty varieties were staged, and all in the pink of condition. *N. Victoria*, *N. incomparabilis Beauty*, *N. i. Sir Watkin*, *N. i. Beauty*, *N. Leedsii Minnie Hume*, *N. Golden Spur*, *N. Wear-dale Perfection*, and *N. Henry Irving*, together with a lot of other choice and popular forms, evidenced the wondrous strength of the Messrs. Barr's collection. Some good *Hyacinths* in pots were shown by the same firm (Silver Flora Medal).

The *Narcissus* competition for the Daffodil Cup, offered by Messrs. Barr & Sons, brought out two competitors. The Rev. G. H. Engleheart, Apple-shaw, Andover, whose collection was chiefly new hybrid and seedling forms, was easily first. *N. White Queen*, *N. Lady Margaret Boscawen*, *N. Lucifer*, and *N. Homer* were a few of the finest. J. W. Jones, Esq., Woking, was second.

At a meeting of the fruit and vegetable committee, Mr. C. Herrin, Dropmore, was awarded first prize for the best flavoured *Apple* in *Sturmer Pippin*. Mr. J. C. Tallack, Livermere Park Gardens, was second with *Court Pendu Plat*. No *Pears* were shown.

A Cultural Commendation was given to Mr. E. Beckett, Aldenham House Gardens, Elstree, for *Strawberry Royal Sovereign*. Mr. J. McLeod, Dover House Gardens, Roehampton, received a similar award for a basket of *Brown Turkey Fig*, gathered from a trained tree 6 ft. by 18 ft., and carrying 470 fruits. Mr. J. Miller obtained a Cultural Commendation for a large basket of *Mushrooms*.

GUNNERA MANICATA.

THIS most highly ornamental plant may be said to be a forbidden one to those who have only small gardens, for well developed specimens will carry leaves 10 ft. or more in breadth, with prickly foot stalks 7 ft. in length. It is most effective when seen near water, and requires a rich, deep soil. It is one of the noblest hardy plants yet introduced. A sheltered position must be given it, because the large size of the leaves render them so liable to be torn to pieces with any winds.—W. B. G.

SWEET PEA SENSATION.

A PICTURE of this novelty appeared in the issue of the *Florists' Exchange* for February 12th. It is said to well merit the name *Sensation*, and to be a really good thing. Four flowers are produced on the same stem quite frequently, and the plants are of strong constitution and vigorous growth. The individual flowers are of large size, first-class form, and delightful fragrance. The standard especially is of great size, and exhibits a dainty shade of cream-yellow. The wings are pure white. The variety is, moreover, stated to be very floriferous, and thus it has good points all round.

QUESTIONS AND ANSWERS.

Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as *Carnations*, *Pelargoniums*, *Chrysanthemums*, *Roses*, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Everlastings for Drying.—A. M.: *Antennaria margaritacea* is perennial and very useful for the purpose. Amongst annuals you should not overlook *Helichrysums*, *Rhodanthe Manglessii*, *Acroclinium roseum*, and the biennial *Ammobium alatum*. Excellent grasses for drying are *Briza gracilis*, *B. maxima*, *Agrostis nebulosa*, and *Eragrostis elegans*.

Carnations Diseased.—A. B.: Your *Carnations* are badly affected with *Spot*, a disease caused by *Septoria Dianthi*, one of the fungi affecting *Carnations*, and which are very difficult to deal with owing to the fact that the fungus lives inside the tissue of the leaves and stems. As a preventive measure you should keep your plants, that is, their foliage, as dry as possible during the winter months, indeed, at all periods of the year when the atmosphere is moist. As a remedy you should clear away and burn all the affected leaves, and the whole plants when they are very badly injured. Any fresh stock that you may get should be kept in a separate house, pit, or frame, away from all that have been attacked with the disease. It would also check and prevent the spread of the fungus if you were to spray the plants at intervals with a solution of sulphate of copper at the rate of 1 lb. to 22 gallons of water. It often proves the most profitable plan to secure fresh

and clean stock, completely destroying the old. Remedies are most effective when used in the very earliest stage of the disease, or as soon as you can detect it.

Solomon's Seal and *Dielytra spectabilis*.—W. P.: The first named has a rootstock which is a typical rhizome. *Iris germanica*, *I. pumila* and *Lily of the Valley* are other examples. The rootstock of *Dielytra* is a rhizome of another form, namely upright, and fleshy. A rhizome is an underground stem more or less branched, but varying greatly in being thick and fleshy, or slender and fibrous, horizontal or upright. The rhizome of *Dielytra* may be compared to that of the common *Primrose* or *Scabiosa*, differing in minor particulars, but botanically speaking all of the above mentioned species have rhizomes. Some gardeners might term the rootstock of *Dielytra*, simply a root or possibly an underground stem, but rhizome is certainly a more correct description of the structure in question. We fail to see why the point should have been disputed. In *Achimenes* we have a more remarkable rhizome, covered with fleshy scales representing modified leaves.

Beetle in Duck Pond.—T. R.: The specimen you sent was the female of *Dytiscus marginalis*, a common but rather interesting water beetle, on account of its large size and peculiar structure fitting it for an aquatic existence. It feeds on other insects and sometimes on small fish. The male may be recognised by a large club or swelling on the two fore legs, just above the tarsus or foot. During the evening these beetles often quit the water, and being strong on the wing fly to long distances. This accounts for your finding the specimen close to your *Melon house*. You need not be alarmed, therefore, as they do not feed on plants. The sharp nippers you speak of are maxillae or jaws with which they catch and cut up their insect food, or the fry of fishes as the case may be.

Colour in Foliage.—W. P.: We do not know of any book that treats of or explains the colour or variegation in foliage. More than probable there is no such thing. Nobody has ever been able to explain it. There is an absence of the green colouring matter in certain variegated plants; and in others more or less of additional colouring matter, but why this should be remains to be discovered.

Books dealing with the Organs of Plants and their Functions.—W. P.: There are now several good books on the subject by different authors; but it would be difficult to say which is the best. Some are more exhaustive than others, and, of course, more expensive. Two useful books of moderate price are *Elementary Botany*, by Joseph W. Oliver, published by Blackie & Son, Ltd., London, Glasgow, Edinburgh, and Dublin; and *Edmund's Botany*, published by Longmans, Green & Co., Paternoster Row, London. The first is sold at 2s. and the second at 2s. 6d. for the second edition. Then there is a larger book, *Pratt and Vine's Botany*, price 9s. A much larger and more comprehensive work is *Hensley's Elementary Course of Botany*, fourth edition, by Masters and Bennett, published by Gurney & Jackson, Paternoster Row, at 15s. If you buy either of the first two above-mentioned and study them well, you will have made a good beginning, and could proceed to get some of the larger ones if so inclined. The first two would enable you to pass the R. H. S. examination as far as morphology and physiology are concerned. Your own practice and gardening books would enable you to pass the practical questions.

Names of Plants.—G. R.: *Sarcanthus laxus* is the name of the small flowered *Orchid*.—T. J.: 1, *Arabis albidus*; 2, *Corydalis solida*; 3, *Primula marginata*; 4, *Pulmonaria saccharata*; 5, *Caltha palustris flore pleno*.—W. B.: 1, *Asplenium thaccidum*; 2, *Aspidium* (or *Cyrtomium*) *caryotideum*; 3, *Pteris cretica Mayi*; 4, *Sibthorpia europaea variegata*; 5, *Ophiopogon japonicus*; 6, *Convolvulus mauritanicus*.—R. G.: 1, *Dendrobium ochraceum*; 2, *Odontoglossum triumphans*; 3, *Odontoglossum nebulosum*; 4, *Cymbidium eburneum*; 5, *Odontoglossum odoratum*.—H. Reid: 1, *Ribes sanguineum*; 2, *Spiraea Thunbergii*; 3, *Spiraea prunifolia flore pleno*; 4, *Acer rubrum*; 5, *Abies nobilis*; 6, *Salix Caprea* (male plant).

Communications Received.—J. Mayne.—R. E. Richardson.—A. McMillan.—J. C. S.—W. S.—A. R.—T. B.—H. W.—J. Plummer.—L. G.—W. B. A.—A. E. B.—R. Jones.—S. Bencraft.—C. C. J.—P.—A. Denison.—Rob.

TRADE CATALOGUES RECEIVED.

TOOGOOD & SONS, Southampton.—Abridged List of Toogood's Royal Farm Seeds.

H. CANNELL & SONS, Swanley, Kent.—Illustrated and Complete Floral Guide of Plants for 1898.

E. PRAET & CIE, Nurserymen, Rue Rosebroeck, Mont-St.-Amand-lez-Gand, Belgium.—General Catalogue of Hothouse, Greenhouse, and Hardy Plants, Orchids, Palms, Ferns, &c.

J. W. WIMSETT & SON, Royal Ashburnham Park Nursery, Chelsea, S.W.—Specimen Palms, Ornamental Foliaged Plants, Exotic Ferns, Fragrant Flowers, Floral Decorations, &c.

H. CANNELL & SON'S FLORAL GUIDE CATALOGUE

Will be found to be a great treasure to all fond of their Gardening. Post free to coming customers. The following will convey an idea of the importance and advantage of our firm:—

" Wharf House, New Mills, Derbyshire,
April 4th, 1898.

" GENTLEMEN,—Just a line to say that I have lent your 1898 Catalogue to Dr. Chapman of this place, who has recently built a greenhouse, and have strongly recommended him to send his orders to you. I have told him all that I had from you has been far and away better than what I have had from any other source, and I have decided never to get anything more from anyone but you. He has seen my place, and is much pleased.

Yours truly,
J. SWINDELLS."

SWANLEY, KENT.

Caladiums

FINEST COLLECTION in the World. We make a speciality of CALADIUMS. Gold Medals Manchester & Leicester. Silver Cup, R.H.S., &c.

Satisfaction guaranteed. JOHN PEED AND SONS, West Norwood, London.

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

1898. FORBES' CATALOGUE 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants

is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and price of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other Valuable Information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,

ESTABLISHED 1870.

Nurseryman, Hawick, Scotland.

JADOO FIBRE.

WONDERFUL SUCCESS.

At a great Horticultural Exhibition recently held in New Orleans, plants grown in Jadoo were awarded

20 FIRST PRIZES and 2 SECONDS.

ADVANTAGES OF GROWING PLANTS & SEEDS IN JADOO.

Seeds germinate much more quickly in Jadoo than in earth.

Greater perfection easily attained.

Suits all kinds of plants.

Is much lighter than earth.

Less frequent watering is required.

The flowers are larger, of richer colour, and last longer.

No soil to mix: No manures required.

Ghent Exhibition, 1898. The two principal prizes of the show (including Gold Medal), were gained by plants grown in Jadoo, by Messrs. Byrvet, Bros., Haarlem.

PRICES:—3/6 per bushel. 8/- per 3-bushel sack. Special prices for large quantities.

Testimonials and full directions for use post free.

Obtainable through any Nurseryman, or from—

JADOO, Limited, EXETER.

ROSES, strong H.P.'s., competition varieties 6/- doz.
VIOLAS, strong plants, bedding varieties, 1/9 doz., 10/6 100.
VIOLAS, strong plants, competition varieties, 2/6 doz.
FANGY PANSIES, best varieties for competition, including many of recent introduction, 3/6 doz.

All Post Free for Cash with Order, from—

J. GRIEVE & SONS,

REDBRAES NURSERIES.

BROUGHTON ROAD, EDINBURGH.

HARDY CLIMBERS. FINE COLLECTION.

FOR PILLARS, ARCHES, WALLS,
PERGOLAS, TREES, &c.

GEO. BUNYARD & CO.

Beg to say their List of the above may now be had free, from

THE ROYAL NURSERIES, MAIDSTONE.

STRAWBERRIES.—H. CANNELL & SONS are supplying runner plants of Royal Sovereign and Sir Joseph Paxton, warranted true, 12s. 1,000; large quantities first-named in pots, 12s. per 100.—SWANLEY, KENT.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, APRIL 23rd, 1898.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, April 26th.—Royal Horticultural Society: meeting of Committees at 12 noon.

GENERAL VIEW OF THE GHENT SHOW.

—It may not be inopportune on this occasion to take a bird's eye view of the Fourteenth International Horticultural Exhibition at Ghent; because when one enters into details the general effect as it strikes the eye of the visitors is lost. The judging was accomplished on Friday the 15th inst., and the show was formally opened by His Majesty the King of Belgium on Saturday morning. The most imposing spectacle for colour and general effect was certainly that in the temporary building termed the *Annexe Mobile*. The *Salle Primitive* is the oldest part of the buildings in which the show was held, and dates back to 1835-36. The Casino or *Salle Vitree* was built in 1868, and is in the form of a huge conservatory. General details will be found in another column.

The view from the gallery in the *Annexe Mobile* was very imposing. It was traversed by three walks connected by transverse ones; but the continuity of the central one was broken by some huge groups towards the far end, and by plants in tubs, stood on tripods. Fine plants of *Dracaena Doucetti* in tubs, Palms and other plants were stood in prominent positions. Massive beds of Indian Azaleas, as well as *Azalea mollis* and other

deciduous types furnished a blaze of colour at once picturesque and unique. The endless variation of colour varieties of the Indian Azaleas were subtly blended, giving the bizarre effect of convex sheets of patterns of colours, like an old fashioned bed quilt. At the far end was a huge circular bed of large dome-shaped specimens of Indian Azaleas in tubs, on the same mixed plan as the smaller specimens. They were superbly flowered, the foliage in most cases being completely hidden. These massive specimens, forming mounds of colour, included splendidly flowered *Roi Leopold*, salmon, *Baron de Pret*, rose, *Bijou de Paris*, white and striped red, *Comte de Chambord*, soft salmon, pink and silvery white at the edges, *Souvenir de Maximilian*, a large red flower, and others of various handsome colours. Against or between the red, white, salmon, purple, &c. of the Indian varieties, there was the orange, apricot, yellow, and other shades of *Azalea mollis*. All of these massive beds were raised in the centre, and sloped in every direction to the walks by which they were surrounded, thus affording the public every opportunity of inspecting the varieties in detail.

Around the sides of the huge building the ground rose behind so that the plants stood upon it faced the spectators. Along the back line most of the large Palms were arranged, a few being in prominent positions elsewhere. They consisted of huge specimens of *Areca Baueri*, *Cocos Bonettii* (with the habit of a Phoenix), *Livistona sinensis*, *L. robusta*, *Corypha australis*, *Phoenix reclinata*, *Rhapis humilis*, and many others. Their dark green foliage formed a pleasant and refreshing foil to the bizarre display of blossom. In front of and under the Palms were huge groups of New Holland and other greenhouse plants of a very varied character, so closely placed that the arrangement seemed continuous from end to end. Groups or collections of *Camellias* and New Holland plants were very prominent, particularly the *Acacias*. Pyramidal and standard specimens of *A. longifolia*, *A. armata*, *A. verticillata*, and others ranged from 6 ft. to 10 ft. high, and had the appearance of *Erica Cavendishii* from the gallery. Other New Holland plants were *Pimeleas*, *Ericas*, *Clanthus*, *Coleonema*, *Diosma*, *Leptospermum bullatum* (finely flowered, globular standards, 1½ ft. to 2 ft. high), *Chorizemas*, *Polygalas*, *Hardenbergia monophylla*, *Cytisus scoparius andreanus*, *Pultenaea stricta*, *Eriostemons* in variety, *Choisya ternata*, and other hard wooded subjects of that nature, which have been so neglected in Britain for some years past. A large number of them were grown as dwarf standards, others as bushes or pyramids, but in most cases informally trained, or altogether unsupported by artificial means. Even the large Azaleas have merely ties of raffia. There were three varieties of Azaleas, in four tiers, grafted one above the other. *Sparmannia africana*, in bushes or standards, 6 ft. to 10 ft. high, was very floriferous. A few Orchids appeared in this building, including specimens of *Odontoglossum Edouardi*, *Cymbidium lowianum* and *Lycaste Skinneri alba*. The roof was partly of glass and partly of wood, but underneath was a thin transparent shading in eight folds or stretches, transversely banded in light green and pink colours that seemed to vary in intensity at different times of the day, according to the brightness of the sun and the incidence of the rays. The coloured shading also had its effect upon the appearance of the plants.

The Casino is a permanent building of oblong rectangular form, in which the society holds its monthly meetings and smaller

shows. The ridge and furrow roof is supported by iron pillars and girders, the ridges being of glass, and the furrows opaque. The effect from the staircase landing was altogether different from that of the *Annexe Mobile*. The stove and greenhouse plants, chiefly fine foliage plants, requiring stove heat were located here, so that there was a wealth of greenery in every direction, consisting of huge Palms and Cycads, towards the ends and sides of the building, as well as in the centres of the high banks or mounds into which the floor space was broken up. Ferns were also prominent, exhibiting a much lighter shade of green. All these were relieved by the variegation of such subjects as Crotons, Caladiums, Dieffenbachias, Dracaenas, Phrynium variegatum, Pandanus Veitchii, Alocasias, Phyllotaeniums, and a host of other subjects of that character. Some Orchids were noticeable, particularly large specimens of *Oncidium ampliatum majus*, *O. sarcodes* and *Cymbidium lowianum*. Two groups of them were also very effective. The Anthuriums, chiefly varieties of *A. scherzerianum* and allies were represented by several large groups which were particularly effective in the *tout ensemble*. A fountain played in the centre, where some rockwork formed a rustic bridge across the water leading from a small pond. At the junction of some walks a specimen of *Rhapis humilis*, about 10 ft. high and 8 ft. through, was the finest we have seen.

The *Salle Primitive*, and other compartments, or galleries branching off from it, were filled with a most varied assemblage of plants. Amongst the new plants the most striking was *Acalypha Sanderi*, a new species from New Guinea, exhibited by Messrs. F. Sander & Co. They had a large number of plants of it in groups in their magnificent exhibit. It had large green leaves, from the axils of which dense rope-like spikes, 1 ft. to 2 ft. in length, of crimson-scarlet flowers hung down, for all the world resembling *Love-lies-bleeding*. Young plants up to three feet in height consisted of a single stem furnished with flowers throughout. Old plants develop their branches candelabra fashion, but the rope-like spikes of flowers are still pendant. In another division of the upstairs galleries were the exhibits of Hyacinths, Tulips, Daffodils, *Polyanthus Narcissi* and *Gardenias*, which were almost overpowering with their varied scents and perfumes in this confined space. *Amaryllis* were well represented, and in most cases in an advanced stage of evolution. *Gloxinias* were moderately numerous, but good at this early period of the year. Very fine were the two groups of the new crisped *Cyclamen latifolium Papilio*, with broad, frizzled and goffered segments like Indian lace. They existed in a great variety of colours, and are sure to become popular in British gardens in a few years.

Canada supplies about one-fourteenth of the imported food of Great Britain.

Mr. P. Barham, formerly foreman under his father at Croxteth, Liverpool, has been appointed gardener to Col. W. H. Walker, the Grange, Gateacre, Liverpool. Mr. Barham entered upon his duties on the 15th inst.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, April 26th, in the Drill Hall, James Street, Westminster, 1—5 p.m. In addition to the society's ordinary meeting, the National Auricula and Primula Society will hold its annual show. At three o'clock a lecture on "Sweet Scented Leaves v. Fragrant Flowers," will be given by Mr. F. W. Burbidge, M.A., V.M.H.

The Crystal Palace and grounds cover 200 acres.

A Noble Gift.—Miss Cruickshank, the sister of the late Dr. Cruickshank, has given £15,000 to Aberdeen University for the purpose of founding a botanic garden in memory of her brother.

British Orchids.—Mr. A. D. Webster, of Greenwich Park, announces for immediate publication by J. S. Virtue & Co., Ltd., a work on British Orchids. The book will contain an exhaustive description of each species of our native Orchids, and will be fully illustrated.

The Dunlop News.—The Dunlop Pneumatic Tyre Co., Ltd., 160, Clerkenwell Road, E.C., has issued No. 11 of the *Dunlop News*, a neatly got up magazine intended for cyclists. We are requested to state that the company will be pleased to send a copy gratis and post free to any cyclist upon receipt of name and address. Many gardeners cycle, and the *Dunlop News* will therefore be of interest to them.

The Sovran Postcard.—We are in receipt of a number of samples of this postcard from the "Sovran Card Co.," 29, King Street, Covent Garden, W.C. The "card" in question is an ingenious device—a multifold card which can be neatly folded up until it is of the size of an ordinary postcard, and subject to the same postal rates. For business people of all classes who have to send lengthy notices or reminders to existing or prospective clients through the post these cards will be invaluable. Prices per 100 or 1,000, with special wording to suit the customer can be had on application to the company.

The Science of Manuring.—This is the title of a small pamphlet issued and forwarded to us by the Sulphate of Ammonia Committee, 4, Fenchurch Avenue, London, E.C. It contains a collection of practical facts connected with the application of manure to the soil according to scientific principles that cannot fail to be of service to the horticulturist and agriculturist. The value of sulphate of ammonia is especially set forth for Hops, Potatoes, vegetables and fruits of all kinds. In a second and smaller pamphlet accompanying the first and larger one is a number of facts about the application of this valuable manure, and at the end appears a table, treating on the quantities of various chemical manures to be applied to such crops as Potatoes, Swedes, Cereals, Clover, and Grass.

Shirley Gardeners' Mutual Improvement Society.—The monthly meeting of the above society was held at the Parish Room, Shirley, Southampton, on Monday the 19th inst., Mr. B. Ladhams presiding over a fair number of the members. Mr. J. Jones, The Gardens, Terrace House, Polygon, Southampton, gave a most interesting and useful lecture on "Table Plants, and Plants for House Decoration." He exhibited a number of very good specimens, and later on he proceeded to cut them up for the purpose of illustrating his remarks on methods of propagation. Quick propagation, he said, was necessary, so many decorative plants being annually lost owing to bad treatment, draughts, &c., while in use indoors. A number of questions was put, and answered satisfactorily, and a hearty vote of thanks was accorded to Mr. Jones for his valued lecture. There was a good display of hardy Primulas by Mr. B. Ladhams, also Caladiums by Mr. E. J. Wilcox.

New York Botanical Gardens is about to be enriched by the erection of a range of thirteen glass houses, which, it is estimated, will cover an area of 45,000 sq. ft. The houses will enclose a large court, which is to be utilised for the cultivation of aquatic plants. The central feature of the southern front of the range will be the large circular Palm house, which will have a diameter of 100 ft., and a height of 90 ft. The wings running east and west from this will be 30 ft. wide, 116 ft. long, and 26 ft. high, measuring to the ridge, and they will be terminated by more roomy erections 46 ft. high and 84 ft. wide. The connecting houses which run south from these will be lower, measuring 30 ft. in width by 75 ft. in length, terminated by two domed, square houses 50 ft. in diameter, and 35 ft. in height. These are in their turn joined by two more low houses, each 38 ft. in width and 103 ft. in length. The heating apparatus will be sufficient to maintain an atmosphere of 70° Fahr. whatever the weather, and the houses are to be all well supplied with hot and cold water.

The Sudden Climatic Changes in America are by some attributed to the fatal policy of cutting down the forests.

Don't be afraid to eat Onions.—They are very wholesome, and drinking sweet milk afterwards, it is said, will purify the breath, leaving no odour.

For Small Capitalists.—Sir Harry Johnston suggests a new opening for small capitalists in the sunny South. He states that the culture of flowers and herbs for supplying material for the manufacture of perfumes is in Tunis a profitable undertaking. If this be true, the business would be almost an ideal one, for a pleasanter one cannot be imagined.

The Cold Storage and Ice Trades' Review.—We are in receipt of the first issue of this publication, which has been published to supply information to all those connected with what is now a very important modern industry, viz., the preservation of all sorts of food by means of the cold chamber and refrigerator. The magazine, which is priced at 4d., should therefore supply a want, and we welcome its arrival, hoping that it has come to stay. The publisher is Mr. R. M. Leonard, 28, Great Ormond Street, London, W.C.

Beddington, Carshalton, and Wallington Horticultural Society.—This flourishing society has just issued in catalogue form its schedule for 1898, together with a list of officers and subscribers, the statements of receipts and expenditure, and the report of the committee for the past year. We notice in the list of officers the name of Mr. W. T. Toogood, of 21, Vicarage Road, Croydon, as secretary. The financial statement shows total receipts of £335 14s. 9d., and an expenditure of £282 7s. 3d., thus leaving a balance in the hand of the treasurer of £53 7s. 6d., as against last year's balance of £35 13s. 4d. From these figures it will be observed that there has been a profit on the year's working of £17 14s. 2d. The balance sheet shows £124 4s. 7d. standing to the credit of the society, with the liabilities nil. The report of the committee naturally congratulates the society upon the satisfactory condition of affairs. The annual show is fixed for Monday, August 1st.

Sweet Gale and Lungwort in the New Forest.—I find the narrow-leaved Lungwort (*Pulmonaria angustifolia*) very common here, at Brockenhurst, growing in the hedges, and now in full bloom, with flowers of all shades, from dark purple to red and lilac. I have never met with it before. The Bog Myrtle (*Myrica Gale*) too, is very common, lighting up the bogs with the ruddy brightness of its buds. I am told that a beer is made of this, called Gale beer in Yorkshire, and is much relished by the men working in the hay and harvest fields. Of Sundews I have found but one, a very small one, and think, though the plant is perennial, that here, as in Devon, where I have found it just at this time of the year, it springs up annually from seed. The trees are covered with lichens, of which I dare not put down the names, though they have been kindly named for me by Mr. Masee and Mr. Marquand, of Kew, who are also staying here. One of them, *Opegrapha taxicola*, a species of the writing lichen, covers the old Yew tree in the churchyard, and looks for all the world as if some ancient Assyrian had been at work with pen and ink, choosing the trunk and the branches of the tree as a means of conveying in cuneiform characters a message to endure for at least a thousand years, for both tree and lichen must have been there for some such period. I heard the wryneck's note to-day (April 12th), showing that spring is come.—J. C. S.

The Simplest Living Things.—The eleventh and last of the course of lectures upon the "Simplest Living Things" was given by Professor Ray Lankester on the 29th ult. The Professor began by discussing the Acinetaria. They had a simple nucleated body, usually with several processes extending from it. These processes were either pointed or ended in suckers which enabled the organism to obtain its food. Besides propagating by fission and by conjugation the Acinetaria also developed buds which on being thrown off by the parent became possessed of cilia, thus establishing a connection between Acinetaria and Ciliata. It was probable, continued the lecturer, that the first living

things formed from albuminous matters were animals subsisting on much the same substance as that of which they were composed. At some period in the growth of these living things chlorophyll came into existence and enabled such as had it to assimilate carbon from carbonic acid and nitrogen from ammonia. The forms intermediate between these and those that required albumen were derived from green plants, and fed on juices containing sugar and less highly elaborated substances than albumen. Fungi and Lichens had this saprophytic mode of nutrition. In classifying the simplest plants the professor divided them into Confervoidae, Conjugatae, and Schizophytae. The first-named were plate-like or spherical forms which separated into biflagellate individuals forming zoospores that conjugated to produce a single mass from whence a new colony arose. The Conjugatae had filamentous or single cells. In the Schizophytae continued division of the cells was the only method of reproduction. There were two series of these, one, the Physochromaceae, living in fresh or sea water. These had peculiar colouring matters and were often without chlorophyll. The second series, Bacteriaceae were smaller and more dependent for food upon organic matter. Some of the bacteria were putrefactive, others like the bacillus of anthrax and tetanus passed into the body and fed on the living substance; whilst others, like diptheria, did not enter the body, but produced on the outside a poison which was absorbed. Some of the spherical forms, as for instance the typhoid bacillus, were able to develop filaments by which they moved.

VALLOTA PURPUREA.

THESE useful autumn-flowering bulbs are beginning to grow afresh, so they should be overhauled at once. The plants resent being disturbed too often and grow and flower freely for several years without repotting, though the surface soil should be loosened each year about this date and removed, giving them a top-dressing of fairly rich soil. Our batch did not flower very freely last autumn, so I have had them all shaken out and repotted. This operation had not been done for the past seven years. The bulbs were sorted as to size, placing from five to seven in an 8 in. pot, three or four in a 6 in., or a single bulb in a 4½ in., or 5 in. pot. The last two sizes given are very useful for small vases, the bulb carrying two spikes of bloom.

With the knowledge that the bulbs will remain in the same pots four or five years, a fairly lasting compost should be given them, which in our case consisted of fibrous loam, peat, leaf-soil, and enough river sand to keep it porous, the first-named predominating. A small quantity of bone meal could be added to this, if at hand. After potting, stand them in a cold pit or frame kept fairly close, and lightly syringe overhead two or three times a day, shading from the sun, until you see they have got hold of the new soil, when more air must be given them and shading dispensed with. They require an abundance of air and water during their growing season from the month of April to the end of July. After that date they can be advantageously stood outdoors in this mild country until the flowers are about to open, when they should be removed to a greenhouse. Manure water should be afforded those that have not been repotted, thrice a week; while those that have been given new soil will scarcely require any stimulant the first season. In any case it should not be given until you perceive the flower spikes showing, and then it should be weak. After flowering, less water will suffice, in fact, water can be withheld altogether during December and the two succeeding months, if the plants are not placed in a too drying position, which they should not be. They are fairly hardy; all that is required is merely to keep them away from severe frost. I have had our pots frozen quite hard, but no harm accrued; of course, they were fairly dry at the time. I find them most serviceable for church decoration at harvest festivals, during the month of September and early October.

—J. Mayne, Bicton.

A FEAST OF DAFFODILS.

MARCH winds have been something more than a proverb this year, for into them winter has concentrated practically the whole of its rigour, with

disastrous results to not a few of our favourite plants, be it said. But the Daffodil has passed victorious through even this severe test, scathed it may be, but not destroyed, beaten to the earth by the malevolence of the gale, but risen again in a very triumph of beauty.

When we take into consideration the grand weather resisting qualities of this flower of many parts it is not surprising that the succeeding years see its share of popularity steadily moving on the up grade and the number of its votaries as consistently upon the increase. Beneficent Nature, assisted by the hand of man has in the Daffodil given us a flower that is without compeer in the months of March and April, and no matter whether nodding at us from nooks in the rockery and beds in the flower garden, or waving 'neath the gentle influence of spring zephyrs in broad stretches naturalised in meadow and orchard, the flowers are alike imperially beautiful. At this season of the year they flood our markets, and are displayed in prodigal profusion to tempt buyers from amongst the busy moving masses in the thoroughfares of our great towns and cities. "Narciss," sweet "Narciss," is the cry, and we welcome the heaven-born radiance of the flowers as we would welcome the face of spring herself. The breath of the country with its wide, untrammelled expanse of sky and meadow is in every blossom, and with it a message of good cheer to the busy worker who is debarred from participation in the exuberant delight of a country spring.

But if so sweet a taste of heaven lurks in the culled blossom, what shall be said of the place where the Daffodil grows, where it is nourished, cherished, and tended with parental care and solicitude, and where in return it yields ungrudgingly the whole of its bright beauty as tribute to its foster-parent? A visit to Messrs. Barr & Sons' nurseries at Long Ditton is not a new experience to us, and yet the glory of the Daffodils comes to us ever fresh year by year, and the sense of enjoyment it brings strengthens rather than weakens. It fell to our lot this year to enjoy a perfectly lovely spring day for our visit, when the Narcissi were absolutely at their best. The sight was, indeed, one to wonder at and admire, for we found the flowers massed as for a field day, the individual characteristics of each form being thus apparent to even a casual observer. Over these huge breaks of colour the eye travels with the most acute sensation of pleasure, for the glittering gold of the blooms is softened by the subtle green of the foliage beneath, and we do not suffer the sense of oppression that comes from the beholding of huge masses of bright colours without any appropriate setting.

An idea of the magnitude of the scale upon which operations are conducted is furnished by the fact that upwards of two million bulbs of Narcissi were planted last year in these nurseries, and even this host will be scarcely sufficient to keep pace with the ever-growing demand. One of the most conspicuous features is a magnificent stretch of N. Barrii conspicuus. Over 180,000 bulbs of this variety alone were planted, all of which we found in full flower. If we calculate that, on an average, each bulb will throw four flowers, we get a grand total of 720,000 blooms of this variety alone. Other popular varieties are grown in proportion, and show conclusively the directions in which the public fancy is trending.

Daffodils fall naturally into three sections according to the size of the corona or trumpet relative to the segments. In all these three sections there are ranged varieties of surpassing beauty, and he would be a bold man, indeed, who would venture to attempt to uphold the merits of one section to the exclusion of those of another.

In the Ajax (Magni-coronati) section, with its huge corona or trumpet, we get the largest and most massive flowers. The very size of many is imposing, although we find all sizes, since the comparatively small Hoop Petticoat Narcissus (N. Corbularia) is included. Then also we have the small forms, N. minimus, N. nanus and N. minor, and these lead up to the large-flowered forms in the order named, N. minimus being the smallest. The Ajax section is, for the sake of convenience, divided according to the colours of the flowers.

First we have the self yellow varieties—in themselves a host. Chief among them comes Glory of Leiden with its mammoth trumpet and segments in proportion—truly a noble flower. Emperor is

another large and very popular flower that is especially valuable for bedding and naturalising, on account of its great vigour and floriferousness. P. R. Barr is rather smaller in size, but fully as useful. The perianth is primrose, and the trumpet a full yellow. The foliage is sturdy, of medium height, and quite distinct. Golden Spur is the variety for those who are on the look out for a good thing at a low price. The trumpet is large, prettily frilled at the margin, and rich yellow in colour. Although the bulbs are cheap, the flower is one of the finest of all. As the result of crossing N. Ajax and N. triandrus the "Johnstoni" group has been evolved, and in it are several highly pretty things, one of them, N. J. Queen of Spain, being one of the most beautiful and refined Daffodils in cultivation.

The bicolor varieties form the second division of the trumpet Daffodils, the segments of the perianth being white, and the corona some shade of yellow. Empress is the most useful of all in this division, for its vigour of habit, and the imposing character of the flowers have marked it out as eminently suitable for both naturalising and bedding purposes. J. B. M. Camm represents the ideal bicolor Daffodil from the enthusiast's point of view, and there is no doubt that for refinement and elegance it is hard to beat. A superb batch of the new Victoria was remarkable for the uniformity of height of the plants, and the size, splendour and symmetry of the flowers.

In the white and sulphur varieties we have some vastly pretty forms, and also some of the most difficult to grow. We found N. cernuus was over, but its variety N. C. pulcher well sustained its reputation. N. moschatus (of Haworth) is another charming dwarf variety. Madame de Graaf maintains its reputation as one of the largest and finest white trumpet Daffodils in existence, it being only surpassed by Weardale Perfection, but its price is prohibitive.

In the second section, the Medio-coronati, we find the corona about half as long as the perianth segments. The latter are often long, and we thus get an elegant star-shaped flower of wondrous beauty. Of varieties of N. incomparabilis alone there is a host, the most important and valuable for general purposes being Sir Watkin. Other varieties such as Gloria Mundi, G. J. Backhouse, Autocrat, Beauty, and Gwyther, being fully as beautiful, but less suitable for extensive planting. N. Barrii conspicuus we have already alluded to, and we may now make mention of N. B. C. Orphee—another charming form.

The varieties of N. Leedsii are legion, but all are chaste and beautiful. Such varieties as Minnie Hume, Beatrice, Duchess of Westminster, Mrs. Langtry, and Katharine Spurrell should be in every collection. At Long Ditton under Mr. J. W. Barr's fostering hand they acquit themselves marvellously well. N. Backhousei is another group which contains some fine things. In addition to N. Backhousei, we have N. B. Wolley Dod and N. B. William Wilks, both very handsome forms.

The third section, Parvi-coronati, contains N. Burbidgei and its numerous forms, N. poeticus, and its varieties of which N. p. poetarum, and N. p. ornatus are the chief.

Novelties are ever dear to the heart of the specialist, and as the work of crossing with a view to the production of new and improved forms is diligently prosecuted at Long Ditton under the vigilant eye of Mr. J. W. Barr himself, we annually look for results. There is no keener or surer eye in the Daffodil world for meritorious novelties than that of Mr. Barr, and a new form has to be good as well as new before it is considered to be worth naming. There are several promising unnamed seedlings now in bloom, carefully protected from all adverse conditions. One of these (a bicolor form) must create a veritable *furor* when it is sent out, for its size and majesty of proportions totally eclipse anything that has gone before—in short, it is a colossus among Daffodils, for Glory of Leiden growing hard by was as nothing to it, and Glory of Leiden is not a pigmy.

'Tis a pity that the stay of the Daffodils, like that of the angels, is so comparatively short, for we would fain keep them for ever with us, but the remembrance they leave behind is a vivid and lasting one, and as delightful as it is vivid and lasting. A day amongst the Long Ditton Daffodils is an intellectual feast to be remembered and treasured as long as memory itself shall last.

HINTS FOR AMATEURS.

Nepeta Glechoma variegata.—Everyone who knows anything about British wild flowers must know the Ground Ivy, *Nepeta Glechoma*, or *Glechoma hederacea*, as it used to be called, for there is no plant more widely distributed. In partially shaded or damp spots it grows with the greatest luxuriance, and its ivy-like leaves, whence the popular name "Ground Ivy," and the old specific name "hederacea," form a rich green carpet upon many a hedge bank, and by many a lane side, the blue flowers peeping from amongst the foliage in countless numbers. Variegated, or improved forms of a few British wildings are cultivated to some extent in gardens, and the Ground Ivy is one of the cases in point. Some of the so-called improved forms of wildings are very little, if any, superior to the wild forms, but in the variegated *Nepeta Glechoma* we have a plant of uncommon merit and great beauty. It is totally distinct in appearance from anything else, and is as easy to grow as it is distinct. We have none too many plants that are suitable for the filling of baskets for the greenhouse and cool conservatory—at least, such plants as the ordinary amateur can take up with confidence—hence it is all the more important that it should not be lost sight of. The variegated form has leaves of the same shape and size as the type, and the creeping habit is the same. It will grow vigorously in almost any soil, but likes a light rich one for preference. The best method of showing it to advantage is to grow it in baskets, for the long trails soon cover the outside of the baskets and hang down a considerable length below them. One of the most noteworthy exhibits at the last meeting of the Royal Horticultural Society was composed of three plants grown and shown in this way by Mr. Charles Turner, of Slough, and a very pretty effect these three plants gave.

Campanula isophylla alba.—The present is a good time to see about repotting the old plants. Some of these have been rather badly treated during the winter, and are only just beginning to break into growth. Shake them out of the old soil, and pot them up, using a compost of two-thirds of loam and one of leaf soil with sand. All the dead snags should be cut off neatly with a pair of sharp scissors or a knife. By coddling these old plants up for a few weeks they may be turned into good specimens that will flower freely before the summer is very far advanced. An occasional sprinkling with the syringe will not do them any harm. As basket plants, both *Campanula isophylla* and its charming white variety are everything that could be desired, and the plants never show up to such advantage as they do when thus suspended. In order to fill a good-sized basket several plants will be required. These may either be put into the baskets at once or grown on for a while in pots—say until the middle of May. The old plants of which we have been speaking will come in finely for this kind of work, as they will naturally throw more shoots, and will clothe the sides of the baskets more quickly than the young plants obtained from autumn or early spring-struck cuttings.

Not infrequently do we see various devices resorted to by amateurs to suspend pots from the roof of the greenhouse or the top of the window, in order to show a particular plant off without having recourse to growing it in special baskets. We may take the present opportunity of again calling the attention of those amateurs who may be handicapped by the lack of suitable baskets, to Lawton's Patent Pot Suspenders, a capital contrivance which was figured in *THE GARDENING WORLD* in the issue for February 5th last. By the use of this clip, and a little wire or string threaded through the eyes, any pot may be safely and easily suspended in any position that may be desired. The cost is comparatively trifling, and will be saved many times over.

Achimenes.—The earliest plants have now attained a height of 2 in. or 3 in., and staking should be proceeded with as soon as possible. If left too long the young plants, being very weak in the stem, soon commence to lop over the sides of the pots, and, if the mischief is allowed to proceed, they eventually become twisted and gnarled looking things that are anything but an object of beauty. The best method of staking is to insert five or six light

stakes all round, near the edge of the pot, and pass a strand of raffia loosely round them, giving it a double turn round each of the stakes to keep it in position. The stakes should be at least 10 in. long above the soil, and no attempt should be made to cut off the ends of the stakes until the plants have nearly attained their full growth. These early *Achimenes* may be kept growing on in heat, so as to get them into bloom betimes, but the later hatches that are to afford a succession to them should not be hurried too much. The latest batch of all will need nothing more than a cool frame, in which they may be grown from start to finish. The summer proper will be gone before these commence to bloom, but there will be the corresponding advantages of larger, finer blooms, and sturdier, shorter-jointed growth. *Achimenes* grow away freely enough when placed in heat, but they then attain a much greater height than they do when the cool treatment is practised.

Freesias.—As the later batches of *Freesias* go out of bloom and begin to show signs that their approaching rest is at hand, the water supply should be gradually lessened and all manurial stimulants must be stopped entirely. Give the plants plenty of light and air, so as to facilitate the ripening process. The plants that flowered earlier in the year are quite at rest now, and nothing should be allowed to disturb or stimulate them into premature growth. A cold frame facing to the north is a good place to put resting plants such as these.

Tulipa Greigi.—This handsome and robust growing species takes as kindly to cultivation under glass as it does in the open, and, when we take into consideration the huge size and brilliant flame-scarlet of its flowers, it is evident that it is well deserving of extensive cultivation as a pot plant. Some of the early Tulips are largely grown in this way, yet none of them is more handsome in every way than *T. Greigi*. At the last show of the Royal Horticultural Society it was very conspicuous in at least two exhibits, and in both cases the pots it was grown in were very small in comparison to the size of the plant and the mammoth proportions of the flowers. Those who make a speciality of bulbs for conservatory decoration will do well not to lose sight of it for another year, if they have not already proved its merits. The great thing is not to force too heavily, but to allow the plants to come on gradually, and to bloom just a little before their relatives in the open ground. *T. Greigi* is a native of Turkestan, and was introduced from thence no farther back than the year 1873, so that it is yet a comparative stranger.

Coleuses.—The present is a good time to take a few of the largest of the plants obtained from early spring struck cuttings in hand, and pot them up to form fairly large specimens. As it is obvious that it takes some time to obtain these, even although the *Coleus* is a very quick growing subject, it is advisable to select these specimens during the present month. They will then have all the best part of the year in front of them, and by the month of June or July will be in good condition for transference to the conservatory. This will be quite warm enough for them then, and up to—say the end of September—but after that time the leaves will begin to fall, owing to the lowering of the temperature all round.

Good specimens can be obtained in 8-in. pots, but 10-in. or 12-in. will not be too large for very strong-growing plants. *Coleuses* are rich feeding and thirsty plants, and, therefore, the soil should be rich and retentive. Two-thirds of good loam, and one of spent Mushroom bed manure, rubbed through a sieve, with a good sprinkling of sharp river sand will form a good compost. Drain the pots fairly well and pot rather firmly. In order to obtain symmetrical plants pinching must be resorted to occasionally; all flowers in particular must be kept pinched out. The syringe should be plied freely amongst the plants morning and afternoon, and the temperature should not be allowed to fall below 60° Fahr. Generous treatment such as this will be sure to produce good plants in a month or two.

Coleus Cuttings should still be put in as they can be obtained from the old stock plants. Although every amateur may not have room for big specimen plants neat little samples in 48 and 32 pots are always of service both for the greenhouse and conservatory as well as for the windows of the dwelling house. In the latter position they are always much admired by the ladies of the house, and when properly looked after they do exceedingly well through the summer months.—*Res.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Woodlice.—A warm pit which I used for propagating tender plants is infested with woodlice. I have trapped many of the pests in pieces of Potato, hollowed out and laid about different parts of the pit, but the numbers of the pests show no appreciable signs of diminution. Please give me a hint as to how to get rid of them a little quicker.—*C. C. L.*

The best plan we know of is to pour boiling water in any corners where the woodlice are observed to be. If you clear the plants out of the pit you might easily do this. See that the water used is quite boiling and do not be afraid to use plenty of it. A kettleful or so will be of little use, so you should fill the kitchen copper and heat that, when you will have a plentiful supply.

Incurved Chrysanthemums.—*Rob*: You will find the following varieties to be as good a dozen as you can have:—Mrs. R. C. Kingston, C. H. Curtis, Lady Isabel, Mme. Ferlat, John Lambert, Lord Wolseley, Robert Petfield, Brookleigh Gem, D. B. Crane, J. Agate, Bonnie Dundee, and Baron Hirsch.

Chrysanthemum C. H. Curtis.—*Rob*: First crown buds of this popular variety produce good blooms, and it also does well when it is stopped at the beginning of March, and the second crown buds are taken.

Chrysanthemum N. C. S. Jubilee.—*S. Bencraft*: This handsome variety received an Award of Merit from the Royal Horticultural Society on October 26th of last year, as an incurved Japanese variety, and not as a true incurved. You would scarcely get judges to pass it as an incurved on the show board, but if you choose to run the risk of disqualification there is nothing to prevent you from so doing.

Potting Camellias.—*A. Denison*: You must wait until the flowers are all off the plants, and the young shoots have begun to make their appearance—that will be the best time to pot. Avoid as far as possible giving too big shifts.

Newly Planted Peach Trees.—*P.*: We think you may proceed to tie your trees now. As a couple of months have elapsed since planting, there is little danger of much more subsidence of the soil. You may, however, make the ties rather looser than is usual, as you say the ground was disturbed to a considerable depth all round. In training the tree you must be careful to bring the lower branches down as near to the ground as you can without straining them. You will then have the base of the tree well furnished, which is a matter of some importance. If the branches of young trees are not thus brought down early in their career they soon become so stiff that it is impossible to do anything with them, and, as a consequence, the base of the tree is bare for the whole of its existence.

Syringing Vines.—*R. Jones*: It is usual to stop syringing the Vines as soon as they have got into the stage that is technically known as "rough leaf." The syringing then becomes unnecessary, although it is not harmful. You may syringe the Vines when in full leaf if you so desire, but in such a case you must be careful with the ventilation, so as to prevent burning.

Davallia canariensis.—*A. E. B.*: The healthy rhizomes of *Davallia canariensis* may be divided to form small plants, if desired. In dividing, take care to preserve intact as many as possible of the roots attached to the rhizomes. In potting these divisions up, it will probably be necessary to give support to the heavier fronds. A higher temperature than the old plant was growing in should be given at first, so as to give the small plants a good start.

Potting Japanese Maples.—*W. Baston*: Your plants do not need potting yet, for these pretty Maples will remain a long time in the same pots and

flourish, even although they may appear to be pot-bound. If the plants had not been in good health they would not have produced such a quantity of foliage. You may give an occasional dose of liquid manure if you like—fresh farmyard manure is as good as anything. A very strong reason for endeavouring to keep the plants in the same pots for as long as possible is that they are so much more useful for decorative purposes.

Dwarf Cockscombs.—*S. Rose* is much puzzled to account for the very dwarf Cockscombs that are to be seen at exhibitions throughout the country. He has tried to grow them himself, but has only succeeded hitherto in producing rather "leggy" specimens.

The cultivation is chiefly accountable. These dwarf specimens are obtained by growing the plants close up against the glass, also by potting rather firmly. The strain again has something to do with it. Those cultivators whose plants *S. Rose* so much admires procure only the best strains of seed, and this fact coupled with the kind of cultivation we have mentioned produces the desired results. If *S. Rose* tries his hand again the hint may be of service.

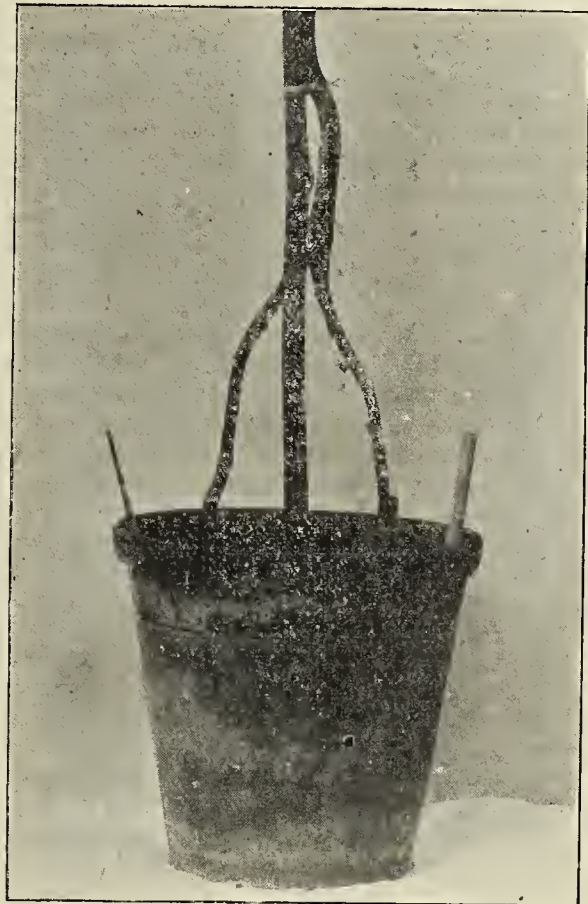
chosen. These were in 3-in. pots at the time, and were potted in pairs into 6½-in. After the roots had taken to the new soil, the top of one was taken off, about 5 ins. from the tips, and a slit was made with an upward cut of the knife at an equal height in the other. The point of the first was shaped into a long wedge and inserted carefully in the slit of the second. They were then carefully bound with fine threads of raffia, and some moss bound round all to insure moisture. Placed in a cool, shady position, they united perfectly in about a fortnight. The plants now stood growing two roots to one plant, and each was contributing an equal share to the maintenance of the growing foliage and resultant blooms. This was evident from the stems of each stock swelling at the same rate through the growing season. They were finally potted into 10-in. pots and took their place with the rest of the collection.

The varieties chosen were picked with an idea of testing what effect the union would have on the colour and shape of the resultant blooms. For this purpose *Mdlle. Thérèse Rey* was united with *Chas. Shrimpton*, the lead being taken by the first-named so that any tinge of colour would show most distinctly on the white flowers. In *No. 2. Mdlle. Thérèse Rey* was again used in con-

last season, but they showed no variation from the true variety, and so I suppose the experiment ends; and I am as far as ever from producing sports by artificial means. To my mind, however, it seems to prove that the roots have little or nothing to do with the colouring of the flower, for though two root stocks were absorbing materials and mingling the resultant sap all the summer, yet nothing of a colouring nature could have been collected by them. This, of course, may be nothing new to those versed in colour science and plant structure, but perhaps the experiment may have other teachings to them, and this must be my excuse for taking so much space in recording it. The accompanying photograph will explain things, perhaps, more clearly than I have been able to do.—*R. E. Richardson, Wollaton, Notts.*

NOTES FROM THE SWANLEY NURSERIES.

In addition to the Chinese Primulas which have been making such a grand show at the Swanley and Eynesford Nurseries of Messrs. H. Cannell & Sons, there are not lacking other attractions. Amongst these one of the most conspicuous is the



GRAFTED CHRYSANTHEMUMS.

AN EXPERIMENT TO INDUCE SPORTING.

THE recent recurrence to the subject of sporting in Chrysanthemums has suggested to me that the following account of an experiment I made in the season of 1896, may be interesting; though it may not throw any additional light on the subject.

It was in the dark days of the previous winter, while lamenting the hard fate of sundry seed heads of Chrysanthemums, which, after having been carefully fertilised, had given up the struggle to reproduce their kind, and which hung ugly and disgusting, a victim to damp, that the wish (being father to the thought) to produce new kinds suggested an experiment in grafting to gain the desired end. The idea may not be new, but as I have never heard or read of anything similar, perhaps a short account of the process may be interesting. My desire at first was to induce an artificial sport from the plant, but all my cogitations failed to give me a cue to work upon.

I had, so to speak, the material, but no tools and no formula. Then the thought presented itself of graft-hybridising, and, though this is no new scheme, the method so far as I know is original. Two plants of similar size, but of very opposite characters, were

junction with *J. S. Dibbens*, the first being again the leader. In *No. 3 Etoile de Lyon* was coupled with *Brookleigh Gem*; in this case the incurved was given precedence to see if the coarse reflexed blooms would influence its co-partner. In *No. 4 Louis Boehmer* and *Mrs. F. A. Spaulding* were wedded, the latter taking the lead; this was to try if the hirsute petals would tell on the smooth ones. *No. 5* was *Gloire du Rocher* with *Jean d'Arc*; and *No. 6*, *Chas. Shrimpton* with *Mme. Chas. Molin*, the second-named in each case leading.

The result was certainly not very startling. In only one case could I see any variation from the normal; this was in *No. 1*, in which some petals were a decided pink. In all the other cases I could not distinguish anything from those under normal conditions, the blooms, however, being exceedingly large and fine for their kinds. This hint may prove serviceable to big bloom growers, and prove a "leg up" to some beautiful but delicate kinds, which have feeble root action; and, perhaps, might correct the deplorable bud-producing habit of others. As no patent rights have been secured for the method I'll make Chrysanthemists a present of the idea.

Cuttings were taken above the union, from the plant which showed a slight pink tint, and grown on

CINERARIAS.

We found several houses filled with these handsome and popular plants, one house in particular in which the cream of the collection was placed being a magnificent sight. The plants were all sturdy specimens of their kind, dwarf and compact, but not so dwarf as to give that idea of squatness that dwarfness carried to the extreme invariably does. The foliage throughout was of remarkable substance, and well exemplified the vitality and vigour of the strain. The heads of flower were magnificent in size and grandeur, and the individual flowers were all that could be desired for size, regularity of outline, and richness and variety of colours. We were informed upon enquiry that all the plants we saw were really the progeny of the "March Past" strain that was shown a considerable number of years ago with excellent results by the Messrs. Cannell, the words "March Past" having been given in allusion to the superiority of the strain over others then in existence.

Naturally enough no trouble has been spared to improve the strain, and make it keep pace with that almost feverish spirit of improvement that has characterised matters floricultural during the last two decades of the present century. Thus, whilst

improved forms, as well as new shades of colour and colour combinations, have been sought for and found by raising seedlings obtained by judicious crossing and recrossing, superior forms have been perpetuated by means of cuttings or root divisions. Comparing the plants raised by these two methods with each other there was, however, very little difference apparent either in vigour of the plant, size of flower, brilliancy of colouring, or floriferousness, but all were alike good in both sections. The whole of the plants were in six inch pots, which size, judging from appearances, is amply large enough for all ordinary purposes.

The Swanley collection is especially rich in shades of blue and maroon, the number of shades being so many, and their differences so subtle, as to baffle adequate description. In addition to the self-coloured flowers, which in Cinerarias as well as in everything else have a richness and effect peculiarly their own, we noticed an infinite variety of what may be termed the bi-coloured flowers, if we accept white for the time being as a colour. On a central white zone which varies in width according to the flower we found margins of all shades of blue, purple, and maroon, the varying widths of which gave an almost bewildering variety; indeed of the seedlings scarcely any two plants had flowers exactly alike. What a field of research a detailed examination of the kaleidoscope-like association of colours this would prove to the physiological botanist, for from one or two primary colours a wondrous variety of hue has been evolved by Nature and man as the result of collaborate working.

Good white varieties are almost invariably the weakest colour section of all modern strains, for the plants seem to be possessed of a feeble constitution, and the flowers are often ragged as compared with the other varieties. The Messrs. Cannell have, however, in Miss May Symbal a grand white form that seems to have risen above the weaknesses common to its kind, for it is certainly both as regards habit of the plant and form of the flower a very fine thing. We hope to see this section fully on a level with the others before very long.

Double varieties find their admirers; indeed it seems as if some people admire anything double simply because it is double. In the case of the Cineraria we cannot adduce any other reason, for the Cineraria has certainly taken too much advantage of its opportunities in assuming the double guise. In deference to those who call for the monstrosity, however, the Messrs. Cannell have a considerable stock on hand. The floriferousness of the plants and the size of the flowers were truly amazing, and left us wondering where this hypertrophy of bloom is to end. The plants, like the singles, bore unmistakable evidence of the high cultivation that the Messrs. Cannell bestow on all the plants they take up.

PLANTS RECENTLY CERTIFICATED.

At the meeting of the Royal Horticultural Society on the 12th inst., the undermentioned certificates were awarded.

Orchid Committee.

EULOPHIELLA PEETERSIANA, *Nov. sp.*—In this recent introduction, flowering for the first time in Europe, we have a species that caused a considerable amount of sensation amongst visitors to the Drill Hall. The large and massive flowers are produced in a raceme surmounting a scape about 3½ ft. to 4 ft. high. The sepals are oblong, the upper one being hooded, and all three, as well as the obovate petals, are of a rich, dark, magenta-purple. The bifid lamina of the lip is small, transverse, and of the same colour, with a golden crest of three to five lamellae passing into seven purple lines that run down the tube. The interior of the latter is creamy-white, the exterior being magenta-purple. It is a magnificent and noteworthy introduction. First-class Certificate. Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burtford Lodge, Dorking.

CYPRIPEDIUM OLENUS BURFORD VAR., *Nov. var. hybr.*—This was obtained from *C. bellatulum* crossed with the pollen of *C. ciliolare*, and is undoubtedly one of the finest hybrids in cultivation, and the Burford variety is the finest yet obtained from this parentage. The flower is of enormous size. The roundly ovate, dorsal sepal is heavily veined and

coloured with purple, the white appearing towards the edges only. The oblong petals are heavily spotted with blackish-crimson on a rosy ground. The massive lip is dark purple. First-class Certificate. Sir Trevor Lawrence, Bart.

ODONTOGLOSSUM WILCKEANUM PITT'S VAR., *Nov. var.*—Though we described and recorded this last year, it has never before been exhibited. The flowers are of great size and generally admitted to be the finest form of *O. wilckeanum*, a natural hybrid. The sepals are almost covered with two large, lobed, chocolate blotches on a yellow ground. The petals are very deeply jagged at the edges and furnished with a horseshoe-shaped line of chocolate blotches, with numerous smaller ones at the base. First-class Certificate. H. T. Pitt, Esq., Rosslyn, Stamford Hill.

DENDROBIUM ASPASIA LANGLEYENSIS., *Nov. hybr. var.*—The sepals and petals of this hybrid variety are sulphur-yellow, faintly tipped with purple. The orange disc of the lip has a bilobed, crimson blotch. It is certainly a charming Dendrobe. Award of Merit. Messrs. J. Veitch & Sons, Ltd., Chelsea.

PHALAENOPSIS STUARTIANO-MANNII., *Nov. hybr.*—The origin of this hybrid is indicated by the name. The gray leaves are mottled with dark green recalling *P. stuartiana*. The sepals and petals are oblong and thickly spotted with brown on a pale yellow ground. The lip is orange-brown with a white tip, and the side lobes are striped with orange-brown. It is both a singular and pretty hybrid. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

EPIDENDRUM ELEGANTULUM LEUCOCHILUM.—The origin in this case was *E. Wallisii*, fertilised with the pollen of *E. Endresio-Wallisii*, itself a hybrid. The oblong sepals and elliptic petals are clear yellow, and the lip pure white, as indicated by the varietal name. The variety is both choice and pretty. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

PHALAENOPSIS SCHRODERAE., *Nov. hybr. nat.*—The leaves are dark olive green above and intense beneath. The sepals and petals are white, with a pale purple tint at the base of the latter, where they are inserted on the purple column. The lip is rose on a white ground, with purple veins; and the side lobes are spotted with orange. It is a pretty Phalaenopsis, presumably between *P. leucorrhoda* and *P. Portei*. Award of Merit. Messrs. Hugh Low & Co., Clapton, and Bush Hill Park, Enfield.

ODONTOGLOSSUM CRISPUM LINDENII., *Nov. var.*—This variety is furnished with large, light, reddish-brown blotches on a white ground. Award of Merit. A Warburton, Esq., Vine House, Haseldene.

MASDEVALLIA VENTRICULATA LONGICAUDATA., *Nov. var.*—In this we have a very dwarf Masdevallia, a pet in its way, having a tubular crimson-purple flower, with three triangular lobes ending in tails 1½ in. in length, and all of a dark hue. Botanical Certificate. Sir Trevor Lawrence, Bart.

Floral Committee.

AMARYLLIS DAONES.—The funnel-shaped flowers of this variety are bright orange-scarlet with white edges to the segments, making a beautiful and charming contrast. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

DRACAENA AUREA STRIATA.—In this we have a third variegated form of *D. fragrans*. The broad, arching leaves are of a dark glossy green, irregularly variegated with broad and narrow bands of bright yellow. The variegation is not confined to the edges or middle as in the other varieties, but occur on any part of the leaf, the bands running the long way of the same. Award of Merit. Messrs. Hugh Low & Co.

CAMELLIA PRIDE OF WALTHAM.—For description see p. 523. Award of Merit. Messrs. Wm. Paul & Son, Waltham Cross.

CAMELLIA MRS. J. BUCHANAN.—This may be described as a single or semi-double variety, with white flowers, irregularly striped and mottled with red. It affords a foil to the massiveness of the large double sorts. Award of Merit. Messrs. Wm. Paul & Son.

CAMELLIA DUCHESS OF TECK.—This is a large, fully double, imbricate, and smooth flower, with soft rose or rosy pink flowers. Award of Merit. Messrs. Wm. Paul & Son.

Narcissus Committee.

NARCISSUS POETICUS HOMER.—The flowers of this noble variety are of huge size, with imbricate, pure white segments. The crown is saucer-shaped, of large size, and rich orange, intensified to crimson at

the edges. First-class Certificate. Rev. G. H. Engleheart, Appleshaw, Andover.

NARCISSUS LADY MARGARET BOSCAWEN.—This is a handsome hybrid, with a very wide perianth of ovate, creamy-white segments, rounded and broad at the apex. The trumpet is of medium length, but very wide and golden-yellow. First-class Certificate. Rev. G. H. Engleheart.

NARCISSUS WHITE QUEEN.—Here again we have a hybrid with a crown of medium length, but wide, deeply cut, and crisped at the mouth, and lemon, fading to white or nearly so. The perianth segments are ovate, of great size, and creamy-white. Award of Merit. Rev. G. H. Engleheart.

NARCISSUS LUCIFER.—Though belonging to the Medio-coronati section, the crown of this variety is much shorter than those of the previous two, cup-shaped, and deep orange almost to the base, being very handsome. The sulphur segments are shaped like those of *N. poeticus*. Award of Merit. Rev. G. H. Engleheart.

NARCISSUS ORIFLAMME.—The short, wide, cup-shaped, rich orange-scarlet crown of this hybrid also shows an affinity with *N. poeticus* or *N. Burbridgei*, the latter itself a hybrid. The oblong segments are creamy-white. It is a very pretty sort. Award of Merit. Rev. G. H. Engleheart.

GHENT QUINQUENNIAL SHOW.

April 16th to 24th.

SPLendid weather favoured the opening of the fourteenth International Horticultural Exhibition (the 163rd held by this society), of the Royal Agricultural and Botanical Society of Ghent. The opening ceremony and inspection of plants was performed by His Majesty the King of the Belgians, who was accompanied by the Queen, and his daughter Princess Caroline. The royal party arrived about 8 a.m. on Saturday the 16th, and were immediately escorted to the Place du Casino by the Civic Guard. The King spent three hours or more inspecting the plants and speaking to the various notable exhibitors and visitors, both Belgian and foreign, who were introduced to him. He was accompanied by the president, M. le Comte de Kerchove de Denterghem, and his daughter, besides the Belgian Minister of Agriculture and many other distinguished people.

THE CASINO.

Prizes were offered for the most varied collection of the forty best flowering or non-flowering plants, in the name of an English committee to honour the memory of M. Louis Van Houtte père. The first prize, a Work of Art (value 300 francs), was awarded to the Ghent Horticultural Society, Ghent, who had fine specimens of *Cyanophyllum magnificum*, *Phyllotaenium Lindeni*, *Heliconia illustris*, *Alpinia vittata*, *Oncidium sarcodes*, *Smilax argyrea*, *Pavetta borbonica*, *Aralia sonchifolia*, *Dieffenbachia Fournieri* and others. The greater number of the plants were fine foliage subjects. The second prize, a Work of Art (value 200 francs) was taken by M. Albert Rigouts, Meirelbeke, Ghent. The opinion freely expressed was that this exhibit should have been first. He had magnificent specimens of *Phyllotaenium Lindeni*, *Polypodium difforme macrophyllum*, *Encephalartos Altensteinii*, *Vriesia moensiana*, with variegated leaves, *Erica Cavendishii*, in fine form, a magnificent pan of *Anoectochilus Petola*, *Dracaena sanderiana*, *Phoenix Roebelinii*, *Heliconia illustris*, *Anthurium Hookeri*, *Dichorisandra argentea*, *Schismatoglottis Roebelinii*, *Dieffenbachia Bausei*, and other fine foliage subjects. He had grand specimens of *Oncidium ampliatum majus*, *Odontoglossum luteo-purpureum*, and *Clerodendron Balfourii*, representing flowering plants. The Gold Medal offered as the third prize was taken by the society Anonyme Louis Van Houtte père, Gendbrugge, Ghent. *Pimelia spectabilis*, *Anthurium Veitchii*, *Dracaena Doucetti*, and *D. Triomphe de L'Exposition* were good, the latter being pretty. Several of the *Anthuriums* were also noteworthy, and *Erica Cavendishii*, and *Cymbidium lowianum* particularly so.

For a collection of twenty miscellaneous plants, flowering or foliage, and open to amateurs, the Gold Medal was secured by M. E. Bedinghaus, Ghent.

In the nurserymen's class for twenty miscellaneous plants the first prize, a Work of Art, was again secured by the Ghent Horticultural Society, with a

massive specimen of *Nephrolepis davallioides* furcans, also *Anthurium Veitchi*, *Aglaonema Roebelina*, *Maranta picturata*, *Cyclanthus spectabilis*, and various others. The second prize, a small Gold Medal, went to M. G. Van den Abeele, Ghent. The third award went to M. Albert Rigouts.

The Ghent Horticultural Society took the Gold Medal for twelve *Crotons*, which were plants of medium size. Very fine varieties were Mme. Bause and Georges Lesneuer. M. A. Dallièrè, of Ledeburg, took the Silver-gilt Medal in case as the second prize. The Society Anonyme L. Van Houtte came in third.

For twenty-five *Dracaenas* or *Cordylines*, with coloured foliage, the Ghent Horticultural Society again took the lead with well coloured specimens 18 in. to 3 ft. high. Very fine were Bartelli, Excellent, Mme. de Smet-Duvivier, and Directeur Alphan (Gold Medal, value 100 francs). M. J. E. Story, Ghent, took the smaller Gold Medal as the second prize.

The leading prize for the best and most varied collection of twenty-five *Anthuriums* in bloom was taken by M. Louis de Smet, Ledeburg, Ghent, whose finer plants were *A. scherzerianum purpureum*, *A. rothschildianum*, *Secrétaire Fierens*, and *A. r. Mme. Eliza Braga*.

The Ghent Horticultural Society came second with smaller plants, but a greater amount of variety, including *A. ferrierense album*, *A. scherzerianum album*, *A. roseum* (salmon-pink) *A. punctatum*, *A. Souv. de l'Exposition*, *A. grandiflorum*, and other finely spotted varieties, hybrids between *A. scherzerianum* and *A. rothschildianum*. M. Arthur de Smet also took a prize for a large group of *Anthuriums*, but the card was too distant to be read without a telescope. He was second for twelve plants of *A. scherzerianum* in flower, and for twenty varieties of the latter species, taking the small Gold Medal. M. Vervaene-Verraert took the large Gold Medal, being first.

M. Gustave Botelberge, Melle, Ghent, took the Silver-gilt Medal for four huge plants of *Strelitzia Reginae*, all in bloom.

For a collection of ten *Dieffenbachias* the Silver-gilt Medal in case was taken by M. A. Rigouts, the varieties *D. Jenmanni*, *D. picta*, and *D. Fournieri* were very fine.

The Gold Medal for a collection of fifty *Caladiums* was taken by the Society Anonyme L. Van Houtte, père. Some of their fine varieties were *Louis Van Houtte*, *L'Automne*, *Atala*, *Clio*, *Raimond Lemoinier*, *Pintado*, and *Chantini*. M. C. Vermeire, of Gendbrugge, Ghent, took the Silver-gilt Medal for the twenty-five *Caladiums* in large pots. The Silver Medal of the first-class for fifteen new *Caladiums* went to the Society Anonyme L. Van Houtte.

The Work of Art offered for fifteen *Cycads*, in large specimens, was taken by M. de Ghellinck, Walle, Ghent. He had enormous specimens of *Encephalartos Altensteinii*, *Cycas siamensis*, *C. circinalis*, *C. revoluta*, *Zamia Hildebrandi*, *Z. verucosa*, *Dioon edule*, and others. MM. de Smet, frères, of Ledeburg, Ghent, took the Gold Medal for eight *Cycads* in large samples. The Silver-gilt Medal for fifteen *Pandanus Veitchi* was taken by MM. Verdonck, Gendbrugge, Ghent. M. K. J. Kuyck, of Mont-St. Amand, took the Silver Medal.

For a collection of fifteen *Palms*, open to amateurs, the Work of Art was taken by M. J. Moens, Lede.

In a similar class open to nurserymen the Work of Art was unanimously awarded to M. Emile de Cock, the treasurer of the society, 55, Boulevard d'Akkergem, Ghent. He had enormous specimens of *Phoenix*, *Rhapis flabelliformis*, *Marattia sorbifolia*, &c. M. Arthur Rigouts was second, taking the Gold Medal.

M. A. de Smet, was accorded the Silver-gilt Medal for Filmy Ferns. M. Em. de Cock, had the best fifteen greenhouse ornamental plants, showy, huge *Palms*, *Ferns*, &c., taking the Work of Art. M. B. Spae took the large Gold Medal, as the second prize.

The Work of Art offered by the members of the council of administration of the society for six Tree Ferns, was taken by the Comtesse de Kerchove de Denterghem, with large samples of *Cyathea dealbata*, *Cibotium Schiedei*, *Alsophila Cooperi*, *Dicksonia antarctica*, &c. The Gold Medal, as second prize, went to MM. de Smet frères, Ghent. For a collection of tree and herbaceous Ferns, the large

Gold Medal was taken by the Comtesse de Kerchove de Denterghem. The small Gold Medal went to M. Ed. Pynaert van Geert, Ghent. He took the leading award, however, for an exotic Fern remarkable for culture or beauty, showing a huge piece of *Polypodium aureum*. He also had the best stove plant in a tall specimen of *Aralia elegantissima*. M. J. Moens took the Silver-gilt Medal for a huge *Vriesia* about to flower.

For a collection of twenty-five stove plants with variegated foliage the Work of Art was taken by M. H. Millet, of Ledeburg, Ghent. M. A. Rigouts took the Gold Medal, worth 150 francs. They were well grown examples of *Dieffenbachia*, *Crotons*, *Alocasias*, *Heliconia*, *Tradescantia superba*, &c.

The valuable Work of Art, offered by M. le Comte de Germiny for the hundred most varied exotic Orchids was awarded to M. A. Peeters, Brussels, with unanimity. He had a great variety of *Cattleyas*, including the pure white *C. intermedia Partbenia*, *C. P. gratissima*, *C. Schroderae*, *C. Mossiae reineckiana*; also *Laelia Latona*, *Eulopbiella Elizabethae*, *Phaius Norman*, *Odontoglossums*, and *Oncidium sarcodes*, in great variety. *Miltonia bleuana nobilior*, *M. b. aurea*, the blue lipped *Zygopetalum Perrenoudi*, and many others set up with *Adiantums*.

The Gold Medal offered by His Majesty the King of the Belgians, for 100 exotic Orchids, was taken by M. Gustave Vincke-Dujardin, of Bruges. The *Odontoglossums* were the predominant feature of this group. *O. crispum Gabrieli* was a beautifully blotched variety, as were *O. andersonianum superbum*, *O. ruckerianum superbum*, *O. scheepsdaliensis* and others. A bold effect was also produced by *Oncidium sarcodes*, *O. spilopterum*, *O. serratum*, and other tall sorts. An enormous specimen of *Anthurium Hookeri*, with leaves about 4 ft. to 5 ft. long and 18 ins. wide, shown by the Comtesse de Kerchove de Denterghem secured a Silver Medal of the first-class. The Work of Art offered by M. le Comte de Kerchove de Denterghem for twenty-five *Palms*, was taken by the Ghent Horticultural Society with very tall specimens of *Caryota*, *Astrocaryum*, *Cbamaedorea elegans*, &c. The Gold Medal (value 200 francs) was taken by MM. de Smet frères.

The Ghent Horticultural Society took the Gold Medal for the collection of fifteen rare *Palms*, showing fine plants of *Brahea havanensis*, *Trachycarpus khasyanus*, *Pinanga Kuhli*, *Livistona Hoogendorpii*, *Dasmonorops javanensis*, &c.

M. A. Rigouts took the leading award (Gold Medal) for twelve stove plants, having variegated or marbled foliage. M. H. Millet was second in this case. The plants were similar in kind to those in the class for twenty-five plants.

The Silver-gilt Medal in case, offered for a collection of fifteen *Bromeliads* in flower, was taken by M. L. Duval, Versailles, in the nurserymen's class. In the class for amateurs the Silver-gilt Medal was taken by M. J. Moens. MM. Duriez frères, Wondelgem, had the best twelve exotic herbaceous Ferns in well-grown samples. They also had the best twelve species and varieties of *Asparagus*. M. Pynaert van Geert took a Silver Medal of the first class for a large *Pandanus desmetianus*. The Silver-Gilt Medal offered for the most beautiful *Rhapis humilis* was taken by M. Arthur de Smet, with a specimen about 10 ft. high and 8 ft. wide.

In the non-competitive classes, Messrs. F. Sander & Co., St. Albans, England, and Bruges, Belgium, exhibited a collection of new and other plants, covering about 70 ft. running of table space round one end of a hall, all the pots being plunged in moss. The most striking and novel of all their plants, or indeed in the exhibition, was the new *Acalypha Sanderi*, with long drooping spikes of flowers like crimson-velvet ropes or a glorified *Love-lies-bleeding*. Other very striking things were *Geonoma pynaertiana*, almost like a *Stevensonia*; *Areca Ilse-manni*, with purple petioles; *Pandanus Sanderi*, with variegation running all over the leaves, and not confined to the margin; *Licuala Jeananceyi*, after the style of *L. borrida*, but having smaller and less formidable spines; and the beautifully variegated *Dracaena Broomfieldi*. The scolloped leaves of *Alocasia wavrineana* are dark green and very singular in appearance. There is a considerable amount of grace in *Calamus Albertii*, and *C. Caroli*, having long, arching, pinnate leaves. *Aralia balfouriana* has trifoliate, variegated leaves, in the style of *A. Guilfoylei*, but having broader segments. *Pan-*

danus Sanderi is bound to become popular on account of its abundant variegation and handsome appearance. *Panax mastersiana* has pinnate leaves curiously bifurcate at the apex. Huge specimens of *Dracaena godseffiana* and *D. sanderiana* were very fine indeed. *Anoectochilus Leopoldi*, in a case as imported, were in good condition after a four months' journey. The large leaves have a golden tracery. Very richly spotted was *Odontoglossum crispum Roi Leopold*. Fine plants of *Cocos weddeliana* had an olive-blue background, as in their native wilds.

Messrs. J. Veitch & Sons, Ltd., Royal Exotic Nursery, Chelsea, London, showed the largest exhibit of *Amaryllis* in the show, in a transept off the *Salle Primitive*. There was a great amount of colour in different named varieties, all arranged in a most effective and telling way. Splendid varieties are *King of the Belgians*, *Elatior*, *Petrina*, *Dorothea*, *Armoire*, *Evadine*, *Model*, *Cecilia*, *Surprise*, *Euphrasia*, *Parthenia*, *Owick*, *Callaby*, and the noble variety *Francisca*. On the opposite side of the pathway they had a fine display of insectivorous plants, chief amongst which were the *Nepenthes*. They had massive pitchers of *N. mixta*, *N. amesiana*, *N. dicksoniana*, *N. mastersiana*, *N. Wittei*, *N. Veitchii*, *N. bookeriana*, and various others on massive plants in pots and pans. Some tall *Cocos flexuosa* formed a background to the whole. In front were flowering specimens of *Sarracenia Stevensii*, *S. Drummondii*, *S. Popei x purpurea*, *S. Popei-Chelsoni*, *S. Chelsoni*, and others not in bloom. They also had a large pan of the rare *Heliampora nutans*, and a fine pan of *Cephalotus follicularis*. *Nepenthes sanguinea* is a rare, but handsome species. They received the highest award given, a bronze Work of Art.

The Jadoo Company, Ltd., Exeter, England, had an exhibit of plants grown in Jadoo fibre, showing that plants of a very varied character may be reared and accommodated by this substitute for soil. For instance, they had *Roses*, *Ferns*, *Lilies*, *Crotons*, *Araucarias*, *Pelargoniums*, *Ficus*, *Palms*, and other subjects. Here also were some photographs of houses in the nursery of Messrs. R. Veitch & Son, Exeter.

Messrs. Wm. Cutbush & Son, Highgate, London, N., had a beautiful group of *Malmaison Carnations*, in several varieties, and all remarkably dwarf. Other tree varieties were represented by a small group of *Winter Scarlet* (free and bright), *King Arthur*, *Waterwitch*, and several others of recent introduction. They also had a fine lot of *Richardia elliottiana*.

MM. L. & G. Duriez, frères, Wondelgem, Ghent, had an exhibit of large *Palms*, *Pandanus*, *Araucaria*, *Ferns*, *Calatheas*, &c., in the Casino.

Messrs. H. Cannell & Sons, Swanley, Kent, had a fine exhibit of *Pelargoniums* in large, imposing bunches of cut flowers, numerous first-class varieties being represented. They also had some fine plants of crimson *Polyanthuses*, and blue *Primroses*.

A very extensive collection of plants was exhibited on the bridge over the ornamental water in the Casino, by M. Lucien Linden, *L'Horticulture Internationale*, Parc Leopold, Brussels, in memory of the late M. Jean Linden, who discovered and introduced about 1,200 Orchids, 250 *Palms*, and 3,000 other species of plants. Amongst others were good examples of *Haemanthus Lindenii*, *Maranta majestica minor*, *M. m. rubra*, *M. m. alba*, *Vriesia hieroglyphica*, *Tillandsia musaica*, *Furcroya Lindenii*, *Dieffenbachia Meleagris*, *Alocasia Putzeysi*, *Dracaena Lindenii*, *Cyanophyllum magnificum*, *Gunnera manicata*, *Dioon edule*, *Dracaena neo-caledonica*, *Caraguata cardinalis*, &c. The native countries of all these things were on the cards attached to the plants.

A small group of *Odontoglossum crispum* was staged by M. A. Van Beerlere, Mont-St.-Amand, Ghent.

MM. Koster & fils, Boskoop, Holland, received a Silver Medal for a group of *Azalea Anthony Koster* (*mollis x sinensis*), with large and very handsome apricot flowers.

Altogether, the Ghent Quinquennial Exhibition on this occasion was finer than it was five years ago.

SALLE PRIMITIVE.

ORCHIDS.—With the exception of the two fine groups in the Casino, the Orchids were mostly arranged on the central tables in the original hall for the show as above named. M. J. Moens secured the Silver-gilt Medal in case offered for the twenty-five best *Cypripediums* and *Selenipediums*. *C. Niobe*, *C.*

van imschootianum, C. Charles Madoux, C. harrisia-num violaceum, and C. Schroderae were noticeable hybrids.

For a similar collection, open to nurserymen, the Gold Medal was secured by M. Ed. Pynaert Van Geert, Ghent, who had five pieces of C. Exul, C. bellatulum album, C. lambertianum, C. mastersianum, C. Bartelli, &c.

In the amateurs' class for the most varied and meritorious collection of fifty exotic Orchids, the Gold Medal was taken by M. F. Panwels, of Antwerp. He had five pieces of Cattleya citrina, Odontoglossum Rossii majus grande, Miltonia Vandesvoordti, Dendrobium macrophyllum, &c.

The Gold Medal for the most numerous collection of species of Orchids was taken by M. A. Van Imschoot, Mont-St.-Amand, Ghent. He had a most varied collection of Odontoglossums, Dendrobiums, Miltonias, Masdevallias, Cochliodas, Cypripediums, &c., but mostly in small plants. M. Ch. Maron, Brunoy, Seine-et-Oise, France, secured the Silver-gilt Medal in case for a new hybrid Orchid, showing the beautiful Laeliocattleya Henry Greenwood, with a large purple lip and lemon throat. He also had the Silver-gilt Medal for the most beautiful Laelia, showing L. digbyana.

In the nurserymen's class for the most varied and meritorious thirty exotic Orchids, the Gold Medal was taken by M. L. de Smet Duvivier. The smaller Gold Medal went to M. H. Van der Straeten, of Bruges. The plants were all of moderate size.

For the most beautiful Oncidium a group of O. sarcodes was shown by M. L. P. de Langhe-Vervaene, taking the Silver-gilt Medal. M. L. de Smet Duvivier had the best Dendrobium in D. thysiflorum, taking the Silver Medal. He also took the Silver-gilt Medal for the three best flowered Orchids, showing Odontoglossum luteo-purpureum, Cymbidium lowianum superbum, &c.

W. Thompson, Esq., Walton Grange, Stone, England, took the Gold Medal (value 100 francs) by acclamation for the best collection of thirty Odontoglossums. He had grandly grown pieces of O. crispum Thompsoniae, O. crispum Annie, O. wilckeanum nobilior, O. luteo-purpureum amplissimum, O. l-p. miniatum, O. Roezlii alba, O. humeanum splendens, &c., in the pink of condition. He was second for the most beautiful Odontoglossum, showing a fine piece of O. Halli. The first prize in this case went to M. Metdepenningen, Ghent, who showed Odontoglossum Mme. Metdepenningen. The latter had the best O. crispum. He also took the Silver-gilt Medal in case for the best fifteen Odontoglossums in the amateurs' class. They were small, clean and healthy plants. M. Metdepenningen again led the way in the amateurs' class for the most beautiful collection of fifteen exotic Orchids, taking the large Silver Medal offered by the committee of the Williams Memorial Fund. He had large pieces of Oncidium sarcodes, Cymbidium lowianum, and Cypripedium lawrenceanum.

AMARYLLIS.—For the finest lot of seventy-five Amaryllis, the Work of Art was taken by Messrs. R. P. Ker & Sons, Liverpool, England. Mars, Lothair, Medusa, Imperial, Fairy Queen, Dido, and others were some of his finer varieties, in a most effective and meritorious display. He also secured the leading prize, a large Gold Medal, for forty Amaryllis, which were of the same character and quality as the previous ones. The smaller Gold Medal for forty went to MM. E. H. Krelage & Son, Haarlem, Holland; and M. F. D'Hooge de Loochristy, was third.

Messrs. R. P. Ker & Sons again came to the front for twelve Amaryllis, taking the Silver-gilt Medal in case. They also took the Silver-gilt Medals for six Amaryllis and for seedlings not before shown at the exhibitions of the society. The standard of merit in all these cases was very high.

In one of the wings of this building was the competition for plants grown by chemical manures, and others without feeding. The Gold Medal was taken by M. E. Truffant, of Versailles, France, who feeds his plants with doses of chemical manures in cartridges of twelve different kinds, each lasting four months.

The L. Van Houtte Society, Ltd., took the Silver Medal for Gloxinias in the nurserymen's class.

BULBS IN POTS.—The Work of Art for 150 Hyacinths in fifty varieties was taken by MM. Byvoet frères, Overveen, Holland. They were very fine considering that they were grown in 4½ in. pots. The Society L. Van Houtte, Ltd., was second; and

M. K. J. Kuyck, Hillegom, Holland, was third. In the class for 100 Hyacinths in 100 pots, the third exhibitor in the previous class was placed second, otherwise the awards were similar.

The Silver-gilt Medal for twenty-four pots of Polyanthus Narcissi was secured by M. K. J. Kuyck, who had five bulbs in each 24-size pot. The L. Van Houtte Society, Ltd., was second. MM. E. H. Krelage & Son, exhibited the most beautiful lot of fifty self-coloured Tulips, which were remarkable for the height of their stems and size of flower (Silver-gilt Medal in case).

The L. Van Houtte Society, Ltd., had the best fifty double Hyacinths, and the best fifty single sorts, taking Silver-gilt Medals in each case.

M. K. J. Kuyck took the Gold Medals for 300 single early Tulips and 300 early double varieties. The same exhibitor took the Gold Medal for 250 Hyacinths in twenty-five varieties grown in pans. They were very effective. He secured the Silver-gilt Medal in case for fifty pots of mixed Daffodils. The L. Van Houtte Society, Ltd., was second.

MISCELLANEOUS NEW PLANTS, &C., IN THE SALLE PRIMITIVE.

The large Silver Medal offered by the Committee of the Williams' Memorial Fund for twenty-five Cyclamen was taken by M. L. P. de Langhe-Vervaene, St. Gilles, Brussels, for his fine lot of C. latifolium Papillo with the finely crisped flowers. He also secured the Silver-gilt Medal in case for the finest fifty Cyclamen showing the same variety in many colours. The Silver-gilt Medal for twenty Gloxinias was taken by M. A. Van Laethem, Gendbrugge. He took a similar prize offered by Herr E. Benary, Erfurt, for thirty Gloxinias.

M. L. Duval, Versailles, France, took Silver-gilt Medals for a collection of fifteen Bromeliads; for three new hybrid Bromeliads; and the best Bromeliad not in commerce (showing Vriesia griesseniana). The Ghent Horticultural Society had the best Anthuriums with variegated flowers. They were of the A. rothschildianum type and very fine indeed. M. A. Peeters, Brussels, had the best seedling in Anthurium hybridum bruxellense.

M. A. Rigouts had the best collection of thirty Aroids, which were very well grown indeed, and also varied (Gold Medal). The L. Van Houtte Society, Ltd., took the smaller Gold Medal for a good lot. M. A. Rigouts took the lead for ten Marantas. The first prize for seedling plants not in commerce was taken by M. L. de Smet-Duvivier, who also was first for a new plant with double flowers, and for ten plants put in commerce since 1895. He also took Silver-gilt Medals for twelve and six Alocasias.

M. Ed. Pynaert-Van Geert took the Gold Medal for ten species of Anoectochilus and their allies, which were fine. M. E. Dallièr, Ledeburg, was second with another interesting lot.

M. C. Petrick, Ghent, took the Gold Medal for the best ten plants put into commerce since 1893. M. A. Rigouts was second.

In the amateurs' classes M. E. Fierens, secretary of the society, had the best forty single and twenty double Cinerarias. The Silver-gilt Medals for forty single and twenty double Cinerarias in the nurserymen's classes was taken by MM. Vilmorin Andrieux & Co., Paris.

ANNEXE MOBILE.

AZALEAS.—The finest display of all was undoubtedly that in this huge structure, on account of the bright hues of the flowers, and the quantity of them. For a collection of thirty large specimen Azaleas the leading award (a Work of Art) was taken by M. de Ghellinck, of Ghent, whose huge, dome-shaped specimens were well flowered and most gorgeous in appearance. Hooi-brencki, Reine de Pays-Bas, Modelle, Baron de Pret, Roi Leopold, and Marie Vervaene were some of his finer sorts. M. Ad. D'Haene, Gendbrugge, Ghent, was second, taking a Work of Art. The Comtesse de Kerchove de Denterghem also took a Work of Art for twenty large Azaleas, which were heavily bloomed.

In the nurserymen's class for twenty Azaleas, M. Ad. D'Haene took the lead (Work of Art). MM. Vervaene, frères, were second (Gold Medal). For a collection of sixty Azalea indica, of market size, the leading award (a Work of Art by MM. de Smet, in memory of M. Louis de Smet) was secured by the L. Van Houtte Society, Ltd. The Gold Medal was taken by M. Bottelberge, Melle. The smaller Gold Medal was taken by M. A. Van Acker, Loochristy. The Silver-gilt Medal in case as fourth prize was

taken by Messrs. F. Sander & Co., St. Albans and Bruges. This latter lot was really grand, and many thought they should have had the first prize, but they were plunged in moss. All these market plants had a most imposing effect, there being nine entries.

The Gold Medal for a collection of 100 varieties of Azalea indica was taken by M. Ad. d'Haene, with a grand lot of medium sized plants, occupying a large kidney-shaped bed. The L. Van Houtte Society, Ltd., was second, taking the smaller Gold Medal.

In the amateurs' class for a collection of twelve Azalea indica in good-sized samples, the Gold Medal was accorded to Mme. La Comtesse de Kerchove de Denterghem.

In a corresponding class for nurserymen, M. P. E. de Cock took the Gold Medal for a beautiful lot of medium size. MM. Vervaene frères were second with larger plants but smaller flowers.

In the nurserymen's class for twenty specimen Azalea indica the Work of Art was taken by M. Ad. d'Haene with dome-shaped specimens of considerable size. MM. Vervaene frères were second with a similarly fine lot, taking the Gold Medal. M. Jos. Vervaene was third (small Gold Medal.) The latter had the Gold Medal for twelve double Azalea indica. He also had the Gold Medal for twenty varieties of A. indica put into commerce since 1888; and the Work of Art offered by Herr R. Seidel, of the Laubegast Society, Saxony, for the best twelve new A. indica. M. P. E. de Cock was second (Gold Medal), but came to the front for the best A. indica with double flowers, not yet shown before the society, taking the Silver-gilt Medal for a seedling with large, regular, flat, rich red corollas, having a rosette in the centre. It was much admired by connoisseurs.

The Silver Medal for A. indica with double flowers, in a variety fixed by grafting, was taken by M. L. Eeckhaute, St.-Denis-Westrem, with Mdlle. Emma Eeckhaute, rose with silvery edges.

M. Ed. Pynaert-Van Geert took the Gold Medal for twenty large plants of Azalea mollis, which were very varied, handsome, and well-flowered. The Gold Medal for thirty plants of Azalea pontica was taken by the L. Van Houtte Society, Ltd. For a collection of twenty hybrid Azaleas (mollis × sinensis) the first prize was taken by MM. Koster & fils, Boskoop, Holland. M. J. Brack, Loochristy, was second. M. Ed. Pynaert-Van Geert came in third with a grand lot; and M. B. Spae was fourth.

For the finest lot of thirty standard Azalea mollis, the Gold Medal was taken by M. A. de Smet, with well-flowered specimens about 5 ft. high; M. B. Spae Coupure, Ghent, was second.

RHODODENDRONS.—The Work of Art for a collection of forty specimen Rhododendrons, was awarded to M. Ed. Pynaert van Geert, who had large and well-flowered bushes in tubs forming an imposing bank, and occupying a great amount of space. M. B. Fortie, Ghent, received the Gold Medal for twenty-five large Rhododendrons, which were well flowered. M. B. Spae took the Gold Medal for ten standard Rhododendrons; and was followed by M. F. Spae. M. Bernard Spae also came to the front for twenty-five standard Rhododendrons, taking the large Gold Medal; and M. F. Spae the small one.

NEW HOLLAND PLANTS, &C.—Her Majesty the Queen of the Belgians offered a Gold Medal for twenty-five specimen plants, and this was secured by the fine exhibit of M. Emile de Cock, Ghent, who had grand samples of Acacia armata, A. longifolia, A. grandis, A. cordata, Erica mediterranea, Azalea linearifolia, Cymbidium lowianum, &c.; M. E. Bedinghaus was second, taking another Gold Medal for a grand lot; and M. E. Collumbien Mirelbeke, Ghent, came in third, taking another Gold Medal for a very fine lot. He was first, however, for a collection of thirty plants in the nurserymen's class, showing a very fine lot of interesting things.

Citrus sinensis (Otaheite Orange) was well grown and heavily fruited. M. C. Vande, Wynckele, took the Silver-gilt Medal for twenty-five plants. M. E. Lossy, Mont-St.-Amand, was a good second (Silver Medal). A Work of Art was accorded to M. C. Vander, Haegen, Neve, for a collection of 100 standard Roses. He was first for the best lot of Maréchal Niel.

The Work of Art for a collection of thirty Camellias was taken by M. L. Eeckhaute, who had pyramidally trained specimens. The Gold Medal for a collection of fifteen greenhouse plants was taken by M.

E. Bedinghaus, who had the Gold Medal for ten Cape and New Holland plants. He also had the Gold Medal for fifteen greenhouse plants in large healthy specimens, his pyramidal *Acacia longifolia* being 10 ft. to 12 ft. high. M. A. de Clercq Van Ghyssem took the Gold Medal for fifteen *Ericas*. In the amateurs' classes for thirty and twenty Cape and New Holland plants, M. E. Bedinghaus again led the way with interesting collections. He also secured the Gold Medal for the best twelve plants in tubs for the summer garden, showing a huge *Doryanthes Palmeri* and other interesting subjects. Mme. la Comtesse de Kerchove de Denterghem took the Gold Medal for twenty Cape and New Holland plants in fine form.

The Gold Medal for twenty *Rhododendrons* of Java, and the Himalayas, or their hybrids, was taken by M. J. Baumann, Ghent, with a well-flowered and powerfully-scented lot, including *R. Edgworthii*, *R. fragrantissima*, *R. dalhousieanum*, *R. d. victoria-num*, *R. Aucklandi*, *R. asamicum*, *R. Gibsoni*, *R. formosum*, Countess of Sefton, and other fine greenhouse types.

M. Jules de Cock, Ledeborg, secured the Gold Medal for twenty Cape and New Holland plants. M. G. de Saegher, Ghent, was second, taking the Silver Gilt Medal in case.

Clivias were well grown and richly coloured; and the Gold Medal for twenty plants was taken by M. C. Ver-Meire, Gendbrugge; M. B. Fortie was a good second.

There was a large number of exhibits of Conifers and other hardy shrubs in the open air, as well as greenhouses, tools, machinery, &c. M. Fred. Burvenick père, Gendbrugge, Ghent, took Silver-gilt Medals for twenty dwarf and ten new Conifers, and a Gold Medal for forty Conifers.

Gleanings from the World of Science.

THE following subjects came before the Scientific Committee of the Royal Horticultural Society on the 22nd ult. :—

Orchid Roots with Fungus.—With reference to the nature of the fungus attacking Orchid roots in a damp atmosphere, referred to at the last meeting, Dr. W. G. Smith, of the Yorkshire College, Leeds, writes as follows:—"The Orchid aerial roots sent contained a fungus which lives on them and has killed some already. The absence of any form of reproductive organs renders it impossible to identify the parasite. Other portions of the diseased plants (*i.e.*, leaves) would be required to ascertain the true nature of the fungus. The fungus present attacks living cells, consumes the food laid up by the plants, and finally kills the roots. A disease having somewhat the same effects has been found in the *Vanilla* plants of Mauritius."

Palm Leaves Discoloured.—Mr. W. A. Holmes, F.R.H.S., of the Putney Nurseries, sent some portions of Palm leaves with numerous translucent spots. They were received from the Continent. An examination appeared to indicate a previous attack by insect grubs, but none were present, the interior tissue having disappeared from the spots; so that the new leaves would probably be quite healthy.

Vine-Browning.—Mr. Hudson showed a young shoot, the leaves of which were blistered and brown. This is due to the presence of the well-known myxomycetous fungus, *Plasmodiophora Vitis*, allied to *P. Brassicae*, the "slime fungus," which gives rise to "club-disease," or "finger and toe," in cultivated cruciferous plants. The only remedy is to cut away and burn all affected leaves or shoots. It is described and figured in Viala's *Maladies de la Vigne*, p. 400.

Ivy Sports.—Dr. Masters exhibited sprays of a peculiar small-leaved dwarf Ivy, remarkable for sending up vertical shoots with distichous leaves, though unattached to a wall. The habit appears to have become fixed, even in free-growing branches. On some shoots, however, the leaves were spirally arranged, as is usual on such branches. It may be observed that the change from the distichous arrangement of the leaves on the horizontal branches of the common Laurel to a spiral one, when the boughs grow erect is common; but it is not a fixed character.

WAKE UP! YOUNG GARDENERS.

I HAVE before me the programme of a flourishing Gardeners' Mutual Improvement Society, issued last October. Amongst the various prizes offered for exhibits, essays, &c., the said prizes being generously placed at the disposal of the committee by various local gentlemen, who I know are actuated by a desire to further self-help and improvement amongst the younger members—I observe three prizes, books to the value of 15s., 10s. and 6s., first, second, and third respectively, for an essay on "A Visit to Kew Gardens" (to be competed for by undergraduates only).

I was present on the 5th inst., when the annual dinner and distribution of prizes took place, and was mortified to hear that although this said society numbers nearly 100 members, and includes many young men, not one attempted to obtain these prizes, although residing not more than an hour's walk from the finest botanic garden in the world, and given six months wherein to complete the task, not one entry being sent in to the secretary. This is not creditable to young men who aspire to any position in the profession, and who possess such advantages as a residence within a few miles of Kew and the R.H.S. Gardens at Chiswick, to say nothing of other historic establishments, such as those at Gunnersbury, afford. It may be that the prize of a 15s. book was not tempting enough for these young men. The single effort, without any prize, to describe a visit to Kew would repay anyone. The educational value of such an attempt to the essayist, is far greater than the intrinsic value of the book. And would any sensible young man, possessing any ambition, despise such a book as beneath his notice? I have before me four Jefferies' "Field and Hedgerow" (not a third of the value) gained as a prize when a younger member of the self-same society, which has given me many a half-hour of pleasure and delight, and is always refreshing. It does seem to me from observation during eight years' residence in this neighbourhood, so rich in its advantages and associations, that the young men simply ignore these golden opportunities of intellectual improvement, and only remember with regret when too late, when perhaps they have undertaken responsibilities and cares in other spheres, that their youth, which is the best time for learning, was so full of opportunities, not utilised, but thrown away.—A. P.

HOW A KNOWLEDGE OF BOTANY IS A HELP TO GARDENING.*

THIS subject is a most important one, a subject, in fact, far too large to be justly dealt with in a single essay. Botany has so much to teach us which is of great interest in gardening, that it cannot be otherwise, because through a knowledge of the science, we get an insight of the physiological principles upon which the practice of horticultural operations are founded.

A gardener is a physiologist in practical horticulture. It is the one and greatest aim of a gardener to bring plant life to its highest state of excellence; or if I may use a scientific phrase, to develop every organ of plant life to its highest condition. Now in order to do this, various are the means which he brings to bear upon it. In the first place it is the soil which occupies his attention, then come heat and moisture; in fact, all the conditions under which a plant is found naturally, he fulfils to the best of his ability. It often happens that by thoughtful care he so much improves the surroundings of these plants compared with those of their natural home, that he coaxes Nature as it were, and consequently there are greater developments of parts, higher perfection of flower and fruit. Then is not the gardener a true physiologist, though often unknowingly so?

I contend that if a knowledge of botany is a means by which we can better understand the nature of plants, it must be a help to gardening, and it is, therefore, advantageous for the gardener to understand it.

It is questioned by some whether a gardener should have a knowledge of botany at all. The objections raised by those people are, that it is possible for a gardener to become "too much of a naturalist," too great a lover of Nature, they assert;

* A paper read by Mr. R. Hodder, gardener to Mrs. Trevor Barolay, Ponsonby, Torquay, Devon, at a meeting of the Devon and Exeter Gardeners' Association.

that the gardener would see more beauty in plants before being improved by the skill of the hybridist than afterwards; that is to say, that to him a single flower would be more a thing of beauty than a double one.

Evidently, some people have the idea that double flowers and others, so much improved by cultivation, are altogether unnatural. Such is not my opinion. There is nothing unnatural in a plant as it grows, although there are at times abnormal developments. The powers which plants possess of developing the double from the single flower are the lawful possibilities of Nature, and are as natural as it is for the sun to shine.

Therefore, the improvements of plants by man (and they are many) represent no new powers added to Nature, but are the result of thoughtful and intelligent men grasping the possibilities in plant life.

There are no men to whom we are more indebted than to the hybridists, whether it be of fruit, vegetables, or flowers, in which they develop a new feature; we might say the world is benefited by their operations.

Though in all this, man is the instrument by which the changes are brought about, it is my contention that man adds no new possibilities to Nature, but he takes advantage of the powers already there.

Therefore, I maintain that horticulture or gardening is the perfecting of Nature, or the development of parts which in a wild state is often an impossibility. It is often the case with our choicest plants in their natural habitats, that they have to keep up a tremendous struggle for existence.

Let me give you one example which I think will prove beyond doubt what I have already asserted that "Gardening is the art which does mend Nature," and that is in the case of the *Gloxinia*. The *Gloxinia* has its parts divided into fives; but in its natural state without the aid of the cultivator four stamens only at first are to be found. The fifth one is in the form of a little projection at the bottom of the flower tube, waiting as it were for more favourable conditions, when it will readily spring to the top of the flower tube to make the fifth, which under proper cultivation it always does.

Then this art must be simply the helping of Nature to attain to its highest state of perfection from our point of view. This art was that which formed the occupation of our first parents, and it is an art that will engage the attention of man to the last.

Well, then you ask what has botany to offer? Wherein is it a help to gardening? In the first place it teaches us about the structure of plants; secondly, the functions performed by living plants; thirdly, the systematic arrangement of plants in their sub-kingdoms, classes, orders, etc.

Before we go on to the examination of their structure, it is well for us that we should understand something of the characters by which plants are divided into sub-kingdoms and classes. We are all aware that the vegetable kingdom is divided into two sub-kingdoms, namely—flowering and flowerless plants. The former are called *Phanerogams*, the latter *Cryptogams*.

Again, flowering plants are divided into two great classes known as *Dicotyledons* and *Monocotyledons*. The first are plants which germinate with two seed leaves, as the term implies, while the second has only one, hence the term, the first part of it being derived from *monos*, one. The characters of these two classes we must keep clearly before us, as we shall see other distinctions as we go on.

(To be continued.)

GREENHOUSE RHODODENDRONS AT EDINBURGH.

A GROUP of eight varieties of hybrid Greenhouse *Rhododendrons* was exhibited by Mr. McMillan, Trinity Cottage, Edinburgh, at the recent spring show of the Royal Caledonian Horticultural Society, and two of them were awarded First-class Certificates. I asked him a few particulars concerning their parentage, and other matters.

"The pure white one is a cross between *R. veitchianum* and a large white-flowered seedling from Lady Alice Fitzwilliam, the former being the seed parent. The other with the blotch is from the reverse cross of the same parents. Mother Nature

must have given the blotch, as this variety is quite distinct from both parents."

"I understand you have been raising seedlings for the last ten years. How many plants do you grow?"

"Three hundred."

"Is that all you have raised in ten years?"

"Oh, no. I had at one time 800, but I was obliged to part with 500, as I had no room to flower them all."

"Were you not afraid, when giving so many away that you might be parting with some of your very best?"

"That is so; and it cost me some anxious thoughts on the subject. But I have two angels that sometimes pay me a visit when I am in a difficulty. The one I call Miss Head, and the other Miss Heart. Miss Head, as usual, paid me the first visit one night when I had been thinking what would become of my 500 seedlings, and gave me her advice in this way:—'You will act very foolishly if you give away so many of those young plants that have cost you years of thought and careful nursing; for some may get them that will grow and show them as their own raising. Take my advice and burn what you can't grow yourself.' Well, I knew that this was good, sensible, worldly advice; but I also knew that Miss Heart would have a say in the matter, and I was not mistaken.

"Early next morning, when the first rays of the rising sun had tipped the hills with its golden glory, who should come tripping in but Miss Heart, so fresh and beautiful, bringing with her from the hills, where she had landed, the smell of the mountain Pine on her Macmillan tartan wings, and the perfume of the Heather on her fairylike feet. So after 'dichting' her feet on the mat, she says, 'Sandy, am ashamed o' ye.' I may tell you that this good angel of mine, when she wants to give me a bit of her mind, speaks braid Scotch, has a tongue, and can use it to some purpose.

"'Am ashamed o' ye. Dinna think but I ken a' yer wicked thochts. Would you gang and rost a' they bonnie wee innocent plants that ye brocht into the world? Oh, man, hae ye nae herrt? Let them live; if ye canna bring them up yoursel, let some ither bodie hae them, so that if they dinna live to flower and smile on you they may gladden the heart o' some ither fair garner.'

"So this curtain lecture saved the innocents from the fiery furnace, and the first work that I did that morning was to pack up a lot and take them to the Botanic Gardens. Another lot went off next day to Mr. Dewar, of the Glasgow Botanic. Then I divided the others among nurserymen and gardeners in private places.

"I am rather disappointed with the Countess of Haddington's seedlings; of course, I have a good many of them to bloom yet, but any that have bloomed are not so good as the Countess. I have been always obliged to make the Countess the seed bearer, as I could never get pollen from my plants. I have sixteen different crosses in pots of various sizes and ages. My seventeenth cross was sown the other day, so that it will be eight years before the seedlings from it flower. Some do flower in less time, and others take longer, but seven years is about the average."

"That is a long time to wait?"

"Yes; but Jacob served seven years (fourteen—ED.) for Rachel, and what true gardener would grudge to serve seven years for a beautiful Countess of Haddington, or a sweet Lady Fitzwilliam."—*Viator*.

GARDENING MISCELLANY.

ROMNEYA COULTERI.

THE members of the Natural Order Papaveraceae have many of them very showy flowers, and of this characteristic *Romneya Coulteri* has a full share. It is a tall, branching herbaceous perennial with large white flowers, and very handsome pinnatifid leaves. It is not so much grown in English gardens as it would be were it better fitted to withstand the influence of the cold. Even ordinary winters try it severely, and it is only in the more favoured localities of our islands, such as in southern Devon, and Cornwall that it does really well. As a greenhouse plant it is worthy of attention, as it takes fairly well to pot culture. A capital illustration of it appears in the current issue of the *Tijdschrift voor Tuinbouw*.

CHLOROPHYTUM ELATUM VARIEGATUM.

THIS is better known as *Anthericum variegatum*, and was heralded forth as a rival plant to *Pandanus Veitchii*. Well, certainly, in this respect, it has disappointed not a few; and, again, many were led to believe it to be a hardy plant, and in consequence a large number of plants were lost. An ordinary frame is not sufficient protection during a winter of moderate severity. I have had it succumb to five degrees of frost. Having seen, during the last few seasons, batches of well grown plants in a small nursery, has revived my interest in it, for well grown plants under artificial light may easily, at a short distance, be mistaken for *P. Veitchii*. I think it well worth the attention of those who have not the command of heat required by the *Pandanus*, and think an appropriate common name for it would be the Poor Man's *Pandanus*, although of course it has a very remote botanical affinity to that genus of plants.—*W. B. G.*

THE EVERGREEN SEDUM AS A BEDDING PLANT.

SOME time back I recommended covering beds with the evergreen *Sedum*, a bit of which I enclose, [*Sedum Anacampseros*,—ED.] and dotting bulbs singly about it. I have now carried this out on a large raised bed at Oakwood, using bulbs having blue flowers such as *Chionodoxa gigantea*, *C. Lucillae*, *C. sardensis*, and different *Muscari*. This has been much admired and is, I think, worthy of note. I propose trying another *Sedum* bed with the best of the smaller and lower growing species of *Narcissus*. Another quite different bed is now in beauty—a tree of Weeping Cherry (*Cerasus pendula*) now in full bloom had thickly planted under it Primroses of many different colours, and the effect of the flowers above and below is, I think, good.—*George F. Wilson, Heatherbank, Weybridge Heath.*

READING AND DISTRICT GARDENERS.

ONE of the most interesting and successful meetings in the annals of the Reading and District Gardeners' Mutual Improvement Association was that held on Monday last, when the prizes offered by Mr. Leonard Sutton at the commencement of the season 1898, for the best essays on "How to keep the Greenhouse gay from October 1st to March 31st," and "How to crop the Vegetable Garden to ensure the best varieties of Vegetables from October 1st to March 31st," were awarded to the successful competitors. The interest taken in the competition was greater than anticipated, thirteen members sending in papers, and it was not a matter of surprise that a good gathering of members assembled on Monday evening last to learn the result, and to hear the prizewinning papers read by their writers. After the formal business had been transacted, Mr. C. B. Stevens announced the awards as follows:—"How to keep a Greenhouse gay."

1st (£1 11s. 6d.), Mr. A. W. Blake, Foreman, The Gardens, East Thorpe, Reading; 2nd (£1 1s.), Mr. G. Stanton, The Gardens, Park Place, Henley-on-Thames; 3rd (10s. 6d.), Mr. John Botley, Foreman, The Gardens, Warfield Hall, Bracknell.

"How to crop the Vegetable Garden:—1st (£1 11s. 6d.), Mr. E. Trollope, The Gardens, Coombe Lodge, Whitechurch; 2nd (£1 1s.), Mr. H. Wilson, The Gardens, Lower Redlands, Reading; 3rd (10s. 6d.), Mr. G. Hinton, The Gardens, Sherwood Lodge, Reading.

The judges were Mr. James Hudson, Gunnersbury Park, and Mr. Edwin Beckett, Aldenham House, Elstree.

Mr. Leonard Sutton, in presenting the prizes, said that he considered the subject of essay writing was one of the most useful and beneficial to the members that the society could take up, for it encouraged the putting of one's ideas on paper and at the present time it was those gardeners that could go to their employers with well thought out ideas that would prove successful, and it would also be of the utmost value to the young gardeners who entered these competitions, for they would reap the benefit of their study and research in after life. The president then called upon the various winners to read their papers and although of course all were on the same subject yet they were treated from different standpoints, thus creating great interest amongst the members present.

A hearty vote of thanks was passed to Mr. Leonard Sutton for his kindness in giving the prizes and also to the members for reading their papers.

Owing to the success of the venture and the statement by the writers of the assistance they had received, from an educational point of view, in writing their papers, the association had decided to take up this interesting subject as a part of their programme for season 1898-99, and a vote was passed that a sum not exceeding £8 should be devoted for this purpose, but that the competition should be divided into various grades, thus giving all members an equal chance to compete.

Cut flowers were staged by Mr. Woolford, The Gardens, East Thorpe, including two good forms of *Odontoglossum crispum*, two fine types of *Cattleya lawrenceana*, spikes of *Amaryllis Empress of India*, and spathes of *Anthurium scherzerianum Wardii*; also flowering spikes of *Prunus sinensis flore pleno* by Mr. Swansborough, Warfield Hall Gardens, whilst vegetables were shown by Mr. Stone and Mr. Hinton, including some nice heads of Sutton's April Cabbage.

QUESTIONS AND ANSWERS.

"* * * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Chrysanthemums.—*E. Bebbington*: Your question is a somewhat lengthy one, and your collection of 'Mums must be proportionately large. The following varieties need not be stopped at all, but allowed to grow on naturally and the second crown bud taken. These will be produced in time to form flowers for your show on November 12th:—*J. W. McHattie, Ma Perfection, J. Cornford, Mrs. Hermann Kloss, Edith Tabor, Mrs. D. Dewar, Commandant Blusset, General Roberts, J. Shrimpton, Western King, Mathew Hodgson, Royal Sovereign, Walter Owen, Boule d'Or, (Calvat's), Phoebus, J. Fulford, H. J. Cutbush, G. Brockman, Mrs. Dr. Ward, Helen Owen, and Mutual Friend.* Exmouth Yellow is a very early variety, and thus second crowns would only be of use if the plants were late, otherwise you must take the terminals if you want it in November. The same may be said of *Emily Silsbury, Phoebus, Mutual Friend, and Edith Tabor* come well on any bud, but second crowns will suit your time best. *Mrs. C. Blick* may be stopped early in March and the first crown bud taken. *Duchess of Fife, and C. W. Richardson* should be stopped at the same time and the second crown bud secured. *G. Seward* may be allowed to grow without stopping and the first crown bud taken, or it should be stopped at the end of March and the second crown bud looked after. *C. B. Whitnall, Directeur Tisserand, Mrs. G. Gover, Bonnie Dundee, and Major Bonnafon* should be pinched about the same time. *Milano, Pride of Madford, Lady Ridgway, Mrs. C. Keyser, Niveus, and Yellow Madame Carnot* should be stopped some time during the first week in April. In both these groups the second crown bud should be secured. *M. Gruyer* requires to be stopped about the middle of April, and the first crown bud taken. All these varieties will do under fairly generous treatment, excepting *Mrs. Dr. Ward*, which needs rather high feeding, and *Australian Gold*, which it is dangerous to feed too strongly.

Names of Plants.—*Enquirev*: 1, *Euonymus japonicus albo-marginatus*; 2, *Euonymus japonicus latifolius-albus*; 3, *Kerria japonica flore pleno*; 4, *Picea orientalis*; 5, *Thujaopsis dolobrata variegata*; 6, *Phillyrea latifolia*; 7, *Cornus stolonifera*; 8, *Buddleia globosa*.

Communications Received.—*J. McLennan*.—*N. B. R. C. H. S.*—*L. Lubbers*.—*George Allen*.—*S. A. Senell*.—*Geo. James*.—*R. L.*—*T. T.*—*Saynor*.—*Gardener*.—*P. T. O.*—*Mentor*.—*Acalypha*.

TRADE CATALOGUE RECEIVED.

H. CANNELL & SONS, Swanley, Kent—Catalogue of sixty bedding designs.



DAHLIAS.

H. CANNELL & SONS,

Sole introducers of the Cactus and single varieties, beg to assure all admirers of this family that they have for twenty-five years been awarded highest honours for the best general collection, and that their stock of 40,000 in 600 varieties is the completest and best kept in England, and give the greatest satisfaction from one end of the World to the other. As a proof append the following.

G. HERBERT HASZARD, ESQ.,
CHARLOTTETOWN,
PRINCE EDWARD ISLAND,
NORTH AMERICA.

MARCH 31st, 1898.

"I wish to thank you for Dahlias. I got some from four different places in England which more or less failed. Whereas all yours are fine plants."

Send for illustrated catalogue, free to coming customers.

SWANLEY, KENT.

Caladiums

FINEST COLLECTION in the World. We make a speciality of GALADIDIUMS. Gold Medals Manchester & Leicester. Silver Cup, R.H.S., &c.

Satisfaction guaranteed. JOHN PEED AND SONS, West Norwood, London.

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

1898. **FORBES' CATALOGUE** 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and price of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other Valuable Information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,

ESTABLISHED 1870.

Nurseryman, Hawick, Scotland.

JADOO FIBRE.

WONDERFUL SUCCESS.

At a great Horticultural Exhibition recently held in New Orleans, plants grown in Jadoo were awarded

20 FIRST PRIZES and 2 SECONDS.

ADVANTAGES OF GROWING PLANTS & SEEDS IN JADOO.

Seeds germinate much more quickly in Jadoo than in earth.

Greater perfection easily attained.

Suits all kinds of plants.

Is much lighter than earth.

Less frequent watering is required.

The flowers are larger, of richer colour, and last longer.

No soil to mix: No manures required.

Ghent Exhibition, 1898. The two principal prizes of the show (including Gold Medal), were gained by plants grown in Jadoo, by Messrs. Byrvet, Bros., Haarlem.

PRICES:—3/6 per bushel. 8/- per 3-bushel sack. Special prices for large quantities.

Testimonials and full directions for use post free.

Obtainable through any Nurseryman, or from—

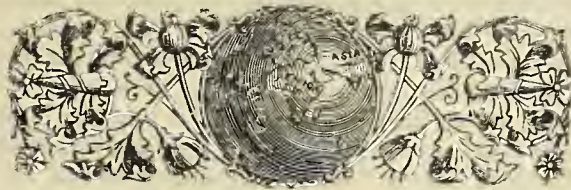
JADOO, Limited, EXETER.

BOUGAINVILLEA CYPHERII.

Grand new plant, largest and best coloured Bougainvillea ever offered, a splendid grower and remarkably free bloomer. Awarded First Class Certificate at the Wolverhampton Floral Fete, 1896, and also at the Oxford Commemorative Show, 1896, and also the Gold Medal at Shrewsbury Great Royal Commemorative Show, 1897, for the best new plant in the exhibition.

JAMES CYPHER has great pleasure in offering this grand novelty. Plants ready end of May, price 10/6 each.

Exotic Nurseries, CHELTENHAM.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, APRIL 30th, 1898.

ROYAL GARDENERS' ORPHAN FUND.—

Amongst the names of those who attended the great annual gathering of this charity, we notice many who were present at the Ghent Quinquennial Show, yet made a point of returning in time to show their loyalty to the interests of a good cause. Notwithstanding the fidelity displayed by the staunch supporters of the Fund, we note a falling away in the amount collected at the annual festival. No doubt several causes have conduced to this result, and we do not anticipate that this deficiency will be anything more than temporary. While such a conclusion is entertained, the supporters of this excellent charity should relax no effort to maintain its vigour and effectiveness in dealing with the distressed orphans of gardeners, who may have been worsted in the battle of life through no fault of their own. But while efforts are made by this and the other gardening charity to induce the great body of gardeners to contribute to the support of the same, it must not be forgotten that this industrious body of men are often sorely taxed to maintain themselves and families in the early and middle portions of their life, in a manner befitting their social surroundings. While this is undeniably true, it is germane to the subject to recall the suggestion of N. N. Sherwood, Esq., at the dinner, that the children of noblemen and gentlemen, who have large estates, should be invited and encouraged to save money and initiate special funds for the benefit of the orphan children of gardeners. There are, doubtless, many owners of gardens endowed with sufficient philanthropy not only to encourage their children in works of benevolence and charity, but to lend a helping hand themselves by contributing to the special funds started by the younger members of their families. We think that if a few influential employers of gardeners were to set the example, it would be copied and adopted by a considerable number of them in various parts of the country in the course of a few years. The lady members of the family would generally have most leisure for this sort of thing, and the charitably disposed could not but find it a congenial occupation. The knowledge that they would be helping the less fortunate of their servants, could not but act as an incentive to strengthen and support their endeavours.

DEPTH TO WHICH PLANTS PENETRATE THE SOIL.—At first consideration many gardeners would regard this as a purely scientific subject, and beyond their sphere of action. Nevertheless, it applies and appeals to every cultivator of the soil on a small as on a large scale. The subject is dealt with by Prof. F. W. Oliver in a paper which appears in Vol. xxi, part 3 of the *Journal of the Royal Horticultural Society* just to hand. He commences his subject by referring to the subterranean rhizomes, bulbs, and tubers of plants, which have each their peculiar depth to which they penetrate the soil. This has a bearing upon the subject, but the roots are the more important organs to consider, seeing that they are the collectors of plant food in the soil, and that the depth to which they penetrate the latter has a direct bearing upon the cultivator's art. The subject, therefore, is of primary importance to gardeners, and they cannot too early in life give it their most serious consideration. In a state of nature germinating seedlings usually commence at or near the surface, but many of them in the course of a few years make a strong effort to bury their crowns at varying depths in the soil. Many seeds, by accident or otherwise, get deeply buried by soil or fallen leaves, and if naturally provided with the means raise their crowns through the superincumbent matter till they reach the surface. Large seeds come into this category rather than small ones. Professor Oliver speaks of the root-shortening which is peculiar to and more or less conspicuous in certain plants, but while that is the case we are fully convinced that such roots as Carrots, Parsnips, and Beet are often shortened through force of circumstances, that is, by their inability to penetrate the soil beyond a certain depth, owing to its hardness, dryness, and improperly prepared condition generally. These tap roots often, indeed, throw themselves partly out of the soil, so that the exposed parts soon become unfit for human food, and thereby represent so much wasted matter.

The tuber of *Arum maculatum* (Lords and Ladies) is taken as a type of what results in this particular case by some of the roots being contractile while others do not possess this faculty. The miniature tuber has its apex erect the first year although by the action of the cotyledon it has been buried to a certain depth in the soil. During the second year the contractile roots have the effect of dragging the apex of the tuber on one side, and this action goes on till the tuber has its apex growing more or less perpendicularly down into the soil. This continues till the tuber has reached its normal depth in the soil, after which it penetrates the same horizontally. This depth varies according to the species, but we find it in Tulips, Colchicum, Crocuses, Gladioli, and various other subjects. These may be regarded as subjects which bury their buds or crowns at a certain depth in order to protect them against various casualties to which they are subjected in their natural habits, the roots penetrating to a still greater depth, become more or less exempt from the incidents and effects of a dry soil and droughty season.

Except where the gardeners engaged in the raising of seedlings, the above facts are more or less of purely scientific interest to the gardener, because the bulbs, corms and tubers find, of their own accord, the normal depths at which they can carry on their functions to the best advantage. Turning to root crops such as Carrots, Beet and Parsnips no one knows the advantage of assisting Nature better than those gardeners who grow vegetables for exhibition purposes. Unless the ground is

trenched and broken up to a certain depth the roots, or at least the usable portions of them, will be very short and comparatively worthless. Besides depth of root run, the fineness of the soil must also be considered, otherwise the roots will lack evenness of surface. If the slender, primary root has to penetrate between stones and hard lumps of soil, it then proceeds to thicken in that position, resulting in a twisted, crooked or even forked tap-root. Deep and fine soil enables shapely roots to be obtained, while it also permits the roots to forage more freely in quest of the necessary ingredients of plant food. This is one of the chief reasons why deep rooting subjects are able to produce heavy crops on land which has become, more or less, exhausted temporarily by the growth of shallower rooting subjects. Various observers and experimenters have noted that certain plants penetrate the soil to a much greater depth than they had suspected. It becomes the gardener, therefore, to study the necessity of trenching and otherwise preparing garden ground, so that the best possible results may be obtained from any given crop.

Wren's Nest on a Brussels Sprout.—A curious instance of birds building their nests in strange places is to be seen in the garden of Miss Humberston at Newton Hall, Chester, where a wren has built its nest on the stem of a Brussels Sprout.

A Royal Gardener.—According to the *Samoa Weekly Herald*, King Malietoa has been severely indisposed of late, and is seeking relief and rest in his palace at Alaca, which is situated in the middle of the bush. At this place his black skinned majesty is starting a Taro patch and Banana plantation.

Testing American Bulbs.—Mr. Andrew V. D. Snyder, of Ridgewood, N.J., U.S.A., has tested American grown Narcissus, the bulbs of which were grown in North Carolina, with imported European bulbs, and finds that the American bulb makes less growth and bears smaller flowers than the European article.

An Improved Step-ladder.—American ingenuity has produced an improved form of step-ladder for the use of the fruit grower when gathering in his crops. The contrivance is supplied with wheels, and by means of the pair of handles affixed can be wheeled from place to place like an ordinary wheelbarrow. A shelf for carrying baskets of fruit is placed between the steps at the front, and the supports at the back, thus serving the double purpose of steadying the ladder instead of the cords used in the ordinary make, and of accommodating the fruit gathered. The "ladder" is capable of being folded up and packed away into small compass when not in use. Whether it will find favour with the British fruit gatherer must depend, however, upon whether it is a too elaborate affair or not, and also upon its price. If these two points are satisfactory it may prove of service.

Agricultural Rates Act.—Smith and others v. Richmond. The Court of Appeal, reversing the judgments of the Courts below, has held that glass-houses are not to have the benefit of the relief given by the Agricultural Rates Act, 1896, to market gardens and nursery grounds. Having regard to the importance of the question to growers, my association has determined to carry it to the House of Lords, if we can secure the support of the trade generally. We have many calls on our funds, and, as it is felt that the serious expense involved in proceedings of such widespread interest should not be wholly thrown on the subscriptions of our members, growers throughout the country are invited to inform our treasurer, Mr. George Monro, by letter addressed on or before the 30th inst. to the offices of the association, 32, King Street, Covent Garden, London, W.C., what financial support they are under the circumstances prepared to afford the association.—*William Poupart, President of the Market Gardeners, Nurserymen and Farmers' Association.*

Powdered Rice is said to be very effective in stopping the bleeding of cuts and bruises.

The Doom Palm.—The Doom or Dom Palm grows plentifully on the banks of the Atbara in the Soudan, and the Fellaheen and Soudanese soldiers in the Anglo-Egyptian army which has been heard of so much of late find some amusement in shying at the clusters of fruit as they hang. The pulp surrounding the stone tastes like ginger bread.

The Cooking of Fruits.—Such fruits as Apricots, Peaches, and Pears have to be subjected for fully a week to the influence of the sun's rays before they are sufficiently dried, and this in California where the sun's rays are much better than here. In cooking these dried fruits, therefore, it is manifest that a large quantity of moisture has to be returned to them before they can possibly be anything like what they were when taken from the trees. Instead of cooking them at once, therefore, or with only two or three hours' soaking, as is too often given, they should be allowed to soak in water for from twenty-six to thirty hours. The bulk will not only be increased thereby, but the flavour and delicacy of the fruit will be incomparably finer.

A Plant for Dry Banks.—Seeing that there is so much discussion about plants suitable for covering bare spaces under trees, it may be germane to the subject to recall to mind a plant that was much in vogue, for covering dry banks where few other things except succulents would grow, about a quarter of a century ago. The plant is *Chrysanthemum* or *Pyrethrum Tchihatchewi*, a Composite of dwarf, creeping habit, with finely divided dark green leaves, forming a rich carpet of green over the dry ground. The white heads, not unlike those of a small Oxeye Daisy, are very abundantly produced in May and June, and may be allowed to remain upon the plant or cut off to bring the dark green carpet into prominence. It may be propagated to any extent by division, cuttings, and seed.

Important Sale of Books of Natural History.—The library of M. De M. G. Dumont, a member of several learned societies, is to be put up for auction on the 9th, 10th and 11th May, next, at 8 p.m., in the Salle Silvestre, 28, Rue des Bon-Enfants, Paris, by the Minister of Me. Maurice Couturier assisted by MM. J. B. Baillié and Fils, experts. Some idea of the importance of the collection may be gleaned from the fact that 1,007 books are catalogued to be sold. They embrace physical and chemical science, and natural science, such as geology, mineralogy, paleontology, botany, zoology, medical science and literature. The bulk of the books are by French authors, and written in French, but there are books in fair numbers by English authors, such as J. S. Bowerbank, Esq., Sir John Lubbock, Sir Joseph D. Hooker, Charles C. Babington, Esq., and others. There are also the journals of some London scientific societies. Some of the works of British authors seem to be translated into the French language. Germany is represented by Reichenbach, the great authority on Orchids, and others. Many of the books are valuable scientific works.

Pellaea atropurpurea in cultivation.—In the April number of the *Fern Bulletin*, a quarterly edited by Mr. Willard N. Clute, Binghamton, New York, U.S.A., is an interesting article on the cultivation of this interesting dwarf Fern. Plants were found in abundance in the seams of masonry of a railway bridge, and having been picked out by an iron tool were transferred to the Dolobran Wild Garden, on the estate of C. A. Griscom, Esq., Haverford, Pennsylvania. To establish these plants in the crevices of rock walls in a garden consisting of two old building-stone quarries transformed into model gardens for native plants, must have been no small feat to accomplish on the part of the cultivator. Usually *Pellaea atropurpurea* is confined to rocks of the limestone formation. The stone in these old quarries consists chiefly of mica schist, without lime. The compost in which the Ferns were planted consisted of mica schist and wood-soil, and the experiment has been very successful. When picked out of the crevices of the railway bridge the fronds were only 2 in. to 3 in. in height, now they are 8 in. to 10 in. Fern growers in Britain might try the experiment with *Asplenium Ruta-muraria* and several other of the smaller growing species.

The Weed.—Darwin at the age of seventy-three said that a cigarette gave him more rest after a hard day's work than anything else.

Blechnum spicant, a common British Fern, is said by the *Fern Bulletin* to grow nearer to the North Pole than any other known species. In the United States it is known as the Deer Fern from the fact that reindeer eat it.

Hibiscus syriacus and its varieties have for some time been known as very handsome flowering shrubs that are particularly valuable, in that they bloom in July and August when there is a dearth of hardy trees and shrubs in flower. Until last year, however, no award had been made them by the Royal Horticultural Society, and it thus fell to the two fine forms *H. s. coelestis*, and *H. s. Painted Lady* to be the first to obtain this distinction. Awards of Merit were granted to both of these plants on the 27th of July last.

Black Rot of the Cabbage.—A bulletin, written by Professor Erwin F. Smith, has been sent out by the United States Agricultural Department. Some of the rules for prevention are "to plant seed on land where the disease has never appeared; to set plants on land that has not been under crops of cruciferous plants for some time; to avoid the use of stable manure, and as far as possible make use of commercial fertilisers; not to turn animals into diseased fields and then allow them to wander over other parts of the farm; to keep up a warfare against insects; to remove and burn all badly-affected plants as they appear; and to destroy weeds systematically." All of these measures commend themselves to the common prudence of the gardener and farmer, with perhaps the exception of the prohibition of the use of stable manure, which, to say the least of it, would be difficult to carry out.

Apple Calvill Grossherzog Friedrich von Baden.—Half a dozen names, or rather that number of words in a name, are surely sufficient for any variety of Apple, whatever its value may be. For general use in this country the translation, namely, Grand Duke Frederick of Baden, might be more acceptable than the original. It was raised by Herr G. H. Fiesser, court-gardener at Baden-Baden. The fruit in form is similar to the White Winter Calville, and of very large size, being about 12 in. in circumference, 3½ in. wide, and 3 in. to 3½ in. high. The skin is yellow, but in the mature state shining orange-yellow, and on the sunny side flushed with a red-brown tincture. The flesh is yellowish-white, of a sweet fine, agreeable flavour, and very fine quality. The period of maturity is from October to December, during which time it is fit for table. A figure of the whole fruit, as well as a section, and the portrait of the raiser are given in *Möller's Deutsche Gartener Zeitung* for the 2nd inst.

Technical Education in Essex.—The technical education committee of the Essex County Council has arranged a new system of testing the horticultural capabilities of the rising generation of the county. Pioneer courses of two days' instruction in horticulture are being given at various sub-centres, of which that in the Church Room at Epping delivered on the 20th and 21st inst., may be taken as an example. The subject was the science and practice of the propagation of plants; and the instruction was imparted by means of lectures, demonstrations, and practical work. The day classes are primarily intended for youths between the ages of fourteen and twenty-five; and in the event of the applications being in excess of the accommodation provided, preference is given to applicants engaged in horticultural pursuits or intending to be. No charge is made either for instruction, or the use of microscopes, tools, &c., required by the student. Anyone interested in gardening is allowed to attend the evening lectures, which the public is invited to attend. Discussion at the evening lectures is also invited. On the first day at Epping the subject was upon the propagation of plants by seeds and cuttings, and other matters pertaining thereto. On the second day propagation by buds and grafts was taken in hand, the students during the day doing practical work and hearing lectures. During the evenings of both days two lectures were delivered, one commencing at 7.30 p.m. and the other at 8 p.m. The lecturers were Mr. David Houston, F.L.S., and Mr. Wakely, the latter taking the practical side of horticulture.

Korean Paper is considered superior to that of China or Japan, and is used in both those countries as a substitute for glass, also for roofing and umbrella covers.

Lily bulbs and Beefsteak.—From the western "States" comes the story of a man who had been sent a free lot of government seeds and bulbs, but whose wife promptly consigned the bulbs to the frying pan in company with a tender bit of steak. The acknowledgment stated that the "Onions" were excellent.

Syringa Senateur Volland.—In this we have one of the handsomest of the many double-flowered Lilacs which have been raised by the celebrated nurseryman M. Lemoine, of Nancy, France. The flowers in this case are of good size, and rich purple when first expanded, but shading to lilac in the later stages. The trusses, too, are exceptionally large and heavy. The variety received an Award of Merit last year from the Royal Horticultural Society.

A Chrysanthemum Controversy.—The awards made in the Jubilee Championship Competition for forty-eight Japanese Chrysanthemums held last autumn by the Ulster Horticultural Society appear to have given a considerable amount of dissatisfaction. We notice that a somewhat belated discussion is being carried on in the columns of the *Irish Farming World*. From the statements made by Mr. Peter Brock, of Glenmor Gardens, Drogheda, it appears that there have been some irregularities that at least require explanation. Mr. Brock states that in the exhibit made by Mr. Mease was a bloom of the Primrose sport from Madame Carnot, Mrs. W. Mease, and that this variety not being at that time in commerce, the exhibit should have been disqualified. The objection was lodged, but one of the judges, Mr. E. Beckett, of Aldenham House Gardens, Elstree, Herts, qualified it by declaring the variety to be Yellow Madame Carnot, as sent out by Mr. H. J. Jones. To this demur was subsequently made by Mr. W. Wells, of Earlswood, who claimed that the bloom should be labelled "Primrose Sport from Madame Carnot." This is the first point of issue, and it practically resolves itself into the question of the identity or non-identity of the varieties G. J. Warren, or Yellow Madame Carnot, and Mrs. W. Mease, the above-mentioned "Primrose Sport from the well-known white variety. As we have seen the two varieties exhibited in this country, Mrs. W. Mease is a much paler yellow than G. J. Warren—in fact, it is a primrose yellow. The second point of issue is that of paper collarets. Mr. Brock avers, and so far the statement has not been challenged, that in the exhibit which was awarded the third prize in this competition, thirty-one out of the forty-eight blooms were supported by paper collarettes, some of these collarettes being as much as 5½ in. in diameter. In defence of these supports, Mr. Beckett is declared to have said that "cardboards, or no cardboards, the exhibit would have won," which is not a justification but an evasion. Mr. Brock states that the supporting of blooms by cardboard collarettes is contrary to the "adopted and recognised standard regulations of the National Chrysanthemum Society." If the Ulster Horticultural Society has "adopted" these rules, there is no doubt of the breach of observance on the part of the exhibitor in question, and Mr. Brock's argument is valid; but, on the other hand, there are many societies who do not follow the N. C. S. rules and regulations, and if the Belfast society be one of them, the argument falls to the ground, unless, of course, there was direct contravention of a rule made by the Belfast society. In the latter case, however, we should imagine that disqualification must have followed.

GARDENING MISCELLANY.

NEW HOLLAND PLANTS AT GHENT.

In reading your "leader" upon the Ghent exhibition I was, like Rip van Winkle, obliged to rub my eyes to make sure I saw clearly; for to read that anywhere out of the United Kingdom such things as Acacias, Ericas, Pimeleas, Diosmas, Polygalas, Chorizemas, &c., should take a leading position at a flower show, and that after they have been so long

neglected among us is a startling revelation. Some day, perhaps, when it takes the public fancy to grow flowers for the pleasure of looking upon them, growing on the plant rather than going to rapid decay in a heated apartment, these old favourites will come to the fore again. I hope this may come about before the generation of plantmen, who delighted to grow and exhibit them, has all passed over to the majority, or else a later generation may have to feel its way in the dark when undertaking their culture.—W. B. G.

CLEMATIS INDIVISA.

THIS Clematis is a well known and valued occupant of the cool greenhouses and conservatories in this country, but its beauty and free flowering character have induced a number of American florists to take up its culture systematically for the purpose of supplying cut flowers. Blooming as it does early in the year, when flowers are as yet comparatively scarce it cannot fail to render good service if looked after properly. The plant was introduced to Europe from New Zealand in 1847, or more than 50 years ago.

TRIPLE-FLOWERED CYCLAMEN.

TWIN flowers amongst cultivated plants of *Cyclamen latifolium* are fairly common, and three separate flowers upon a peduncle are not rare, but, speaking from memory, we do not remember having previously seen so complete a combination of three flowers as that sent us by Mr. A. Pentney, gardener to A. J. Howard, Esq., Worton Hall, Isleworth. The flower stalk was very stout, but perfectly round as a straw, and bore on the top a huge flower consisting of three completely amalgamated into one, with fifteen perfect segments arranged round a transverse opening showing the indications of three cups or openings with three clusters of stamens numbering sixteen in the aggregate, being one in excess of the normal fifteen required for three flowers. The variety belonged to the giganteum strain, and was pure white, except at the month which was slightly tinted with blush. It was distinctly scented, though not very sweet, but this might have been due to the age of the flower.

THE BARBERRY.

SOME of the *Berberis* family are among our showiest spring-flowering shrubs, and the majority of them being quite hardy makes them doubly valuable. They look well in the shrubbery, but far more conspicuous as isolated specimens on the lawns, for what is prettier than a huge bush of *B. buxifolia* (Syn. *B. dulcis*), quite 10 ft. high and 15 ft. through, with its drooping branches touching the turf, and crowded with tiny orange cups, with a yellow perianth? It is a perfect mass of flower just now, and is worthy to be included in the planter's collection. *B. stenophylla* makes another good specimen, whose habit is much more drooping than the first-named, and its flowers appear in clusters, unlike the former. The colour is very nearly the same. The finest plant that has come under my notice of this sort was at Broadlands, Romsey, South Hants., standing on the east side of the flower garden on the turf. This is supposed to be a hybrid between *B. empetrifolia* and *B. Darwinii*.

The last-named is another showy kind, and thrives almost anywhere. I have noticed it growing on an old wall with but 1 in. or so of rubble to give it a start. This variety seeds and sows itself freely in Devon. Then there is the common Barberry (*B. vulgaris*) and its varieties, all very pretty, but much taller growing than the previous species, so they should be kept more to the shrubbery border proper. The berries of some of them are very pretty later on, and are often used to make a sort of preserve. *B. nepalensis* is another handsome species, if given a good position. It has cuspidate, pinnate leaves, nearly 2 ft. in length, and is well worthy of a place. There are several other kinds, but the foregoing have come under my notice more often than them.—*Devonian*.

HOW A KNOWLEDGE OF BOTANY IS A HELP TO GARDENING.

(Continued from p. 541.)

Again, flowering plants have two kinds of stem. The Dicotyledons increase in size on the outside by

a continuous ring of wood, and are called exogens. They include trees, shrubs, and a great many of our choicest flowering plants. Monocotyledons have their woody matter arranged in isolated bundles scattered through a groundwork of cellular tissue. They include Palms, Liliaceous plants, grasses, Bamboos, Cereals, Orchids, and various other plants.

A third division is called Acrogens; and these are non-flowering plants, which increase or grow on the top, as you very plainly understand by the growth of the Tree Fern. These form a part of the sub-kingdom Cryptogamia.

Now a few words on the germination of the seed which contains the embryo or future plant. The embryo is composed of three parts, namely, the root, the seed leaves, and the young stem. Then again seeds differ much in their composition. For instance, in the natural order Leguminosae, which is the Pea and Bean family, you will find that these two seed lobes are thick and fleshy, and occupy the entire seed; while in other cases the embryo or future plant occupies but a very small space in the seed. The other portion of the seed is filled with nourishing matter known as perisperm, which substance nourishes the embryo or young plant until it has attained a certain state of development and has sufficient root and leaf to provide for itself.

Now before germination can take place this nourishing matter has by the agency of moisture, heat, and air, to be brought to a state of solution or decomposition. Hence the truth of the proverb where it says, "Except a corn of wheat fall into the ground and die it abideth alone."

Well, then, what are we to gather from a knowledge of the seed that may help us in accomplishing its germination? It is just this, that we let the seed get due proportions of heat, moisture, and air. If a pan is not well drained, the pores of the soil remain clogged; air cannot penetrate, and consequently the seed will remain a long time dormant or very probably perish. The system to be adopted for all seeds, and especially for those which are very small, is to well water the pans before the seed is sown, to let the pot stand for a time so that the superfluous water may drain away and then to sow the seed on the even surface of the soil. By the time the pot again wants watering, if stood in a moist atmosphere, in most cases, your seeds will have germinated.

Some recommend that if a pan of seed becomes dry it should be stood in water in order to give it a thorough soaking. With this I entirely disagree. By watering a pan in this way, in almost every instance, the rushing in of the water at the bottom causes the material on which the soil is resting to get displaced; the soil also settles down and it never again assumes a condition suitable for the growth of seeds. Now I have tried both systems here mentioned; with the former I seldom get a failure, but with the latter seldom a success.

Let me give you an instance which has occurred under my notice during the different processes which I have tried. This was with a pan of seed of an Arabian Thistle, which was sown in the ordinary way, watered as some recommend, and placed in a position, supplied with bottom heat, having a minimum of 65°, and a maximum of 75°. The seed remained there for about four or five weeks, and showed no signs of germination; therefore, I took the pan containing the seed and placed it under a warm wall in the open air, and allowed the soil to get dry, then watered again in the ordinary way, and what happened? In a few days the seed grew splendidly.

What was the cause of failure with this seed, let me ask? Simply this: the soil retained far too large an amount of moisture, the air could not permeate, as freely as it should have done, to insure germination. I found by close observation that as soon as the soil resumed its proper condition, with the proper amount of air, heat and moisture, growth at once took place.

Here again is another difference in the growth of the root with those two great classes of plants which have been previously mentioned, and this also is worthy of our notice. In the Dicotyledons the root grows by one direct prolongation of the radicle, and it never branches until after leaving the seed: while on the other hand amongst the monocotyledonous plants, with one seed lobe, a branching of the root takes place immediately on germination.

(To be continued.)

HINTS FOR AMATEURS.

SEEDLINGS.

THERE is no more interesting part of the gardener's experience than the raising of seedling plants of all descriptions, more particularly tender plants that require the shelter of glasshouses to get them up betimes. At the same time these plantlets require particularly careful treatment, for in their early stages they will not stand the hardships that they will in their more mature conditions. Many of these seedlings require watching almost continually during the choppy and changeable weather that is characteristic of April, and often of the earlier part of May, and the amateur who cannot devote the whole of his time to them is at a disadvantage. Still, the raising of seedlings is such an important part of gardening that no man can claim to be even fairly proficient in the art unless he has learned by practice to handle seedlings with success. The flower garden, for instance, is dependent for a large part of its material upon plants raised from seed sown in the early months of the year, and tended through the critical stages of babyhood in April and May until they arrive at the first stage of vigorous planthood in early June, when they are ready for transference to open beds and borders out of doors.

Recently we discussed the ways and means whereby a stock of bedding plants might be worked up from cuttings. Now we have to consider briefly the other common method of propagation, viz., by seed.

Pricking Off.—This operation is one of the most important in the whole routine of seed raising, and is, indeed, fully as important as the sowing of the seed, for upon its proper performance depends in a very great measure the future career of the young plants. If carelessly carried out it is very seldom that the young plants do much good after it, whilst, on the other hand, if well done the plants grow away with little or any check, thankful for the increase of space granted them. Just now this kind of work is pressing its claims persistently, for it is not of the kind that can be relegated to some time in the future, near or otherwise. It must be done at once, for every day imperils the safety and welfare of the plants. At such a time as this the value of the oft repeated warnings against sowing seed too thickly can best be gauged, for where these warnings have been disregarded the seedlings are crowded from the very first, and really never have a chance to develop into vigorous plants. Where the sowing was practised as advised the seedlings can be left until they are of a fair size before they are disturbed, and they can then, as a matter of course, be handled by the operator with much greater ease and certainty.

To the beginner "pricking off" will come as a somewhat tedious piece of work which will try his patience to a considerable extent. In such cases as tuberous Begonias, for instance, when the plants are so small that a pointed stick with a slit at the point has to be used to pick them up because the fingers are scarcely nimble enough to perform the task, the patience of the operator will have to be strongly developed. With such things as Stocks, Asters, Pyrethrum, Golden Feather, Lobelias, Dianthus, Ageratum, &c., the seedlings will be of a size that can be readily picked up by the fingers without the aid of the stick a-forementioned.

The soil for the seedlings should be carefully freed from all rubbish, and coarse lumps should be broken up by passing it through a sieve. No manure, chemical or otherwise, should be mixed with it. A good compost may be made of equal parts of loam and leaf soil with plenty of sand, mixing the whole thoroughly together. The pans, pots, or boxes which are to be used should be fairly well drained, and a layer of moss, or rough leaf soil, put over the cracks. Make the soil fairly firm, and the surface should be smooth and even. Then everything will be ready for a start.

In taking the seedlings out of the seed pan the utmost care must be employed. The separation of the plants from each other is also a matter of the first importance. Rough or careless handling will lead to the destruction of a large proportion of the young side rootlets, and the baby plants start in their new quarters handicapped from the outset. "Stripping," as the destruction of these side root-

lets is technically called by gardeners, is a matter of very frequent occurrence, and amateurs are specially warned against making the mistake. Such are often exercised in their own minds to account for seedlings dying off, one after the other, after they have been "pricked off," and in the majority of cases this is the real cause.

Another mistake equally as common is that of "hanging"—a not inappropriate term which is applied to the practice of leaving the young roots suspended in the soil but not in close contact with it. This is often brought about when too large holes are made, the plants roughly thrust in, and the holes as roughly covered in. The plants whose roots are thus exposed inevitably perish. "Stripping" and "hanging" then are to be carefully avoided if success is desired.

The soil and pans or boxes having been got in readiness a few of the plants should be taken out of the seed pan and carefully separated. Lay these out on a flat surface such as the lid of a box, where they can be picked up easily. Then with a wooden dibber make a hole in the soil in the prepared pan just large enough to take the roots of the plant without crushing them. The seedlings may be planted rather deeper in the new soil than they were in the seed pan, as this will help to keep them upright. Fill in the hole carefully, and make it firm by pressing the dibber down into the soil by its side. Avoid having too many of the young plants out of the soil at once, for the delicate roots soon perish.

After Treatment.—Supposing the operation of pricking off the seedlings to have been properly accomplished, the next thing is to give them a watering with water of a temperature of from 65° to 70° Fahr. This should be done in such a way that the soil is not washed into mud, and a fine rose-can will therefore be necessary. Return the plants to the warm house from which they were taken, and keep them quite close for a few days. As the sun has now a good deal of power special attention must be given to shading. The shading should be put on and taken off as it is necessary, for it is not advisable to permanently shade seedlings, since it tends to make them drawn and weak in the stem. On dull days the full benefit of the light may thus be given the young plants, and this in itself is of no small moment.

When the seedlings have begun to grow away vigorously they will call for more hardy treatment (we are dealing now exclusively with plants that are intended to do duty in the open presently), and to this end the house in which they are growing should be kept cooler, or, if this is not practicable on account of the presence of other tender plants in the same house, a removal should be made to a cooler house. If all goes well this removal may take place about the third week in May, and it will be the first step in the hardening off process.

Other seedlings that are intended to grow into plants to do duty in pots under glass may, of course, be kept growing on as freely as possible in a gentle heat. Such things as Celosias and Cockscombs revel in an abundant supply of heat, whilst in the case of Primulas, Cyclamen, and the like which have to be raised in heat a cooler treatment is desirable. Not a few people make the mistake of keeping their Primulas in heat for too long and the plants become drawn and weekly at the collars as a consequence when a rather lower temperature would have produced sturdy and vigorous plants.

Seedling Ferns.—We ought perhaps to apologise for using the term "seedling" instead of the more correct "sporeling" Ferns, but the idea conveyed by both terms to the average gardener who is not a student of physiological botany is practically the same, and we are not now discussing the points wherein a spore differs from a seed, and a seed from a spore. Where Ferns are grown for any length of time in a house it will always be possible to pick up a supply of young plants from the floor of the house underneath the trellis, in nooks in the walls, or indeed in any place where a little moisture is obtainable. Where this has not been considered sufficient and a quantity of spores have been sown in pots of specially prepared soil, these pots will have to be watched with especial care. They must be kept closely shaded from the sun and well looked to for water. Instead of so much overhead watering, however, which no matter how carefully it is done will wash the spores up together in heaps it will be well

to stand the pots in saucers, 2 in. or 3 in. deep, filled with water.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Tomatos.—I have a wall which is at present unoccupied, facing to the west in my garden, and should like to utilise it for Tomatos, if you think they would do well. The soil is a rather sandy one, but I have a supply of stable manure that I could use for it if necessary. The height of the wall is 4 ft.—*P. T. O.*

The western aspect will suit the Tomatos fairly well, although it is not so good as a southern one. Still, the plants will get a fair amount of sun, and sun is what Tomatos need first of all. The soil is of secondary importance, although it should not be neglected by any means. If it is inclined to be poor give it a good dressing with the manure you speak of. This should be done at once in order to avoid bringing the roots of the plants into contact with raw manure. You will need to train your plants diagonally, as they will soon get to the top of a 4 ft. wall.

Hoya gone wrong.—I have (or rather had, for I am afraid it is dead now) a nice plant of *Hoya carnosa* growing on the back wall in my greenhouse. The wall had got rather green and dirty, and last winter I thought I would try to improve the look of it a bit. I took the plant down, cleaned and lime-washed the wall, and returned the plant to its place. The wall now looks nice and clean, but the leaves of the plant have all gone yellow, and it appears to be dead. Has the limewashing done the mischief, and is there any hope of saving the plant?—*Mentor.*

The limewashing could have had no evil effects, but we think the cause of the evil lies in the fact that you have twisted the stems of the plant just above, or, perhaps, just below the soil, and death is following the injury. A speedy examination should ascertain whether the suggestion is correct, and if it is not the evil must be sought at the root. We fear there is little hope of saving the plant, as the succulent leaves of the *Hoya* do not hold out signals of distress immediately the injury to the plant is received, and the injury, whatever it is, has probably been operative for some time.

Tulips with Mottled Leaves.—*Gardener:* The most notable instance of a Tulip having mottled leaves is *Tulipa Griegi*, the foliage of which is, in its way, as handsome as the flowers. The leaves are of large size for a Tulip, rich green in colour, and spotted over with heavy, dark maroon spots. You should certainly grow the species.

Acalypha musaica for the Flower Garden.—You are quite right in your supposition, *Acalypha*, that this plant would do well out of doors in the flower garden, but, unfortunately for the originality of the idea, as far as you are concerned, the practice has been adopted in several quarters. The plants colour exceedingly well, in fact, fully as well as as they do in the best warm houses, and they are very effective, for the colour is not at all a common one. Cuttings struck in the early spring if pushed on will make just the sort of plants for use in this way.

Digging against Box Edging.—*P. E.:* We do not think you have made a mistake in turning the roots of the Box edging into the border, since it will give the Box a much better chance than if the roots had been turned into the gravel walk. In any case, the roots would ultimately turn towards the richer soil so you have only taken time by the forelock as it were. You must be careful not to dig too closely to the box with the spade; up to within 3 in. or 4 in. will be close enough for deep digging.

Aponogeton distachyon.—*G. T. B.:* You may grow the Cape Pond Weed very well in the concreted tank of which you speak, but the depth (4 ft.) will be too much for the plants to be placed at the bottom of the tank. You might build a bank of soil in the middle of the tank as you suggest, but we think

the better plan would be to grow the plants in rough baskets or boxes, and bring these up to the required height by placing them on a pedestal of bricks or other boxes. A depth of 2 ft. of water will be the maximum, and 18 in. will be a good medium.

SPRING FLOWERS IN HYDE PARK.

AMONGST dwellers in the country there is a very prevalent idea that to the teeming multitudes in town and city the faces of the flowers are but the faces of strangers, which stray into their midst incidentally, but which have no settled abode in the smoke and bustle of the busy haunts of men. To such people the magnificent floral effects that are, year by year, prepared for the benefit of the public in the parks and open spaces of the metropolis are an unknown quantity, and it is not difficult to imagine the astonishment that would be exhibited were they able to take just a peep at some of these

Narcissi, and Tulips galore have been blooming with right good will for the past fortnight, and we question very much if they have ever appeared to greater advantage. The Hyacinths, in particular, have been much above the average, and this in a season when there has been a good deal of complaint in many quarters that the consignments of bulbs from Holland have not been so good as usual. With commendable foresight, however, a superior lot of bulbs was obtained by the authorities by paying a higher price than ordinary, and no one can doubt that the departure was a wise one. The firm who supplied the bulbs, Messrs. Jas. Carter & Co., of High Holborn, have every reason for congratulation upon the results, whilst the triumph of the able park superintendent, Mr. W. Browne, who has planned and arranged their disposition with such consummate skill is as complete.

No elaborate associations of colours have been attempted, but considerable attention has been given

Hyacinths Grand Maitre, Mirandolina, Grandeur à Merveille, Charles Dickens (in blue and rose varieties), Robert Stieger, General Havelock, and Queen of Hyacinths. A good deal of variety has thus been obtained and the general effect is good.

Further on, between the Stanhope and Grosvenor Gates, the flower garden becomes considerably wider, a large grass area encircled by gravel walks having numerous beds of various sizes laid out upon it. Here there are to be seen some grand masses of Hyacinths, large beds being completely filled with one variety. These beds have been planted in pairs, one on the eastern and the other on the western side of the enclosed space. Such sorts as Marie Stuart, white; Sir H. Barkley, deep blue-black; Mdme. Hodson, pale rose; and Gertrude, rich rose; have acquitted themselves wonderfully well, the uniformity of height, the size of the flower spikes, and the time of flowering, bearing unmistakable evidence of careful sorting of the bulbs. Several



BORDER OF TULIPS AND HYACINTHS IN HYDE PARK.

displays which the true Londoner takes very much as a matter of course.

The 400 acres of Hyde Park afford something more than a vast promenade to the ranks of fashionable society, for flowers are distributed with great profusion, and, it may be added with excellent taste, and their bright hues add much to the gaiety of the scene that may be seen there on any bright spring day. The face of spring in the park may not be the modestly beautiful one that the countryman knows and loves, for the subtle jade has not disdained to add the blandishments of art to the charms of nature, but for all that, it is a vastly pleasurable experience to make her acquaintance, and to pass an hour amongst the hosts of floral subjects that she has called into being.

As usual, the greatest effort has been made on that side of the park nearest to Park Lane, where a series of rather formally shaped beds, cut out in the grass, run from a little above the entrance at Hyde Park Corner to the Marble Arch. There, Hyacinths,

to simple and effective contrasts of two colours. That time-honoured association of blue and yellow is worked out in a variety of ways, and appears at almost every turn, white not unfrequently being added, whilst the combination of red, white, and blue is to be met with in several places.

Entering from Hyde Park Corner, the first bed, and a very pretty one, is filled with the blue Hyacinth *Regulus*, interspersed with and overtopped by *Narcissus Sir Watkin*. An edging is furnished by two rows of *H. Mont Blanc*. Another effective bed has an edging of two rows of *H. Regulus*, the centre block consisting of the rich rose *H. Incomparable*, interspersed with *Jonquil Campernelle*. A red, white, and blue bed all of Hyacinths is exceedingly rich. The red is furnished by *Mdme. Rachel*, the white by *Mdme. Van der Hoop*, and the blue by *Orondates*. Most of the beds here are oblong in shape, and such handsome Daffodils as *Golden Spur*, *Emperor*, *Empress*, and *Sir Watkin* have been freely employed in conjunction with

smaller round beds give abundant evidence of the effectiveness of the blue and yellow contrast. The blue is furnished by a groundwork of *Scilla sibirica*, and the yellow by *Narcissus Sir Watkin*, *N. Horsfieldii*, *N. Emperor*, or *N. maximus* thinly planted.

The Tulips are rather later than the Hyacinths, but the earlier ones are fully as good, and the later ones promise well. They are planted in considerable numbers both in the beds in the enclosed area above referred to and on the Park Lane side. Near the Grosvenor Gate is a fine mass of *Keizer Kroon*. This is a warm corner, being well sheltered on the east and north and the Tulips have signified their satisfaction by especially good behaviour. *Proserpine*, also a fine Tulip, has come rather badly from some reason or other, but *Ophir d'Or* has made the most of its opportunities. Several mixed beds in which Tulips have been mixed with *Doronicum plantagineum* are to be seen hereabouts, and very pretty they are, for the *Doronicum* has a delightful shade of

green, and helps to tone down the rather gaudy hues of the Tulips.

From the Grosvenor Gate on to the Marble Arch both Tulips and Hyacinths are rather later, the heavier shade being no doubt accountable. There are here several fine beds of such Tulips as Molière, Murillo, Rosa Mundi, Rex Rubrorum, and Yellow Tournesol, while we must not forget to mention a grand bed of Hyacinth King of Blues on the Park Lane side, certainly one of the best examples of Hyacinths in the whole of the park. Some mixed beds of Polyanthus are also very gay here, as they are in other parts of the park.

On the northern side, west of the Marble Arch, we find one of the prettiest pictures to be found in the whole of the park. The crest of the mound which is terminated by, and runs parallel to, the Bayswater Road, is clothed with various shrubs, and in front of these and facing full south is a border which runs westward in a series of graceful curves until it is terminated by a mass of Narcissi which have been naturalised in the grass. In this border a large number of varieties of Hyacinths and Tulips has been planted, each variety forming a distinct block of colour that stands out freely by itself, and helps to form a very vivid, and showily varied whole. The illustration, to which we are indebted to the kindness of Messrs. J. Carter & Co., depicts one of the most imposing of these curves. Our readers will have no difficulty in recognising Keizer's Kroon Tulip in the foreground, and will be able to gain a good idea of the general arrangement, which is well worth imitation.

ROYAL GARDENERS' ORPHAN FUND.

CHAS. E. KEYSER, Esq., of Aldermaston Court, Reading, presided at the annual dinner of this charity, which took place at the Hotel Metropole on the evening of Wednesday, the 20th inst. The chairman was supported by a strong gathering of gentlemen well known in horticultural circles, including Sir Trevor Lawrence, and Messrs. N. N. Sherwood, Martin J. Sutton, Leonard G. Sutton, W. Marshall, W. B. Hemsley, Geo. Nicholson, H. B. May, J. Assbee, H. J. Jones, R. Dean, G. Wythes, G. Reynolds, M. Gleeson, J. Smith, H. J. Adams, J. Gould Veitch, H. Hicks, W. Sherwood, E. Sherwood, W. H. White, W. R. Alderson, W. Y. Baker, A. J. Baker, P. R. Barr, J. W. Barr, G. H. Barr, H. J. Balderson, W. J. Brewer, J. Butler, G. Bick, A. B. Crichton, J. N. Cox, W. Cox, Geo. Cuthbert, G. H. Cuthbert, G. Dean, E. T. Cook, C. H. Curtis, Geo. Featherby, Geo. Gordon, R. P. Glendinning, Harris, G. J. Ingram, J. Kay, Peter Kay, Rev. Mayall, J. A. Laing, D. P. Laird, Stuart H. Low, J. F. McLeod, A. Marshall, A. J. Monro, E. Feathers, E. Mott, W. Moore, W. J. Nutting, W. Nutting, J. Odell, C. E. Osman, A. Outram, F. Penney, J. Poupert, H. Rides, J. Russell, E. Rochford, Jos. Rochford, John Rochford, G. H. Richards, D. Pell Smith, T. W. Sanders, J. Smith, T. Speller, J. Stephens, J. B. Stevenson, J. Sweet, S. M. Segar, T. Swift, J. Tiffin, H. Tellman, J. G. Taylor, J. Walker, W. Woodman, H. P. Wooderson, Wheatley, B. Wynne, T. C. Ward, A. W. G. Weeks, and the secretary, A. F. Barron.

After a plentiful repast had been discussed, the chairman rose to propose the customary loyal toasts of "The Queen," and the "Prince and Princess of Wales, and the rest of the Royal Family." In speaking of Her Majesty he said that she interested herself in everything in which her subjects were interested, and he thought that horticulture had a special claim upon her regard. The Princess of Wales was, next to Her Majesty, probably the most beloved lady in the land, whilst the Prince astonished everyone by the amount of work he accomplished; in short, the Royal Family always sought to identify itself as closely as possible with all classes of the people, and he hoped it would be long before loyalty ceased to be an essential characteristic of an Englishman. Both toasts were enthusiastically received.

The toast of the evening, "Success to the Royal Gardeners' Orphan Fund," was also given by the chairman, who said he felt much diffidence in occupying a position as their chairman, which had been previously filled by eminent noblemen and gentlemen. He had felt that he was not an inappropriate person to propose the loyal toasts since he was High Sheriff for the Royal County of Berkshire.

His audience knew fully as much of the "Fund" as he. They knew it was started in 1887, in commemoration of Her Majesty's Jubilee, that it had made good progress since then, and that it now had invested funds to the value of £10,000. During the past year help had been given to nearly 100 orphans. He, with others, regretted that the charity was not able to do more, seeing how valuable was the work it was doing—those who had been fortunate in horticulture trying to alleviate the distress of those who had been unfortunate. He thought the "Fund" was not so well known as its foster association, the Gardeners' Royal Benevolent Institution, and hoped that when it became better known its sphere of influence for good would be widely extended. He coupled with the toast the name of Mr. N. N. Sherwood, their treasurer. The toast was enthusiastically drunk.

Mr. Sherwood, in replying, said that, as a society, they had much to be thankful for, but it was a matter of regret that last year the annual subscriptions showed a slight falling off. He hoped that in the near future they would be able to elect all those who applied for assistance, and that they would not, as now, have to send some away. He suggested, as a means of increasing the income of the "Fund," that the children of noblemen and gentlemen who had large estates should be invited to save for the purpose of founding special funds for the benefit of the orphans, these funds to be called by the name of the house, or of the children supplying them. He thanked the company for receiving his name so heartily.

Mr. Martin J. Sutton proposed "Gardeners and Gardening." He said that he himself was not, in business, strictly connected with gardening, but his two brothers, Mr. Leonard G. Sutton and Mr. A. W. Sutton were. His province was agriculture, but he thought that farmers would have to take a lesson in thorough cultivation from gardeners before they could get their land to pay. He coupled the name of Mr. A. W. G. Weeks with the toast. After the reception of the latter by the audience Mr. Weeks responded, saying that he had a great respect for gardeners, for he had ever found them to be an honest, praiseworthy, body of men, who were often trusted by their employers with many thousands of pounds worth of goods.

Mr. R. Dean, in a humorous speech, proposed "The Press." He laid particular stress upon their indebtedness to the horticultural Press, and associated with the toast the name of Mr. George Gordon. That gentlemen, in replying, assured the company that the Press had been closely associated with the "Fund" since its inauguration, and that its merits had been kept persistently before the public.

The chairman was heartily received at the invitation of Mr. W. Marshall. Mr. Keyser replied at some length, thanking them all for the reception they had given him, and the manner in which they had shown their appreciation of his humble services. He took a great interest in gardening, and he had given his representative at Stanmore (Mr. M. Gleeson), and his representative at Aldermaston (Mr. A. Gal), a chance of showing what they could do in horticultural exhibitions. This he had done with a view to helping the magnificent exhibitions of plants, flowers, fruits, and vegetables now held in this country.

It was announced that the evening's subscriptions amounted to £559 6s.

This was made up of the following large subscriptions:—C. E. Keyser, Esq., £116 16s. (including Baron Schroder, £10 10s.; G. W. Palmer, £20; T. F. Blackwell, £10 10s.; and J. H. Benyon, £10); Mr. Assbee, £63 6s. (including £5 from Mr. E. Rochford, £5 from Mr. J. Sweet, £5 3s. from Mr. John Rochford, £3 3s. from G. Monro, £3 3s. from Mr. Jos. Rochford, £3 3s. from J. G. Taylor, £3 3s. from C. P. Kinnell, and £5 from Mr. J. Walker); N. N. Sherwood, Esq., £58 14s. (including J. Veitch & Sons, £10 10s.); Mr. G. Reynolds, £32 18s.; Baron A. de Rothschild, £21; N. M. Rothschild, Esq., £26 5s.; M. J. Sutton, Esq., £25; L. G. Sutton, Esq., £25; A. W. Sutton, Esq., £5; S. M. Segar, Esq., £19 19s.; A. W. Weeks, Esq., £16 5s.; W. Robinson, Esq., £10 10s.; Mr. J. F. McLeod, £10 16s. 6d.; Mr. J. B. Stevenson, £6; Messrs. Dickson (Chester) £5; Mr. H. J. Adams, £5 5s.; Sir Trevor Lawrence, Bart., £10 10s.; P. Rudolph Barr, £10 7s.; Thames Bank Iron Co., £7 7s.; Hugh Low & Co., £5 5s.; H. J. Clayton, £4 10s.; C. J. Denning, £4 2s.; Mrs. Head, Sydenham, £10;

H. Hicks, £3; W. J. Nutting, £6 6s.; Dr. Masters, £3 3s.; J. Godseff, £3; H. Balderson, £3 3s.; G. Cuthbert, £5 5s.; T. Whillans, £2 8s.; M. Gleeson, £2 12s. 6d.; and £2 2s. each from W. J. Brewer, T. C. Ward, R. P. Glendinning, P. Crowley, H. J. Wimsett, W. Marshall, A. Marshall, R. Dean, G. H. Richards, F. Blackwood, J. Russell, and J. Speller.

The evening's proceedings were much enlivened by Songs from Miss Gertrude Snow, Miss Foxcroft, and Mr. H. Schartau, whilst a recitation by Mr. H. Hudson excited a good deal of laughter.

The singing of "Auld Lang Syne" in demonstrative fashion terminated the proceedings.

BELGIAN NURSERIES.

I.—M. ED. PYNART-VAN GEERT, GHENT.

ONE of the most easily accessible nurseries in the city of Ghent, and one of the nearest to the principal railway station is that of M. Ed. Pynaert-Van Geert. It occupies an island between two arms of the River Escaut, at Port Bruxelles, an ancient gate of the city, at the outer end of the Rue Bruxelles. Beds of Hyacinths, and single and double Tulips on the lawns around the dwelling house make the place gay at the present time.

Having announced our arrival we were soon led into the propagating pit, where a varied assortment of plants is being reared from seeds and cuttings. The broad pinnae of the new *Adiantum claesianum* have a broad silvery centre from whence radiate numerous silvery veins, making a highly ornamental Maiden-hair Fern. Here we noted a remarkable variety of *Kentia balmoreana*, five years old, yet only 6 in. high, and having a very compact arrangement of the pinnae. Small plants of *Pandanus utilis*, having red edges to the leaves are highly ornamental, and reminded us of a time when the plant was more common in this country than it is at present. A compact growing subject is *Pitcairnia tabulaeformis*, having a rosette of leaves lying close upon the soil. A rare plant is *Labisia pothoiana* having olive-coloured leaves with white edges and midrib, and suitable for stove culture. A curious Aroid is *Cryptosperma ferox*, having its petioles marbled like a snake.

M. Pynaert-Van Geert is a successful cultivator of *Anoetochilus*, as it may be remembered he took the first prize at the Ghent Show for this class of plants, which he grows in frames in the propagating pit. The golden tracery of lines on the leaves of *A. Petola* is well known. The velvety-olive leaves of *A. Dawsoniana* are netted with red. Yellowish and creamy lines on the leaves of *A. sanderianus* make this another very handsome species. These three are grown in quantity and all are very vigorous and healthy. Other species are cultivated in smaller quantities.

Azaleas of all sizes in the nursery number some 30,000, most of which consist of the finest modern varieties of *A. indica*. Those of market size and under are planted out in leaf soil upon the benches of the house, but presently they will be planted in beds in the open-air for the summer months. Here again leaves, scarcely half-decayed, constitute the staple of the material in which they are to be planted, say about a fortnight hence. They were all cut back some time ago and the prunings used as cuttings or grafts. *Azalea mollis* is also grown in great quantity and variety, the larger specimens taking the first prize for this class of plants at the great show. In another part of the nursery we passed through a block of houses entirely filled with Indian Azaleas about ready to be planted outside. Amongst flowering specimens a very fine new variety is *A. indica Souvenir de Madame Francois Vervaene*. The flowers are large, double, and pink, fading to silvery margins.

In the cool corridor is a collection of hybrid *Rhododendrons* of the *ponticum* type. Large specimen plants are also grown in tubs, producing a very fine display when in bloom. Particularly interesting is the hybrid *Azaleodendron*, the parents being a variety of *R. ponticum* and *Azalea mollis*. The leaves are evergreen and intermediate between the parents. The oldest plant is laden with blush flowers beautifully spotted upon the upper segments, so that this triumph of the skill of the hybridist is ornamental as well as botanically interesting.

Many of the best of the Orchids were at the exhibition on the occasion of our visit to the nursery.

Amongst those in bloom we noted *Cypripedium mastersianum*, *C. Exul* and *C. chamber-leanum*, a hybrid between two species indicated in the name. It has perhaps a greater leaning towards *C. chamberlainianum* than to the other parent. The upper sepals of *C. violaceum*, another hybrid, are brown, with a greenish-yellow edge. The petals are violet-purple, with a brownish base; and other parts of the flower show the influence of *C. hirsutissimum* and *C. villosum*, which were the parents. The upper sepal of *C. Druryi delectum* is of a soft yellow, with a maroon midrib; and the petals are golden-yellow. *C. koffmannianum* (insigne x *Boxalli*) has the dorsal sepal richly blotched with brown on a greenish-yellow ground, and the upper portion is blotched with violet. A plant of *Odontoglossum cuspidatum platyglossum* carries a large panicle of flowers. In passing through the various divisions of the Orchid and some other houses we noted a layer of the midribs of tobacco leaves laid under the benches, generally over or near the hotwater pipes. Heat and moisture cause a slight vapour of nicotine to rise in the house, thus driving away or killing greenfly and other insects.

Araucaria excelsa is one of the specialities of this establishment. One large, cool, shaded house is filled with plants ranging from 1 ft. to 4 ft. high. The bulk of them consists of the typical form, but there are several interesting and distinct varieties, of which *A. e. glauca* is, perhaps, the best known, and characterised by the sea-green hue of its foliage. The branchlets and twigs of *A. e. compacta* are densely crowded together, giving the growth of the trees a compact appearance. Another house is filled with plants 6 ins. to 12 ins. high, all in the picture of health. The method of propagation is entirely by cuttings. The compost in which they are grown consists mostly of leaf soil with a little loam and well-rotted manure.

Fine foliage plants of various kinds are grown in considerable quantities, besides those already mentioned as being in the propagating pit. *Curculigo recurvata variegata*, a Palm-like plant with undivided leaves, is in very fine condition. Of a useful decorative size, and well coloured are the plants of *Pandanus Veitchi*. *Vriesia fenestralis* is handsomely netted with dark green on a light green ground. *Citrus sinensis*, the Otaheite Orange, in compact specimens about a foot high, is well furnished with fruit. *Dracaena Bruanti*, having the young foliage deeply tinted with reddish-bronze, is a plant that is very popular on the Continent, and is grown at this nursery in considerable quantity. The long, drooping sprays of *Asparagus Sprengeri* are very effective and graceful. Well known and useful plants are *Eucbaris grandiflora*, *E. Mastersi*, *Sibthorpia europaea variegata*, and *Saxifraga sarmatosa tricolor superba*, the latter thriving well here, and producing handsomely-coloured foliage.

Palms constitute one of the leading features of the establishment, the span-roofed houses being constructed so as to accommodate plants of various size. There are also some rare species in the collection. The long, black spines on the leaves of *Oncosperma Van Houttei* remind one of those of an *Astrocaryum*. The species has pinnate leaves, and is, moreover allied to *Areca*. The huge undivided leaves of *Phoenicophorum sechellarum* are always striking and of noble appearance. The leaves of *Areca triandra* are pinnate and divided at the apex like those of a *Geonoma*. *Washingtonia robusta* has fan-shaped leaves furnished with a thin fringe of white filaments at the edges of the segments. Here also are fine plants of *Licuala grandis* 2 ft. to 3 ft. high, and furnished with twelve to sixteen well-developed leaves each. *Livistona rotundifolia* is a handsome fan Palm, with orbicular leaves, fingered at the edges.

No Palms are more popular or more extensively grown on the Continent than *Kentia fosteriana*, *K. balmoreana*, and *Cocos weddelliana*, which are cultivated in pots or tubs according to size. The bulk of the plants are, however, of useful, decorative, or market size, and confront the visitor in every house or every second one. *Areca Baueri* is also very abundant, in sizes varying from 1 ft. to 3 ft. high, and upwards to specimens of gigantic size. In the case of seedlings for market two or three are often put into one pot to make little specimens well furnished with foliage. One block of four large houses practically constitutes one building, for the interior is continuous and the temperature accordingly uniform in all. The Palms here are mostly of large size

with the foliage arching over every pathway. *Kentias*, *Areca*s and *Latania*s are most abundant here. *Areca sapida* is similar to *A. Baueri*, but may be recognised by its much paler petioles. Another house is filled with *Latania borbonica*, 2 ft. to 3 ft. high, and mixed with *Kentia balmoreana* in fine condition.

The next house entered was filled with *Kentia fosteriana*, 3 yds. to 4 yds. high, and grown in tubs. A still more lofty house accommodated the largest specimens on the premises, or such of them as were at home. Some of the biggest, consisting of *Sabal Adansoni* and *Areca Baueri* were at the Ghent show, where they attracted a great amount of attention from visitors, as they towered above everything else in the exhibition, and took the first prize along with others in a class for Palms. M. Ed. Pynaert-Van Geert exhibited in eighteen classes and took as many prizes. Other huge specimens in this house were *Latania borbonica*, *Chamerops humilis*, *Chamaedorea Dermesti*, *Areca sapida*, *Phoenix reclinata*, *Phoenix canariensis* and *Chamerops Stauracantha*, with orbicular, very deeply divided glaucous leaves. It is 14 ft. to 16 ft. high, and the largest specimens of its kind in Belgium. *Kentia fosteriana variegata* (panachée) has its leaves more or less heavily striped and banded with yellow, and is unique in its way.

Kitchen Garden Calendar.

WEEK'S WORK.

FRENCH BEANS.—To have these early it is necessary that some pains and trouble be taken both in preparing the ground and protecting the young plants as soon as they appear through the soil. In but few districts is it safe to allow the plants to go unprotected till the first week in June, as a very slight frost will cut them down. If seed be sown now, and the weather is favourable, the young plants will make their appearance about the middle of May; therefore, to make them safe from injury hoops should be put over the rows on which mats or canvass can be placed to afford protection at night. Runner varieties grow very fast when the weather is favourable; but, as a rule, they will come to no harm for a fortnight or three weeks from the time the young plants make their appearance. Dwarf kinds are more easily protected as they do not grow so rapidly, and most of them will withstand two or three degrees of frost. It is, however, not safe to allow them to remain exposed at night till all danger of frost is past. So far, the spring has been dry with cold ungenial weather, so that the growth of all vegetables has been slow.

PEAS have suffered from the cold winds and frosty nights, and these together with the absence of rain have somewhat retarded progress. Another sowing should be made as soon as the former ones make their appearance through the soil, choosing some of the main crop or late varieties such as *Autocrat* and *Carter's Michaelmas*. The former sowings should have the stakes put to them as soon as they are a couple or three or inches high. It may be necessary where the ground is light to have recourse to watering the early lots, as the ground owing to the absence of rain has become dry; but this should not be resorted to unless actually necessary, as the water cools the soil.

POTATO PLANTING ought now to be brought to a close as soon as possible, as the growth will not have made sufficient progress to suffer should we be visited with late spring frosts. Another sowing of Carrots may now be made, selecting such varieties where the soil is not deep, as *Matchless*, *Red Intermediate*, *Model*, and *Scarlet Perfection*. The former should be sown in drills at least 15 in. apart. The earlier sowings should now be thinned, leaving the plants about 4 in. from each other. Beetroot for an early supply must also be thinned, allowing ample room for the plants to develop. The main sowing should now be made unless in places where the soil is very fertile, then it would be better to defer doing so till towards the end of May as the roots are apt to grow too coarse. Broccoli of all kinds should now be sown choosing an open piece of ground or one facing the north, as on such the plants grow more sturdy than on hot dry borders facing south.

Should the Turnip fly make its appearance the ground should be kept moist and the plants occasionally dusted over with lime. We often see plants riddled with these troublesome little creatures, in fact many of them are eaten off as soon

as they make their appearance through the soil, and the gardener is sorely tried to get sufficient plants for his requirements. A rich fertile seed bed and plenty of moisture to assist the plants to make their growth will usually prevent any serious attacks. Turnips will now grow more readily, particularly if assisted by frequent waterings. Small sowings should, therefore, be made about every three weeks to keep up a supply of nice crisp tender roots.

CELERY will now need attention, plants ought to be pricked out as soon as they are large enough to handle. If a gentle hot-bed can be afforded them in cold districts, so much the better, but failing this a warm border that has been liberally manured and where an abundant supply of water can be given will suit them well. Celery should suffer no check at any time. The young plants from the late sowings in the open ground will now be making their appearance, and these should be assisted by gentle waterings till such times as we have some rain.

Tomato plants ought now to be potted on and grown in a gentle heat under glass until the weather is favourable for putting them out. Air should be admitted freely on all favourable occasions, that the plants may be short jointed and sturdy. Pay particular attention to all newly planted vegetables such as Onions, Leeks, Cauliflower, Cabbage, and Lettuce, and see that they do not in any way suffer for want of water; at the same time do not sodden the soil, as this will retard progress. Vegetables in pits and frames will now need special care as the soil soon becomes dry. French Beans, Peas, and Potatoes will all need watering, and both the former will be greatly benefited by gentle syringing when the lights are closed in the afternoon. See that there is an ample supply of all kinds of herbs and salads, as these will now be in constant demand.—*Kitchen Gardener*.

The Orchid Grower's Calendar.

THE rather sharp spring frosts which have been pretty prevalent since the last calendar have necessitated our turning on the heat in the cool houses the last thing at night; and as a help to keep the temperature from going down too low, we have put the blinds down also. This protects plants that are hanging up near the roof glass; but the blinds should be pulled up again as soon as the sun rises. A little care in this direction saves firing hard, and at the same time helps the plants considerably.

In the warmer divisions, the fires must be kept well in hand, for although the sun at times is powerful, the cold east winds prevent our putting on much air even by the bottom ventilators; and unless it can pass over the warm pipes before it reaches the plants it is not beneficial to the plants. Careful shading, as before advised, and a judicious use of the heating apparatus is much the best at this season.

CYPRIPEDIUM HIRSUTISSIMUM is a most useful all-round slipper, flowering well under anything like reasonable conditions. A medium temperature, too, suits it well, so that most amateurs may grow it. It is just now in flower, side by side, with the newer introduction *C. Chamberlainianum*, which appears to me very much like a geographical form of *C. hirsutissimum*. The difference only seems that the one has the colour on the petals and the other on the pouch. However that may be, they are certainly both worthy of a place in even a small collection, on account of their good growing properties.

MILTONIA VEXILLARIUM growing in the intermediate house should be closely looked after for yellow thrips which soon play sad havoc with the young growths and also the spikes, which will soon be in sight as they show before the growths are above half made up. Dust a little tobacco powder into the growths, as this makes them shift to the outside, then fumigate, and those that the powder does not kill will soon be got rid of. The same applies to *M. Roezlii* which, however, grows best when placed where it can get the shade and heat of the warmest division.

TRICHOPILIAS.—Where room is limited, a few of these dwarf-growing Orchids may be grown with advantage. We have just now the pretty *T. crispata* in flower, which is much admired. The plants do best in pots or pans, which may be suspended near the glass. Very little compost should be placed about the roots; and as they are very impatient of much moisture at the roots they should be allowed

to get dry between each watering. Treated in this way they give very little trouble and flower freely.

COOL HOUSE.—Here the handsome *Odontoglossum polyxanthum* is making a good show. Considering it was introduced by Klabock twenty years ago, the wonder is that it is not more plentiful. Like *O. luteo-purpureum* and *O. Hallii* it does best if accommodated with just a few more degrees of heat than is afforded *O. crispum*, otherwise the treatment is identical.—C.

POTATO ONIONS.

THE value of these does not appear to be recognised so much as their usefulness deserves. They are so mild and valued much by *chefs*, after the old Onions are over, and when the latter fail to keep well. (We learn such is pretty general in Scotland this season. The autumn rains being heavy and the season remarkably late, tubers were in many parts badly ripened). The Potato Onions—and those from the old stock of bulbs planted in the same way as the former—were valued much till the young crops were forming bulbs and becoming serviceable. By reason of the heaviness and dampness of the land, our own stock of bulbs (Potatos, or underground bulbs), are not worth the keeping for transplanting. Shallots often may be seen in gardens, in capital condition, where Onion growing is not attempted by reason of the grub pest.—M. T., Carron, N.B.

SOCIETIES.

THE NEWCASTLE SPRING FLOWER SHOW.—

April 20th and 21st.

THE Durham, Northumberland, and Newcastle Horticultural and Botanical Society has had in the course of its long career (for the society is one of the oldest of its kind in the country), many ups and downs. The spring show, however, which was opened at Olympia, Newcastle, on the 20th inst., was a distinct success. Advantage was taken of the commodiousness of the place to stage the various exhibits with excellent general effect, but apart from this improvement the show, as far as the material staged went, was one of the best ever held in Newcastle, and far in advance of the spring shows of late years.

The classes according to schedule were well patronised all round, both amateurs and professional cultivators turning up in strong force.

In the "open" section of the schedule, Mr. Geo. McDougal staged a fine group of miscellaneous plants occupying the space allotted of 60 square feet; Mr. J. McIntyre was second; and Mr. H. H. Hillier, third.

Mr. J. McIntyre scored for three flowering plants, three plants of *Azalea indica*, four specimens of *Dicentra (Dielytra) spectabilis*, and six *Spiraeas*.

Auriculas were well shown, and formed a centre of attraction. Six distinct varieties (Alpines excluded) were best shown by Mr. Thos. E. Hay, who also had the premier two plants of the same class, Mr. Richard Willis taking the first for four. Mr. S. Bewick had the best green-edged, and Mr. Thos. F. Hay the best self-coloured variety. The premier six and two plants of Alpines came from Mr. Geo. Lee.

Mr. McDougal came to the front in the classes for bulbs, for twenty-four Hyacinths in pots in not less than twelve varieties. Mr. D. Wylam had the best twelve Hyacinths in nine varieties, and Mr. T. Wheeler the premier twelve of one variety.

The nine pots of Single Tulips in six varieties, and the six pots of double Tulips in four varieties gave Mr. McDougal other successes.

In the classes for floral decorations, Messrs. Perkins & Sons, of Coventry, again won high honours. They secured first prizes for the basket of cut flowers, the bridal bouquet, two hand bouquets, lady's sprays, and buttonhole bouquets, a sufficiently clear demonstration of their skill in the art of flower arrangement.

The classes from which nurserymen were debarred from competing contained some excellent material. Here Mr. J. McIntyre won for four Chinese Primulas and six *Spiraeas*, Mr. Wm. Pitt for six *Cinerarias*, and Mr. T. Morris for four pots of Lily of the Valley (the pots or pans not to exceed 8 in. in diameter).

Mr. T. Wheeler staged the best twelve Hyacinths, and Mr. D. Wylam the best six Hyacinths in the classes for bulbs.

Mr. D. Wylam and Mr. Jos. Ellison were the most successful exhibitors in the amateurs' portion of the schedule.

The judges were Mr. James Douglas, of Edenside, Great Bookham, Surrey, and Mr. Chas. Paul, Old Trafford Gardens, Manchester.

The non-competitive exhibits were fairly numerous and attracted a good deal of attention. Mr. James Douglas staged a fine lot of blue Primroses that were much admired. Messrs. Wm. Clibran & Son, of Altrincham, showed a general collection of stove foliage plants, Cacti, and Carnations. Amongst the last-named the variety Yellow Wonder was especially noteworthy.

Messrs. Pearson & Sons, of Chilwell, Notts, had a large assortment of Daffodils, which flower they cultivate largely. Glory of Leiden, Madame de Graaff, and forms of the handsome *Narcissus triandrus* were in great prominence.

Messrs. Tell & Co., Hexham, sent a fine group of miscellaneous plants, and the table decorations submitted by Messrs. W. Edwards & Son, Sherwood, Notts, were in capital taste, and were much admired by visitors. Messrs. J. Thompson & Son, of Forest Hall, Messrs. T. A. Hutchinson & Son, of Forest Hall, and Mr. A. E. Campbell, Gourock, N.B., all sent groups of plants, whilst a showy stand of Orchids came from Mr. J. G. McKenzie, Heddon-on-the-Wall.

NORFOLK AND NORWICH HORTICULTURAL.

—April 21st.

The Annual Spring Show of this society was held in the spacious St. Andrew's Hall, Norwich, and was extremely well attended. The principle feature in the show was the centre table, which consisted only of those beautiful silvery-white and golden flowers, the Narcissi or Daffodils. Other flowers and flowering plants, such as Orchids, Amaryllis, Azaleas, Cinerarias, and Gloxinias were arranged on tables; and the large specimens of stove and greenhouse foliage and flowering plants were effectively arranged, forming in all a very interesting show. During the afternoon and evening the band of the Seventh Dragoon Guards played selections of music.

For six Amaryllis J. H. B. Christie, Esq., of Framingham Manor, took first, with W. J. B. Birkbeck, Esq., of Thorpe, a close second. The only entry for six distinct Auriculas came from B. E. Fletcher, Esq., with some very fine specimens. An extra prize was awarded to J. J. Colman, Esq., for a basket of Auriculas, and deservedly awarded.

The Azaleas, in six distinct varieties, were poor, and in consequence the leading prize was withdrawn; second prize went to G. D. Trafford, Esq., Wroxham Hall, with Col. Rous, Worstead House, third.

F. Chaplin, Esq., of Thorpe Road, took the leading place with six well-grown plants of *Coleus*; J. G. Snelling, of Eaton Hall, was second. F. P. Hinde, Esq., of Thorpe Hamlet, was an easy first with six Gloxinias; F. Chaplin, Esq., second; and W. J. Birkbeck, Esq., third. J. G. Snelling, Esq., led with six well-grown pots of *Mignonette Machet*; F. P. Hinde, Esq., came in second; and E. S. Trafford, Esq., third. For six pots of *Cinerarias* W. J. Birkbeck, Esq., was an easy first, followed by J. G. Snelling, Esq.

For six pots of bulbous plants in flower Col. Rous was first with some grand specimens of *Narcissus bicolor Horsfieldii* and *N. Barrii conspicuus*; S. G. Buxton, Esq., of Catton Hall, was second. For six Orchids, distinct, S. G. Buxton, Esq., took first with five pieces of *Vanda suavis*, *Dendrobium nobile*, and *Cattleya Schroderi*; Rev. Canon Ripley, of Earls-ham Hall, was second; and Col. Rous, third. For three Orchids the Hon. A. E. Fellowes, M.P., of Honingham Hall, was an easy first with well-grown pieces of *Dendrobium nobile*, *Lycaste Skinnerii*, and *Cattleya lawrenciana*; Canon Ripley was second; and E. S. Trafford, Esq., came in third. Mr. Trafford also took first for a single specimen of *Dendrobium densiflorum*; and S. G. Buxton, Esq., was second. For six *Caladiums* W. S. Birkbeck, Esq., was placed first.

In the class for twelve bunches of greenhouse flowering plants, E. S. Trafford, Esq., was first with specimens of *Dendrobium thyrsoflorum*, *Rhododendron Countess Fitzwilliam*, *Amaryllis*, &c., with

Col. Rous, second, and Canon Ripley, third. For six bunches, the Hon. A. E. Fellowes, M.P., took the lead, B. G. Fletcher, Esq., was second, and J. H. B. Christie, Esq., third. For twelve bunches of hardy cut flowers, distinct, Mrs. Petre, of Westwicke House, was first with fine bunches of *Gentiana acaulis*, *Narcissus Horsfieldii*, *Anemones*, &c.; O. Corder, Esq., was second, and Col. Rous, third. For six bunches, B. E. Fletcher, Esq., secured the first place, J. H. B. Christie, Esq., was second, and S. G. Buxton, Esq., third. The prize for six bunches of *Anemones*, distinct, went to Canon Ripley with *A. ranunculoides*, *A. apennina*, *A. nemerosa alba*, &c., with R. B. Longe, Esq., second. For twelve cut *Gardenias* the Hon. A. E. Fellowes was first, followed by S. G. Buxton, Esq.

For six flowering stove and greenhouse plants (Orchids excluded), S. G. Buxton, Esq., was first, with J. G. Snelling, Esq., second. For four distinct plants Canon Ripley, A. G. Buxton, Esq., and Col. Rous were first, second, and third respectively. For a single specimen S. G. Buxton, Esq., was first; W. J. Birkbeck, Esq., second, and Col. Rous, third. For eight foliage stove and greenhouse plants, S. G. Buxton, Esq., took the lead. For six foliage plants, S. G. Buxton, Esq., was again first, with Canon Ripley, second, and A. J. Bunting, Esq., third. For four plants, A. J. Bunting, Esq., was first; J. G. Snelling, Esq., second, and Canon Ripley, third. For a single specimen, S. G. Buxton, Esq., had the best. F. P. Hinde, Esq., and Col. Rous scored respectively in this order.

In the classes for Narcissi there was an exceptionally keen competition, and the judges had an extreme difficulty to decide in many of them as to where to place the awards.

In the open class for three blooms each of thirty-six distinct varieties, Messrs. Barr & Sons, of King Street, Covent Garden, and Long Ditton Nurseries, carried off the leading prize. We saw those varieties as this firm is so well known to possess and raise, such as the beautiful Weardale Perfection, and delicate Madame de Graaff, the showy *Barrii* conspicuus, and Dorothy E. Wemyss, the graceful and delicately tinted cup of *Duchess of Westminster* and many others, such as Mme. Plemp, Capt. Nelson, their new bicolor *Victoria*, which was much admired, Mrs. Vincent, and C. W. Cowan. A large yellow trumpet variety, named Fred. Moore, was very striking, also the graceful *Queen of Spain*, and the beautiful *triandrus albus*. The second prize went to Mr. G. W. Miller, of Wisbech, who had some well-known varieties, exhibiting good culture, such as Mme. de Graaff, Mad. Plemp, *Apricot*, *incomparabilis Gloria Mundi*, *Leedsii* Mrs. Langtry, and many others. Miss K. A. Spurrell, of Bissingham Hall, was a very good third.

For twenty-four distinct Narcissi, Mrs. Petre was first; Col. Rous, second; and O. Corder, Esq., third. A special prize was deservedly awarded to Mrs. Cator, of Woodbastwick Hall, who contributed twenty-four very well grown specimens.

For twelve Daffodils, Lord Suffield, of Gunton Park, was first; J. H. B. Christie, Esq., was second; with Canon Ripley, third. For six varieties, Miss Spurrell took first; Mrs. Petre, second; and O. Corder, Esq., third.

For twelve distinct Pansies, J. H. B. Christie, Esq., was first. The entries for Tulips were exceedingly weak. For twelve distinct varieties, W. J. Birkbeck, Esq., was first, with fine blooms of *Ophir d'Or*, Thomas Moore, *Proserpine*, &c.; Canon Ripley, was second; and S. G. Buxton, Esq., third. For six Tulips, W. J. Birkbeck, Esq., was first; B. E. Fletcher, Esq., second; and S. G. Buxton, Esq., third. For six zonal *Pelargoniums*, F. P. Hinde, Esq., was first; J. B. Lennard, Esq., second; and J. G. Snelling, Esq., third. Mr. Snelling was first for six tricolor *Pelargoniums*. For twelve plants for table decoration, A. J. Bunting, Esq., led the way; S. G. Buxton, Esq., was second; and Canon Ripley, third.

FRUIT.—For a dish of six dessert Apples, E. S. Trafford, Esq., was first; Canon Ripley, second; and Miss Penrice, third. Canon Ripley had the best kitchen Apples; E. S. Trafford Esq., was second; and Miss Penrice and A. J. Bunting, Esq., were equal third. For dessert Pears, R. B. Longe, Esq., was first. For stewing varieties, Mr. R. B. Longe, was first; and Col. Rous, second. Mrs. Petre had the best dish of twenty-four Strawberries. For twelve Strawberries, E. S. Trafford, Esq., was first. For six Strawberry plants in pots,

A. J. Bunting, Esq. was first; E. S. Trafford, Esq., second; and Col. Rous, third.

VEGETABLES.—B. E. Fletcher, Esq., had the best thirty sticks of Asparagus. For Kidney Beans, Col. Rous was first. Lord Suffield had the best Broccoli. Hon. A. E. Fellows, M.P., led in the class for Cabbages. For a brace of Cucumbers, E. S. Trafford, Esq., led. The Cos Lettuce shown by Mr. E. S. Trafford was best. For Cabbage Lettuce, Col. Rous was first. A. G. Buxton, Esq., Mrs. Lubbock and Hon. A. E. Fellowes, M.P., scored for Mushrooms, respectively. For Onions, Col. Rous was first; Lord Suffield, second; and A. J. Bunting, Esq., third. Mrs. Lubbock was first for Peas. R. B. Longe, Esq., had the best late Potatoes. Mrs. Petre was first for early varieties. Mrs. Lubbock had the best collection of vegetables.

The non-competitive exhibits came from Messrs. Barr & Sons, who sent a very comprehensive collection of Daffodils, about 200 bunches in about 70 varieties, comprising some of the very choice sorts, backed up with their own foliage, and dotted with Palms. Some of the most conspicuous were Mme. de Graaff, Mme. Plomp, Mrs. Walter Ware, Mr. and Mrs. Camm, M. J. Berkeley, P. R. Barr, Leedsii Mrs. Langtry, Duchess of Westminster, and many others. They also sent a very interesting collection of early spring-flowering bulbous plants, such as *Erythronium revolutum*, *E. Hendersoni*, *Fritillaria aurea*, *F. armena*, *F. ruthenica*, *F. plnriiflora*, and varieties of *Meleagris*, a few *Muscari*, in variety, also the curious *Iris tuberosa*, some grand specimens of *Tulipa Greigii*, *T. Leichtlini*, &c.

Messrs. Daniels Bros., Norwich, sent a large assortment of horticultural sundries as well as a collection of Narcissi, among which we noticed some fine specimens of *N. Barrii* conspicuus, *Emperor*, *Empress*, *Victoria*, etc. Mr. Miller, of Wisbech, also had a group of Narcissi and some very fine double and single Primroses. Mr. J. Green, of East Dereham, sent a similar collection including some fine *Pelargoniums*. Messrs. Read Bros., of St. Stephen's, sent a large exhibit of their floral decorations, which were much admired for the light and artistic arrangements in bouquets, wreaths, baskets of flowers, &c. From Messrs. Ruymp & Sons, St. George's, Norwich, came some very useful manipulations in horticultural pottery ware, showing what, and how, Ferns, Begonias, *Pelargoniums*, &c. can be grown to adorn the conservatory and greenhouse.

The hon. secretary, Mr. J. E. T. Pollard, and the stewards are to be complimented upon the way the show was arranged and conducted throughout. The plan of a clearance ticket is a good one, and should be copied and adopted by other societies. This would prevent the loss of many plants.

ROYAL HORTICULTURAL.—April 26th.

THE combined meeting of the Royal Horticultural Society and the annual show of the National Auricula and Primula Society had the result of bringing together a great variety of plants hardy and tender, which evoked a considerable amount of enthusiasm amongst the visitors. Orchids, Daffodils, Roses, and Primulas in their various sections were the leading features of the show on Tuesday last.

Messrs. J. Veitch & Sons, Ltd., Chelsea, exhibited an interesting lot of Orchids. Very striking was *Laeliocattleya Thorntonii* (*Laelia digbyana* x *Cattleya gaskelliana*) with a massive, fringed lip. Other handsome things were *Laeliocattleya Ascania* superba, *L. wellsiana langleyensis*, *Laelia Latona*, *Cattleya Schroderae amabilis*, and *Epidendrum Wallisii* (Silver Banksian Medal).

The Right Hon. J. Chamberlain (grower, Mr. J. Smith), Highbury, Birmingham, staged a small group of Orchids, including *Laeliocattleya highburyensis*, *Epicattleya*, *guatemalensis*, both bigeneric hybrids. He also had *Masdevallia chamberlainiana*, *Cattleya Schroderae highburyensis*, and *Galeandra devoniana*, etc.

J. Bradshaw, Esq., (gardener, Mr. H. Whiffen), The Grange, Southgate, exhibited some very fine forms of Orchids, including *Odontoglossum crispum* Whiffeni, *O. Inteo-purpureum sceptrum*, *Cattleya intermedia alba*, and various other handsome *Odontoglossums*.

A large group of *Cattleyas* and *Odontoglossums* was exhibited by Messrs. Hugh Low & Co., Clapton. *Cattleya Mossiae* and *C. Mendelii* in several varieties were fine. Noteworthy also were the forms of

Odontoglossum andersonianum, *O. wilckeanum*, *O. ruckerianum splendens*, *O. crispum*, *Oncidium St. Legerianum*, and various other useful things, all set up with Ferns and Palms (Silver Banksian Medal).

A Cultural Commendation was accorded to J. Colman, Esq., J.P. (gardener, Mr. W. King), Gatton Park, Reigate, for a grand specimen of *Cattleya lawrenceana*. A similar award was accorded to De B. Crawshay, Esq., (gardener, Mr. S. Cooke), Rosefield, Sevenoaks, for a splendidly grown piece of a magnificent variety named *Odontoglossum triumphans Lionel Crawshay*. A similar award went to Walter Cobb, Esq., (gardener, Mr. J. Howes), Dulcote, Tunbridge Wells, for a fine piece of *Cypripedium Gertrude Hollington*. He also showed *Dendrobium albo-sanguineum*, and *Odontoglossum polyxanthum Dulcote* var.

A large group of *Cattleya Mendelii* in variety, *Odontoglossum ruckerianum*, *O. crispum*, *O. Pescatorei*, *O. triumphans*, *O. wilckeanum*, and others was exhibited by Messrs. B. S. Williams & Son, Upper Holloway. They also had fine forms of *Odontoglossum harrayanum*, *Vanda suavis*, &c., (Silver Banksian Medal).

Messrs. Linden, Parc Leopold, Brussels, exhibited a large group of *Odontoglossums*, *Miltonias*, and *Cypripediums*. Very striking forms of *Odontoglossum* were *O. wilckeanum Thompsoni*, *O. w. tenuiflorum*, *O. w. luteolum*, *O. w. mooreanum*, *O. cirrhosum* in fine varieties, *O. ruckerianum gratissimum*, *O. Princesse de Canaries*, *O. triumphans castaneum*, *O. hystrix haumontianum*, *O. ruckerianum lilacina*, and others, the bulk of which are regarded as natural hybrids. A bold hybrid was *O. crispum Comte de Flandre*, by reason of the large purple blotch on each of the sepals. *Miltonia vexillaria Memoria Lindeni* is a rich rose-magenta variety. The forms and markings were endless (Silver Gilt Flora Medal).

H. T. Pitt, Esq., Rosslyn Stamford Hill, staged a fine form of *Odontoglossum triumphans*. H. Greenwood, Esq., Highfield, Haslingden, exhibited *Odontoglossum hunewellianum maximum*, *O. humeanum*, and *O. aspersum fulgens*. Sir Trevor Lawrence, Bart., staged *Mormodes oenanthum* and a splendid form of *Odontoglossum crispum*. E. Ashworth, Esq. (gardener, Mr. Holbrook), Harefield Hall, Wilmslow, had the beautiful *Cattleya Mendelii Beatrice Ashworth*, and *C. Schroderae Harefield Hall* var. C. L. N. Ingram (gardener, Mr. Bond), Elstead House, Godalming, had a fine hybrid named *Cattleya Sedeni*.

A group of handsome and shapely *Dracaenas* was put up by Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E. The plants were all clean and well grown specimens of named varieties of merit, some of the best of which were *D. terminalis alba*, *D. Constant Lemoine*, *D. Denisonii*, *D. pendula*, *D. Salmonea*, and *D. Gladstonei*.

A collection of choice hardy flowers sent by Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester, consisted chiefly of *Fritillarias* and *Erythroniums*. *F. macrophylla* (*Lilium thomsonianum*) was very conspicuous, also *F. Meleagris alba*, *Erythronium revolutum*, *Watsoni*, and *E. giganteum*. A collection of flowers of hardy Himalayan *Rhododendrons* was sent by Sir John Dillwyn Llewellyn, Penllergaen, Swansea, contained some very handsome varieties.

A quantity of cut Roses came from Mr. W. Rumsey, Joynings Nurseries, Waltham Cross, Herts. They comprised some excellent samples of *Nipbetos*, *Ulrich Brunner*, *Senateur Vaise*, and *Maman Cochet* (Silver Banksian Medal).

Six dozen large, fine blooms of *Rose Maréchal Niel* were sent by Mr. J. Walker, Thame, Oxon. The wonderfully free-flowering *Rose Fortune's Yellow*, was exhibited in both cut single blooms, and sprays by Mr. Fyfe, gardener to Lord Wantage, Lockinge, Wantage (Bronze Banksian Medal). Messrs. R. & G. Cuthbert, Southgate, Midx., had an exceedingly showy lot of named hybrid *Azaleas*, produced by crossing *A. mollis*, and *A. sinensis*. The plants were all well flowered (Silver Banksian Medal).

A very interesting exhibit of Ferns was made by Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton. It consisted of some of the most valuable members of the three genera, *Gymnogramme*, *Cheilanthes*, and *Nothochloenas*. Of the first-named genus, twenty-five species and varieties were staged, amongst which were robust specimens of *G. Parsonsii*, *G. Alstonii*, *G. chrysohylla*, *G.*

scbizophylla gloriosa, *G. peruviana argyrophylla*, and *G. wetenballiana*. Five forms of *Cheilanthes* and *Nothochloena* were on view (Silver Flora Medal).

Messrs. John Laing & Sons, Forest Hill, S.E., showed a capital lot of their prize strain of *Gloxinias*. The colours of the flowers were very varied and brilliant, and the size and refinement of the flowers much above the ordinary. Bedded as they were in Maidenhair Fern, with an edging of *Isolepis gracilis* they formed a very pretty picture (Silver Flora Medal).

The cut Roses submitted by Mr. Geo. Mount, Canterbury, were of that superior quality that we expect to see from Mr. Mount. The samples of the *Bride*, *Catherine Mermet*, *Captain Hayward*, *Ulrich Brunner*, and *Mme. de Watteville* were really perfect (Silver Gilt Banksian Medal).

Messrs. Paul & Son, The Old Nurseries, Cheshunt, had several fine *Rhododendrons*, including *R. Handsworth White*, and *R. caucasicum roseum*; also some grand samples of the new hybrid *Polyantha Rose Psyche*. A superb potful of *Trillium grandiflorum album* came from Mr. Empson, gardener to Mrs. Wingfield, Amptill House, Ampt-hill.

Mr. W. Bain, gardener to Sir Trevor Lawrence, Burford Lodge, Dorking, showed a handsome group of *Anthuriums*, also cut flowers of the same. *A. scherzerianum latifolium*, *A. lawrenceanum*, *A. andreanum*, *A. Dr. Lawrence*, and *A. Perfection* were a few of the best forms on view (Silver Flora Medal).

A Silver Banksian Medal was awarded to L'Horticulture Internationale Société Anonyme, Parc Leopold, Brussels, for a collection of *Anthuriums*.

Mrs. Bowman (gardener, Mr. F. Cornish), Joldwynds, Dorking, Surrey, exhibited a fine pan of the parasitic plant *Lathraea squamaria* grown on the roots of *Hazel*. We have never seen the flowers in such abundance from so small an area.

As usual at this time of year there was a number of exhibits of hardy flowers, and amongst these Daffodils played an important part.

A very varied and comprehensive collection of hardy flowers came from Messrs. Paul & Son, of Cheshunt. Here there were to be seen some grand masses of *Doronicum plantagineum excelsum*, *Adonis vernalis*, *Geum miniatum*, *Iris pumila aurea*, and *Saxifragas* in variety.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., also showed a lot of similar material, although *Primulas* were a strong feature of his group. From the same firm came a large group of Daffodils, in which many of the leading varieties, including the new bicolor *Victoria*, occupied a prominent place. Three fine masses of *Narcissus Bulbocodium* were specially noteworthy.

Messrs. Barr & Sons, King Street, Covent Garden, had a magnificent array of Daffodils, comprising upwards of seventy varieties, which represented all sections of this charming flower. Such varieties as *Glory of Leiden*, *Madame de Graaff*, *Fred Moore*, *De Rudini*, *Weardale Perfection*, *Mrs. H. J. Elwes*, *Incomparabilis Gloria Mundi*, *Leedsii* *Duchess of Westminster*, and *Barri* conspicuus were in splendid condition. Early-flowering Tulips and miscellaneous hardy flowers were also shown by the same firm (Silver Flora Medal).

Messrs. J. R. Pearson, Chilwell, Notts, had a choice collection of Daffodils, in which were some grand *incomparabilis* and *Leedsii* forms.

Messrs. James Veitch & Sons, Ltd., likewise had a big group of Daffodils, all the flowers being first-class. *N. Leedsii Gem*, *N. L. Katherine Spurrell*, *N. L. Mrs. Langtry*, *N. Glory of Leiden*, and *N. Maurice Vilmorin* were some of the best (Silver Flora Medal). The Chelsea firm also showed *Rhododendron indicum* var., *Kaempferi*, *Chionanthus virginicus*, and *Deutzia hybrida Lemoinei*.

An interesting group of seedling Daffodils was contributed by the Rev. G. H. Engleheart, Apple-shaw, Andover.

Collections of scented-leaved plants were sent from the Royal Gardens, Kew, and the nurseries of Messrs. J. Veitch & Sons, Ltd., for the purpose of illustrating the lecture by Mr. Burbidge.

At a meeting of the fruit and vegetable committee, a Silver Gilt Medal was awarded to Mr. G. Wythes, gardener to Earl Percy, Syon House, Brentford, for a first-class collection of vegetables. Broccoli, Asparagus, Tomatoes, Leeks, Seakale, Cabbage, French Beans, Potatoes, and Saladings were of the

best, and formed a capital example of the variety of vegetables that can be obtained thus early in the year by the exercise of skill and foresight.

Messrs. Jas. Veitch & Son, Ltd., sent samples of Broccoli Market Favourite. A Cultural Commendation went to Mr. H. T. Martin, gardener to Lord Leigh, Stoneleigh Abbey, Kenilworth; for a grand dish of Seakale.

A Silver Gilt Banksian Medal was awarded to Mr. W. J. Empson for a first class collection of fruit and vegetables. Amongst the former were Strawberries, Apples, Pears, and Bananas, and included in the latter were Asparagus, Seakale, Tomatos, Broccoli, Leeks, and Potatos, all of excellent quality.

Eight dishes of Apples were submitted for the Veitch flavour prize. Col. Brymer, Ilington House, Dorchester, was placed first with Allen's Everlasting; and Mr. R. Bullock, gardener to C. P. Serrocold, Esq., Taplow Hill, Maidenhead, second with Hereford Pearmain.

Mr. A. Outram, 7, Moore Park Road, Fulham, showed his patent thermometer holder and indicator—a handy and useful contrivance.

A Silver Banksian Medal went to Messrs. Osman & Co., Commercial Street, E.C., for an exceedingly handsome set of lamp shades, fans, Menus, &c., of natural, dried Ferns and Palm fronds—a very chaste and interesting exhibit.

NATIONAL AURICULA AND PRIMULA.—April 26th.

THE annual show of this society was held in conjunction with the fortnightly meeting of the Royal Horticultural Society on the above date. There was a lot of material present, but the flowers were not so refined as usual, although the size was good.

SHOW AURICULAS.

Mr. J. Douglas staged the premier twelve dissimilar varieties, showing Mrs. Potts (Barlow), Mrs. Dodwell (Woodhead), Negro (Pohlmann), Greenfinch (Douglas), Olympus (Douglas), Mrs. Kenwood (Barlow), Acme (Read), Black Bess (Woodhead), George Rudd (Woodhead), Dr. Hardy (Simonite), Marmion (Douglas), and George Lightfoot (Headley). Mr. C. Phillips, Bracknell, was second; Mr. William Smith, Bishop's Stortford, third; and J. T. Bennett Poë, Esq., Ashley Place, S.W., fourth.

In the smaller class for six dissimilar, Mr. C. Phillips came to the front with Geo. Rudd, Mrs. Phillips (Phillips), Mrs. Barnett, Mrs. Henwood, Richard Headley, and Jno. Simonite; Mr. Wm. Smith was second; and J. T. Bennett Poë, Esq., third.

The first award for four, dissimilar, went to Mr. J. Sargent, Cobham, who had Mrs. Potts, Abbe Liszt, Mrs. Dodwell, and Lancashire Hero. Mr. A. S. Hampton, Reading, was second; Mr. A. R. Brown, Reading, third; Mr. A. Fisk, Broxbourne, fourth; Mr. W. Palmer, Shortlands, Kent, fifth; and Mr. J. Gilbert, gardener to the Rev. L. R. Flood, Merrov, sixth.

Mr. P. Kennell, Winchmore Hill, led for two, dissimilar, showing F. D. Horner (Simonite), and Acme (Read); Mr. J. Sargent was second; Mr. A. R. Brown, third; Mr. A. S. Hampton, fourth; Mr. W. Palmer, fifth; and Mr. J. Gilbert, sixth.

Mr. C. Phillips had the best green-edged specimen in an unnamed variety. Mr. Sargent was second with F. D. Horner; Mr. J. Douglas, third; and Mr. Sargent, fourth with the same variety.

The first award for the best white-edged specimen went to Mr. Sargent for Featherbell. Mr. J. Gilbert was second with Acme; Mr. J. Douglas, third, with the same variety; and Mr. A. R. Brown, fourth with Feather Bell. Mr. Sargent also had the best gray-edged specimen in Lancashire Hero; Mr. W. Smith coming second with Geo. Rudd, and third with Rachael; Mr. J. Douglas, fourth with the same variety; and Mr. J. T. Bennett Poë, fifth with G. Lighthody.

There was a great deal of competition for the self-coloured specimens. Mr. Fisk led with Heroine; Mr. J. Douglas was second with Mrs. Potts (Barlow); Mr. W. Smith, fourth and fifth; and Mr. J. T. Bennett Poë, sixth.

GROUPS.—There were three competitors for the group of fifty plants in not less than twenty varieties, Alpines included. Mr. J. Douglas was first with a fine exhibit that contained, amongst other varieties, Mrs. A. Potts (Barlow), Snowdon's Knight (Douglas), Miss Prior, Monarch (Horner), Colonel Chamneys (Turner), Heatherbell, Negro (Mellor) Lord of Lorne,

Mrs. Dodwell, Rachael and Ajax (Horner). The Guildford Plant Nursery, Guildford, was second; and Mr. Chas. Phillips, third.

The premier Auricula in the show was adjudged to the Abbe Liszt shown by Mr. J. Sargent. Mr. P. Purnell obtained a first for six show varieties amongst competitors who had never won a prize. Mr. J. W. Euston was second.

ALPINE AURICULAS.

Mr. C. Phillips headed the list of competitors for twelve plants, dissimilar. He had Sister Mary, Edith Western, Vandyke Jubilee, Regina, Perfection, Mrs. Gorton, Evelyn Phillips, Saturn, Lady Clementine Walsh, Mrs. Martin Smith, and Gladys Phillips, all of them in excellent order. Mr. J. Douglas was second, also with some good flowers, and the Guildford Hardy Plant Nursery third.

The first award for six varieties went to Mr. G. W. Euston, gardener to Mrs. Whitbourn, Gt. Gearies, Ilford, who had The Bride, Tennyson, Psyche, Schubert, Calypso, and Urania, all of them Douglas's seedlings. Mr. C. Phillips was second; Mr. J. Douglas, third, and Mr. J. J. Keen, Southampton, fourth.

Mr. J. W. Euston also scored for four Alpines, showing Tennyson, Rosy Morn, Hiawatha, and Cimiez, also all of Mr. Douglas's raising. Mr. Walker, Reading, was second; Mr. A. R. Brown, third, and the Rev. L. R. Flood, fourth.

Clara, shown by Mr. C. Phillips, was placed first as the best Alpine Auricula with a gold centre. Mr. J. T. Bennett Poë was second with Dean Hole. The finest white centred variety was Perfection, shown by Mr. C. Phillips; and the second, Amazone, shown by Mr. J. Kean. The premier Alpine Auricula in the show was Mrs. Martin Smith, shown by Mr. C. Phillips. Mr. G. H. Addy, Waddon, Surrey, was first for six plants in the competition for previously unsuccessful or non-competitor. Mr. J. W. Euston was second.

FANCY AURICULAS.

The Guildford Hardy Plant Nursery staged the leading group of twelve fancy forms, having Harlequin, Moonlight, Rosy Morn, Innocence, Buttercup, Old Gold, Russett, Khartoum, Canary Cup, Belle, Twilight, and Full Moon; Mr. J. Douglas was second.

PRIMULAS AND POLYANTHUS.

Mr. J. Douglas won the first prize for twelve Polyanthuses, dissimilar, with a grand exhibit; Mr. G. Dixon, Chelford, was second; and Mr. J. W. Euston, third.

Mr. Douglas was also first for twelve single Primroses, dissimilar, showing grand clumps. The Guildford Hardy Plant Nursery, was second. Messrs. Paul & Sons, of Cheshunt, led for six double Primulas.

The first award for a group of Primulas or Auriculas was won by the Guildford Hardy Plant Nursery with a capital lot of Auriculas; Mr. P. Purnell was second, with Primulas and Auriculas mixed; Mr. J. Douglas was third.

Mr. Douglas scored for twelve distinct species of Primulas, showing P. mollis, P. japonica, P. cortusoides, P. floribunda, and P. decora amongst the rest.

The first prize for six species of Primulas was won by Mr. J. W. Euston; The Guildford Hardy Plant Nursery was second; and the Messrs. Paul & Sons, of Cheshunt, was third.

There were four competitors for the basket of Primroses and Polyanthuses arranged for effect; J. T. Bennett Poë, Esq., was first; Mr. J. Douglas, second; and Messrs. Paul & Son, third.

NARCISSUS MAXIMUS.

WHEN well grown there is none of the large trumpet Daffodils that possess a handsomer presence than Narcissus maximus. It is an early variety, however, and, perhaps, the knocking about by cold winds that it gets as a consequence of its earliness has something to do with the fact that only now and again do we see it in really first-class condition. At the time of writing it is blooming away in grand style in Battersea Park, and the two round beds of it situated near the aviary are certainly the finest examples of it that we have ever seen. The size and substance of the segments are unusually good, and impart a solidity to the flower that is far too seldom seen, thus setting off to perfection the huge and handsomely frilled trumpet which is the conspicuous

feature of the flower. There are also some good clumps of it growing amongst the grass and down by the edge of the ornamental water; indeed, with the well known varieties Emperor and Empress it evidently enjoys almost a monopoly of attention in the park above-mentioned.

POTATO GROWING IN SCOTLAND.

IT is difficult to understand why Potato planting by farmers is, in so many cases, prolonged till late in the season. Often the farmers (who cultivate many acres) may be seen planting in May. Certainly their success cannot be under-rated, as capital remuneration, by many, is received for their fine tubers. It may be worthy of note that most of the leading cultivators believe in giving plenty of room for the development of the shaws, and to allow sun and air, to have full influence on the ground. As much as 2½ ft. and 3 ft. between the rows may be seen. Of course, strong growers have the greatest space. Heavy and light land have also due consideration. On light sandy soil manure is liberally supplied, but more sparingly on damp heavy land. It is surprising to find such fine quality from strong, clayey land; but fields of highest elevation are preferred for Potato culture.—M. T., Carron, Stirlingshire.

OBITUARY.

DR. ALEXANDER PATERSON.

ORCHID growers in particular, and our readers in general will regret to hear of the death of Dr. Paterson, which took place at his residence, Fernfield House, Bridge of Allan, Stirlingshire, on Friday the 22nd inst. For many years past his name has been kept prominently before the horticultural world on account of the valuable collection of Orchids which he had gathered together at Bridge of Allan. Latterly through failing health he was less active and the outside world heard less of him, while he was prostrated with illness of several months' duration previous to his death.

Dr. Paterson was born in 1822, in Dundee, so that he was in his seventy-sixth year. When sixteen years old he entered the medical classes at Edinburgh University, and obtained his degree of M.D. in 1843. He commenced the practice of medicine in Edinburgh, but his health giving way he was advised to visit the Bridge of Allan, where he derived so much benefit that he settled down there for life, and never afterwards failed to recommend his adopted home as a salubrious and otherwise delectable resort for those in quest of health. The notoriety of the Bridge of Allan as a health resort had so augmented through the exertions of the doctor, both in the Press and by private correspondence that it became a popular spa. The community acknowledged his services in 1885 by a public presentation. He held the office of medical officer for the burgh and was a J.P. for the county.

The Doctor had a wide knowledge of Orchids and was no indifferent botanist; whilst he took an active interest in the cultivation of his favourites, as well as in gardening generally. For several years past it has been his delight to send the Queen a basket of Orchids annually on the occasion of her birthday. Many a gardener has had reason to be thankful for the privilege granted him of inspecting the Doctor's Orchids.

Independently of his practice and his love for Orchids, Dr. Paterson was an intelligent antiquary, and kept a large collection of all sorts of curios and antiques for many of which he was indebted to his numerous friends and old patients, who took pleasure in gratifying his antiquarian tastes. As with his Orchids so with his museum, the Doctor shared his pleasure with others, so that his house became a great attraction to visitors, who were welcomed by the genial and hospitable owner. He leaves a widow and a grown-up family, but his lamented death will be regretted by a wide circle of friends, not only at Bridge of Allan, but over a great portion of the country to which his influence extended.

QUESTIONS AND ANSWERS.

Marechal Niel Rose losing leaves.—J. T. Thurston: It would be unsafe to hazard a complete solution as to the cause of the lower leaves of your plant falling, so much being dependent upon circumstances. The leaves are thin in texture, and the spots are not due to any fungoid disease. The poor texture may be

due to insufficient light and ventilation in the first place. Secondly, they have evidently been injured by water hanging in globules from their edges and tips, which may have been acted upon by the morning sun or unduly heated air from the heating apparatus, while yet the ventilation was insufficient. If the leaves are too far from the glass, that would in a great measure account for their thinness, making the premature falling of the leaves to some extent unavoidable. As it is, the evil may to some extent be counteracted by judicious ventilation from now onwards, so that the health of the plant may yet be maintained, notwithstanding the bare condition of the lower portion. A rapid rise of temperature from bright sunshine may, and should be prevented by a little ventilation in the early morning, increasing it as the sun waxes stronger, and again reducing it as the afternoon wears on.

Beetle and Grub.—*L. Marsland*: The specimens you send are those of the well-known Black Vine Weevil (*Otiorhynchus sulcatus*), but too often found in vineries, Peach, and other hothouses, doing damage to a great variety of plants. The grubs attack the roots, while the weevils gnaw the leaves, young shoots, flowers, and fruits. In order to get rid of them see that all cracks and crevices of the brick or other walls are cemented. Clear away all loose rubbish in the houses that would afford them shelter. Lay down some loose boards, or pieces of bark if you like, to act as traps, inducing the weevils to lay up beneath the same. Examine the traps every morning, and destroy those you find. If any trees or Vines are affected lay a white cloth under them by day; then go in at night with a lantern. Turn on the light and tap the trees, &c., when the weevils will fall on the cloth where they may be caught before they have time to crawl away. Search for the grubs by turning out of their pots those plants suspected, repotting them in fresh soil. By perseverance, you should soon get rid of the pest.

Azalea sporting.—*Henry Thom*: This is quite of common occurrence. Some varieties are so liable to it that half the plant may produce red or other coloured flowers, while the rest may be white or white and silvery-pink according to the variety. It is merely a separation of the colours of two parents or grandparents; for, like Chrysanthemums, the varieties have been much mixed by intercrossing, so that the colours are much mixed. Some have a tendency to revert, or the colours separate in different parents. New varieties are often obtained in this way, and with the object of fixing them the sporting shoots are grafted on some ordinary variety as a stock. This might also be effected by cuttings as in the case of Chrysanthemums, but they take longer time to root, and the wood should only be half ripened.

Variiegated Abutilon.—*A. H.*: You have probably seen Abutilon Czarwitzii, or a sport similar to it from the same parent, namely from A. Souvenir de Bonn, which has now been in cultivation for some years. The new variety is a sport from the last named, and has the greater portion of the leaves of a creamy-white, changing to silvery-white when fully matured. A. Souvenir de Bonn has the white variegation almost confined to the margin.

Begonia Gloire de Lorraine.—*G. West*: What we now say is largely confirmatory of what we said on a former occasion. The plant originated on the Continent and was derived from B. scotrana and B. Dreggei, the latter being closely similar to, or according to some authorities, identical with B. parviflora. The latter, judging from the habit of Gloire de Lorraine, was the seed parent. The pollen parent is, however, very often as potent as the seed bearer in effecting bold and striking changes in the progeny from both the originals.

Strobilanthes dyerianus.—*A. J. B.*: The leaves of this species generally lose colour in winter, but particularly when allowed to run to flower. Cut the plants back and grow them on again into bushy specimens, or take the cuttings when they have attained a length of 3 in. to 3½ in., and root them in sandy soil under a bell glass or in the frames or cases of a propagating pit in the usual way. As soon as they are fairly well rooted, pot them off singly, and grow them on with cooler treatment with a judicious amount of ventilation and exposure to light, and they will assume their wonted rich colours presently.

Names of Plants.—*J. T. Thurston*: Saxifraga crassifolia (often called Megasea crassifolia).—*Sigma*: The plant is the Savin (*Juniperus Sabina*), and Saffron is undoubtedly a mistake for Savin. The plant from which Saffron is obtained, and from which Saffron Walden takes its name is *Crocus sativus*, the orange stigmas of which furnish the colouring matter in question. Savin is entirely a different thing. There are various kinds of it, that from Colchicum autumnale being Meadow Saffron.—*C. Etherington*: *Tritelia uniflora*.—*H. W.*: 1, Saxifraga Composii; 2, Aubrietia deltoidea; 3, Cardamine pratensis flore pleno; 4, Primula rosea; 5, Lamium Galeobdolon; 6, Scilla hispanica alba.—*R. H.*: 1, Odontoglossum wilckeanum; 2, Dendrobium Bensoniae; 3, Odontoglossum Cervantesii; 4, Oncidium sarcodes.

Communications Received.—W. C., Edinburgh.—F. E.—W. B. G.—Thos. Fletcher.—A. F. B.—J. C.—J. P.—A. L.—M. W.—H. D.—W. E. M.—S. Robertson.—T. Ewart.—Carl.—Seasons.—T. T. L.—Roxburgh.

FIXTURES FOR 1898.

MAY.

- 10.—Royal Hort. Society's Committees.
- 18.—York Florists' Exhibition.
- 18.—Alexandra Palace Show (3 days).
- 25.—Temple Show (3 days); Bath and West of England at Cardiff (5 days).
- 27.—Manchester Whitstuntide Exhibition (6 days).

JUNE.

- 8.—Royal Botanic Society's Summer Show.
- 14.—Royal Hort. Society's Committees.
- 15.—Grand Yorkshire Gala (3 days).
- 20.—Royal Agricultural Show, Birmingham.
- 22.—Jersey Rose Show.
- 23.—National Society's Rose Show at Bath.
- 28.—Royal Hort. Society Committees; Special Rose Show; R.H.S. of Southampton (2 days).
- 29.—Richmond Horticultural Society; Croydon Rose Show.

JULY.

- 2.—Rose Show at Crystal Palace.
- 6.—Farningham Rose and Horticultural Show.
- 6.—Co. Boro' of Hanley Floral Fête (2 days).
- 9.—Manchester Rose Show.
- 9.—Garden Party and Exhibition, N.A.G.A.
- 12.—Wolverhampton Floral Fête (3 days).
- 12.—Royal Hort. Society's Committees.
- 13.—Durham and Newcastle Hort. Society's Show (3 days).
- 14.—National Rose Show at Halifax.
- 20.—National Carnation and Picotee Society, at the Crystal Palace.
- 26.—Royal Hort. Society's Committees.

AUGUST.

- 1.—Beddington, Carshalton, and Wallington Show.
- 1.—Leicester Show (2 days).
- 1.—Northampton Hort. Society (2 days).
- 9.—Royal Hort. Society's Committees.
- 10.—Bishops Stortford Hort. Society's Show; Hastings and St. Leonards Hort. Society's Show.
- 10.—Salisbury Show.
- 10.—Etwell & District Show.
- 11.—Taunton Deane Show.
- 17.—Shropshire Hort. Society (2 days).
- 17.—Newton Stewart Floral Fête.
- 18.—Leighton Buzzard Show.
- 19.—Devon and Exeter Hort. Society's Show.
- 20.—Leven and District Show.
- 23.—Royal Hort. Society's Committees.
- 26.—Royal Hort. Society of Ireland Show.
- 27.—Falkirk Show.

SEPTEMBER.

- 1.—Stirling Show (2 days).
- 2.—Dahlia Society's Show at Crystal Palace.
- 3.—R. B. and H. S. of Manchester, Amateurs' and Cottagers' Exhibition.
- 6.—Royal Hort. Society's Committees; Nat. Chrys. Society (3 days).
- 14.—Royal Cal. Hort. Society (2 days).
- 20.—Royal Hort. Society's Committees.
- 29.—R.H.S. Fruit Show at the Crystal Palace (3 days).

OCTOBER.

- 11.—R.H.S. Committees and Lecture.
- 25.—R.H.S. Committees and Lecture.

NOVEMBER.

- 1.—West of England Chrysanthemum Show (2 days).
- 1.—Boro' of Croydon Chrysanthemum Show (2 days).
- 1.—Kingston and Surbiton Chrysanthemum Show (2 days).
- 3.—Devon and Exeter Fruit and Chrysanthemum Show (2 days).
- 8.—R.H.S. Committees, with Floral and Botanical Demonstration at the Drill Hall.
- 8.—Highgate Chrysanthemum Show (3 days).
- 11.—Huddersfield and District Chrysanthemum Show (2 days).
- 15.—Folkestone & District Chrysanthemum Show (2 days).
- 15.—R. B. and H. S. of Manchester Chrysanthemum Show (2 days).
- 16.—Ascot, Sunninghill, Sunningdale, and District Show (2 days).
- 22.—R.H.S. Committees and Lecture.

Secretaries of Societies will greatly oblige the Publisher by forwarding early information of Fixtures.

INDEX TO ADVERTISEMENTS.

| | |
|---------------------------------|--------------------------------|
| Auction Sales. | Insecticides. |
| Protheroe & Morrils.....546 | Corry & Co.546 |
| Catalogues. | Gishurst Compound545 |
| Barr & Sons545 | XL All.....518 |
| Bunyard & Co.....545 | Lawn Mowers. |
| H. Cannell & Sons549 | Ransome, Sims & |
| Dobbie & Co.548 | Jefferies, Ltd.560 |
| J. Forbes.....549 | Manures. |
| Kelway & Son545 | Chemical Union545 |
| J. Peed & Sons.....549 | Clay & Son.....560 |
| Simpson & Son.....545 | W. Colchester545 |
| R. Smith & Co.....545 | Debbie & Co.....548 |
| Sutton & Sons545 | Homco.....545 |
| Chrysanthemums. | Meggitt's.....545 |
| Devon Nursery.....545 | Munnure545 |
| Dobbie & Co.548 | Native Guano Co.547 |
| R. Owen.....545 | Standen's548 |
| Florists' Flowers. | W. Thomson & Sons.....547 |
| Cheal & Sons548 | Miscellaneous. |
| Dobbie & Co.548 | Cooper's Cycles560 |
| J. Forbes.....545 | Epps's Cocoa547 |
| Kelway & Son545 | Gishurstine545 |
| Keynes, Williams, & Co. 548 | Juno Cycles560 |
| J. Peed & Sons.....548 | Smyth's Baskets545 |
| Turner547 | Netting. |
| J. Wells545 | A. Potter.....545 |
| Flower Pots. | Orchids. |
| Sankey & Sons, Ltd.547 | J. Cyphat549 |
| Fruit Trees. | W. L. Lewis & Co.....545 |
| G. Bunyard & Co.545 | P. McArthur548 |
| R. Smith & Co.548 | F. Sander & Co545 |
| Garden Sundries, &c. | Publications. |
| J. Arnold.....545 | "Cactus Journal"546 |
| Corry & Co.545 | Cannell & Sons.....548 |
| Essery's Anthracite560 | GARDENING WORLD.....546 |
| Hirst, Brooke & Hirst. 545 | Ogilvie.....559 |
| Jadoo Fibre549 | Roses. |
| Leeds Orchid Co.560 | J. Cocker & Sons.....545 |
| A. Outram547 | R. Smith & Co.....548 |
| Porter's Stakes.....545 | Turner547 |
| G. H. Richards.....548 | Seeds. |
| H. G. Smyth545 | Barr & Sons545 |
| Summer Cloud.....547 | H. Eckford.....548 |
| Hardy Plants. | McArthur & Co.546 |
| Turner.....547 | I. Peed & Sons.....547 |
| Heating Apparatus. | Simpson & Son.....545 |
| W. Cooper, Limited560 | R. Smith & Co.....548 |
| Messenger & Co., Ltd.....548 | Sutton & Sons545 |
| Thames Bank Iron Co.545 | R. Sydenham515 |
| Horticultural Builders. | Turner547 |
| J. Boyd & Sons.....545 | Situations, &c. 546 |
| W. Cooper, Ltd.560 | Tents |
| J. Gray.....545 | A. Potter.....548 |
| Hypolite545 | Weed Killers. |
| W. Richardson & Co. 590 | Acme Chemical Co.547 |
| J. Weeks & Co., Ltd. 545 | Boundary Chemical Co. 545 |
| Hose. | G. W. Harrison 545 |
| J. Reddaway & Co., Ltd. 548 | |

A Special Offer to Readers of THE GARDENING WORLD 25/- BOOK for 8/-

NO HOME SHOULD BE WITHOUT ONE.

THE BEST { BOOK OF } EVER
INFORMATION } ISSUED.
Size of Encyclopædia: 9 by 11½ inches. 656 Pages

Ogilvie's Encyclopædia

OF USEFUL INFORMATION AND WORLD'S ATLAS.

By Special Arrangement with the Publishers of the "Encyclopædia of Useful Information and Atlas of the World," we are enabled to offer to the Public a Magnificent 25s. Volume for 16 of the coupons, which will appear weekly, together with 6d. each, accepted in Weekly Instalments, or the Coupons may be held until the whole period has elapsed and brought or sent to the Office with 8s., and 6d. towards carriage.

30498. **COUPON.**

OGILVIE'S ENCYCLOPEDIA OF USEFUL INFORMATION, AND WORLD'S ATLAS, (Published Price 25s.). 16 COUPONS, AND 6d. WITH EACH.

Name _____

Address _____

Postal and money orders should be made payable at the East Strand Post Office to F. A. COBBOLD "GARDENING WORLD" Office, 1, Clement's Inn, Strand, London, W.C.

Gardening Charities, &c.
GARDENERS' ROYAL BENEVOLENT INSTITUTION.—Secretary, GEO. J. INGRAM, 50, Parliament Street, S.W.
ROYAL GARDENERS' ORPHAN Fund.—Honorary Secretary, A. F. BARRON, Royal Horticultural Society's Gardens, Chiswick, W.
UNITED HORTICULTURAL PROVIDENT and BENEFIT SOCIETY.—Secretary, WILLIAM COLLINS, 9, Martindale Road, Balham, S.W.



DIRECT FROM COLLIERY. PATRONISED BY HIS GRACE EARL WINCHILSEA.

GUARANTEED 25 PER CENT. MORE DURABLE THAN CHEAPER SORTS.

Used at the Mansions and Gardens of the NOBILITY and GENTRY, and at the principal Maltings in United Kingdom.
 (DOWSON'S PLANT) AND WATER GAS FOR STEAM. HOP AND ORCHID GROWERS AND NURSERYMEN.

ESSERY'S ORIGINAL ANTHRACITE.

Machine Cut. Three sizes ready for use. Hard and Large, entirely without Smoke, superseding Coke in every respect. Effecting a very important Saving by constant combustion. Much greater Heat, Durability, Cleanliness, and Diminution of Labour. Autograph Certificates. References. First Cost Prices.

Can be had only from **WILLIAM H. ESSERY, Pantyffynon Collieries, SWANSEA.**
 Established 1848. N.B.—Not my Coal unless delivered in trucks painted "William H. Essery."

"VINES AND VINE CULTURE,"

Price 5s.;

By ARCHIBALD F. BARRON.

Post Free 5s. 3d.

Late Superintendent of the Royal Horticultural Society's Gardens, Secretary of the Fruit Committee, &c.

Third Edition, Revised and Enlarged. "The Best Book on Grapes and their Culture."

THE "GARDENING WORLD," 1, CLEMENT'S INN, STRAND, W.C.

W. COOPER, Ltd., Horticultural Providers, 755, OLD KENT ROAD, LONDON, S.E.

Span-Roof Poultry House.



5 ft. x 4 ft. ... 22/-
 6 ft. x 4 ft. ... 25/-
 For other Sizes see List.

Rustic Summer House



OUR LEADING FEATURE, £4.

"COOPER" CYCLES.

Latest Frame, Large Weldless Steel Tubes, Ball Bearings, Tangent Wheels, and Brake and Mud Guards, Cushion Tyres, from £5 10s.



Ladies', with Dress and Gear Guards, from £6. Twelve Months' Warranty. List free. Largest Cycle Works in London.

Estimate for Every Description of Horticultural Work, Free on Application.

Rustic Summer House.

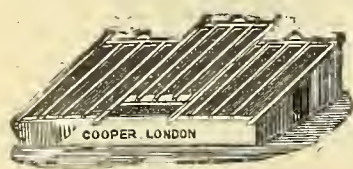


£3 5s. Complete.

Span-Roof Improved Poultry House



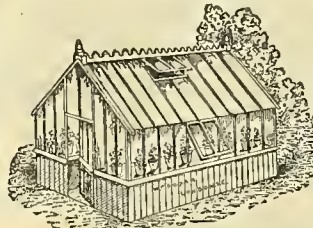
5ft. x 4ft. 35/- | 7ft. x 5ft. 45/-
 6ft. x 4ft. 40/- | 9ft. x 6ft. 50/-



Cucumber Frames.

One Light.
 4 ft. x 3 ft. 17/-
 6 ft. x 4 ft. 28/-
 Two Lights.
 6 ft. x 4 ft. 30/-
 8 ft. x 6 ft. 50/-

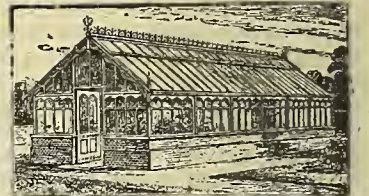
AMATEUR SPAN-ROOF GREENHOUSE



For other Sizes see List.
 7ft. by 5ft. £2 16
 8ft. by 5ft. 3 10
 9ft. by 6ft. 4 0
 10ft. by 7ft. 5 0
 0 0 0 0

Span-Roof Conservatory.

Substantially and Handsomely Built.



Everything Complete and ready for Erection.

Illustrated Catalogue Free. Large List containing 364 pages and about 1,200 Illustrations, Six Stamps.

RANSOMES'



ONLY GOLD MEDAL, India and Ceylon Exhibition, 1896.

Patronised by THE QUEEN and PRINCE OF WALES.

All Mowers sent on a month's trial, Carriage Paid.

LAWN MOWERS,

THE BEST IN THE WORLD.

All sizes to suit every requirement

"PATENT GEAR AND CHAIN AUTOMATONS," with New Patent Double Angle Cutting Barrel, Patent Ribbed Driving Rollers, and Patent Adjustable Front Rollers.

"ANGLO PARIS," the Best Light Machine.

"LION," the Best Cheap Machine.

THE BEST "HORSE AND PONY" MOWERS. New Designs, New Patterns, New Adjustments, and New Patent Spring Handles.

Price Lists Free on Application.

Orders executed promptly by all Ironmongers.

RANSOMES, SIMS & JEFFERIES, Ltd., IPSWICH

JUNO CYCLES ARE THE VERY BEST.

12 Equal Monthly Payments.

LARGE DISCOUNT. CARRIAGE PAID.



JUNO Diamonds, from £10.
 16s. 8d. monthly.
 JUNO Ladies' or Gent's Safety, £12 12s.
 21s. monthly.
 £14 14s.
 24s. 6d. monthly.

Write at once for new illustrated Juno List, Machine and accessories. Sent post free. Saddle, 4/6. Ball Pedals, 4/6. Toe Clips 9d. Saddle Covers 1/- Standard Cyclometers 10,000 miles 2/3. All descriptions in stock. Lists free.

Metropolitan Machinists' Co., Ltd.

Steam Works, Show Rooms, Riding School, Offices—

75, 76, Bishopsgate Without, LONDON, E.C.

And at Piccadilly Circus, exactly opposite the Criterion, London, W.

Our new large JUNO Cycle Riding School for ladies and Gentlemen now open, 1,700 ft. Single lesson, 1/6; come till perfect, 10/6, or free to buyers of the Juno.



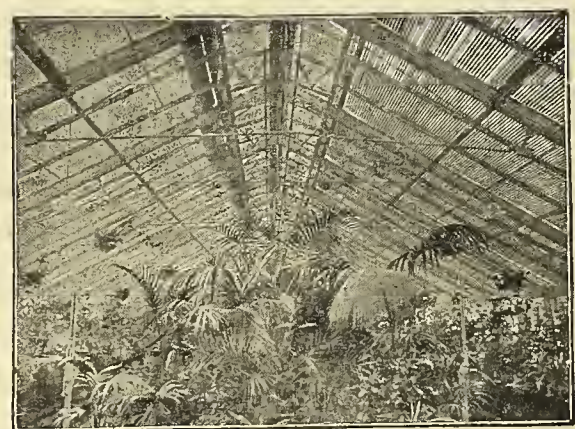
CLAY'S MANURES.
CLAY'S SUCCESSFUL GARDENING.
 1s, post free.
CLAY & SON, Stratford, London, E.



THE CARNATION; ITS HISTORY, PROPERTIES, and MANAGEMENT; with a descriptive list of the best varieties in cultivation. By E. S. Dodwell. Third edition, with supplementary chapter on the yellow ground. Price 1s. 6d.; post free, 1s. 7d.—PUBLISHER, 1, Clement's Inn, Strand, London, W.C.

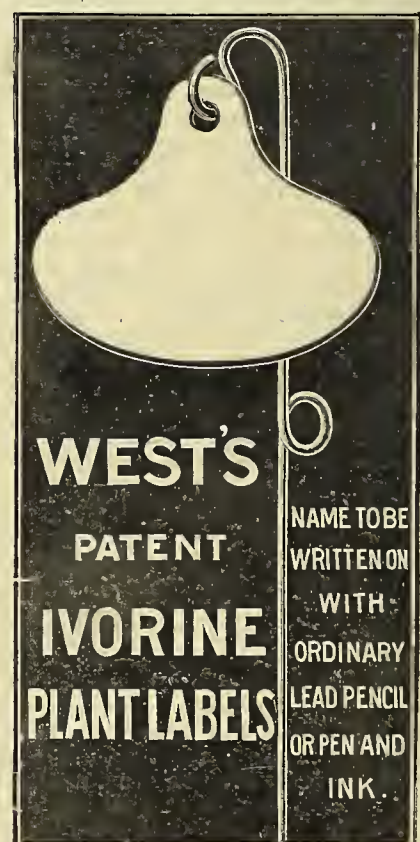
PARISIAN BLINDS.

Awarded over 50 Prize Medals.



GLASS HOUSES
 Of all kinds.
HEATING APPARATUS
 for Horticultural Buildings, Dwelling Houses, and Public Buildings.
 NEW CATALOGUE FREE.

W. RICHARDSON & CO.,
DARLINGTON.



WEST'S PATENT IVORINE PLANT LABELS

NAME TO BE WRITTEN ON WITH ORDINARY LEAD PENCIL OR PEN AND INK.

The "IVORINE" Writing Disc, being made of a specially prepared substance, having the properties of real ivory, is imperishable, and does not corrode or eat away, like wood and metal labels; and being ivory-white, when written upon it shows to perfection. And also, as the writing is on the Ivorine itself it is permanent, washable, and does not become unreadable, as is the case with all painted labels, as the paint gets old. It is for all purposes, and will last a century either in a greenhouse or out in a garden, and not only is it always ready for use and may be written on both sides, but the name when written in pencil may be easily rubbed off, and so used as many times as desired.

Samples and Lists of the West's Patent Specialities post free.
 PRICE:—9d. per dozen, 8s. per Gross; per post.
 Supplied by all Nurserymen, Florists, &c.

THE LEEDS ORCHID CO.,
 ROUNDHAY, LEEDS.

ROSES, strong H.P.'s., competition varieties 6/- doz.
VIOLAS, strong plants, bedding varieties, 1/9 doz., 10/6 100.
VIOLAS, strong plants, competition varieties, 2/6 doz.
FANCY PANSIES, best varieties for competition, including many of recent introduction, 3/6 doz.

All Post Free for Cash with Order, from—

J. GRIEVE & SONS,
 REDBRAES NURSERIES.

BROUGHTON ROAD, EDINBURGH.

LISTER'S SPECIALITIES.

PANSIES, Fancy and Show.—Our unrivalled competition vars. are now offered at 3/- per doz.; 2 doz., 5/6. All the latest and best vars. only grown, all sure prizewinners anywhere. With every doz. is enclosed new vars. of 1898. **VIOLAS**, 1 doz. Champion vars., 1/6; 2 doz., 2/6. Blue, White and Yellow, separate or mixed colours, 25, 2/6; 50, 4/6.

DAHLIAS, from any section of our world-renowned collection, Show, Fancy True Cactus, Pompon and Single, 1 doz. superb plants and vars., 3/6; 2 doz., 6/6.

Summer **CHRYSANTHEMUMS**, 1 doz. best selected vars., 2/3. Every plant offered is in the best of health, true to name and carriage paid. Cash refunded if unsatisfactory in any way. Our **NEW BOOK** on the **PANSY, DAHLIA**, etc., 7d.; free on all orders of 5/-. New Plant List free.

LISTER & SON, Florists, ROTHESAY.

Caladiums

FINEST COLLECTION in the World. We make a speciality of **CALADIUMS**. Gold Medals Manchester & Leicester. Silver Cup, R.H.S., &c.

Satisfaction guaranteed. **JOHN PEED AND SONS**, West Norwood, London.

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER,
 Exotic Nurseries, CHELTENHAM.

1898. **FORBES' CATALOGUE** 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants

Is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and price of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other valuable information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,

ESTABLISHED 1870.

Nurseryman, Hawick, Scotland.

JADOO FIBRE.

WONDERFUL SUCCESS.

At a great Horticultural Exhibition recently held in New Orleans, plants grown in Jadoo were awarded

20 FIRST PRIZES and 2 SECONDS.

ADVANTAGES OF GROWING PLANTS & SEEDS IN JADOO.

Seeds germinate much more quickly in Jadoo than in earth.

Greater perfection easily attained.

Suits all kinds of plants.

Is much lighter than earth.

Less frequent watering is required.

The flowers are larger, of richer colour, and last longer.

No soil to mix: No manures required.

Ghent Exhibition, 1898. The two principal prizes of the show (including Gold Medal), were gained by plants grown in Jadoo, by Messrs. Byrvet, Bros., Haarlem.

PRICES:—3/6 per bushel. 8/- per 3-bushel sack. Special prices for large quantities.

Testimonials and full directions for use post free.

Obtainable through any Nurseryman, or from—

JADOO, Limited, EXETER.

BOUGAINVILLEA CYPHERII.

Grand new plant, largest and best coloured Bougainvillea ever offered, a splendid grower and remarkably free bloomer. Awarded First Class Certificate at the Wolverhampton Floral Fete, 1896, and also at the Oxford Commemoration Show, 1896, and also the Gold Medal at Shrewsbury Great Royal Commemorative Show, 1897, for the best new plant in the exhibition.

JAMES CYPHER has great pleasure in offering this grand novelty. Plants ready end of May, price 10/6 each.

Exotic Nurseries, CHELTENHAM.

KEYNES' CACTUS DAHLIAS.

Best Plants. Best Varieties. Moderate prices.

Send Post Card for Catalogue.

About half the good varieties in commerce were raised here.

KEYNES, WILLIAMS & COMPANY,
 Dahlia Growers, SALISBURY.

FOWLER'S LAWN SAND.



(INTRODUCED IN 1877).

A Certain and Effectual Destroyer of Daisies, Plantains, and Weeds generally, so troublesome and unsightly on Lawns. A renovator also of old and decayed Lawns.

All Lawns should be dressed at least once a year with this article, its fertilizing properties being equal, if not superior, to anything at present offered.

PRICES—In Tins, 1s., 2s. 6d., 5s. each; in Casks, ½ cwt., 8s. 6d.; ¾-cwt., 16s.; 1-cwt., 30s. each.

Manufacturers, **CORRY & Co., Ltd.**
 Finsbury St., LONDON, E.C.

To be had of the Seed and Nursery Trade generally.

CAMPBELL'S FUMIGATING ROLLS.

The cheapest, simplest, and most effectual method of fumigation known. No lamp, fumigator, oil or spirit required. Simply light the Roll, and hang it up.

| REDUCED PRICES:— | | | | s. | d. |
|------------------|----------------|----|----|----|----|
| No 2 for | 500 cubic feet | .. | .. | 0 | 5 |
| " 3 " | 1000 " " | .. | .. | 0 | 8 |
| " 4 " | 2000 " " | .. | .. | 1 | 2 |

LEMON OIL INSECTICIDE.

The best liquid Insecticide for sponging, dipping, or syringing with.

PRICES:—Pints, 1/6; quarts, 2/9; ½ gallons, 5/-; gallons, 9/- each.

SOLD BY ALL SEEDSMEN.

Wholesale by:—

EXORS. **ROBERT CAMPBELL.**

117, Chapel Street, SALFORD.

CHEALS' Celebrated DAHLIAS

WORLD-WIDE RENOWN · STRIKING NOVELTIES

NEW CATALOGUE POST FREE

J. Cheals & Sons, SUSS EX

GLOXINIAS FINEST MEDAL COLLECTION

* IN THE WORLD. *

Send for CATALOGUE to

JOHN PEED & SONS, West Norwood, London

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—**P. MCARTHUR**, The London Nurseries, 4, Malda Vale, London W.

CARTERS' HOLBORN PRIMULA.

—SINGLE or DOUBLE in choicest mixture. Our Prize Strain of the beautiful winter-flowering conservatory plant is the finest in cultivation. We were the originators of the blue variety now so popular. SINGLE, separate colours, white, scarlet, blue or pink. In Sealed Packets, price 2s. 6d., 3s. 6d., and 5s. each, post free.

CARTERS' BRILLIANT CINERARIA.

—The very finest strain ever submitted to public notice. Awarded Highest Prize, Medal Royal Botanic Society, 1837, Royal Horticultural Society, 1898. A customer recently sent us blooms measuring 3½ inches across. Fresh seeds, all colours, mixed. In Sealed Packets, 2s. 6d., 3s. 6d., and 5s. each, post free.

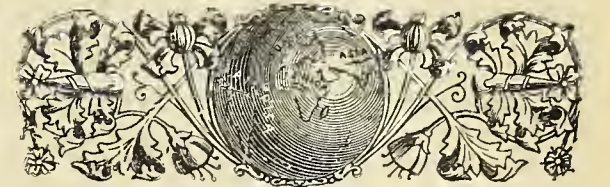
CARTERS' VICTORIA CALCEOLARIA.

—Our grand strain is the very perfection of scientific culture, being compact in habit, and brilliant in colour and size of blossoms. A customer writes:—"The plants were a perfect picture, many with 600 blooms; we took first prize." Fresh seeds, all colours, mixed. In Sealed Packets, price 2s. 6d., 3s. 6d., and 5s. each, post free.

CARTERS' INVINCIBLE GLOXINIA.

—We have brought this fine summer decorative plant to the highest excellence. H.R.H. the Princess of Wales greatly admired our exhibit at the Temple Exhibition last summer, and was graciously pleased to pronounce it an "exquisite display." Fresh seeds, all colours, mixed. In Sealed Packets, price 2s. 6d. and 5s. each, post free.

CARTER'S, THE QUEEN'S SEEDS-MEN, 237, 238, and 97, HIGH HOLBORN, LONDON.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, MAY 7th, 1898.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, May 10th.—Royal Horticultural Society: meeting of Committees at 12 noon.

Sale of established Orchids by Messrs. Protheroe & Morris.

WEDNESDAY, May 11th.—Royal Botanic Society's exhibition at Regent's Park.

Sale of Lilies, Palms, and greenhouse plants by Messrs. Protheroe & Morris.

FRIDAY, May 13th.—Sale of imported and established Orchids by Messrs. Protheroe & Morris.

EXPERIMENTS WITH CROPS AND MANURES.

—A pleasing and satisfactory sign of the times is the activity displayed in various parts of the country in experimenting with the cropping of land under local conditions as to soils, climatic influence and other conditions of environment. General conclusions for any wide area or tract of country are not only useless, but would be misleading to cultivators; hence the value of giving results obtained under the prevailing conditions in separate centres or districts. Most of these experiments are being carried on under the auspices of agricultural schools or colleges, but their findings apply equally to horticulture in so far as the plants dealt with are of a kind common to both industries. We should like to see departments attached to different colleges dealing exclusively with gardening for the simple reason that many important garden crops or plants do not come under the domain of agriculture at all. Peas, Beans, Potatoes, all the Brassica tribe, and occasionally some other crops, such as Carrots and Onions, are common to both agriculture and horticulture; but that is all unless orchards and market gardening generally are to be regarded as farming. Even then the hundreds of plants in common cultivation, with which British gardeners have to deal, are entirely disregarded by the professors attached to agricultural colleges.

Supplement V to the "Journal of the University Extension College, Reading" is before us, containing the fourth annual report on field experiments. The report deals with various trials which have been

conducted during the past year in Berkshire, Dorset, Hampshire and Oxfordshire. The county councils for these respective shires co-operate with the College at Reading, and each grants subsidies to cover the expenses. During the past year the experiments consisted largely of testing the effects of manures on the principal farm crops, but arrangements have been made for experiments that will continue from year to year till the whole course of a rotation of crops has been completed. Much valuable information should be obtained from this course regarding the value and effects of unexhausted manures, that is, of those that retain their fertilising faculty in the soil for two or more years and thus benefit succeeding crops. The average results for different centres are given separately. Samples of soils from the different districts have been analysed, and glass jars containing sections of soil have been stored in the College Museum for future reference. The experiments have been carried out under the supervision of Douglas A. Gilchrist, B.Sc., the Director of the Agricultural Department. The report of the experiments should prove valuable to those farmers who are provident enough to avail themselves of the information supplied.

Experiments were made with Swedes and Turnips with the view of combating or checking the destructive and much dreaded Finger-and-toe Disease (*Plasmodiophora Brassicæ*.) Under the name of club or clubbing gardeners are only too familiar with this pest of Cabbages, Cauliflower, Brussels Sprouts and other members of this important tribe. Some important and interesting results have been obtained at Headington, Oxford, in a soil consisting chiefly of fine sand, where one would have expected that the fungus could make but little headway. In 1895, the crop of Swedes outside the experimental plots was almost completely destroyed. It was observed that the disease was most virulent where farmyard manure had been applied, a result due, no doubt, to the greater amount of moisture available for the fungus. The soil consisted of sand overlying the Middle Oolite system, a calcareous formation; but where the sand was deep it was very poor in lime, and here the greatest amount of damage occurred. Eleven plots of land, each $\frac{1}{12}$ of an acre were marked off in 1896 upon the same ground where the disease had been so prevalent the previous year. Dressings of varying quantities of caustic lime, gas lime, sulphate of copper, bleaching powder and basic slag were given to separate plots in January to give them time to disinfect the soil before the time of sowing the Turnips arrived. They were applied and stirred into the soil to a depth only of 1 in. or $1\frac{1}{2}$ ins., so as to give them a good chance of being evenly distributed.

The roots were carefully classified at the end of the growing season, according as they were sound, slightly diseased, or badly so, and each heap weighed separately. The results were singular and striking, but the obvious conclusion was that the fungicides applied had been inoperative. None of the dressings had appreciably reduced the ravages of the disease, while, singularly enough, the heaviest lot of sound roots was obtained from the undressed plot. This gave Turnips at the rate of 5 tons 6 cwt. per acre perfectly free from disease. The next heaviest weight was 5 tons 4 cwt. of sound roots where a dressing of 3 tons of gas lime per acre had been given. The heaviest total crop came off the plot dressed at the rate of 4 tons of caustic lime per acre. The next highest total again came from the plot dressed at the rate of 3 tons of gas lime. It was obvious that no reliable data could be deduced from the results. It

was resolved therefore to continue the experiments on the same plots last year, without further dressing, in order to ascertain whether the reputed fungicides would show any appreciable results after a more lengthened period in which to disinfect the soil. In 1897 these expectations were fully realised, for excellent results were obtained by the use of caustic lime, gas lime and chalk, that had been applied in January 1896. Nothing satisfactory was obtained from dressings of sulphate of copper and bleaching powder. The conclusions, therefore, are that lime in some form or other has the effect of destroying the fungus to a greater or less extent, but that it must be applied to the soil some considerable time previous to the sowing of the Turnips. We should reasonably expect that the same instructions would apply to all other crops of the Brassica tribe.

Elaborate experiments were also made with Potatos in the Trial Grounds of Messrs. Sutton & Sons, Reading, as well as at five other centres. The results in each case go to prove that Potatos always give the most satisfactory returns from ground that has been manured for some previous crop. As we recorded on a previous occasion the application of artificial manures may not only not be serviceable, but prove harmful on dry or sandy soils in drouthy seasons. Provided the rainfall were sufficient during the growing season artificial manures would give satisfactory or even handsome returns; but the Potato is a shallow rooting plant, and suffers in the southern counties in drouthy seasons, to an extent of which northern growers enjoying a moister climate can have no conception. The most generally useful manure for Potatos has been found to consist of 12 tons of farmyard manure, $1\frac{1}{2}$ cwt. nitrate of soda, 3 cwt. superphosphate, and 1 cwt. muriate of potash per acre, all applied in the autumn previous to planting, except the nitrate, which should be given in two applications during the earlier period of growth.

The Ghent Quinquennial.—It is estimated that this superb show cost 100,000 francs, or £4,166 13s. 4d. in English money.

May Day in Bermondsey.—The annual May Day festival of the Children's Guild of Play was held in the Town Hall, Bermondsey, on Saturday, the 30th ult. The Chairman of the London School Board (Lord Reay) presided.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, May 10th, in the Drill Hall, James Street, Westminster, 1—5 p.m. At 3 o'clock the Rev. Prof. G. Henslow, V.M.H., will lecture on "Some of the Plants Exhibited." The schedule of the show of British grown fruit, to be held at the Crystal Palace, on September 29th, 30th, and October 1st, is now ready and can be obtained on application to the Secretary, R. H. S., 117, Victoria Street, S.W.

Havoc by Hail.—The towns of Plymouth, Devonport, and Stonehouse were visited on Monday by a hurricane of wind and rain accompanied by a storm of hailstones of large size. Many places of business had to cease work for the day owing to the work-rooms being deluged as a result of the down pipes refusing to act. At the dinner-hour the main entrance gates to Keyham Dockyard were blocked by hailstones and debris washed down from the higher thoroughfares, and some twenty carts were at work removing the obstruction. At the Marine Barracks, Stonehouse, the covered drill shed was inundated, and the fire brigade were requisitioned to pump the water out. No casualties from seawards are yet reported, but from the fruit-growing vicinity of the Tamar it is announced that the crops have been irretrievably damaged by the hailstorm. The damage is estimated at several thousand pounds.

Mrs. McKinley receives so many flowers daily at the Windsor Hotel, Washington, that a special cold store-room has been set apart to maintain them in a fresh condition.

Raffia.—The finer matting now so extensively used for tying purposes in gardens has no affinity with the material of which Russian mats are made. It is prepared from the leaves of *Raphia Ruffia*, a Palm native to the island of Madagascar.

Species of Cacti.—Something like 1,000 species of the order Cactaceae are admitted by botanists; but gardeners have greatly multiplied this number independently of those which are the direct result of artificial hybridisation. Most of them belong to tropical and subtropical North America, including Canada. A few are found in Brazil and Chili. A solitary species of *Rhipsalis* is found in South Africa, Mauritius and Ceylon, being the only member of the family truly indigenous to the Old World. Several *Nopaleas* and *Opuntias* introduced from America have been naturalised on this side of the Atlantic. Farmers in Cape Colony would be glad to get rid of the *Opuntias* which now infest their fields.

National Amateur Gardeners' Association.—The first Saturday afternoon excursion of this association takes place on the 7th inst. As we go to press we notice that the members have for the second time within the last three years made the beautiful gardens of Aldenham House, Elstree, the destination of an outing. They have reason to be thankful for the kind permission of Lord Aldenham to visit his gardens and grounds; and no doubt they will highly appreciate the horticultural skill of the gardener, Mr. E. Beckett, independently of his welcome and personal attention to the party. The association has also made arrangements for visiting the Trial Grounds of Messrs. Sutton & Sons, at Reading, on the 23rd July next. On that date the main party will travel by the train leaving Paddington at 1.45 p.m. Those wishing to leave sooner will be permitted to travel by an earlier train.

M. Ed. Pynaert-Van Geert.—We learn with much satisfaction that M. Pynaert, of Ghent, Belgium, has been named a Chevalier du Mérite Agricole. He was for many years professor at the School of Horticulture, Ghent, in company with his three illustrious friends, MM. Em. Rodigas, Van Hulle, and Burvenich. All four of them have come to be designated familiarly as the four-bladed Clover or Trefoil. They have rendered great services to Belgian horticulture, collaborating amongst them several journals, organising conferences, occupying themselves with exhibitions, and in a word defending and supporting the horticultural interests of their country. When the Government of France, in 1890, wishing to develop the hothouse industry of their country, had inscribed a duty of thirty francs per 100 kilogrammes, in addition to the ordinary tariff, M. Ed. Pynaert and M. Bruneel went to France in order to combat the projects of the Government. They acquitted themselves of their mission with great address and energy, resulting in establishing an equal reciprocity between the two neighbouring countries. We congratulate M. Pynaert on his recent distinction from France.

The Pope and the Gardener.—Whilst walking in the gardens of the Vatican recently, Leo XIII came across an undergardener who was engaged in digging. His Holiness is a zealous student of the practical adjustment of scales of remuneration for workmen, and is always glad of the opportunity of putting some of his broad-minded theories to the test. So he said to the gardener: "My good man, how much do you receive a day for your labour?" "Two francs, your Holiness," was the reply. "And how many children have you?" "None, your Holiness." "And does your wife also work for her livelihood?" "Holy Father," said the labourer, "I have never been married." The Pontiff paused and reflected, "Then, my good man," said he, "I shall give instructions that from henceforward, instead of two francs a day, you shall receive a franc and a-half, and that half-a-franc shall be added to the wages of some other workman who has a wife and family to support." His Holiness appeared pleased with his own decision; not so the gardener, who failed to see the justice of the decision, and by no means shared in the enthusiasm of the Pope over his solution of the question.

Quick Changes of Temperature.—We in England are apt to grumble at the great and sudden changes in temperature from day to day, and we have had our full share of such vicissitudes this spring, but parts of the United States have been more hardly treated, for on April 5th it was freezing all day, and on the 13th, a little more than a week later, the thermometer stood at 70° Fabr.

Addition to Greenwich Park.—The recent addition made to this park is now thrown open to the public. The grounds, known as "The Wilderness" were at one time attached to the Chief Ranger's Lodge on Blackheath, the residence of H.R.H. the Duke of Connaught. The wild character of the place has disappeared by the making of paths and converting the erstwhile stagnant pool into a miniature pond. There are some fine trees on this addition to the park, and all has been tastefully laid out.

The Island of Cuba, which is the centre of the world's interest at the present time, is one of the most fertile spots on the earth's surface. It is stated by authorities that a farm of 33 acres will produce in one year thousands of pounds each of sugar, coffee, tobacco, cacao, cotton, indigo, maize, rice, and bananas. Of the total area of the island, however, only ten per cent. is under cultivation, seven per cent. is not reclaimed, and four per cent. is forest. Great tracts are unexplored. The forests contain many valuable woods, such as cedar, mahogany, and rosewood. The commerce of the island, even under the incapable rule of the Spaniards, has been great, for in 1893, before the curse of war fell in all its blighting misery, she exported 718,204 tons of sugar out of a total production of 815,894 tons. The exports of leaf tobacco amounted in the same year to 227,865 bales, whilst 147,365,000 cigars and 39,581,493 packages of cigarettes left her shores. Now everything has changed, and the people are in the direst misery.

Ink, Ancient and Modern.—The statement is frequently made, says *The Journal of the Society of Arts*, that since Mediaeval times the art of ink-making has declined, and it is adduced as evidence that on documents written over 800 years ago the writing is more legible and better preserved than that on some written within the last 100 years. It is probable that this inferior ink has come into use from the desire to employ an ink of more perfect fluidity that would facilitate rapid writing better than the old ones. Vitruvius, Pliny, and Dioscorides each speak of ink as containing soot or lampblack mixed with some mucilaginous fluid, and the legibility of the old records was doubtless due to the fact that carbon was the base of the ink, and that when this began to be discarded the fading of manuscripts became more rapid. An ink receptacle found at Herculaneum contained a quantity of ink which proved to be composed of lamp-black mixed with oil. Such ink must have required constant stirring, and a brush instead of a pen was probably used for writing. The lamp-black, says Underwood, was ground up with the oil as painters' colours are now, and this throws light upon the meaning of the taunt hurled by Demosthenes at his great rival Aeschines, that the latter had been compelled in his youth, through poverty, to sweep the school, sponge the benches, and grind the ink. The rapidity with which carbon settles out from the liquid in which it is suspended precludes its use for modern commercial inks. The extract of gall-nuts or other tannin matter in combination with an iron salt, which forms the base of most black inks of the present day, was used many centuries ago, and was at first mixed with lamp-black. The coloured inks of to-day are chiefly simple solutions of aniline dyes, but logwood and other vegetable dyes are still used to a considerable extent, as they were by the ancients. A very remarkable modern fireproof ink is used for writing on fireproof paper largely composed of asbestos. This ink has a platinum salt for its basis. Indian ink so much used by draughtsmen is chiefly made in China. It is a mixture of carbon and gum with the addition of a small quantity of musk or Borneo camphor. To make it properly the ingredients must be of the best and the carbon must be finely divided. After the carbon and gum have been mixed, the product has to be slowly dried, and moulded into sticks to which a high polish is subsequently given by brushing them with a hard brush anointed with beeswax.

He was a vegetarian.—Brown; "I thought you were a vegetarian, but I bear you eat mutton." Robinson: "I am not a bigoted vegetarian; I only eat the meat of animals that live on vegetable food."

The Oxlip in Belgium.—In this country the Oxlip (*Primula elatior*) may be regarded as a very local plant, being confined to two areas in Essex, Suffolk, and Cambridge, with two other small, outlying spots. It is much more abundant upon the Continent, and grows by the acre in moist meadows and other low-lying places between Ghent and Brussels. The plants cover the ground about as thickly as the Primrose and Cowslip do in some parts of this country where they have not been destroyed either by the plough or by wholesale uprooting by the "penny-a-root" marauders. The plants in Belgium form thriving tufts of several crowns throwing up numerous flower scapes from 4 in. to 8 in. in height, and practically giving the meadows a pale yellow hue.

Tomatos and Early Vegetables in the South of France.—According to the *Nord Horticole* it is only a few years since the Tomato was, particularly in the neighbourhood of Antibes, the object of extensive cultivation. This cultivation has, however, diminished considerably of late because it has ceased to be so remunerative as in the past. Both Egypt and Algeria have become close competitors in this direction. The first crops of the season in these countries arrive rather sooner at maturity than those growing on the French side, and the placing of these upon the market have brought about a sensible lowering of prices. Nevertheless, the resources of vegetable culture are many, as the collections of vegetables got together by the "Syndicat de Cagnes," and by MM. Vilmorin-Andrieux & Co. have proved. The culture of Asparagus, for instance, has been absolutely transformed. Instead of old local varieties, poor and miserable, the grand varieties of Argenteuil have been substituted, and the results obtained have been excellent. M. Maraini has been especially successful. We must also make mention of the Strawberries of M. Nigon, the Artichokes shown by M. Herbert, and the collections of vegetables of MM. Angosso, Rondelli, and Malaussena which illustrate the magnificent results which can be obtained in this naturally favoured country.

DWARF BEAN, VEITCH'S EARLY FAVOURITE.

As the new year comes round, in most places where glass structures exist to any extent, the owners are looking forward to have early forced vegetables, and these are amongst those most frequently asked for. This being to those who have to provide for the demand are always anxious to obtain a variety that comes quickly into use. All those who have been cultivators of French Beans from thirty to forty years, will remember many selections being put on market, all more or less good.

For many years I pinned my faith to Osborn's Prolific as a quick dwarf early kind, with Ne Plus Ultra to follow; but last year I obtained a small supply of Veitch's Favourite, and tried it beside Osborn's and one or two other kinds, with the result that it was earlier than either of them, the pods being large, very straight, and of first-rate quantity. Some were sown later, and became ready for use early in May, being grown in 3-in. pots, six plants in a pot, the soil being good, and the plants stimulated when in fruit; and from these we had some of the best Beans I ever saw.

This year our first supply was sown on December 23th in 7 in. pots, and from these we had Beans ready for use on February 14th. Ne Plus Ultra sown at the same time was twelve days later. Everyone who wants a good quick Dwarf Bean should give this a trial, as it is first-rate.—J. C., Chard.

A FINE STRAIN OF POLYANTHUS.

A BOXFUL of cut flowers of an admirable strain of Polyanthus reached us the other day from Mr. W. Angus, gardener to J. Ogston, Esq., Norwood Hall, Cults, Aherdeen. They were cut from the open ground and had stout stalks 6 in. to 9 in. in length, and therefore well adapted for placing in water. Mr. Angus saves seed of the best varieties every

year, and sows it in a mild botbed sometime in March. The seedlings are pricked out in due course, so as to facilitate and encourage good growth during the summer months. Early in October they are placed in their flowering quarters, where they prove a source of great attraction for many weeks when in bloom. All were delightfully fragrant, and redolent of the old-fashioned gardens of the spring time of the present generation.

The flowers sent exhibited a considerable amount of variety, but we were particularly taken with a golden yellow one, having five faint rays round the centre; otherwise, the usual orange eye was wanting, leaving a pleasing, uniformly golden flower. This ought to make a good bedding variety. The yellow sorts, with a large orange eye, were also in good form. The white varieties were, however, deficient in size. Crimson selfs varied from a glowing red-crimson to dark maroon, almost black, all being certainly fine of their colour. The gold-laced varieties were also fine, one in particular being quite equal to many of the named varieties in the clearly defined outline of the lacing and the crimson-maroon body-colour. There were also good purple sorts with large flowers. Red, purple, and crimson varieties, edged or laced with white, might be considered fancies. They certainly add greatly to the bizarre effect of the whole in mixed plantations. These hardy flowers evoke a considerable amount of enthusiasm amongst all classes of people, and we congratulate Mr. Angus on his strain.

INTERESTING WILD PLANTS IN DEVON.

LAST week I had an opportunity of looking at some of the Devon wild flowers, and found two of the three sundews, *Drosera rotundifolia* and *D. intermedia*, growing on Woodhury Common. *D. anglica* grows also, I believe there, but I have never met with it. At the same spot I came upon *Pinguicula lusitanica* in some abundance, *Schoenus nigricans*, the black hog-rush, and the lovely yellow mitred fungus (*Mitrula paludosa*) floating in the water on dead leaves.

At the mouth of the River Exe, which is about a mile and a half wide, juts out a large sandbank reaching from the Great Western Railway line nearly to within a quarter of a mile of Exmouth, the river flowing into the sea between the end of the bank and the Exmouth shore. This is known as the Warren, and in the fifties there were still a great number of rabbits on it, though I believe they have now all disappeared. I took the ferry from the Exmouth beach and walked over the sand to the farther extremity and saw much that was interesting. Parts of the sand are well kept together by the Marram Grass (*Psamma arenaria*). It is also called mat grass, starr, and bent, the two latter names occurring in an Act of Parliament passed in the reign of George II., which describes it as a rush or shrub. The Act forbids the cutting of it in the north-east coast of England and especially in Lancashire, as it is stated that the best way to preserve the sandhills from being blown away and so letting in the sea and destroying cultivated land is to preserve this grass; and any person cutting it without the leave of the owner is subjected to a penalty of twenty shillings, or in default three months' hard labour in the House of Correction. It seems, from the Act in question, that this grass was cut by "idle persons and disposed of for the purpose of making mats, brushes, and hrooms or hesoms." In Anglesea it is still used for making baskets and ropes. It is stated that were it not for this grass the town of Hull would have been long since washed away; and Holland's sandbanks are kept up by it in conjunction with a sedge (*Carex arenaria*) and Lyme Grass (*Elymus arenarius*).

The pretty little cress *Teesdalia nudicaulis* grows plentifully on the Warren, and already many plants were in seed. A few plants of *Cakile maritima* were also flowering. The Portland Spurge showed up well with its bright-red leaves, and at each step the flowers of the Stork's-hill (*Erodium cicutarium*) were to be seen varying in colour from lilac to white. Very like this last flower, but with grassy leaves, I found another flower—and this find is the reason of my writing to you—a flower which grows only on this particular Warren in Great Britain, though I am told it is a common flower in Jersey and Guernsey. I mean *Trichonema Columnae*. It is a modest little

flower, white in colour, veined with pink, and not growing more than from $\frac{1}{2}$ in. to 1 in. out of the ground. It is a bulbous plant, in flower just at this time, and few, I fancy, have seen it. As *Euphorbia pilosa* only grows near Bath in this country, and is not found again until Portugal is reached, so would this little flower seem to be connected with a southern flora, for it is plentiful on sandy hillocks in southern countries.

I wish to record that since I have returned to London I have gathered, growing wild, in an open meadow the Snake's Head (*Fritillaria Meleagris*) within nine miles of London, on April 29th, 1898.—*J. C. S.*

PEOPLE WE HAVE MET.

MR. WILLIAM CARMICHAEL.

THE subject of this sketch was born in the beautiful Vale of Upper Strathearn. He was educated at the parish school, which was as efficient in the early part of the century as now, thanks to John Knox for having an endowed school established in every parish, as well as a kirk. The heritors were obliged to build to build a school, a master's house, and provide a playground. John Knox ordained that every head master should have a fair knowledge of Greek and Latin, that he was to receive a salary of not less than £60 a year, in addition to the fees, and that the latter should not exceed 10s. per half-year. Scotch boys, therefore, had advantages in those days not possessed by their English contemporaries.

At the age of fourteen Mr. Carmichael informed his mother that he wanted to be a gardener, to which she replied, "Dinna be a gardener, Willy, as it is a poor, wandering trade, besides, you hinna a frien' in the gardening world." "I shall be a gardener, mother," he replied. At the first election after the Reform Bill, he went with his father to Crieff, when the latter went to give his vote. There father and son met the head gardener to the Duke of Montrose, Buchanan House, and Mr. Carmichael, sen., remarked that his son wanted to be a gardener. The Duke's gardener said he would be glad to have the boy, that his terms were £15 as apprentice fee, and that the lad would be bound for three years.

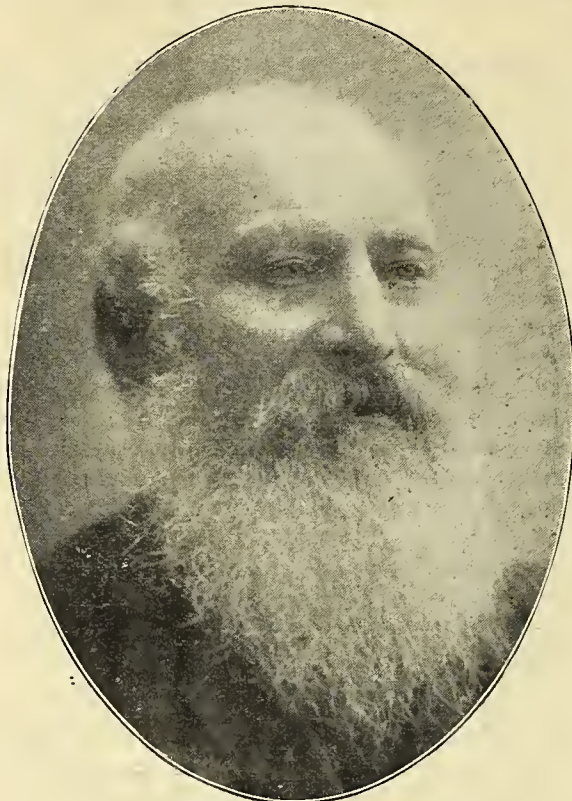
Buchanan House was then one of the best places in Scotland. Mr. Montgomery was an old Kew man, and a model gardener in every respect. The garden was about twelve acres in extent, and Mr. Montgomery was a great man for trenching. He used to walk up the garden, saying, "Now my lads, give it the steel; when I was a young man at Kew I used to give it right and left." There were six journeymen and labourers besides the boy. Grapes, Pines, Peaches, Nectarines, and hardy fruits were well done. Mr. Carmichael was never under a gardener who could wield the pruning knife so well, or was a better kitchen gardener. The walks were rolled every morning while the family was in residence, and not a weed was to be seen.

After spending his three years, Mr. Carmichael got into the Royal Botanic Gardens, Edinburgh, under the great Mr. Wm. McNab, to study botany under Professor Graham. Mr. McNab was an excellent cultivator, and the father of Heath culture. After staying about two years his master sent him as foreman to Mr. McMath, at Archerfield, and afterwards at Drumlanrig. Before Mr. Carmichael had been two years at Archerfield, Mr. McNab sent for him and engaged him as principal foreman to the Duke of Norfolk, Arundel Castle, Sussex. As Mr. McNab employed fifty men, and was very strict with them, the subject under notice was much surprised at receiving an invitation to dine with him. This was before the days of railways, so Mr. Carmichael sailed from Leith to London, and from thence travelled to Arundel by coach, a distance of fifty miles.

There were about forty men employed in the gardens, but Mr. Wilson, the head gardener, was not considered very expert. The collection of fruit trees, however, was fine, wall trees in particular being second to none in the matter of training. There were no table decorations in those days, a good supply of fruit and vegetables being all sufficient. Mr. Gilpin was landscape gardener, and Mr. Carmichael got some valuable hints from him which were serviceable in after years. About two years later the adjoining estate of Bignor Park was in want of a gardener, and Mr. Wilson told his foreman that he wanted to give him a start in life. Mr. Carmichael

objected on the score of youth, but his master drove him over to Bignor Park, a distance of eight miles across the South Downs, where they had an interview with Mr. and Mrs. Hawkins. The squire was pleased with the appearance of Mr. Carmichael, but objected on the score of youth. Mr. Wilson exhibited great tact, however, and told Mr. and Mrs. Hawkins that his foreman had been educated in a good school, was full of energy, and a better gardener than himself. The objection was then dropped.

Mrs. Hawkins was a niece of the great botanist Sibthorp, and inherited his taste. When Mr. Carmichael asked her whether he might purchase a few Cape Heaths she replied that she had already spent a good deal in them, and had been told by her previous gardener that they could not be grown in Sussex. Mr. McNab, of Edinburgh, however,



MR. WILLIAM CARMICHAEL.

obliged him with three dozen bushy plants, which he grew like weeds and exhibited. The late Mr. Glendinning, of Turnham Green, then travelling for Lucombe, Pince & Co., Exeter, called at Bignor Park, and was much struck with the Heaths. Mr. Ewen, of Petworth, heard that Mr. Tugwell, of Crowe Hall, Bath, wanted a gardener who could grow Cape Heaths and hard-wooded plants, and wrote about Mr. Carmichael, with the result that the latter had a telegram to go there immediately.

Thus after being three years at Bignor Park, Mr. Carmichael moved to Crowe Hall, where his employer allowed him to exhibit Heaths and erect new houses. Mr. Tugwell proved the best master he ever served. Mr. Carmichael, in the course of ten years, got together the finest collection of Heaths (over 100 varieties) in the county. After being at Crowe Hall three years, he won about £60 annually at Bath, Bristol, Cheltenham, and other shows.

After serving ten years at this place he next moved to Dunmore Park, Stirlingshire, as general manager. Lord Dunmore was then a minor, but asked whether money would make his gardener stop with him. He did stay for six years, when H.R.H. the Prince of Wales, offered him, unsolicited, the entire management of his place at Sandringham, and the laying out of it under the directions of the Princess. Everything had to be made or re-modelled, and Mr. Carmichael saw nothing but incessant toil before him; but he was just the man to put a "stout heart to a stey brae." He turned a Turnip field of fifteen acres into a kitchen garden. During the ten years of his stay at Sandringham he also made about 500 acres of plantations, thinned all the woods which were in a neglected state, and made the game covers. He had from 300 to 400 labourers under him, trenching for plantations and road making. The first job he had when he went there was to lay out the ground of the Bachelor's Cottage, now enlarged and called York Cottage.

It is now one of the keenest pleasures of Mr.

Carmichael's life to visit Sandringham and see the effect of his labours. He planted most of the rare Conifers which are now fine trees. He also took to the Home Farm for a few years. After leaving Sandringham he went to lay out the new gardens at Nowton Court, Bury St. Edmunds. J. H. Porteous, Esq., is a great man for Coniferae, and has a fine collection.

The hero of this short sketch has had a long and active career, but is now resting on his oars, having chosen Edinburgh in his retirement—the word is, however, scarcely correct, for he is still a gardener, and says that if he had to begin his career over again he would choose gardening as his profession. He was fortunate in getting a small garden, about a rood in extent, which is entirely filled with seedling Strawberries. He has got new blood into the race by crossing Waterloo with other sorts. They are great bearers, unsurpassed in flavour, and only want to be known to be widely cultivated. Mr. Carmichael still possesses great vitality, and energy, and takes infinite delight in conversing with a brother of the craft about his favourite profession.

THE LATE CHRYSANTHEMUM SHOW AT BELFAST.

ON page 55r of your issue for April 30th, I notice you refer to the dispute raised by Mr. Peter Brock and others, and as it very much concerns myself, I shall be obliged if you will kindly allow a short space in reply to the same.

The facts of the case I will deal with as briefly as possible. The bloom of the yellow sport shown by Mr. Mease was exactly the same in colour as shown by him at the Royal Aquarium which was labelled Yellow Mme. Carnot and passed as such. He instructed his assistant who was in charge of his blooms at Belfast to name it Yellow Mme. Carnot, but Mr. W. Wells advised him to label it Primrose sport from Mme. Carnot. In looking over the stands I did not notice the name, but took it for granted it was a bloom of Yellow Mme. Carnot, and passed it as such. I may here mention we had blooms of that variety about as pale in colour as the one shown by Mr. Mease. During the afternoon a protest was lodged and I was called into question. Mr. Wells and Mr. Mease's assistant both assured me that it should have been shown as Yellow Mme. Carnot. I certainly did not feel justified in disqualifying the stand, as I knew full well that in several places Mme. Carnot sported the previous season.

Respecting the paper collars, if the rules were violated to the extent stated, surely it was the place of Mr. Brock, or whoever noticed it, to enter a protest at the proper time, and the case would have been thoroughly investigated, and, as far as I was concerned, justice done; but I heard nothing of this till I read it in print some weeks after, and the writer then attempted to criticise the stand of blooms in question, and in replying I did state that cardboard or no cardboard the blooms would have received the same award. At the same time I attempted to make it clear, and I think most readers would have understood me as meaning to take away the cardboard and the stand was well ahead of the next competing stand. This I fully explained in a further reply later.

I do not wish for one moment to attempt to screen myself from all blame, I honestly did my best to do justice. I was the only judge appointed to judge the principal classes of cut blooms, and I had a considerable amount of work to do. Perhaps it was somewhat unfortunate that three English growers received the three highest awards at the hands of an English judge; but I value my reputation far above showing any partiality.—*Edwin Beckett.*

I have read your interesting remarks, *re* the above in your issue for 30th ult., and as you refer to further explanation being required, I beg to ask your insertion of the following:—It has been made perfectly clear that Chrysanthemum Mrs. W. Mease was not in commerce at the date of the Belfast show, Mr. Mease's stand should therefore, in justice to other exhibitors, have been disqualified. Mr. E. Beckett, of Aldenham House, Elstree, was the sole judge of this great show. The Belfast show dispute is a matter which other Chrysanthemum show committees should take timely notice of and appoint such expert judges as

will fully understand and adhere to the rules of competition, and make their awards in accordance with such regulations as their schedules adopt or imply.

The second point of issue relates to the cardboard collarets as employed in the third prize stand, exhibited by Mr. Henry Perkins, of Greenlands, Henley-on-Thames. The Ulster Horticultural Society adopted "the regulations" of the National Chrysanthemum Society. Having regard to this fact, how could collarets be considered permissible? It was clearly shown by the blooms that were dismantled on the second day of the show that, without such extraneous aid as cardboard collarets, the third prize stand would have had to take a much lower place in the list of awards. The Belfast committee only allow till 3 p.m. on the first day of the show to lodge protests. It being the second day when the collarets were discovered a protest was then useless. The first prize stand, exhibited by Mr. W. H. Lees, of Trent Park, New Barnet, constituted a centre of attraction for exhibitors and visitors that will not readily be forgotten by those who had the privilege of seeing it.

The Ulster Horticultural Society have deservedly earned the best congratulations of all interested in the cultivation of the queen of autumn flowers for the energy and enterprise they have shown in bringing their show to such a high standard of excellence, and to rank as one of the foremost in the United Kingdom. I have no doubt they will much regret that the awarding of the Jubilee prizes was the cause of so much dissatisfaction among the competitors in the class referred to. I have no wish to further belate this discussion, but consider your remarks in reference to my statements about the collarets demand the above explanation.—*Peter Brock, The Gardens, Glenmor, Drogheda.*

THE APPLE BLOSSOM WEEVIL.

(*ANTHONOMUS POMORUM*).

THIS destructive pest is again very busy in the kitchen garden; and unless prompt steps are taken it will play sad havoc with the young growth as well as the blossom buds, with the result that very little, if any, good fruit will be found on the trees, and the greatest part of the foliage will be disfigured. Of course, it is next to impossible to think of tackling large standard trees at this time of year, but where espaliers and medium size pyramid or bush trees are suffering on account of this depredator, no time should be lost in endeavouring to dislodge it.

These notes would have been of more value had they been given a month ago; still a great deal can be done even now in saving a part of the crop as well as lessening the attack another year. I have found hand picking to be the only safe and certain remedy; a very tedious operation some will say, but it is only by close attention that one can hope to battle successfully with this enemy. There will be found at times, right in the centre of the young shoot, a little white miniature creature that takes a keen eye to detect it. As a guide to where it is lurking in the shoot you will see a tiny hole has been bored. It is also found in the curled leaves from whence it can easily be dislodged.

Each individual blossom too should be carefully examined, as it is from early in April, or soon as the shoots begin to expand their first leaf that this pest can be found. If allowed to remain long in the blossom bud the mischief is soon done. It never expands properly and eventually has the appearance of being scorched, and on being opened will be found to contain the little white maggot. All the blossom buds that might have been bored into by the female to lay its egg drop off at a later stage. I have as yet only found one maggot in a single blossom, while occasionally I have found (what I consider the female) nestled in between the many blossoms of the flower bud. Squeezing them between the finger and thumb soon puts an end to them.

Last autumn I put on grease bands to all the Apple trees in the garden hoping to escape this dreaded pest, but am sorry to record that my hopes have not been realized. Grease bands no doubt are a preventative on trees in the open, but I doubt if they are of much avail where Iron trellising is in use, as in my case, where it is possible for the females to crawl up to the tree from the soil without making use of the main stem of the tree, and one cannot

well go in for greasing these many uprights, which stand 6 ins. apart. If some kind of paste could be prepared to paint the trees all over as a preventative, I think we should stand a far better chance of eradicating this the greatest pest the Apple grower has. What do some of your better informed readers say to this.—*J. Mayne, Bicton.*

THE FLOWER GARDEN.

THE April of 1898 has achieved the distinction of being the driest that we have had for many years, for it brought really no rain, with the exception of a few nice showers on the last two or three days. May has been ushered in with showery weather, and this, combined with the rise in temperature, has been working wonders with the aspect of the flower garden during the last few days. The want of rain all through what we regard as one of the showery months of the year, has been a sad trial to shrubs which were shifted during the past winter, and the labour of watering these has been an item in the general bill that has had to be taken in. Even now the rains we have had up to date are by no means sufficient, and we can only hope for a continuance of the showery weather. The rains have come just right for Rhododendrons which were planted within the last two or three weeks, but these plants will need to be very closely watched if they are to do well.

THE GRASS has been and is growing with wondrous rapidity, and the mowing machines must be kept busily at work to keep pace with it. The knives of the machine should not be set down too low, for too close cutting is very injurious to the sward, and it is far wiser practice to mow twice with medium closeness than to cut very close once. On sward that is to be devoted to cricket, lawn tennis, and bowls the roller must also be kept regularly at work. With the ground soft from rain, as it is now, a splendid opportunity occurs for the roller to work effectively, and there is not that subsequent "baking" of the surface that arises from rolling after artificial waterings during hot weather. A sprinkling of soot, given just before a shower, is a capital dressing for any lawn, and advantage should be taken of the showery weather to give it.

SPRING FLOWERS.—The early Tulips have been having a fine time of it, and the Daffodils have also done well, although the dry weather was not exactly to their liking. The value of the Daffodils for spring bedding becomes more apparent each year, and such large trumpet varieties as Emperor, Empress, Maximus, and Golden Spur can scarcely be planted in too great quantities. Besides the filling of the flower beds, however, the practice of naturalising large numbers in the grass has much to recommend it; indeed, when we take into consideration the grand object lesson that is provided in this direction for the gardener who wishes to make the most of things at Kew and the public parks of London it is a wonder that the idea is not more extensively carried out.

After the flowers are off the Tulips and the Daffodils in the beds every attention should be given to the plants, in order that they may have the opportunity of making their growth properly.

Polyanthuses represent such a wealth of colour variety that it is a pity they are not used in greater numbers. Beds filled with a mixture of varieties are very showy, and last in condition for a considerable time. The double crimson and double white Daisies make capital groundwork for either beds or borders, and when employed in conjunction with Wallflowers, Tulips, Narcissi, Hyacinths, and other spring-flowering subjects are always admired. A good stock of them will be found a great advantage.

SEEDS.—The present time is an important one as far as seed sowing goes, for there are many things that require to have seed sown now if the flower garden is to present that gay and varied appearance, which it should do if the gardener fully grasps his opportunities. A considerable proportion of seed sowing is done under glass in heat towards the end of February and the beginning of March, but these early plants may well be supplemented by others raised from seed sown in the open air. Choose a sunny, sheltered border not overhung by trees, and after carefully breaking up and levelling the soil sow

the seed, either broadcast or in very shallow drills, transplanting the seedlings as soon as they are fit to handle. Stocks, Asters, Zinnias, &c., raised thus will form a capital succession to those reared under glass. There are many other half-hardy annuals that may well be sown *in situ*, in the mixed borders, and even the handsome *Perilla nankinensis*, and such Castor-oil plants as *Ricinus communis*, and *R. Gibsoni*, although generally regarded as very tender subjects will do exceedingly well if treated in this way. These late-sown seeds produce plants that are often very little behind, in point of time, those raised under glass. Suitable spots should be selected in the borders, the soil prepared, and the seed sown, taking care to label each plot so as to avoid subsequent disturbance of the soil. When the seedlings appear thinning out may follow, the strongest plants being left, and these not being subjected to the check of transplanting will grow with great rapidity, given anything like favourable weather.

Polyanthuses should be sown on a shady border in light, rich soil. If a convenient situation does not offer itself out of doors, a bed of soil may be made up in a north frame and the seed sown there, the seedlings being subsequently transplanted to the open ground as they become large enough.

TUBEROUS BEGONIAS.—The second week in March the tubers were looked over, sorted, transferred to shallow boxes, covered lightly with soil, and placed in a gentle heat. These have now developed into sturdy plants which are much in want of more room. This should be given them at once, for if they are left in their present somewhat confined quarters they will be starved before their time comes to be consigned to the open. A plan that we have followed for some years with conspicuous success is to plant them out in specially prepared beds. A shallow hotbed, about 3 ft. in height, is made up of stable manure, and on the top of this is placed some 10 in. of soil. In this, the plants are put out, allowing space for further growth. A spare frame with its attendant lights is put over the whole in such a way that the plants are brought up to within a few inches of the glass. They are closely watched for airing, shading, and watering, and they are regularly sprinkled with the syringe. During cold nights they are covered up warmly with mats, for seeing that they are so close to the glass they would be injured by even a slight frost if left uncovered. By this system sturdy short-jointed plants are obtained that fill the beds well from the commencement, and which are in flower immediately after they are planted out.—*A. S. G.*

Gleanings from the World of Science.

A New Fertiliser.—We have on previous occasions alluded to the bacteria or microbes which aid leguminous crops in collecting their nitrogen from the soil and atmosphere. Nitragin is the name applied to these organisms collectively. More recently Herr Caron has been experimenting with a mixture of bacterial organisms under the name of "alinit," which he claims to be of immense value in the cultivation of crops in the field, but particularly when used on certain soils. He claims to have had remarkable results from his experiments, which have been carried on for the past four years, with laborious assiduity. Further experiments are still necessary in order to fully demonstrate the value of his discovery. The leading or more important organism is a bacillus belonging to the aerobic group known as the hay bacilli, and which bears a close resemblance to *Bacillus mycoides*, so abundant in most soils that are tilled and cropped. "Alinit" consists of spores forming a creamy-yellow powder, which has to be dusted thinly over the ground intended to be sown or planted.

Water Voles and an Apple Tree.—At the meeting of the Linnean Society of London on the 21st ult., an exhibit was made, on behalf of Lieut.-Col. Birch-Reynardson, of a portion of the trunk of an Apple tree which had been so seriously attacked by Water Voles (*Arvicola amphibius*) as to cause the death of the tree; and several others, it was stated, had been similarly injured. Such extensive damage from such a cause was regarded as unusual.

HINTS FOR AMATEURS.

MAY.

"Hail, all hail, the merry month of May."

THUS far go the words of the old ballad in which we are invited to hail with joy the appearance of the May month, when Nature awakes from her sleep in right good earnest, and clothes wood and glade and hedgerow with her myriad-hued mantle. The May month has from time almost immemorial held a peculiarly distinguished position amongst the months of the year, and the junketings and merry-makings with which its first day was wont to be ushered in in the good old times are matters of common knowledge. With the staid wisdom of the nineteenth century these practices have lapsed, and it is only in country places very remote from the busy swirl of latter-day civilisation that the spectacle of Jack-in-the-Green and his attendant satellites can be observed, whilst the once ubiquitous May-pole has vanished from our village greens.

The name-mother of the month was *Maia*, daughter of that much-occupied individual Atlas, the mother of the nimble Mercury, by Jupiter. Her goddess-ship could not have chosen or have been given a better month to perpetuate her memory amongst mortals for standing as it does upon the threshold of summer it possesses a peculiar charm which none of the other months of the year can boast of; indeed, it is *par excellence* the month of spring, with all her subtle influences, for it is in spring, according to the poet Tennyson, that—"A brighter plumage glows upon the hunched dove, and in spring a young man's fancy lightly turns to thoughts of love." Surely what is true of the "young man" is true of the "young maiden" also, and if we assume this we have committed ourselves to a very close association of the seasons with the hopes and blessings, pains and pleasures of the human race.

The month of May, seems to have taken to itself as its special characteristic the youth and vigour which mark the season of spring, and this idea has been immortalised by Shakespeare in the phrase "his may of youth and bloom of lustihood," whilst in Spenser's quaint phraseology we find the term "may" applied to a young woman in the words "the fairest may was she that ever went."

It is not at all surprising when we consider the facts of the case that a deal of superstition should have been interwoven with the legends concerning the qualities of the month, and one of the most amusing, perhaps, is that of the May dew. The dew falling in May was supposed to possess peculiar virtues. Careful housewives were of opinion that the dew of May was especially efficacious in the bleaching or whitening of linen, and they accordingly took every opportunity of exposing their stores of linen to its beneficent influences. This belief was harmless enough, and contained the elements of truth, inasmuch as exposure to the air, when it is the pure air of mountain or moorland, has certainly bleaching properties, but she would be either a hold or an ignorant housewife who attempted to carry out the idea within reach of our towns and cities, for efficacious as the May dew may be, its virtue would scarcely be potent enough to counteract the malevolent action of the blacks and smuts with which the townsmen and townswomen are painfully familiar.

The May dew, moreover, was believed by some of the ancient philosophers to contain a universal solvent in the form of a red and odoriferous spirit which could be obtained by careful and repeated distillations. It has been stated that the sect of the Rosicrucians took their name from the fact that they prepared this spirit. Certainly the name may have been derived from the Latin *ros* signifying dew, and *crux*, cross. The members of the order were often known as the "Brothers of the Rosy Cross," by reason of the fact that the first syllable of the word Rosicrucian was supposed to come from the word *rosa* a rose, instead of *ros*, dew.

Even in our own day there is a good deal of superstition connected with the influence of the May month upon various maladies. Thus there are thousands of mothers who implicitly believe that children will never get rid of whooping cough until May, no matter at what time of the year they catch it. This belief has probably risen from the fact that the nasty cough which invariably remains with children after the regular "whoop" has disappeared

except during exceptionally severe paroxysms, only disappears after the advent of genial spring weather. As we often enough do not have really genial weather until May it is easy to see how the superstition has been evolved.

We have been speaking, hitherto, of the kindly and beneficent side of the nature of May, but fickle as she is she has yet another side, and one that is not so commendable, just as the honoured "May Queen" is balanced by the May-game, who was the sport and derision of his comrades and acquaintances, as illustrated in Ford's well-known lines—"Why should not I, a *May-game*, scorn the weight of my sunk fortunes." Sometimes the month brings with it warm and favourable weather, and occasionally extreme heat is reached, which as we are not yet used to hot weather thus early in the year often proves more trying than the sultry sun of July and August, when we have become shaken down to the regularly higher temperature. Occasionally the other extreme of cold, biting winds is reached that makes us shrink within ourselves, so to speak, and don hastily the garments which previous warm weather may have induced us to doff. Between these extremes we are called upon to enjoy (?) all manner of fluctuations, and thus the month has come to be regarded as a highly treacherous one as far as the weather is concerned. There is thus a world of truth in the old advice—"Till May be out ne'er cast a clout."

Lovers of plants know full well that treacherous, changeable weather is quite as distasteful and injurious to plant life as it is to animal life, and they will be likely to repeat the words of "hail" in a slightly sarcastic frame of mind, and far more likely to speed the parting than to welcome the coming guest.

To speak the whole truth the May month is one of the most trying that the gardener has to contend with, the more so that it is a critical season with many crops both indoors and out. Outdoor crops, however, are in a better condition to take care of themselves, and it is only when actual frost threatens that the gardener is worried to any great extent on their behalf. In cases of frost, of course, protection has to be given to many things, and it will be well to have protective materials of all kinds ready to hand for immediate use when it is required, more particularly during the first half of the month. The difficulties of the outdoor gardener who has to bestir himself to prevent his young Potatoes from getting nipped are slight as compared with the man who has to see after a varied collection of fruits and flowers growing under glass. The question of ventilation during catchy weather, for instance, is a perfect bugbear, for it should be the aim to prevent frequent fluctuations of temperature as far as possible, since plants under glass are far more likely to take harm in this way than the hardier subjects which are outside.

During the prevalence of cold cutting winds in conjunction with hot sun the greatest care must be exercised, for the heat of the sun sends up the temperature of the house to a considerable height, and if much air is given a cold draught is generated. This is especially harmful to Vines which are in various stages of growth, from the first rough leaves and onwards. Draughts check the growth and disfigure the foliage, and yet some air is necessary, otherwise burning would be likely to result. In airing all warm houses the lights should be opened on one side of the house only, and that side should be the one facing to the south.

Shading is now a matter of considerable importance to most things, for the young and tender growth is easily burnt. Such things as tuberous Begonias, Gloxinias, and Achimenes, scorch very readily, and as the month wears on and the heat of the sun becomes fiercer, scorching may be looked for upon Palms, Dracaenas, and foliage plants generally, unless means are taken to prevent it.

Watering must receive the closest attention. The best time to give the heavy watering is the afternoon—say from 3 p.m. to 5 p.m. A good watering then will carry all but the thirstiest subjects over until the same time next day, although such things as Spiraeas, which have very little soil indeed in the pots, may require it twice or thrice a day in dry weather if they are to be kept from flagging.—*Rex*.

Roses at Marriage Ceremonies.—America is credited with originating the plan of throwing the petals of Roses at bridal ceremonies instead of rice.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Stag's Horn Fern Attacked with Fungus.—*T. T.*: If you have any suspicion that a fungus is the cause of the mischief to your pot plant, you might water it with a weak solution of Condy's Fluid. The plants growing on the tree stump may be served in the same way. Enough of the fluid to make the water a light pink, and no more, should be put into the water. You will do well to follow this up by giving the plants some fresh sweet compost to grow in, and should advise you not to use so much sphagnum moss, and more fibrous peat. A few pieces of charcoal are quite a necessity.

Chrysanthemum Sunstone.—*Mum*: You will find Sunstone just the variety you need. It is a free grower, a good doer, and the flowers besides being of noble proportions exhibit that rich shade of bronze-yellow that is so attractive and effective in all floral decorations, especially those that have to stand the test of artificial lights.

Propagating Perennial Asters.—*Saynor*: You are rather late in thinking about doing this for the plants out of doors are pretty forward. The system generally adopted is division of the roots. Lift the old stools and divide them up carefully; a single strong shoot with a few roots attached will grow into a good plant if potted up and looked after. After potting consign the young plants to a pit or frame where they may be kept close, and carefully watch them for shading and watering, and airing presently when you see they are making a start. If you like to wait a little longer cuttings may be taken from the tops of the shoots of the old plants. These will form bushy little specimens that will flower as freely as the old plants, but which will be much dwarfer.

Winter Tomatos.—I have half a dozen Tomato plants that I grew on through the winter for fruiting. They have only borne a very slight crop, however, although they appear to be in vigorous health. Is it worth while attempting to do any more with them, or would you advise me to have young plants in their stead.—*T. T. L.*

The latter alternative would certainly be the better plan, inasmuch as it would be the surest. Occasionally, however, old plants of this kind may be made to start afresh and bear good fruit. If you wish to try this, cut out any growths that have fruited and are not needed for carrying other growths, also the tops. Then train up young shoots from as near the bottom as possible. You ought then to get some fruit.

Hyacinth of two colours.—In a bed of Hyacinths which I have of the blue variety Charles Dickens I notice some of the spikes have rose coloured flowers mixed with the blue ones, and in two instances half the spike is blue and the other half is rose. Is this uncommon? I thought it might interest some of your amateur readers.—*T. Ewart*.

There are two varieties of the Hyacinth Chas. Dickens, the one with blue flowers and the other with rose. It is not an uncommon occurrence to see the two colours on the same spike, as yours are, and, indeed, we only noticed last week that some plants of this variety growing in Hyde Park were exhibiting this peculiarity. The effect is certainly rather strange. These bulbs with the flowers of two colours may not come the same next year, for the flowers would probably be all blue or all rose. It might be interesting to make the experiment. The flowers would of course be much smaller than those thrown this year.

Deutzia gracilis.—*Carl*: It would be little short of barbarous to turn your Deutzias out of doors now that the flowers have fallen off them. It is true that the Deutzia is a hardy subject, but then you must remember that plants in the open have not yet commenced to flower, and should frost supervene would not be in a condition to withstand harm. Your plants, however, are just making their growth for the season, and upon this depends next year's crop of flowers.

Instead of turning them out of doors, therefore, put them in a gently heated pit or frame, where they can develop their growths at their leisure. No great amount of pruning is needed, but a little thinning of the shoots may be required in order to keep the plants in good shape. This thinning may be done at once.

Chrysanthemum G. J. Warren.—*Roxburgh*: This variety originated at Balcombe Place Gardens, Sussex, and was named after the gardener at that place. It has received three certificates, viz., an Award of Merit from the Royal Horticultural Society on October 26th, 1897; a First-class Certificate from the National Chrysanthemum Society on November 1st in the same year; and another First-class Certificate from the Scottish Horticultural Society on November 18th, also in 1897. From what we have seen of the variety and its behaviour we should consider it considerably the inferior of its parent, Madame Carnot, as far as robust habit and general vigour go.

CAMPANULA PORTENSCHLAGIANA MAJOR.

For some years the typical form of this Bellflower might have been seen in gardens under the name of *C. muralis*, and possibly that is still retained in some collections. The correct name, however, has been adopted in most of the leading collections of hardy herbaceous and alpine plants. The specific appellation is rather cumbersome on account of its length, but no hardy plantsman will quarrel with the plant itself, for it is one of the prettiest and most useful of the dwarfier growing kinds. The variety under notice has larger flowers than the type. The accompanying illustration of it was prepared from a photograph which was taken in the nursery of Messrs. R. Veitch & Son, Exeter, Devon. For some years past they have been getting together a fine collection of herbaceous and alpine plants, the latter being chiefly grown on the rockery in the Queen's Road Nursery, where we have noted many choice things. The large, blue flowers of *C. portenschlagiana major* are produced in the greatest profusion on plants not exceeding 6 in. in height, but as a rule considerably under that. The blooms are bell-shaped and upright, and perfectly distinct from those of any other species flowering in the open air during the summer months. The species is a native of Dalmatia, and proves perfectly hardy in this country.

ORCHIDS AT CLARE LAWN.

GARDENING is still carried on with spirit and intelligence at the suburban residence of Sir Frederick Wigan, Clare Lawn, East Sheen, Surrey. It is a quiet and beautiful place, enshrouded with trees, and situated close to the Sheen Gate of Richmond Park.

We made a rapid survey of the Orchids the other week under the guidance of the grower, Mr. W. H. Young, and noted that the collection is still on the increase, and the cultivation of several sections vastly improved within the last few years. In one of the houses a fine piece of *Sobralia macrantha alba* is on the point of flowering; while the fragrant flowers of *Cattleya citrina* and *Odontoglossum citrosimum* made their presence unmistakable. *Cymbidium traceyanum*, *C. winnianum*, and *C. eburneolum* are some of the many types here.

The cool *Odontoglossums* have now been associated with the *Masdevallias*, having changed their quarters since we saw them last; and their improvement is at once apparent. Baskets of *O. Rossii* in great variety, and including *O. Rossii rubescens*, are now floriferous and pictures of beauty. Other species are *O. ruckerianum*, *O. Cervantesi*, *O. c. Morado*, *O. odoratum*, *O. o. baphicanthum*, and *O. Oerstedii*, the latter a gem, of which a pan carried three dozen flowers. On one of the smaller pieces a peduncle carried twin flowers—quite an unusual occurrence. *Ada aurantiaca*, with its rich orange flowers, made a fine contrast with the paler *Odontoglossums*.

In another compartment of the same house *Odontoglossum Uro-Skinneri* is throwing up spikes of remarkable vigour. *O. polyxanthum grandiflorum* is a handsome variety. Amongst *Cymbidiums* we noted *C. devonianum* and *C. tigrinum*, the latter

being a great favourite with Mr. Young. Hybrid and other *Disas* are responsible for adding largely to the display in the house. Beautiful and interesting are *Disa langleyensis*, *D. Veitchii*, *D. kewensis*, and *D. tripetaloides*, the latter being a species with medium-sized flowers of great charm. *Masdevallias* are numerous, a considerable number being already in flower, including the singular *M. Chestertoni*, with black, spotted segments and a salmon lip, having red veins. Good things are *M. ignea*, *M. i. Echartii*, *M. harryana*, *M. trochilus*, and others. The singular looking *M. trochilus* has chestnut-brown flowers with long yellow tails. *Epidendrum hastatum* has brown sepals and petals, and a white lip.

The third compartment of this house contains a handsome and well-flowered variety of the hybrid *Odontoglossum elegans*, many plants of *Cypripedium bellatulum*, with leaves like leather, and a fine batch of *Miltonia vexillaria* coming into bloom.

The rock house has been the charm of the place for many weeks past, and was an eye-opener to us. When the door was opened it seemed like an entrance

ludemanniana is also flowering well. Some plants of *P. schilleriana* have been here for the last fourteen years, and are still in pristine vigour. All are grown in teak baskets suspended from the roof. *Saccolabium ampulaceum* is a little gem. A bed of varieties of *Cypripedium barbatum* planted out on one of the benches has been gay for some time past. *C. b. nigrum* is a very fine thing. The white-lipped *C. Godefroyae leucochilum* is very pretty. The well-defined and rich colours of *C. mastersianum* marks the hybrid as the finest form of it we have seen. There are some giants amongst the specimens of *C. lawrenceanum*. Many hybrids of various kinds have been raised here. The metallic-looking leaves of *Microstylis Scottii* are very pretty. The same may be said of *Anoetochilus Dawsoni*, whose velvety-olive leaves are lined with red veins. The upper third of the petals of *Cypripedium sargentianum* is deep red.

Another house of choice Orchids contains *Dendrobium thysiflorum* bearing twelve racemes of bloom. The blue-purple hybrid *Epidendrum endresio-Wallisii* is also very handsome. Very choice are



CAMPANULA PORTENSCHLAGIANA MAJOR.

to fairyland. The rocks and walls are covered with various Ferns, Selaginellas, Ficus, &c., and from every prominent elevation and coign of vantage long, drooping sprays of *Cymbidium lowianum* depend in such a way that almost every flower is seen to the fullest advantage. The plants are mostly of large size, grown in pots, and fling out their racemes on all sides in the most charming and enchanting way, owing to their being elevated and unsupported by stakes. There are only ten plants, but they carry 100 spikes, bearing 1,628 flowers, all in prime condition. One of the plants carries twenty-seven spikes with an average of sixteen flowers each. The finest spike is 5 ft. long, and carries thirty-six flowers; the plant has seven spikes. Thirty-two flowers on a spike is of common occurrence. One variety has a rich maroon-crimson blotch on the lip, and tinted sepals and petals. *C. l. concolor* carries twelve and fifteen flowers on two spikes. *C. grandiflorum* is also here. The plants have been kept five years in the same house, and during the severe winter three years ago the inside temperature for several days sunk to 34°. The duration of the flower is marvellous.

The *Phalaenopsis* house still contains some flowering plants of this genus. The first spike of *P. grandiflora aurea* was caught in a London fog, and having been partly cut back is now in full bloom. *P.*

Cattleya Skinneri alba, bearing four spikes; *C. Mendelii* and *C. inter-elegans* (*intermedia* x *elegans*) a larger and much finer thing than the first-named supposed parent. The choicest and most handsome Orchid in this house is *Cattleya Schroderae* with a large orange blotch in the throat, and having blue veins radiating from the blotch, the rest of the lip being suffused with lilac. The lip is 2½ in. wide. *Laelia Latona* in the richest colours of this hybrid may also be seen here.

The true form of *Cattleya intermedia* is flowering in another house along with a choice variety of *Dendrobium roobile*, named *D. n. Hutchinson's* variety. The lip measures 1¼ in. across, and its dark maroon blotch contrasts finely with the soft lilac of the rest of the flower. The blue-purple *Sobralia Ruckeri*, *Trichopilia suavis*, and *T. s. alba* are all choice things, the last-named carrying ten flowers.

The next house we entered was also a warm or East Indian one, containing many *Dendrobiums*. The long racemes of white flowers of *D. veratrilium*, having a lined and marbled blue lip are very graceful. Other species flowering are *D. Bensoniae*, *D. Parisii*, *D. rhodocentrum*, and *D. polyphlebium*, having a crimson lip edged white, and appearing like a hybrid between *D. Parisii* and *D. macrophyllum*. The display in this house is also enriched with *Thunia alba*, *Oncidium ampliatum*, *Angraecum*

arcuatum, A. Leonis, *Cypripedium barbatum* Warneri, *C. niveum*, and *C. concolor*. A fine plant of the latter, which has been here since 1893, has yellow, spotted flowers. A smaller plant is carrying three flowers on one spike, a very rare occurrence. We have never seen so many before on one scape, and must compliment Mr. Young upon his success.

BLIGHT AND BLESSING.

PROFESSOR FRED. ENOCK has delighted many British audiences by his interesting and lucid descriptions of the insects and insect life of this country, and the Royal Horticultural Society was fortunate in securing him for a lecture on the 12th ult. The end of the Drill Hall where the lectures are usually given was enclosed by canvass, and a dark room was thus improvised to enable the audience to have the benefit of the numerous lantern slides which the professor brought with him. These illustrations were taken from drawings and photographs of the various insects dealt with, and it would be difficult to overpraise them for accuracy and detail of finish. Every member of the audience must have gone away with a very faithful idea of the structure and qualities of some of the insect friends and foes he meets with, thanks to these admirable illustrations and the Professor's not less admirable descriptions. Mr. McLachlan occupied the chair.

In his opening remarks, the lecturer spoke of the ubiquity of "blight" or green fly. In his humorous way he said that green fly was not always green, but was sometimes black and brown and white. This fly bred so rapidly that unless something else preyed and lived upon it everything would soon be completely covered, and we should never be able to grow plants at all. He then proceeded to enumerate some of the insects which preyed upon the fly or blight, and were, therefore, to be regarded by the gardener as friends.

First of all came the Wasp Fly or Hoverer. There were twenty or thirty of these flies belonging to the genus *Syrphus*. They all fed upon the green fly and laid their eggs amongst it; in fact he had counted 500 on a single leaf. The maggot of the wasp fly hatched after a few days, and straightway began to feed upon the green fly. These maggots could easily be identified by the way in which they fixed themselves to the midrib of the leaf by their anoclasters and waved their bodies about, seizing the green fly with their hooked mouths. One of these maggots could destroy as many as 150 green flies in an hour, and they kept this up for thirteen or fourteen days. In the chrysalis stage this insect resembled the bud of a tree to whose bark it was affixed. The eye of the wasp fly had 11,000 facets, or 22,000 for the two eyes, each facet being capable of receiving a distinct image. Some capital slides were shown illustrating all stages of the wasp fly's existence.

Nearly every fly, continued the professor, had its own parasite, the one insect preying upon the other, and this hyperparasitism was often carried to the third degree.

Speaking of the Black Currant Gall mite which had done so much damage to the Black Currant industry in various parts of the country, more particularly in Kent, the lecturer showed how the mite, which was a torpedo-shaped insect barely one-fourth of an inch long, took up its quarters in the bud and eventually destroyed it. The only way to get rid of them at present known was to pick off all the galls and burn them. He had discovered, however, that this mite had a parasite which preyed upon it, and perhaps something might be done by cultivating the parasite.

Professor Enock next turned his attention to the Willow Gall, which was to be seen in such quantities upon Willows. These galls were the work of the Willow Sawfly (*Nematus gallicola*). He had never yet found a male of this Sawfly, and the flies were really not plentiful. The eggs are laid generally in the month of April, and the leaf feels the effects of the piercing of its epidermis and the insertion of the egg within an hour. He had cut open the galls and found the maggots hatching. The Willow Sawfly also had its parasites which pierced the body of the maggot and thus paralysed it, so that it would form a means of subsistence for the maggots hatched from its own eggs, which it subsequently laid within the gall.

The Devil's Coach-horse Beetle was described as one of the most useful of the insects that were to be found in a garden. It preyed upon all sorts of caterpillars that were injurious to vegetable life, and on that account should be spared whenever it was found, and not, as was too frequently the case, destroyed.

Mr. McLachlan made a few remarks at the conclusion of the lecture, mentioning among other things, that the chrysalis of the Lace-wing Fly had been described as fungi by an Italian botanist of some repute, thus showing how easy it was for anyone to be led astray.

A very hearty vote of thanks was accorded to Professor Enock at the close.

BELGIAN NURSERIES.

II.—MM. LOUIS VAN HOUTTE CIE., LTD., GHENT.

THE famous nursery of this company is situated at Gendbrugge, just beyond the ancient gateway of the city of Ghent, known as Port Bruxelles. According to the Belgian custom the title of the firm is Société anonyme L. Van Houtte, Père, being named after the founder of the firm, the father of M. L. Van Houtte.

Arriving at the nursery during the dinner hour we went for a stroll through the grounds, some fifteen acres in extent. A considerable portion of the ground at the time of our visit was planted with spring flowering bulbs such as Hyacinths, Tulips, and Daffodils, all of which were remarkably dwarf and sturdy. Their dwarf character would no doubt be due to the peculiar nature of the soil which consists almost entirely of very fine, gray sand annually enriched with applications of farmyard manure or leaf soil. The Hyacinths were practically past their best, but Daffodils were at their best, including breadths of the large trumpet varieties such as are grown for commercial purposes. *Narcissus odorus* and its variety *N. o. rugulosus* were 12 in. to 18 in. high and grown in considerable quantity, as was *N. orientalis*, also in full bloom. Beautiful and interesting were the numerous forms of the Duc Van Thol Tulips, in a brilliant array of colours. Slightly later, but still belonging to the section we term early, was a great number of sorts of Tulips planted for spring bedding in this country. Each variety was grown in some quantity, and it only required another week or so to set the whole field ablaze with a gorgeous array of different colours. The plants were dwarf, but evidently at home in the sandy soil of this part of Belgium.

We passed through portions of the nursery planted with the stocks of fruit trees. Various ornamental shrubs and trees were coming into bloom, including *Pyrus spectabilis*, *P. salicifolia*, and others. Sweet Bays (*Laurus nobilis*) are grown in great quantities, in pots and tubs which cover a considerable area of ground. Very fine were the standards, having heads 3 ft. by 3 ft. on stems averaging about 4 ft. high. Pyramids are equally, if not more, plentiful, and were symmetrical specimens varying from 4 ft. to 12 ft. in height according to age. The upright stems are closely furnished with side branches from base to apex. These Bays are grown as we would Oranges for ornamental purposes, housing them in winter and standing them out as soon as the weather gets sufficiently mild in spring.

Various choice hardy plants were growing in frames or stood in the open, including terrestrial Orchids, both European and Asiatic. *Cypripedium*, *Orchis*, and *Ophrys* were some of the genera represented. Four frames, each about 12 yards in length, were filled with the rare and interesting *Myosotidium nobile*, the New Zealand Forget-me-not.

M. Jules van de Kerckhove now came to our assistance, and we passed through the houses which number something like ninety-five of all sizes, and for various purposes. Most of them are span-roofed structures, and well adapted for plant culture. A general collection of plants is grown, though perhaps they are not so numerous as when M. Louis Van Houtte Père made Belgian horticulture a household word in this country many years ago. The times have changed, and the aim now is to grow those plants chiefly which are of leading commercial importance. Stove and greenhouse plants with ornamental foliage are still, however, well represented. Palms, *Alocasias*, *Anthuriums*, &c., are grown in

quantity. Amongst others we noted *Dracaena Bruanti*, *D. Doucetti*, *Acalypha obovata*, *Asparagus Sprengeri*, with its long, drooping sprays; *Claviga squamata*, and *Abutilon Czarwitzi*, the latter having its leaves almost wholly white. *Furcroya Lindeni* closely resembles an American Aloe with white edges to the leaves, and is very distinct. The *Rhopalaspis* are represented by *R. vervaeneana*, with rusty, woolly stems and paler woolly leaves; and *R. aurea*, having a clothing of yellow-brown wool. *Ficus lanceolata* is an uncommon species, with lanceolate, dark green leaves, 6 in. to 12 in. long. The blue *Amaryllis*, *A. procera*, also known as Empress of Brazil, was flowering in the same house as the above.

Fine foliage plants were also the feature of the next house entered. A new plant is *Alocasia Kerchovei*, the large leaves of which are dark green and silvered all over, while the under-surface is violet. *Begonia Otto Foster* has velvety olive leaves and large silvery blotches. Notable also are *Heliconia illustris*, *Pandanus pacificus* and numerous species and forms of *Dieffenbachia*. The dark and light green leaves of *D. Rex*, covered with large creamy blotches, are very handsome. There is a large, general collection of Aroids, and *Melastomads*. *Dracaena sanderiana* and *Smilax Sarsaparilla* are grown in quantity. *Globa alba*, belonging to the Ginger family, has yellow flowers and white bracts. A graceful and handsome foliage plant belonging to the Myrtle family is *Eugenia glazioviana*, having small rhomboid leaves, and a drooping, twiggy habit of growth.

Crotons are grown to some extent, preference being given to the finer varieties. *C. caudatus tortilis* has long, twisted, dark green leaves, richly variegated with yellow and having red petioles. Along with them the hybrids between *Anthurium scherzerianum* and *A. rothschildianum* are very numerous, varied and beautiful.

Numerous houses are filled with Palms of various sizes, thousands of them being of a size often required for decorative purposes in private establishments, and including *Phoenix*, *Kentias*, *Cocos*, *Geonomas*, *Latantias*, &c. We passed through a large house, really consisting of six built in one block, and continuous internally from one side to the other. This contains *Cocos weddelliana* by the thousand, and of all sizes. The same may be said of *Kentia balmoreana* and *K. fosteriana*. *Aspidistra lurida*, and *A. l. variegata*, in well grown plants, constitute the glory of another house.

Indian *Azaleas* are so abundant and varied that they cannot be ignored. They meet the visitor at every turn, in all sizes from the cutting to plants of useful market size in full bloom. These latter would vary from 15 ins. to 18 ins. in diameter, with stems about a foot high, and flat tops so profusely covered with flowers as to completely hide the foliage. The first house we entered was a curvilinear-roofed structure, 180 yards in length, and entirely filled with varieties of *Azalea indica*, planted out in beds of leaf soil and making their growth. Flowering specimens of market size were stood at intervals amongst them.

Elsewhere we came upon a block of twenty houses, or in other words one huge house covered by twenty spans of glass roofing. The same order prevailed as already described. Many of the finest varieties in commerce were in bloom. The large double flowers of *Lady Hellington* are of a beautiful rosy-purple. *Deutsche Perle* is well known in this country as the best white. The flowers of *Comte de la Torre* are salmon, edged with silvery white. Fully double and very handsome are the flowers of *John T. D. Llewellyn*, being flesh-coloured, deepening to pink in the centre, and white at the edges. Plants raised from grafts are ready for market in the course of three years. Those which are intended to be grown into large specimens are grafted on stems 18 ins. high, this height being convenient for growing into broad, dome-shaped heads, like the large plants at the Ghent exhibition.

Every preparation was being made for planting out the young stock in the open ground. They are to be grown in leaves collected in the woods and forests last autumn, so that they are yet scarcely at all decayed. During hot weather the beds are heavily watered every night. Many English visitors crossed our path while passing through the houses and grounds.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Laelia elegans Mrs. Moojen.—The flowers of this variety are of large size and differ in form from those of the more common types in cultivation. *L. elegans* is so variable, however, that some authorities do not hesitate to consider it a natural hybrid between *Laelia purpurata* and *Cattleya guttata*. Some of the forms, at least, favour this view. The form under notice has white sepals and petals, faintly tinted with blush, at least, after it has been open for a week or more. The petals are twice as broad as the sepals, being elliptic-oblong, and measuring $1\frac{1}{2}$ ins. or nearly so across the middle. The tube of the lip is white on both surfaces or slightly tinted blush; the side lobes and the apical one are crimson-purple, with a small, pale blotch at the apex of the latter. This rich colour narrows at the base of the lamina into a band of the same colour, running almost to the base of the tube. The column is white, slightly tinted purple, especially on the concave inner face. This fine variety has been flowering for some time past with Mr. J. Segar, Bandon Hill, Croydon.

PLANTS RECENTLY CERTIFICATED.

THE awards mentioned hereunder were granted by the Royal Horticultural Society on the 26th ult. Orchid Committee.

LAELIOCATTELYA WELLSIANA LANGLEYENSIS. *Nov. hyb. var.*—The seed parent was *Cattleya Trianaei*, and the pollen bearer *Laelia purpurata*. The sepals are pale lilac and the petals a shade darker. The large orbicular lamina of the lip is crimson-purple; the outer face of the tube is deep purple, and the blotch in the throat yellow. Form and colour are chiefly due to *Laelia purpurata*, and the variety is far superior to the type. First-class Certificate. Messrs. J. Veitch & Sons, Ltd., Chelsea.

LAELIOCATTELYA THORNTONI. *Nov. hyb. bigen.*—This was derived from *Cattleya gaskelliana* crossed with the pollen of *Laelia digbyana*, and the result is a bold, handsome and very singular flower. The sepals and petals are soft mauve, the latter being finely fringed or toothed on the outer edges. The large, deeply bifid lip is deeply fringed all round the margins, lilac with a broad lemon disc, and strikingly distinct. First-class Certificate. Messrs. J. Veitch & Sons, Ltd.

CATTELYA SCHRODERAE AMABILIS. *Nov. var.*—The sepals are blush and the petals soft silvery lilac. The lip is characterised by a large coppery-orange blotch in the throat, and the base of the lamina is beautifully shaded with pale blue. It is altogether a very choice variety. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

ODONTOGLOSSUM PESCATOREI DUCHESS OF WESTMINSTER. *Nov. var.*—The pure white flowers of this striking variety are handsomely blotched all over with circular, violet markings. It received an Award of Merit, but deserved a higher honour. The Duke of Westminster (gardener, Mr. N. Barnes), Eaton Hall, Chester.

CATTELYA SEDENI. *Nov. hyb.*—This is the result of crossing *C. lawrenceana* with *C. percivaliana*. The sepals and ovate petals are deep rose. The strongly curved tube of the lip is deep purple, the lamina crimson-purple and the throat yellow, making altogether a handsome hybrid. Award of Merit. C. L. N. Ingram, Esq. (gardener, Mr. Bond), Elstead House, Godalming.

CYMBIDIUM CANALICULATUM.—This bears a long raceme of flowers, the oblong sepals and lanceolate petals of which are almost black. The lip is crimson-red with a white band along the centre. Award of Merit. J. Sparks, Esq., Heathcote, Ewhurst.

CATTELYA SCHRODERAE HAREFIELD HALL VAR. *Nov. var.*—The sepals and ovate, crisped petals are blush, while the lamina of the lip has lilac margins, a dark purple disc and two orange blotches in the throat. It is a highly meritorious variety. E. Ashworth, Esq. (gardener, Mr. H. Holbrook), Harefield Hall, Wilmslow.

CATTELYA MENDELII BEATRICE ASHWORTH. *Nov. var.*—The sepals and petals in this case are of a faint

blush, while the lip is pure white, with a yellow blotch in the throat, making a chaste and beautiful variety. Award of Merit. E. Ashworth, Esq.

MORMODES OENANTHUM.—The singular dull red, purple flowers of this species are strongly scented, and have the lip sharply reflexed at the sides. One pseudohub carried three racemes. Botanical Certificate. Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking.

ODONTOGLOSSUM HUNEWELLIANUM MAXIMUM. *Nov. var.*—The flowers of this form are much larger than the type and almost covered with chestnut blotches. The petals have very numerous, smaller spots on a pale yellow ground. The lip is white, spotted with purple-brown. Award of Merit. H. Greenwood, Esq., Highfield, Haslingden.

Floral Committee.

DEUTZIA PARVIFLORA.—This is a distinct and pretty species, with corymbs of pure white flowers like those of a *Spiraea* and leaves quite characteristic of *Deutzia*. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

AZALEODENDRON EDOUARD ANDRE.—The parents of this hybrid were *Azalea mollis* and a variety of *Rhododendron ponticum*. The flowers are rose, spotted on the upper segments with crimson. The crisped, lanceolate leaves are evergreen. Messrs. J. Veitch & Sons, Ltd.

PTERIS SUMMERSI.—This may be described as a crested form of the well-known *P. Wimsetti*. Every pinna is heavily crested and the variety of first-class merit for decorative and market purposes. Award of Merit. Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton.

RICHARDIA RHODESIA.—The spathe of this new form is of great size and rich golden-yellow, with a green midrib externally. The broad, triangular leaves are spotted with white. There is a black blotch at the base of the spathe. It is a great improvement on the better known yellow sorts. Award of Merit. Leopold de Rothschild, Esq. (gardener, Mr. J. Jennings), Ascott, Leighton Buzzard.

PRIMROSE EVELYN ARKWRIGHT.—The flowers of this variety are of enormous size, measuring 2 in. to $2\frac{1}{2}$ in. across. They are primrose-yellow with a five-lobed orange eye. The original stock of it was found wild in Dinmore Wood, Herefordshire, in 1887, and has retained its character to the third generation from seed. Award of Merit. J. H. Arkwright, Esq., Hampton Court, Leominster, Herefordshire.

RHODODENDRON HANDSWORTH WHITE.—The flowers of this *ponticum* variety are profusely produced, and white tinted with pink along the ribs, and spotted with yellow on the upper segments. Award of Merit. Messrs. Paul & Son, Cheshunt.

THE DAWSON ROSE.—This looks like a hybrid between the China and polyantha Roses. The flowers are semi-double, and rosy-pink. Award of Merit. Messrs. Paul & Son.

Narcissus Committee.

NARCISSUS WILL SCARLETT.—The white segments of this hybrid are those of *N. poeticus*. The crown is very wide or bowl-shaped, and of a rich orange almost to the base. The variety is certainly handsome. First-class Certificate. Rev. G. H. Engleheart, Appleshaw, Andover.

NARCISSUS POETICUS DIADEM.—The segments of this variety are sulphur at first, fading to white. The cup is very wide, shallow, and bright orange at the edges. Award of Merit. Rev. G. H. Engleheart.

NARCISSUS WHITE WING.—The segments are ovate and white. The cup is of moderate length, narrow, and clear yellow. Award of Merit. Rev. G. H. Engleheart.

NARCISSUS WHITE LADY. The flowers of this form are of large size, with white segments, shaped like those of *N. poeticus*. The short, crisped cup is lemon-coloured. Award of Merit. Rev. G. H. Engleheart.

The National Auricula and Primula Society made the undermentioned awards at the Drill Hall, on the 26th ult.

AURICULA HIAWATHA (DOUGLAS).—This variety belongs to the Alpine section, and has a rich golden eye, maroon ground colour, and a buff-red edge of an uncommon shade. First-class Certificate. Mrs. F. Whitbourne (gardener, Mr. J. W. Euston), Great Gearies, Ilford, Essex.

AURICULA FIREFLY (DOUGLAS).—Here again the eye of this Alpine Auricula is golden; the ground colour much reduced in extent, and maroon-crimson;

while the edge is broad and bright crimson. First-class Certificate. Mr. James Douglas, Edenside, Great Bookham, Surrey.

AURICULA OLYMPUS (DOUGLAS).—In this we have a gray-edged, show variety of first-class merit. The maroon ground is limited in extent, and the paste pure white. First-class Certificate. Mr. James Douglas.

AURICULA MRS. DRANFIELD.—This is a self-coloured, violet show Auricula, with a white paste. The flowers are larger and flatter, and the throat and paste better than those of the well-known variety Mrs. Potts. The variety is therefore choice and handsome. First-class Certificate. Mrs. Dranfield, (gardener, Mr. Charles Phillips), Dranfield.

HOW A KNOWLEDGE OF BOTANY IS A HELP TO GARDENING.

(Continued from p. 551).

Now we will go on to consider the organs of nutrition, and the manner in which the operation is carried on by root, stem, and leaf. The root is the first part which makes its appearance, and serves not only as a nutritive organ, but also holds the plant in the ground. Roots assume various forms, and it is not always an easy matter to distinguish between a root and a stem, especially that of an underground stem. Take for instance the Moutan Paeony, and *Anemone japonica*, both of which have a great power of forming buds upon the root.

Well, before we get too far above ground let us look for a moment at the functions of the root and let us see whether a knowledge of the botany of this particular part of the plant, will be of any help to the gardener.

Roots absorb nourishment by a process known as imbibition, which means a flow inwards, and it is by the extremities alone that this process is carried on; but right at the very point of the root, there is what is known as the root cap, which covers the growing point of the root. It is far better adapted to push its way through the soil than the very soft cellular tissue which is immediately behind it; and it is by the extremities of the roots and the root hairs that the whole of the nourishment is taken up.

To prove this statement, here is a very interesting experiment that you can try for yourselves, and one that will afford you much pleasure whenever you have a few minutes to spare. Take a small flourishing plant, fix it in some position so that the points of the roots can just be immersed in water, and you will find that so long as the extremities are immersed the plant will flourish. Now, fix it in another position, and let the extremities of the root be in dry air and all the other part of the root immersed, and in this case you will find that the plant will wither and die.

Then there is another thing to be taken into consideration in connection with the root taking up nourishment, and that is that those little rootlets cannot absorb anything of a much greater density than water; so you quite understand before anything can be plant-food it has to be brought to a state of solution. Therefore, what a lesson we learn here in connection with the feeding of plants, and especially those in pots.

I do not believe in the plan that some recommend for using artificial manure, especially that of putting it upon the surface of the soil for pot plants. My first objection to this is that the time the water occupies in soaking through the surface of the soil is not sufficient to bring much manurial substances to a state of solution and the consequence is that a great deal of ammonia and other gasses is carried off by the air which should have been carried down to the roots.

Secondly, my objection is that the manure so used lays upon the surface of the pot in lumps, and the result is, by the burning nature of some manures, that the roots immediately under become damaged, and consequently the plants suffer.

Then the third objection is that by placing manure on the top of the soil in this way, you are stopping the air passages of the soil and this will soon throw your plants into a bad state of health, because the moment the air passages become stopped there is a great difficulty in soaking the ball with moisture in a proper manner.

Of course this does not apply to the open ground where the surface of the soil can be constantly stirred and other air spaces renewed; neither do I refer to the mulching of plants in pots, where, if the material used is as it should be, there is no hindrance to either air or water.

Well then, if you are going to give a plant manure that is to be easily assimilated or taken up by the plant, and where you do not want all the energies of the same to be spent on food conversion, but where you want all its energies thrown into growth, and the development of its floral organs, I believe in applying it, whether it be artificial, farm-yard manure, organic or inorganic ingredients, in a really soluble state, not of much greater density than clean water. There is no doubt that the best plan is to soak all manures before putting them on a pot, and if a plant is to be forced, and is required to grow to perfection in a short space of time, it must be fed by solutions and by foods that are easily assimilated. Again I maintain that a knowledge of root function cannot fail to be a help to the gardener.

Then there is another point which we must notice before leaving the root, and that is the process of exosmosis or the outflow carried on by the root. From this also we can see the necessity in the rotation of crops, because, as you all know no two orders of plants contain the same chemical composition of sap. Therefore, it is plain that the sap of one order would convert certain mineral substances into plant food which the sap of another could not do.

Now with the stem we shall be very brief, just noticing a few forms of stem. The stem receives various names according to its duration and structure. In herbaceous plants it is called *caulis*, that is stem, which dies down to the ground naturally every year, such as Asparagus, etc. Stem is termed culm in grasses, *truncus* in trees, caudex or stork in Palms and Cacti, and stipes in Ferns.

Then we pass from the stem to another very important part of the plant, and that is its leaves. Leaves as you know, carry on a very important part in connection with the growth of the plant. All the sap that is taken up by the roots is carried up to the leaves and there it undergoes various changes, through the agency of light, air, &c.

The sap in its ascent passes up through the young wood and flows to the leaves, carrying with it the mineral ingredients of plant food. The leaves take up their carbon in the form of carbon dioxide from the atmosphere, and under the influence of sunlight the materials are rearranged chemically and built up into the substances which go to the increase of root, stem and leaf. A considerable amount of it is drafted into the cambium layer between the bark and the young wood. In this region it goes to thicken the stem and part of it passes downwards to extend the root system. When rooting cuttings you will find that the young roots are produced from the cambium layer, the new material descending from above, not rising from below.

When you ring a *Dracaena* or any other plant for the purpose of rooting it the roots would form from the under lip instead of the upper one if the building matter came from below, and not only this, but the upper part of the plant after being ringed would wither and die under the conditions named, because all communication from the root would be cut off.

Now there is a practical point which presents itself, and it is this: Should a cutting be divested of its leaves before being put into the soil, or should it be put in with as many leaves as possible? My opinion is that this depends almost entirely upon the place you have to root it in. If you put a cutting in an atmosphere that is almost at the point of saturation, no evaporation can take place from the leaves, then I prefer as many leaves as possible, because the more leaves you have on a cutting, where it cannot flag, the more do they assist in the formation of roots. If, on the other hand, you expose the cutting to a drying atmosphere then I would advise the stripping of its leaves almost entirely. If not, with an arid atmosphere these leaves will evaporate the life blood of the cuttings, and give it off to the air.

Then again there is another point to be taken into consideration, and that is the power that some plants have over others in giving off moisture. Plants whose natural habitat is a high and dry atmosphere, have always a feeble power of evaporation; whilst on the other hand those of warm and moist climates have a great power of evaporation. It is generally

supposed that plants evaporate more by the agency of light than by sun heat.

Now, how is this process of evaporation carried on? It is carried on principally by breathing pores in the leaf, known as stomata, which mean mouths. They are openings placed on the epidermis of the leaf and consist usually of two crescent-like cells, supposed to resemble the lips and the orifice of the mouth. They open and close according to the state of the moisture or dryness of the atmosphere.

Then again the position of the leaf also affects stomata. Leaves which are borne horizontally have much the largest number of stomata upon the under side.

Then again, leaves which are borne vertically have often an equal number on each side. Take for instance the Hyacinth, where you will find them, with a very little magnifying power, irregularly distributed over the surface of the leaf.

The number of stomata varies very considerably on different plants, from a few hundreds to many thousands on the surface of the leaf.

Another point of importance as to how a knowledge of botany may help a gardener is in defining the division or otherwise of the leaf, whether it be simple or compound, pinnatifid, or palmatifid; and to define its margin, whether it be serrate or what. This I think to be most important to a gardener, as the shape of the leaf is so often asked for when one has to describe a plant. The venation of the leaf is also very important in the classification of plants.

You will always find that in the case of dicotyledons the venation of the leaf resembles network, and is said to be reticulated; while in monocotyledons the veins are parallel from margin to midrib; and in acotyledons the veins are forked, as in Ferns.

(To be continued.)

SPRING FLOWERS IN REGENT'S PARK.

REGENT'S PARK has an individuality peculiarly its own, and this individuality lends itself with remarkable ease to the accommodation of spring flowers. It has no Serpentine, and no Row, but it manages to do very well without them, and yet remain highly attractive.

The particular feature that strikes the visitor in the month of April is the extent to which the naturalisation of suitable bulbous subjects in the grass has been carried out, and the conspicuous success that has been attained in this direction. On every hand, wherever a suitable stretch of grass has presented itself, one finds the sward starred with Narcissi, Muscaris, and Tulips, following the Snowdrops and Crocuses of earlier spring. These sweeps of grass-set flowers have much to recommend them; they break the monotony of formally shaped beds, and long, straight borders, and they distribute more evenly the rich colours of the flowers instead of confining them within the comparatively limited area of carefully laid-out beds, caged in with wire fencing, round which the public marches as around the den of some curious animal.

Not that beds are wanting, however, for their requirements are well looked after, but the garden of grass, old-fashioned in idea as Nature herself, and yet original in execution, claims the first attention.

The wide avenue with its fringe of umbrageous Horse Chestnuts is a pleasant promenade on a summer's day, but amidst the fresher green of the peeping young leaves it is simply delightful, whilst the eye rests with a sense of complete approval upon the line of graceful Elms, also in their rudimentary spring dress, which flanks them on either hand. This avenue runs approximately north and south, and by its side are gathered the greater part of the flower beds proper. All these beds are cut out in the grass, and even the borders have grass verges, but the public is rigorously kept off the grass, or else the latter would scarcely look as fresh and green as it does. Gravel paths, clean, dry, and comfortable, are provided in plenty, however, and the beauties of the flowers can thus be observed from all points of view. Hyacinths, Tulips, and Narcissi have been freely utilised, and a few Wallflowers have been introduced here and there to break the monotony, but we were rather surprised not to find them in greater numbers.

Of the Hyacinths used the deep blue Grand Monarch was exceedingly good. H. Gertrude, and H. Grandeur à Merveille in association looked well,

but by far the prettiest thing in Hyacinths was a bed filled with the flesh-coloured Gigantea, and the light blue La Peyreuse, the two forming a very aesthetic blend.

Of the Narcissi Sir Watkin, Empress, Barri conspicuus, Horsefieldii, and Emperor have all been planted in considerable quantity, and one of the sights of the park was a large triangularly-shaped bed filled with the last named variety, a few dark maroon Wallflowers being interspersed with them.

Tulips have been exceedingly gay and bright, such varieties as Ophir d'Or, Keizer's Kroon, and Proserpine, being the favourite varieties. Proserpine has been especially good in both the beds and the various ornamental vases scattered about the park.

The narrow ribbon borders which run parallel with the centre avenue and on either side of it, have been filled with great taste and judgment. The double crimson and double white Daisies have been employed as a groundwork, and out of them there stood, in relief as it were, showy blocks of Narcissi, Tulips, and Hyacinths of various sorts; in fact to our idea these borders constituted the most effective part of the bedding proper. Several round beds filled with Polyanthuses in variety and Alpine Auriculas were also rendering a good account of themselves.

SWEET-SCENTED LEAVES v. FRAGRANT FLOWERS.

MR. F. W. BURBIDGE, M.A., of Trinity College Botanic Gardens, Dublin, read an interesting paper on this subject before the Fellows of the Royal Horticultural Society, on the 26th ult. Mr. J. Hudson, of The Gardens, Gunnersbury House, Acton, occupied the chair.

Before proceeding to discuss the merits of fragrant leaves as against those of flowers, the lecturer spoke of the widespread use of perfumes amongst the members of the human race. They had been employed, he said, by the sturdy Norman and the crafty Moor, by the Hindoo and the Aztec, and their uses had not in fact, been restricted to any age or clime or nation. Many of these perfumes had been obtained in some way or other from sweet smelling leaves, and many plants were grown expressly for the purpose of preparing perfumes from them. In Shakespeare's time all the old gardens were full of sweet herbs used by housewives and chemists in the making of potions, pomanders, sweet waters, etc. Botany, medicine, and chemistry were then in their swaddling clothes. It was the age of perfumed gloves and shoes, and perfumes and sweet-scented plants generally were in high favour. English literature abounded in reference to sweet smelling leaves. He wished to persuade gardeners to place a higher value upon plants having fragrant foliage, and to cultivate them as carefully as they cultivated others for their flowers. The scent of certain leaves was due to the presence in those leaves of essential oils, and the perfume was the vapour exhaled from these oils under the influence of heat and moisture. He distinguished between odours exhaled by floral and foliage leaves by describing the former as positive, and the latter as negative. Flowers emitted their fragrance only at certain times, and this fragrance was given off spontaneously, whilst in the case of foliage leaves the fragrance was there during the whole life of the leaf; it was persistent, and in some cases was retained even after the leaf was dead. In one or two instances the fragrance of the dead leaf was more powerful than that of the living one, as for instance in the scented Cape Pelargoniums. The audience was invited to test this by means of the samples of dead and living leaves of some of these Pelargoniums which had been brought to the meeting by Mr. Hudson. Finally leaf odours were negative because they were not given off spontaneously as in the case of floral leaves, but were apparent when the glands containing the essential oils were ruptured by pressure in the hands.

Leaf odours and flower odours on the same plant often differed. Thus in the Orange the scent of the flowers was different from that of the leaves, and that of the leaves from that of the bark and wood.

Discussing the value to the plant itself of the presence of these essential oils, Mr. Burbidge suggested that perfumes were an aid to fertilisation in that they served to attract insects in much the

same way as the fragrance of the flowers, and, moreover, many plants which had sweet-smelling leaves had not fragrant flowers. The presence of these oils also tended to check evaporation of water from the leaf tissues, and this was an advantage to those plants which were growing in dry, sunny places; the temperature was also made more regular. Again the odours often acted as a safeguard to the plants possessing them in warding off the attacks of predatory animals and insects. The smell of Cloves, camphor, and Lavender were used to keep insects away from textile fabrics, whilst chests made of camphor wood were the only thing that had been found efficacious in the tropics in keeping at bay the destructive termites or white ants. On the other hand, some animals had a great liking for the smell of some leaves. Thus cats were inordinately fond of Nemophila, Valerian, and Fenugreek.

Perfumes affected various people differently. Some were anosmic, or had no sense of smell, whilst others were hyposmic, and had the sense of smell in an exceedingly acute degree. To the latter class of people belonged the best buyers of Tobacco, Tea, Spices, &c. Some objected strongly to perfumes, and one of the early examples of this distaste was to be found in Socrates who abhorred perfumes of every description, whilst it was stated that Nero burnt more than one year's produce of Arabian perfumes upon the funeral pyre of his Empress Poppeia. It would be hard, moreover, to imagine a person like Oliver Cromwell or John Knox using perfumes, and it would be just as difficult to think of Queen Elizabeth not employing them. Seeing how great a measure of enjoyment it was possible to bestow upon many people through their organs of smell, he strongly advocated the planting of plants having sweet-smelling leaves, all round and about institutions for the blind.

In conclusion, Mr. Burbidge averred that there was a sound sanitary basis for the use of perfumes both on the person and in the dwelling room, seeing that most of them had strong antiseptic properties. Thus the burning of Lavender in a room would destroy all obnoxious odours, and not merely mask them. He advocated the use of bunches of sweet-smelling leaves for use in bed chambers, and alluded to the fact that the old Duchess of Leinster was very partial to the employment of these, what she prettily termed, "bed-room bouquets." He thought also that there was a good market for plants of this class, as well as sweet-scented pot herbs.

Collections of living plants illustrative of the lecture were sent from the Royal Gardens, Kew; and by Messrs. Jas. Veitch & Sons, Ltd., Chelsea, and Mr. Burbidge expressed his obligation to the senders; also to Mr. Hudson for the sprays, and dried leaves of the Pelargoniums referred to, and to Lord Annesley, of Castle Weilan, Co. Down, Ireland, who had sent him sprays of between forty and fifty species of plants with sweet-smelling leaves.

GARDENING MISCELLANY.

THE VARIEGATED GROUND IVY.

THE common Ground Ivy (*Nepeta Glechoma*) is probably as well known as any British plant, for it is, as *Rex* states on p. 536, pretty widely distributed; in fact, I saw it only the other day on the top of the Chiltern Hills. But the variegated form, which is equally as free as the type, is, as yet, comparatively unknown. Last year I came across it in the Glasgow Botanic Gardens—and made a note of it—but I did not recognise its value for decorative purposes, or its extreme beauty, until I was introduced to it afresh on the 24th ult., in the gardens of Falkland Park, South Norwood Hill, where my friend, Mr. A. Wright, has draped the whole of the staging in one of his plant houses with its remarkably effective foliage. Doubtless, as the season advances, the effect will become still finer, for the plant is so distinct and handsome, and grows so vigorously that its acquisition is a *sine qua non*. *Rex*, therefore, does well to call attention to it, for it is, undoubtedly, a valuable addition to the amateur's stock.—*C. B. G., Acton, W.*

A BED OF CAMPERNELLE AND SPIRAEA.

SIMPLE combinations of bedding plants often pro-

duce very pleasing effects by the contrast between two colours, whether of the foliage or flowers, or both. A large circular bed in the gardens at Kew has been planted with a few bushes of *Spiraea arguta*, placed at regular intervals all over the bed. The groundwork was closely planted with *Narcissus odorus rugulosus* last autumn, and both subjects have been flowering freely for some time past. The slender, twiggy branches of the *Spiraea* are leafless as yet, so that the small clusters of white flowers show distinctly against the golden-yellow of the *Campernelle*, and at a short distance are suggestive of a shower of snowflakes upon the otherwise naked bushes.

SOCIETIES.

NATIONAL AURICULA SOCIETY (Northern Division).—April 30th.

THE above society held its annual exhibition in the Free Library Hall, Middleton, near Manchester, on the above date, which was unfortunately accompanied by heavy rains and high wind, which were obviously responsible for the poor attendance during the day.

The show was a good one, though not nearly as large as in the previous year. The quality of the individual specimens was, however, up to the usual high standard, according to the Rev. Mr. Horner and Mr. T. Lord, the leading figures of the show.

SHOW AURICULAS.

For six, dissimilar Rev. F. D. Horner secured the premier prize with *Titania*, *Miranda*, *Favourite*, *Rainbow*, *Sprightly*, and Rev. C. Dalton. He had a very close second in Mr. T. Lord, who showed Mrs. Henwood (very good), Mrs. Potts, Gerald, Seedling No. 10, *George Lighthody*, and *Favourite*. Mr. J. Simonite was third with *Ossian*, *Melaney*, *Seedling*, *Heatherbell*, *Atalantis*, and Dr. Hardy; with Mr. W. H. Midgley fourth, showing *F. D. Horner*, *Heroine*, *Black Bess*, Mrs. Dodwell, *George Lighthody*, and *Acme*.

For four, dissimilar, Mr. T. Lord was a good first with Mrs. Potts, F. D. Horner, *Acme*, and *George Lighthody*; Mr. B. Simonite came second with *Ossian*, *Heatherbell*, *Flamingo*, and *Invincible*; Rev. F. D. Horner was third with *Favourite*, *Orient*, *Mirano*, and *Agathas*; Miss Woodhead took the fourth place; Mr. W. H. Midgley was fifth; Mr. A. R. Brown, sixth; and Mr. J. Clements, seventh.

In the class for pairs, Miss Woodward secured first with *Heroine* and *Rachel*; Mr. N. M. Shipman was second; Mr. R. Gorton, third; Mr. E. Shaw, fourth; Mr. J. Clements, fifth; Mr. G. Thornley, sixth; and Mr. A. R. Brown, seventh.

In the class for pairs by "Maiden Growers," Mr. W. M. Shipman took the prize with *Beauty* and *Admiral Napier*. For single plants, green edges, Rev. F. D. Horner secured the first award with *Orient*; Mr. T. Lord was second and third; Rev. Mr. Horner fourth and fifth; Mr. B. Simonite, sixth; Mr. T. Lord, seventh; and Rev. Mr. Horner, eighth. For a single, gray edge, Mr. T. Lord was first with *Geo. Lighthody*; Miss Woodhead, second; Mr. T. Lord, third and fourth; Rev. Mr. Horner, fifth; and Mr. A. R. Brown, sixth. For a single, white edge, Miss Woodhead was first with Mrs. Dodwell; Mr. T. Lord, second; Miss Woodhead, third; Rev. Mr. Horner, fourth; Miss Woodhead, fifth; Rev. Mr. Horner, sixth; Mr. T. Lord, seventh; and Mr. D. Kershaw, eighth. For a single self, Rev. Mr. Horner was first with *Favourite*; second and third, Mr. J. Beswick; fourth and fifth, Rev. Mr. Horner; sixth, Mr. J. Clements; seventh, Rev. Mr. Horner; and eighth, Mr. T. Lord. The premier Auricula in the whole show was secured by Mr. T. Lord with Mrs. Henwood.

ALPINE AURICULAS.

For six dissimilar varieties, Mr. T. Lord secured first with magnificent specimens of *Charles Turner*, *J. Ashton*, *Dr. Knott*, *Brighteyes*, *Dr. Durnford*, and *John Allen*; Mr. R. Gorton, second, with seedlings Nos. 128, 114, 117, 129, 87, and 96; Mr. J. Beswick, third, with *Miss Walker*, *Dr. Knott*, *Brighteyes*, *John Allen*, *Forest Queen*, and *John Ashton*; Mr. J. Stallfort, fourth; and Mr. J. W. Bentley, fifth.

For four, dissimilar, Mr. J. Beswick took first, with *J. Allen*, *J. Ashton*, *Rising Sun*, and *Dr. Durnford*; second, Mr. T. Buckley; third, Mr. R. Gorton;

fourth, Mr. A. R. Brown; fifth, Mr. T. Lord; sixth, Mr. J. Clements. In the class for pairs, dissimilar, Mr. T. Buckley took the lead with *Emir* and *J. Allen*; with Mr. J. Lees, second; Mr. A. R. Brown, third; and Mr. W. Stringer, fourth. For single plants, yellow centres, Mr. A. R. Brown was first, with *Evelyn Phillips* (very good); Mr. T. Buckley, second; Mr. A. R. Brown, third, with *Gladys*; Mr. R. Gorton, fourth and fifth; and Mr. A. R. Brown, sixth, with *J. J. Kean*.

For a single, white centre, Mr. R. Gorton led the way with seedling 119; Mr. J. Beswick was second; Mr. T. Lord, third; Mr. J. Stilfort, fourth; Mr. J. Beswick, fifth; and Mr. R. Gorton, sixth. The winner of the show Auricula again took the prize for the premier Alpine in the show, given by R. Gorton, Esq.

The competition for gold laced Polyanthuses was weak, only a few deserving comment. For three dissimilar black grounds, Mr. Geo. Thornley was first, with Mrs. Brownhill, seedling, and *Cheshire Favourite*; second, Mr. J. Beswick; and third, Mr. W. Stringer. For three red grounds, Mr. J. Beswick was first, with *Middleton Favourite*, *Seedling*, and *George IV.*; the second prize went to Mr. W. Stringer; and third to Mr. Geo. Thornley. For a single plant, black ground, the first, second, and third prizes went to Mr. G. Thornley, with Mrs. Brownhill, *Cheshire Favourite*, and *Exile*; the fourth and fifth prizes went to Mr. J. Beswick, with *Thomas Ball*, and *Lancashire Hero*. For a single plant, red ground, Mr. J. Beswick took the lead with *Middleton Favourite*; Mr. J. Greenhouse was second; and Mr. G. Thornley, third.

J. W. Bentley, Esq., of Stakehill House, Castleton, sent some well grown specimens of *Azaleas*, also *Wistaria sinensis*, and *Aponogeton distachyon*. From Messrs. Barr & Sons, of Covent Garden, came a large collection of Daffodils, including some fine specimens of *N. Glory of Leiden*, *N. Emperor*, *N. Shirley Hibberd*, *N. bicolor Madame Plomp*, *Dean Herbert*, and a single specimen bloom of their large Trumpet Daffodil, "Weardale Perfection," which attracted much attention. Messrs. Barr also had a large collection of single and double Tulips, conspicuous amongst which we noticed some good, single bedding varieties, such as *Thos. Moore*, *Keizer's Kroon*, *Proserpine*, *Cottage Maid*, etc.; and of double sorts, *Tournesol*, *Murillo*, *Rex Ruhrorum*, etc.; some beautiful species, such as *T. clusiana*, and *T. Greigi*; also *Anemones*, *Fritillarias*, *Erythioniums*, etc.

OBITUARY.

MR. LYNCH WHITE.

WITH deep regret we have to record the death, on the 2nd inst., at Bournemouth, in his 47th year, of Mr. Lynch White, of Homefield, Bickley, Kent, only son of Mr. Lynch White, of Leigham House, Streatham Hill, S.W., the founder of the extensive business carried on at Upper Ground Street, S.E., under the title of The Thames Bank Iron Co. Deep sympathy is felt in the trade for the widow and family, and also for the surviving partner, Mr. W. Y. Baker.

QUESTIONS AND ANSWERS.

* * * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Larvae on Cherry Trees.—*J. M.*: It is not the first time we have met with caterpillars on Cherry trees under glass, precisely under the same conditions, and doing the mischief you mention. We believe, however, that there are more than one species of moth guilty of this sort of thing. There are two large groups of moths to either of which it might belong, namely, Tortricina and Tineina, the latter consisting of some 650 British species. The Small Ermine Moth (*Hyponomeuta Padellus*), which you suggest, belongs to the Tineina, but the caterpillars sent do not belong to the genus *Hyponomeuta*, because the latter are social or gregarious living in great numbers under a common tent or web, and are of a different colour from those on your trees; Those you sent live singly under their webs, and as far as we can make out from the larvae belong to the

Tortricina, and might possibly be *Antitbesia pruni-ana*, as they correspond pretty closely in size, colour, habit, and other particulars. In any case the only remedy we have seen put into practice, or that can be suggested is hand picking. Wherever you find a curled leaf have it examined, and the contained larva destroyed. It is a laborious job if the larvae are abundant, but you might set a boy to examine the trees at intervals from the time the leaves commence to expand. By catching them when young it will prevent much damage, and the insects from reaching the perfect state. We take it that the eggs were laid upon the trees last summer, and the larvae have hatched out a few weeks before their time owing to the warmth of the house.

Interchange of Papers on Gardening Subjects.
—W. B.: In the course of our varied experience with mutual improvement societies there has been no difficulty in getting an exchange of papers by members of different societies to read at their respective meetings; but as a rule it is arranged between the secretaries or other officials and members of other societies, it may be at a distance of three to hundreds of miles. We think, however, there are such arrangements, whether by affiliation or otherwise, whereby two or more gardeners' associations can and do effect an interchange of papers. We believe the Woolton Gardeners' Mutual Improvement Association is constituted on those lines, or something similar, because members of that association read papers at the meetings of others. You might apply to Mr. R. G. Waterman, Church Road, Woolton, Liverpool, and we have no doubt he will put you on the right track. That is sufficiently near your place to make it possible for the writers of the papers to turn up in person and read their papers. In our experience papers always give most satisfaction when the writers are present to read them and answer questions. There are some societies about London which might be willing to exchange papers, but as they are over for a season, there is no chance of bringing the matter before them till October next. In the meantime, however, you may proceed with your arrangements, and by applying again if necessary, we have no doubt we could help you in getting other papers.

Choice Varieties of Streptocarpus.—*Gloxinia*: Any fine varieties you may wish to increase may be multiplied by cuttings of the leaves in the same way as Gloxinias are propagated, so as to keep them true to name, that is, by leaf cuttings. The leaves should be fully developed but in fine condition, not when they begin to get exhausted and die back with age. Even then, however, you might be able to root the basal half of the leaf where vitality is retained long after the top has died. Use sandy soil, and do not over-water the cuttings till roots have been formed and they show little crowns. After that stage you may pot them off singly in 60-sized pots.

Lathraea squamaria.—*T. Gerard*: It is quite true that this subject is a parasite, just as much as the allied species of Broom-rape are. Therefore, you will have to sow seeds or plant roots in pots or pans of soil in which something is growing to which the fleshy roots of the parasite may attach themselves and thus be able to subsist. In a wild state it grows on the roots of various trees and shrubs such as Hazel, Willow, Elm, Black Walnut, Rhododendrons, &c. We believe it takes to the roots of Willows as readily as to anything, so that you can strike some cuttings and be ready to plant the *Lathraea* when you can procure seeds or specimens. There is not so much trouble attached to the growing of these subjects as might be imagined, provided you have suitable host plants to the roots of which the parasites can attach themselves. There being no chlorophyll in them they must be connected with something which can make and supply food for them.

Saffron.—*Sigma*: You will find a reply to your question on p. 559 under "Names of Plants."

Names of Plants.—*W. H. Y.*: The Fern is *Polypodium quercifolium*, the reference being to the barren fronds; the flowering plant is *Agathosma rugosa*.—*H. Cannell*: *Asclepias curassavica*.—*T. M.*: 1, *Pyrus Maulei*; 2, *Spiraea Thunbergii*; 3, *Forsythia viridissima*; 4, *Rhododendron dauricum*; 5, *Rhododendron flavum*; 6, *Kalmia glauca*.—*W. B.*: *Lunaria biennis*; *Fritillaria Meleagris*; 3, *Caltha palustris flore pleno*; 4, *Scilla hispanica*; 5, *Scilla hispanica alba*; 6, *Lathyrus vernus*.—*A. B. L.*: 1, *Masdevallia Shuttleworthii*; 2, *Odontoglossum andersonianum*; 3, *Oncidium sarcodes*; 4, *Dendrobium infundibulum*; 5, *Oncidium heteranthum*.—*A. H.*: 1, *Retinospora plumosa aurea*; 2, *Taxus adpressa*; 3, *Podocarpus andina* (also known as *Prumnopitys elegans*); 4, *Sequoia sempervirens*; 5, *Juniperus sinensis aurea*.

Communications Received.—Nath. Bryson.—H. Cannell.—A. Keen.—Jas. Moir.—T. W.—E. West.—H. Hendry.—W. S.—A. J.—C. M.—W. Hyde.—C. R. N.—G. Laithway.—R. Stewd.—S. O.—T. Arnold.—E. P.—D. James.—Karl.—P. Ford.

TRADE CATALOGUE RECEIVED.

FOTHERINGHAM & KING, Corn Exchange, Dumfries, N.B.—Herbaceous and Bedding Plants, Cbrysanthemums, &c.

FIXTURES FOR 1898.

- MAY.
10.—Royal Hort. Society's Committees.
11.—R.B.S. Great Summer Exhibition of Plants and Flowers.
18.—York Florists' Exhibition.
18.—Alexandra Palace Show (3 days).
25.—Temple Show (3 days); Bath and West of England at Cardiff (5 days).
27.—Manchester Whitsuntide Exhibition (6 days).
28.—Cheltenham Show (2 days).

- JUNE.
8.—Royal Botanic Society's Floral Fête (two days).
14.—Royal Hort. Society's Committees.
15.—Grand Yorkshire Gala (3 days).
20.—Royal Agricultural Show, Birmingham.
22.—Jersey Rose Show.
23.—National Society's Rose Show at Bath.
28.—Royal Hort. Society Committees; Special Rose Show; R.H.S. of Southampton (2 days).
29.—Richmond Horticultural Society; Croydon Rose Show.

- JULY.
2.—Rose Show at Crystal Palace.
5.—Hereford Rose Show.
6.—Farnham Rose and Horticultural Show.
6.—Co. Boro' of Hanley Floral Fête (2 days).
6.—Tunbridge Wells Rose Show.
7.—Woodbridge Rose Show.
9.—Manchester Rose Show.
9.—Garden Party and Exhibition, N.A.G.A.
12.—Wolverhampton Floral Fête (3 days).
12.—Royal Hort. Society's Committees.
13.—Ipswich Rose Show.
13.—Durham and Newcastle Hort. Society's Show (3 days).
14.—National Rose Show at Halifax.
20.—National Carnation and Picotee Society, at the Crystal Palace.
21.—Sidcup Rose Show.
26.—Royal Hort. Society's Committees.

- AUGUST.
1.—Beddington, Carshalton, and Wallington Show.
1.—Leicester Show (2 days).
1.—Northampton Hort. Society (2 days).
9.—Royal Hort. Society's Committees.
10.—Bishops Stortford Hort. Society's Show; Hastings and St. Leonards Hort. Society's Show.
10.—Salisbury Show.
10.—Etwall & District Show.
11.—Taunton Deane Show.
17.—Shropshire Hort. Society (2 days).
17.—Newton Stewart Floral Fête.
18.—Leighton Buzzard Show.
19.—Devon and Exeter Hort. Society's Show.
20.—Leven and District Show.
23.—Royal Hort. Society's Committees.
26.—Royal Hort. Society of Ireland Show.
27.—Falkirk Show.

- SEPTEMBER.
1.—Stirling Show (2 days).
2.—Dahlia Society's Show at Crystal Palace.
3.—R. B. and H. S. of Manchester, Amateurs' and Cottagers' Exhibition.
6.—Royal Hort. Society's Committees; Nat. Chrys. Society (3 days).
14.—Royal Cal. Hort. Society (2 days).
20.—Royal Hort. Society's Committees.
29.—R.H.S. Fruit Show at the Crystal Palace (3 days).

- OCTOBER.
11.—R.H.S. Committees and Lecture.
25.—R.H.S. Committees and Lecture.

- NOVEMBER.
1.—West of England Cbrysanthemum Show (2 days).
1.—Boro' of Croydon Chrysanthemum Show (2 days).
1.—Kingston and Surbiton Chrysanthemum Show (2 days).
3.—Devon and Exeter Fruit and Chrysanthemum Show (2 days).
7.—Sevenoaks and West Kent Cbrysanthemum Show (2 days).
8.—R.H.S. Committees, with Floral and Botanical Demonstration at the Drill Hall.
8.—Highgate Chrysanthemum Show (3 days).
11.—Huddersfield and District Chrysanthemum Show (2 days).
15.—Folkestone & District Chrysanthemum Show (2 days).
15.—R. B. and H. S. of Manchester Chrysanthemum Show (2 days).
16.—Ascot, Sunninghill, Sunningdale, and District Show (2 days).
22.—R.H.S. Committees and Lecture.



Gardening Charities, &c.
GARDENERS' ROYAL BENEVOLENT INSTITUTION.—Secretary, GEO. J. INGRAM, 50, Parliament Street, S.W.
ROYAL GARDENERS' ORPHAN FUND.—Honorary Secretary, A. F. BARRON, Royal Horticultural Society's Gardens, Chiswick, W.
UNITED HORTICULTURAL PROVIDENT and BENEFIT SOCIETY.—Secretary, WILLIAM COLLINS, 9, Martindale Road, Balham, S.W.

Agricultural Economist

An ILLUSTRATED MONTHLY MAGAZINE of 52 pages and Exponent of scientific and high-farming; advocate of co-operation in agriculture, in the supply of farm requisites and the sale of produce; organ of the Agricultural and Horticultural Association, the pioneer society for mutual supply of pure alloakes, complete manures, reliable seeds and implements on wholesale terms. Specimen copy free. Subscription per annum, 5s. inclusive of postage. Single Copies 6d. each, through all Newsagents.—3, AGAR STREET, STRAND, LONDON, W.C.

EPPS'S COCOAINE.

COCOA-NIB EXTRACT.

The choicest roasted nibs (broken-up beans) of the natural Cocoa on being subjected to powerful hydraulic pressure, give forth their excess of oil, leaving for use a finely-flavoured powder—"Cocoaine," a product which, when prepared with boiling water, has the consistence of tea, of which it is now, with many, beneficially taking the place. Its active principle being a gentle nerve stimulant, supplies the needed energy without unduly exciting the system. Sold only in labelled tins. If unable to obtain it of your tradesman, a tin will be sent post free for 9 stamps.—JAMES EPPS and Co., Ltd. Homoeopathic Chemists, London.

RUBBER STAMPS

WITH A MOVEABLE LINE.

SPECIALLY DESIGNED OUTFIT

FOR

Seedsman and Florists. COMPLETE FOR 7/6.

The Outfit consists of Rubber Die (any wording) mounted on Special Air Cushion Rubber (1/4 inch thick) so as to neutralise any inequalities of surface in Seed Bags, &c.; a Font of Solid Rubber Type, containing 74 Letters, Points, and Ornaments. These are simply pressed into designs, and can be altered at will. In addition a Type Holder is enclosed for marking single lines of moveable type only. For 1/6 extra we include 21 figures, so that it can also be used as a dating stamp.

All sorts of Rubber Stamps made to order at short notice and low prices.

F. A. COBOLD.

1, Clement's Inn, Strand, London, W.C.

"AMERICAN GARDENING."

An Illustrated Journal of Horticulture, published in the interests of the amateur in the Garden, the Conservatory, the House, the Fruit and Vegetable Grower, Trees, Shrubs, and Flowers.

The Leading American Horticultural Authority.

Issued weekly, and mailed, postage paid, to English subscribers for a 6s. money order.

Address, "AMERICAN GARDENING," 170, Fulton Street New York, U.S.A.

No worm or other vermin can possibly enter a plant where

Porter's Patent Invincible Crocks

is used. Neither boards, slates, nor ashes are required to stand the pots on, so that money, time, and injury to plants are saved; they fit any pot, and last for many years. All Chrysanthemum growers should use them.

Mr. J. Crawford, Coddington Hall Gardens, Newark, when writing in "The Bazaar" about these Crocks, says—"I now use them for anything and everything that is of the least value, and I am quite confident that when as well known as they deserve to be, no other Crock will be used."

30, 1s.; 100, 3s.; 1,000, 25s.; Carriage Paid.

A. PORTER, STONE HOUSE, MAIDSTONE.

AMATEURS

Who follow the instructions given in

'The Amateur Orchid Cultivators' Guide Book'

By H. A. BURBERRY, F.R.H.S.,

ORCHID GROWER TO

The Right Hon. JOS. CHAMBERLAIN, M.P.

CAN GROW ORCHIDS

In Cool, Intermediate, or Warm Houses,

SUCCESSFULLY

There is a Calendar of Operations for each month, and full information as to the treatment required by all Orchids mentioned in the book.

With some fine coloured illustrations

Second Edition.

5s. od.; post free, 5s. 3d.

"GARDENING WORLD" Office, 1, Clement's Inn, Strand London.



JUST PUBLISHED. Globe 8vo, 4s. nett.

GARDEN-MAKING.

Suggestions for the Utilising of Home Grounds.

By L. H. BAILEY. Aided by L. R. TAFT, F. A. WAUGH and E. WALKER.

MACMILLAN & CO., Ltd., LONDON.

LISTER'S SPECIALITIES.

PANSIES, Fancy and Show.—Our unrivalled competition vars. are now offered at 3/- per doz.; 2 doz., 5/6. All the latest and best vars. only grown, all sure prizewinners anywhere. With every doz. is enclosed new vars of 1898. **VIOLAS**, 1 doz. Champion vars., 1/6; 2 doz., 2/6. Blue, White and Yellow, separate or mixed colours, 2s, 2/6; 50, 4/6. **DAHLIAS**, from any section of our world-renowned collection, Show, Fancy True Cactus, Pompones and Single, 1 doz. superb plants and vars. 3/6; 2 doz., 6/6. Summer **CHRYSANTHEMUMS**, 1 doz. best selected vars., 2/3. Every plant offered is in the best of health, true to name and carriage paid. Cash refunded if unsatisfactory in any way. Our **NEW BOOK** on the **PANSY, DAHLIA**, etc., 7d.; free on all orders of 5/-. New Plant List free.

LISTER & SON, Florists, ROTHEWAY.

Caladiums

FINEST COLLECTION in the World. We make a speciality of **CALADIUMS**. Gold Medals Manchester & Leicester. Silver Cup, R.H.S., &c.

Satisfaction guaranteed. **JOHN PEED AND SONS**, West Norwood, London.

ORCHIDS.

Clean Healthy Plants at Low Prices. Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER, Exotic Nurseries, CHELTENHAM.

1898. **FORBES' CATALOGUE** 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and price of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other Valuable Information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,

ESTABLISHED 1870.

Nurseryman, Hawick, Scotland.

JADOO FIBRE.

WONDERFUL SUCCESS.

At a great Horticultural Exhibition recently held in New Orleans, plants grown in Jadoo were awarded

20 FIRST PRIZES and 2 SECONDS.

ADVANTAGES OF GROWING PLANTS & SEEDS IN JADOO.

Seeds germinate much more quickly in Jadoo than in earth.

Greater perfection easily attained.

Suits all kinds of plants.

Is much lighter than earth.

Less frequent watering is required.

The flowers are larger, of richer colour, and last longer.

No soil to mix: No manures required.

Ghent Exhibition, 1898. The two principal prizes of the show (including Gold Medal), were gained by plants grown in Jadoo, by Messrs. Byrvet, Bros., Haarlem.

PRICES:—3/6 per bushel. 8/- per 3-bushel sack. Special prices for large quantities.

Testimonials and full directions for use post free.

Obtainable through any Nurseryman, or from—

JADOO, Limited, EXETER.

KEYNES' CACTUS DAHLIAS.

Best Plants. Best Varieties. Moderate prices.

Send Post Card for Catalogue.

About half the good varieties in commerce were raised here.

KEYNES, WILLIAMS & COMPANY,
Dahlia Growers, SALISBURY.

BOUGAINVILLEA CYPHERII.

Grand new plant, largest and best coloured Bougainvillea ever offered, a splendid grower and remarkably free bloomer. Awarded First Class Certificate at the Wolverhampton Floral Fete, 1896, and also at the Oxford Commemoration Show, 1896, and also the Gold Medal at Shrewsbury Great Royal Commemorative Show, 1897, for the best new plant in the exhibition.

JAMES CYPHER has great pleasure in offering this grand novelty. Plants ready end of May, price 10/6 each.

Exotic Nurseries, CHELTENHAM.

IMPORTANT TO GARDENERS.

SAVE 50 PER CENT. IN LABOUR BY USING

"ELECTRIC" WEED DESTROYER.

We GUARANTEE WEEDS EXTERMINATED BY ONE WATERING. Unsolicited testimonials to this fact received from all parts. TEST AND PROVE.

CARRIAGE PAID on 10 gals. and upwards to any part of the United Kingdom.

10 gals. at 1/6; 20 gals. at 1/5; 40 gals at 1/4.

One gal. diluted with 25 gals. of water will clear 100 square yards.

DRUMS allowed full price if returned in good condition.

No GARDENER should be without our new illustrated list of garden specialities; post free upon receipt of application.

WM. WOOD & SON, LTD.,

JAMES L. WOOD, F.R.H.S., Managing Director,
North British Wharf, WOOD GREEN, LONDON, N.
Telegrams:—"Wood, Wood Green, London."
Telephone:—10, Tottenham.

CHEALS Celebrated

DAHLIAS

WORLD-WIDE RENOWN. STRIKING NOVELTIES

NEW CATALOGUE POST FREE

J. Cheals & Sons, SUSSSEX

GLOXINIAS

FINEST MEDAL COLLECTION

* IN THE WORLD. *

Send for CATALOGUE to JOHN PEED & SONS, West Norwood, London

VIOLAS! VIOLAS! VIOLAS!

20,000 of the three following vars. to offer cheap:—
Blue Gown. Best Blue.
Christiana. Best White.
Oriole. Best Yellow.
5/- per 100; 1/- per doz.; post free. Special price per 1,000 on application.

J. J. UPTON,

The Nurseries, IRLAM, near MANCHESTER.

CARTERS' HOLBORN PRIMULA.—SINGLE or DOUBLE in choicest mixture. Our Prize Strain of the beautiful winter-flowering conservatory plant is the finest in cultivation. We were the originators of the blue variety now so popular. SINGLE, separate colours, white, scarlet, blue or pink. In Sealed Packets, price 2s. 6d., 3s. 6d., and 5s. each, post free.

CARTERS' BRILLIANT CINERARIA.—The very finest strain ever submitted to public notice. Awarded Highest Prize, Medal Royal Botanic Society, 1897, Royal Horticultural Society, 1898. A customer recently sent us blooms measuring 3 1/2 inches across. Fresh seeds, all colours, mixed. In Sealed Packets, 2s. 6d., 3s. 6d., and 5s. each, post free.

CARTERS' VICTORIA CALCEOLARIA.—Our grand strain is the very perfection of scientific culture, being compact in habit, and brilliant in colour and size of blossoms. A customer writes:—"The plants were a perfect picture, many with 600 blooms; we took first prize." Fresh seeds, all colours, mixed. In Sealed Packets, price 2s. 6d.; 3s. 6d., and 5s. each, post free.

CARTERS' INVINCIBLE GLOXINIA.—We have brought this fine summer decorative plant to the highest excellence. H.R.H. the Princess of Wales greatly admired our exhibit at the Temple Exhibition last summer, and was graciously pleased to pronounce it an "exquisite display." Fresh seeds, all colours, mixed. In Sealed Packets, price 2s. 6d. and 5s. each, post free.

CARTER'S, THE QUEEN'S SEEDSMEN, 237, 238, and 239, HIGH HOLBORN, LONDON.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. MCARTHUR, The London Nurseries, 4, Maida Vale, London W.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, MAY 14th, 1898.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, May 16th.—Sale of Lilies, bedding plants, &c., by Messrs. Protheroe & Morris.

WEDNESDAY, May 18th.—Alexandra Palace Show (3 days). York Florists' Exhibition.

FRIDAY, May 20th.—Sale of imported and established Orchids by Messrs. Protheroe & Morris.

SUCCESSFUL CULTURE OF VANDA TERES.—

Some ten or fifteen years ago gardeners looked upon this Vanda as a difficult subject to bloom, and we have seen large plants put under various peculiar conditions with the object of inducing them to bloom. Since then, however, a number of gardeners and Orchid growers, that is, specialists, have learnt how to bloom this species more or less satisfactorily. No one is more successful in this respect than Mr. George Reynolds, gardener to Messrs. de Rothschild, Gunnersbury Park, Acton. The species has now been grown here for many years with greater or less success, till this year something over 200 spikes of bloom have rewarded the cultivator. In the early days of its culture at Gunnersbury Park, almost the whole of the stock was grown in a heated pit, planted out in sphagnum over a considerable amount of crocks and brick bats as drainage. In this pit the plants were necessarily dwarf, and had to be frequently let down by cutting off the lower portions or by taking the tops as cuttings. The old plants that were beheaded threw out a few side shoots. A certain quantity of bloom was annually obtained from this pit, and was at that time regarded with a certain amount of pride and satisfaction. A few plants were later on transferred to the stove by way of trial, and grown in pots, if

we rightly remember, against the west aspect end of the stove, close to the glass. Here the plants had more head-room, and were allowed to run up. The heat and moisture of the stove proved even more suitable to the welfare of the plants than the conditions that prevailed in the pit, so that more and more of the plants were transferred to the stove, where the whole of them have been accommodated for some time.

These plants have now been flowering for three weeks at least, the first batch of flowers having been cut on the April 27th. Usually the flowers keep up a display for a month or somewhat longer. The gorgeous effect of 200 spikes, with their massive and curiously formed flowers, has to be seen to be admired and fully appreciated, particularly by those who have never previously seen so many plants in flower. As the plants have to be accommodated in accordance with the slope of the glass roof, they vary in height from 2 ft. to 6 ft. or more. The taller and stronger the stems, the finer the spikes and the larger the size attained by the individual blooms. The advantages gained in the stove, therefore, are greater head-room, more uniform temperature, and atmospheric moisture during the growing season. From the time the flower spikes make their appearance till the plants show signs of having completed their growth in early autumn, an abundant supply of water is furnished the roots, independently of atmospheric moisture, which in itself must be of material advantage judging from the numerous aerial roots produced at different points all along the stems. The aim of the cultivator is to get good growth, and then to ripen it properly. This is secured by the withholding of water at the roots, and the reduction of atmospheric moisture as the days shorten, and sunlight and heat decrease. The gradual withholding of moisture induces the plants to go to rest, while the tissues of the wood and leaves get matured and hardened.

The other conditions of cultivation are very simple. The plants are grown in four large wooden boxes, two of them close to the glass, and two others on the opposite side of a pathway, the latter resting on the end of the central, raised bed of the house. Four rows of plants occupy the boxes against the glass, and two rows the remaining set. The boxes are about 18 in. wide, or thereby, and 6 in. deep, inside measurement. The rooting medium, or compost consists of an ample depth of crocks, mixed with some nodules of charcoal and surfaced with a layer of living sphagnum. While in bloom the plants are carefully shaded, as that conduces to the durability of the flowers. Such cultural treatment is well worth copying, and might be pursued to advantage by all gardeners having this Vanda under their care. The results amply justify the means adopted, namely, a harvest of over 200 spikes, each carrying from three to seven blooms, the latter number not being uncommon. Counting the number of growths on these two hedges of plants, they would be six to eight years old. Strong cuttings a foot in length, after having made a good growth, may flower within the twelvemonth, after which the plants flower annually. Many of last years growths have each produced two spikes, though a third sometimes appears only to be checked by the two that secure the lead. The sepals and petals are of a silvery rose, while the disc and interior of the side lobes are yellow, more or less closely lined with orange-brown. There are several varieties, some of them being handsomely lined or banded with crimson spots or markings on the yellow ground of the lip. In some cases the lines are very faint. The whole taken

together constitute as fine a lot as any gardener might wish to see or possess.

The National Schools of Berlin are furnished with over 100 specimens of four different kinds of plants twice a week, for botanical demonstrations.

Dried Fruits.—It requires five to six pounds of Apricots, six to eight pounds of Peaches or Pears, and about two-and-a-half pounds of Prunes to make, respectively, one pound of dried fruit.

Messrs. B. S. Williams & Sons, of Upper Holloway, have acquired extensive grounds, forming part of the Manor Farm, Regent's Park Road, Finchley, for the purpose of further extending their business, and growing hardy trees, shrubs, general nursery stock, and plants under glass.

The Queen Bee lives three or four years, and the workers only three to six months. As the drones usually die by violence it would be difficult to determine their natural lifetime. Bees have been known to occupy the same hive consecutively for forty-six years.

The Royal Horticultural Society's Forthcoming Great Show.—Members of the Preston and Fulwood Horticultural Society are forming a party to visit London during the show week. Mr. Frame, the courteous tourists' conductor of Fishergate, Preston, has charge of the arrangements, and will conduct parties wishing to see the sights of London. The train starts on Tuesday night, May 24th, leaving Windermere at 9 o'clock, Kendal 9.18, Oxenholme 9.27, Carnforth 9.55, Lancaster 10.7, and Preston 11.51. There will also be trains on the branch lines from the Fylde District to Preston. It is expected that a number of gardeners from Liverpool will join the train at Wigan, who will be accommodated with saloons if timely application is made. Further information may be had from Mr. Frame or Mr. C. Parker, Secretary Preston and Fulwood Horticultural Society, 11, Cannon Street, Preston.—"P."

Dover Flower Show.—The committee responsible for the management of this show, have a president (the Mayor of Dover), a treasurer, and a secretary, yet it does not appear to assume the title of horticultural society. Nevertheless, a very good schedule of prizes has been got up for the show to be held on August 17th and 18th. Prizes are offered in 120 classes, of which fifty-nine are open to all England, including classes for plants in pots, cut flowers, fruit and vegetables. Another group of classes is open to gardeners residing within a radius of 15 miles of the borough of Dover. Twenty-two classes are devoted to the interests of cottagers and allotment holders in the borough, whose garden does not exceed forty perches. Other groups are open to amateurs, ladies, nurserymen, and florists, and there are ten classes in which special prizes are offered. Eight out of ten just mentioned are for vegetables, so that Dover evidently wishes to increase the love for vegetables of a useful and, therefore, economic kind. We wish the committee of the Dover flower show every success in its laudable endeavour to promote the cause of gardening. The hon. secretary is Mr. E. M. Worsfold, Market Square, Dover.

A Prescription for Mordant Ink given by Theophilus is, according to the summary appearing in the current issue of the *Journal of the Society of Arts*, as follows:— "Cut with your own hand twigs from the Hawthorn trees in April or May, before they put forth their leaves and flowers, and lay them by in the shade to dry somewhat. Then pound off all the bark and put the same into casks full of water, and let them stand for eight days until the water absorb all the sap of the bark. Then pour out the water into a pan or cauldron and boil it, and then throw in more bark, until you boil all the sap out of it, and repeat this until the water is boiled down to a third; and then boil this until it grows black, and begins to thicken, taking care to add no more water. Then add one-third of pure wine, and put it into three new pans until a skin forms on the surface. Then place the pots in the sun until the black ink separates itself from the red dregs. Afterwards pour the pure ink into small bags of parchment or bladders, and hang in the sun until all is quite dry. And when dry take as much as you want and mix with wine over a fire, and add a little atramentum (here sulphate of iron) and write.

Errata.—At p. 566, in the 25th line from the bottom of the first column, for "Mr. McMath" read "Mr. McIntosh." In the 36th line from the bottom of the second column for "Mr. Ewen" read "Mr. McEwen."

Green Peas and French Beans, unshelled, are being sold at 1s. 6d. a pound in the London markets. A basket of Strawberries, containing about a dozen fruits costs 3s., that is a shilling for four fruits, or threepence apiece.

Irish Gardeners' Benevolent Society.—A special meeting of the supporters of this charity was recently held at the Rotunda Buildings, Dublin, Mr. Cranmer, the president of the society, in the chair. The chief business was the election of a secretary in the room of Mr. Thomas Shaw, who has resigned. On the motion of Mr. Campbell Mr. W. S. Hall was chosen as successor to Mr. Shaw. Mr. Campbell, Jun., then read a very instructive paper on the "Naturalisation of Flowering Plants," which was ably discussed by several of the members.

The Twenty-five best Chrysanthemums from an American point of view would naturally differ from the best twenty-five in the opinion of English growers. The Americans set special value upon the flower stem and foliage of the variety. The former must be long and stout, and the latter sturdy and vigorous. A list of the best varieties was given in November last by Mr. Robert G. Carey, before the Florists' Club of Philadelphia, and subsequently appeared in *The American Florist*. In the issue of *Le Nord Horticole* for May this list is again given, with description of the varieties mentioned. The first varieties on the list are Mrs. Jerome Jones, Maud Dean, Major Bonnaffon, Vivand' Morel, Silver Cloud, William Lincoln, Mrs. H. Robinson, The Queen, and Mutual Friend. Of the remaining varieties, Modesto, Charles Davis, Miss Agnes L. Dalskov, Miss Georgina Pilcher, and Golden Wedding are well-known on this side of the water, whilst the others are either utter or comparative strangers. An editorial note at the bottom of the French translation calls the attention of Gallic readers to the fact that varieties in America must have good stems and foliage as well as other good qualities if they are to rise above mediocrity.

Scottish Horticultural Association.—The usual monthly meeting on Tuesday evening, the 3rd inst., under the chairmanship of the president, was largely attended by members. A number of new members were elected, and a further list nominated. The leading paper of the evening was one on "Bulb Culture in Lincolnshire," by Mr. J. Alexander, Revesby Abbey, Horncastle. The paper was read by the secretary, and was of a very interesting and informative character, shortly describing the soil, method of culture, the varieties cultivated, and the *modus operandi* of bunching and marketing pursued by two of the leading bulb farmers of Lincolnshire, a county which may now be described as the Holland of Britain in so far, at least as Narcissi culture is concerned. During the spring season tons of cut blooms are despatched daily to the principal markets, and in the autumn a very large and rapidly increasing trade is done in bulbs. The paper was much appreciated, and a hearty vote of thanks was awarded to Mr. Alexander. Mr. D. P. Laird, of Messrs. Laird & Sons, who acted as one of the jurors at the recent Quinquennial Show at Ghent, afterwards gave a highly interesting, entertaining and eloquent account of the great show, which he saw there and the people he met. His short address was much appreciated by the members present, who accorded him a very warm vote of thanks. There were several interesting exhibits on the table, amongst which may be specially mentioned several blooms of Chrysanthemum W. H. Lincoln, which, though they seemed born out of due season, were excellent specimens. A new Cabbage, shown by Messrs. Laird, and raised by a Mr. McKinlay, was also much admired as a very early hearting and handsome variety. The president also contributed a very early elegant vase of Spanish Iris in beautiful variety. The annual outing of the association takes place on Saturday the 21st inst., the place to be visited this season being Gosford House, the beautiful and interesting demesne of the Earl of Wemyss. We wish the excursionists a pleasant afternoon.

Fragrance of *Lilium Harrisii*.—It is stated that the pastor of a church in Jersey City, U.S.A., requested that no Easter Lilies should be used for decorative purposes in his church, several persons having for several years past fainted owing to the overpowering fragrance of the flowers.

The Vine Mildew was named *Oidium Tuckeri* by the late Rev. M. J. Berkeley. Until quite recently its natural history was but little known; then its true fruits or asci were discovered and it was relegated to the genus *Erysiphe* as *E. Tuckeri*. Now the fungologists say that an inspection of the perithecia shows it to be a *Uncinula*, namely, *U. americana* or *U. spiralis*.

Canals in Mars.—Hitherto the phenomenon of the doubling of the canals in Mars, as seen through the telescope, has been set down to the growth of vegetation on either bank. The newest explanation by M. Antonidi is that the phenomenon of doubling is caused probably by the eye of the observer, seeing double. Surely this is a serious allegation against the condition of the star-gazers.—*Snaggs*.

Packing Watercress in Tins has been attempted by an enterprising farmer in Wisconsin, U.S.A. The Cress, after having been pressed tightly in the tins was covered with saline fluid, and the tins were then hermetically sealed. After the tins had lain unopened for a year they were opened, and it is stated that the Cress was found to be as fresh in appearance and as tasty as when it was first cut. We understand that the farmer intends to follow up the experiment by canning Watercress on a large scale for trade with tropical countries.

Poor *Dracaena*.—M. C. Petrick, of Ghent, has recently raised a new *Dracaena* which he has named after the great French writer, M. Emile Zola. The *Nord Horticole* takes exception to this and speaks in very strong language concerning what is evidently regarded as a gross insult. In the comments upon the matter which appear in the May number of that paper, Zola is spoken of as being under the ban of society, and of all loyal and independent people. It concludes by saying that the writer is convinced that no honest Frenchman, or foreigner who is also a friend of France, will be found who will attempt to obtain it, which is distinctly hard—upon the *Dracaena*.

Forfar Horticultural Improvement Association.—This Society held its concluding meeting in the Burgh Court Room, on the evening of Tuesday, 3rd May, the president, Mr. Thos. Wilson, Glamis Castle Gardens, presiding over a good attendance. The paper for the evening was "Progress of Horticulture in America during Her Majesty's Reign" by Mr. Alfred Outram, F.R.H.S., London, which, in his absence, was read by Mr. James Brown, the secretary. At the close a hearty vote of thanks was passed to Mr. Outram for his very interesting paper. There were on exhibition from Glamis Castle Gardens, twenty-five varieties of *Narcissus* besides some blooms of that grand strain of single *Begonias* so well grown there, which were very much admired. A vote of thanks was passed to Mr. Wilson, who in returning thanks, intimated that that closed the session and called on the secretary to read the balance sheet, when it was found the society was in a healthy condition financially. The annual general meeting to elect office bearers for the coming session was then held, when the following were appointed—viz.: Mr. John Knox, hon. president; Mr. Thos. Shiel, New Cemetery Lodge, president; Mr. Thos. Wilson, Glamis Castle Gardens, vice-president; Mr. James Brown, 86, Castle Street, hon. sec. and treasurer. Committee: Mr. John Clark, Fernbank; Mr. Andrew Lees, Southview; Mr. James Saddler, Honeyplace; Mr. J. R. H. Robbie, Castle Street; Mr. A. Harris, Baronhill; Mr. Wm. Moir, View Mount; Mr. Walter Piggott, Zoar. The company then adjourned to Mr. Robertson's hall for supper, Mr. Wilson presiding, and Mr. Shiel being croupier. After covers had been removed, Mr. Robbie, vice-president, in the unavoidable absence of Mr. Knox, hon. president, in name of the members presented Mr. Wilson with a silver-mounted silk umbrella, along with a ladies' combination workbox for Mrs. Wilson, bearing suitable inscriptions in recognition of his valuable services as president during the past session. Mr. Wilson very feelingly replied. With song and sentiment a happy evening was spent.

Echinocactus polyancistrus is a recent introduction from California, but is yet very rare in this country. A figure of it is given in *The Cactus Journal* for April, Pl. V. It is a very spiny plant like most or all of its congeners. The spines are its special feature, some being red and others white, while they may be of several hues on one and the same plant. They are 3 ins. to 4 ins. long, and very much flattened. The plant body is light green, thus forming a striking contrast with the particoloured spines. Very few plants have been found in the native home of the species, and as it multiplies very slowly even under cultivation, it is bound to be a rare plant for years to come.

Lettuce Forcing in the States.—In this country the growing of Lettuce under glass is not carried on to any extent, but in America vast crops are raised thus. One of the most successful cultivators in the neighbourhood of Bolton calculates that within a radius of ten miles of that city not less than from 150 to 200 acres of under-glass space are devoted to this crop. The returns must be remunerative or we should not hear of vast areas such as this being devoted to the purpose. The structures employed are chiefly frames, which are either placed on hotbeds or are unheated. The plants in the cold frames are raised from seed sown in the open ground in September, which are transferred to the frames early in October; or the seed is sown on hotbeds or in heated houses later on in the winter, the plants being put in the frames early in the spring. The plants from the autumn sowing need but little or no water during the winter months, but careful attention is given to ventilating on bright sunny days.

ROYAL HORTICULTURAL SOCIETY.

THE TEMPLE SHOW, MAY 25TH, 26TH, & 27TH. FOR the eleventh year in succession, the Royal Horticultural Society will hold their great annual flower show in the Inner Temple Gardens on May 25th, 26th, & 27th. Every year the desire of growers to exhibit increases, and the officials of the society have a very anxious task in endeavouring to do justice to those growers who support the fortnightly shows of the society held at the Drill Hall, and yet at the same time to encourage others to come forward. The space is absolutely limited by agreement with the Temple Authorities; no more or larger tents may be erected. Hence, every new exhibitor whose entry is accepted means curtailment of the space allotted to previous supporters.

A catalogue of the show will be given gratis to every visitor, and will contain a notice of new and rare plants entered on or before May 19th. It will also contain a programme of the music to be performed each day. On the first two days the Band of H. M. 2nd Life Guards, and on the 3rd day the Band of H. M. Royal Horse Guards will perform.

The judges will meet at the secretary's tent at 10.30 a.m. on May 25th, at which hour, punctually, the tents will be cleared of all exhibitors and their assistants. The Fruit, Floral, and Orchid Committees will assemble at the secretary's tent at 11 a.m. sharp; and the show will be opened at 12.30.

N.B.—All plants for certificate must be entered on or before Monday, May 23rd. Address:—Secretary, R. H. S., 117, Victoria Street, S.W.

They cannot be entered under any circumstances on the day of the show.

TO GROW FINE FRUIT.

THE *Journal de l'Agriculture* gives the following instructive story by Mr. Duret, agriculturist of Indret-Loire, a story all those who have charge of an orchard will do well to remember.

"Two or three years ago (the tale is old, but as will be seen, is for this very reason more valuable), I visited an old friend for whom I had obtained some slips of a Vine called Gros Cabernet. It was near the middle of September when one day we drove together into his vineyard. "There they are," he exclaimed, "your magnificent Grapes."

"I do not recognise them," I replied. "You have not grown them on my slips? The Lignieres Pinot Noir does not produce such fine fruits."

"They are indeed your Pinots."

"But the Grapes are enormous, what have you done?"

"Well, I dissolved 2 kilogrammes (4.410 lbs.) of sulphate of iron in 100 litres (22 gallons) of water, and with this solution I sprayed the leaves and fruit of my Vine. But one must work at the right time. I waited until the Grapes had attained one third of their ordinary size. I sprayed again a month later, and again twenty days before gathering. You see the effect. I obtained similar results with Cherries, Pears, and Apples."

"That was a success," I said, "and next year I shall try your method."

Alas, when the time arrived I had quite forgotten the receipt and the magnificent Grapes of which I have just spoken. Yesterday, by chance I met this old friend, after an absence of two years. I thought of his Cherries, Apples, and Pears. "Well," I said, "have you repeated your sulphate of iron experiment?"

"Yes, and always with the same success. What about yourself?"

"I have so many matters to attend to that I can hardly help forgetting some, but what is delayed is not lost and I intend next July, August, and September, to spray some rows of Vines, to see whether I shall obtain Grapes of wonderful size and beauty."

Let us observe that the method is applied, at least for fruit, by the horticulturists of the environs of Paris, who moisten each promising fruit with a solution of sulphate of iron by means of a brush.—*Cosmos, September 18th, 1897.*

AUSTRALIAN PERFUMES AND ESSENTIAL OILS.

Although the Australian colonies are rich in plants yielding delicious perfumes and valuable essential oils, little or nothing has been done, so far, to practically utilise the advantages thus afforded. Systematic flower farming is still in its experimental stages, and there exists an almost untouched field of illimitable extent at the command of those possessing the necessary capital and experience in the manufacture of perfumery and essential oils, coupled with the advantage of an abundance of mutton fat, so largely used in the perfumery trade, at minimum prices. In New South Wales all the garden flowers of Europe and Asia, especially those emitting the richest fragrance, are found growing in unsurpassed luxuriance, many being obtainable nearly all the year round, their profusion and cheapness proving how easily they are reared. Several of the essential oils obtained from the leaves of native plants are really perfumes, and their chief use is in scenting soaps and other preparations. The quantities used are small, and the plants used are wild.

Among the native perfume-yielding plants which remain unutilised are several varieties of *Acacia*, including a few which furnish a scented wood. The *Acacia farnesiana*, which is largely cultivated in Italy and the south of France, the well-known pomade, called "Cassia" being produced by placing the sweet scented flowers in melted mutton fat or olive oil, until the latter becomes impregnated with their odour, grows plentifully in many parts of New South Wales; and another species of *Acacia*, familiarly known as the Golden Wattle, is equally useful as a perfume plant; as is also the Native Laurel, or Mock Orange. Among the plants from which sweet-scented and other oils may be obtained are the Native Sassafras, Peppermint, Bloodwood, Blue Gum, Mountain Ash, White Gum, Ironbark, Woolly Butt, Spotted Gum, Tallowwood, Messmate, Red Gum, Poplar Box, and other species of *Eucalyptus*; Ridge Myrtle, Tea-tree, Native Peppermint, Dogwood, and Turmeric.

The essential oil of the Red Gum has been found a reliable remedy for chronic dysentery and diarrhoea, and that of the Moreton Bay Ash makes an excellent furniture polish. The oil obtained from the Native Sassafras resembles, in odour, ordinary Sassafras oil, with an admixture of oil of Caraways, and is used for medicinal purposes. *Eucalyptus* oil possesses many valuable qualities, and is said to possess the power of destroying bacteria, or animal life. Its antiseptic powers have been fully recognised by the medical profession, and by many it is preferred to carbolic acid in the treatment of wounds. The leaves of the various kinds of *Eucalyptus* are found useful

in preventing or removing scale in boilers. The oil of the Mountain Ash, a common species of *Eucalyptus*, dissolves gutta percha readily, and can be used, like kerosene, for lamps, having a greater illuminating power, a pleasant odour, and absence of liability to explosion. Three ounces of the oil have been found sufficient to scent eight pounds of soap at a cost of one farthing per pound.

The oil obtained from the Stringy Bark is found to be more efficacious, in many complaints, than the ordinary English Peppermint, being less pungent and more aromatic. The oil of the White Gum has been suggested as a soap-perfume. The Woolly Butt oil possesses the remarkable property of imparting an indelible stain to paper, but at present it has not been utilised for commercial or industrial purposes. The oil of the Grey Gum possesses a delicious citronelle odour, and makes an excellent soap perfume. Several varieties of the Tea Tree furnish an oil possessing most, if not all, of the properties of cajuput, so largely used in India as a remedy for rheumatism. Practically the number of native shrubs and trees in New South Wales capable of being utilised in the manufacture of perfumes and essential oils is without limit, and when the large quantities of either product, obtainable from comparatively small proportions of bark or leaves, is taken into consideration, it will be seen that in this direction New South Wales possesses exceptional advantages for those possessing the requisite capital and experience to establish large remunerative productive industries. It may also be mentioned that the Olive, Castor Oil Plant, and Linseed grow luxuriantly in the colony, and are easily cultivated.

NOTICES OF BOOKS.

FLOWER FAVOURITES: Their Legends, Symbolism, and Significance. By Lizzie Deas. London: George Allen, 156, Charing Cross Road. 1898. Price 3s. 6d. nett.

Those who delight in reading and treasuring legends, fairy tales, traditions and sentimental tidbits concerning the popular flowers of garden, field, and wayside, will find much in this handy little volume to gratify their taste and occupy their leisure moments. It consists of some 229 pages, is of foilsap octavo size, and contains short quotations from the poets, but has no illustrations. The letterpress is of large and clear type, requiring little exertion of the eye in following it.

Naturally the Rose, Thistle, Shamrock, and Leek come under review, together with other old flowers with which most people come in daily or frequent contact. Tales concerning the Rose go back to the time of the Arabs and Persians, thence onward to the king of Babylon, Greeks, Romans, and peoples of other parts of the world. The account of the English emblem comes under the heading of Rose Brier, and it is stated, according to some authorities, that the Rose *argent* of York was a cultivated form of the Field Rose (*Rosa arvensis*). The "York and Lancaster" Rose symbolical of the union of the two ancient royal families of England, is rightly ascribed to a variety of the Damask Rose, notwithstanding the fact that it is frequently confounded with *Rosa Mundi*, a variety of *Rosa gallica*. There are also English legends about the Rose, which he who runs may read.

The legends, tales, and accounts of the Thistle, including amongst several other species the Scotch Thistle, are very fully given. One tradition given about the adoption of the Thistle as the badge of Scotland attributes it to a company of bearded men with high crowned hats, who met in the Council House of Edinburgh, about the middle of the sixteenth century. The Order of the Thistle, according to another legend, goes back to the time of Archius (other history spells his name Achaius), a Celtic king of the Scots, and it claims, therefore, to be the most ancient of all orders of high honour. The popular legend about the origin of the high respect given to the Thistle by Scotchmen is also correctly recorded. A party of invading Danes were proceeding to surprise the Scottish camp by night when a bare-footed Dane trod upon a Thistle, and gave vent to an involuntary howl which aroused the Scots, who flew to arms with a mighty shout and bloody rout, according to their wont, and drove back the foe. If this is the correct origin of the Thistle as the national emblem of Scotland, the date must

lie somewhere between 830 and 1014 A.D., the beginning and end of the Danish invasions north of the firths of Forth and Clyde. No more than other authorities is the author able to settle the specific identity of the Scotch Thistle. The heraldic device does not, in our opinion, represent a Thistle, native of the British Isles within the botanico-historic period at least.

The story of the Shamrock is discussed in a short chapter of about three pages. It is stated to be a Trefoil, but beyond that its specific identity remains undetermined as in the case of the Scotch Thistle. If we are to accept the cultivated Leek as the true Welsh emblem there would be no doubt as to its botanical name. On the contrary, if, as tradition says, Welshmen wear the Leek in memory of St. David, their patron saint, the specific identity of the plant again becomes obscure; for St. David "did feed only upon the Leeks which he gathered in the fields." Now there are several wild Leeks, and the cultivated one (*Allium Porrum*) is not a native.

Several legends hang around the Blue Cornflower (*Centaurea Cyanus*). At the present day it is held dear to the Germans as the national emblem of Germany. When Queen Louise of Prussia was forced by Napoleon to flee from Berlin, she took shelter in a cornfield where she amused her children by making them wreaths of the Blue Cornflower. Her son Wilhelm, afterwards king of Prussia and first Emperor of United Germany, chose as his emblem *die Kornblume*; hence it is dear to all patriots of the Fatherland. The above notes culled from the book will give our readers a general idea of the tenor of the book, much of which is interesting.

REASONS WHY APPLES DO NOT KEEP WELL.

THOSE proprietors of gardens who have a limited experience of fruit keeping are oftentimes sorely tried by finding, after following the best advice obtainable, that in some seasons no inconsiderable portion of their Apple harvest goes prematurely to decay, and possibly accuse the unfortunate individual who gathered them with carelessness, without justifiable reason beyond their own want of knowledge. Now Apples, like almost or quite all vegetable productions, are liable to so many diseases and enemies that it is almost sure, whatever the character of the season may be, that at least some of the fruit will be affected by one or more parasites in a greater or lesser degree, as the atmospheric conditions have favoured their development. In some years the damage done is very little, and almost or quite escapes notice; in others the damage is much greater, and calls for constant attention in the looking over the fruit, and using those having symptoms of decay first.

It will frequently be found that in even small collections of Apples and Pears there are two or three of these fungoid growths among them. One of the most common belongs to the genus *Cladosporium*, which, developing beneath the true cuticle, often covers the surface of the fruit with dark round spots. Decay frequently takes place at these. Sometimes, however, it dries up the fruit, causing it to adhere to the tree through the winter, and when allowed to remain is often a cause of canker. Again, it not unfrequently happens that some fruits turn brown on the trees, and soon after round mealy spots form on the surface showing that the spawn of *Oidium fructigenum* has been vegetating in its tissues.

Sometimes a fungoid growth will be found in apparently sound fruit, much resembling in appearance the Potato disease. So far as my own experience goes the softer fleshed Apples are the most subject to this, and it appears to be most prevalent after dry, hot summers. The fruit is available for culinary purposes for some time after it is first taken with the malady. Lastly, fruit decays naturally in the ordinary course of things according to whether it is naturally an early or late variety. For instance a French Crab will keep for many months after Codlings, and yet these latter may in truth be said to have kept well if preserved in fair condition two months after being gathered. Now it is out of all reason to expect these varied enemies to be kept altogether at bay; but when observed all affected fruit should be carefully removed from those which are sound, because if no other mischief is done, it is

certain that sound fruit will acquire a musty taste if surrounded by that in a state of decay.—W. B. G.

CINERARIA STELLATA.

THERE is a considerable diversity of opinion about this strain of *Cinerarias* which has been worked up and put into commerce by Messrs. Sutton & Sons, Reading. The strain is the result of crossing the modern greenhouse race of *Cineraria* with the old *C. cruenta*. The general public is generally highly delighted with, and full of admiration for, the easy grace of the large panicles of starry flowers, as well as the great variety of colours already to be met with in the strain. The gardeners, on the contrary, have for some years past been so heavily weighted with the idea that massive, imbricated flowers and dwarf plants are the only things worth striving for in a *Cineraria*, that every thing else must be put in subjection to this view.

We may recall the fact that only a few years ago the wild *C. cruenta* was re-introduced and annually raised in some quantity at Kew, when and where it was greatly lauded for its graceful and elegant appearance, notwithstanding the fact that the plants varied from 3 ft. to 5 ft. in height. Now by the crossing of the wild original with its cultivated progeny, the plants have been reduced to half the height or less. Surely that in itself is an advantage. The flowers are intermediate in size, and intense as well as pale colours of many shades have been imparted to them. The strain is, therefore, well adapted for conservatory decoration, even where space is limited. The decorative value is infinitely superior to that possessed by their dumpy garden relatives. A purpose may be served by both strains which are well worth preserving, so that neither may be discarded to give exclusive preference to the other. It may be urged that the new strain lacks pedigree, but that is merely sentiment, and a narrowing of the view of what may be regarded as really beautiful. That of course is a danger to which specialists lay themselves liable; but let us not forget the once despised race of Japanese *Chrysanthemums*, and the *Carnations* that would not conform to the canons of the florist.

The new strain known as *C. stellata* shows a great range of colour such as mauve, pink, purple, magenta, magenta-purple, blue-purple, lilac, rose-purple, white tipped with purple and other shades, which have been flowering in profusion at Reading for some time past. In company with them are batches of *C. lanata*, *C. pcpulifolia*, and *C. multiflora*, which have more or less of a shrubby habit, with smaller, generally woolly leaves, and are later in coming into bloom. All these intercross with one another, and whether the strain of *C. stellata* can be improved by intercrossing with the above-named species remains to be seen. The garden race has every appearance of having been brought to its present stage of development simply by intercrossing and selection from the wild *C. cruenta*, if we are to judge from their strictly herbaceous character and large leaves.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Dendrobe and Odontoglot from Fairfield.—A richly-coloured variety of *Dendrobium nobile* comes to us from Mr. A. Grigor, gardener, to Alex. O. Gill, Esq., Fairfield, Aberdeen. The upper half of the sepals and petals is of a rich, intense purple, quickly giving place to a pale, nearly white ground towards the base. The lip also has the usual colour markings much intensified. The bloom is of average size, but the rich colouring makes it a variety of no ordinary merit. Accompanying it was a bloom of *Odontoglossum polyxanthum*, also highly coloured as far as the blotches were concerned, but the markings on the petals were reduced to one small blotch at the base, leaving all the rest of a bright yellow. The lip was shorter than we often see, and almost roundly-cordate. Both Orchids were therefore good of their kind, the *Dendrobium* being the more distinct of the two.

Cypripedium kerchovianum W. H. Young, *Nov. var.*—The original or typical form of this hybrid was raised in the Brussels Botanic Garden, where it was first flowered in 1892, as the result of

crossing *C. Curtisii* with *C. barbatum*. It was named in compliment to M. le Comte de Kerchove de Denterghem, the president of the Royal Agricultural and Botanical Society of Ghent. The variety under notice was raised by Mr. W. H. Young, Orchid grower to Sir Frederick Wigan, Clare Lawn, East Sheen. It resulted from the reverse cross of the original, namely *C. barbatum* var., with *C. Curtisii* as the pollen parent. The seeds were sown on the 26th December, 1893, and is now flowering for the first time. The dorsal sepal is white, lined with green veins and shaded with purple towards the sides. The dusky petals are tipped with purple, and marked all over with black spots, thus showing the influence of *C. Curtisii*. The huge purple lip also has the long claw of the lip peculiar to the last-named. The oblong leaves are broad and very vigorous. Mr. Young has already flowered several hybrids of his own raising.

THE YELLOW SPORTS OF CHRYSANTHEMUM MME. CARNOT.

I DON'T know who wrote the paragraph concerning *Chrysanthemum* G. J. Warren, but the paper was laying on the potting bench, and you see what one of my men's opinion is:—Poor G. J. Warren! he does get it hot, and for what reason I cannot think; for I will defy anyone to see any difference in the growth of that and Mme. Carnot and Mrs. Mease. The make, shape and size of the flower are the same, only different in colour, and the only thing I can see against it is, it isn't pure white; for this is the only thing in which anyone can see any difference in the two (or three).

Concerning *Chrysanthemum* Mrs. Mease, it was not till I went to the Belfast show that I saw it was distinct from G. J. Warren. I wired from there to Edinburgh to tell Mr. Mease to reserve me the stock, and I have no doubt but that it was my telegram which lost me the stock and caused the bother; for as you know I was not in Edinburgh, though someone else was. Even Mr. Mease himself did not know any difference, but considered that he was exhibiting G. J. Warren, or as he called it, Yellow Mme. Carnot. He also said "I did not know the conditions of the Ulster Horticultural Society's schedule, otherwise, you may rest assured, I should not have done as I did. It turned out to be distinct, and I did what I did quite innocently."—*W. Wells.*

Kitchen Garden Calendar.

THE WEEK'S WORK.

THE dry weather of the last month somewhat retarded the growth of plants, so that vegetable crops in general are by no means so forward as one would have expected to find them after such a mild winter. The welcome rains, however, of the last week have been favourable to the growth of most things, the gardener who does not wish to be behind must, therefore, be busy if he would keep pace with the work. Cauliflower for autumn should now be transplanted. Such varieties as Michaelmas White, Autumn Giant, and Autumn Mammoth are all good kinds, as they are not liable to run to seed. If planted while the ground is moist, they will soon take fresh hold of the soil. Brussels Sprouts ought also to be put out as soon as the ground can be got ready for them. This is a crop that takes some time to grow, and unless the plants are put out early the season becomes advanced before any sprouts are formed. The last sowing of Broccoli seed ought now to be put in, choosing an open place that the plants may grow sturdy. This crop has been exceptionally fine with us during the present spring, particularly Standwell, Model and Late Queen. There is an advantage, where a continuous supply has to be kept up, of growing several varieties, as all do not turn in together. Borecole should also be got out in good time that the plants may grow sturdy. There can be no advantage in leaving the plants in the seed beds after they are large enough to handle, and if the ground is ready better take advantage of showery weather to put them out.

PEAS.—Particularly those grown under glass have done well this season; it is doubtful, however, if there is yet anything equal to William Hurst for either pot culture or growing in pits. Those sown

on the open borders have done well and are showing plenty of pods. Late Peas are often troublesome to grow in hot seasons, as they are subject to the attack of fly in a very young state. Small sowings should, therefore, be made at intervals of about a week. Pay particular attention to earthing up Potatoes. The soil between the rows should be loosened up and rendered as fine as possible before being drawn up to the plants, for where left rough it is seldom that the tubers are of good shape. The thinning of many vegetable crops at this time of the year is an important item.

CARROTS, PARSNIPS, BEET AND ONIONS will all require to be done in a young state if fine, well-shaped roots are to be obtained. It is, however, not necessary to set the plants out at the full distance at first as the young tender roots may be drawn for use as they become large enough; but thinning ought never to be deferred until such times as the plants become crowded. The sooner this work is done the better, for when allowed to remain until the foliage becomes crowded, this is produced at the expense of the roots. Gardeners are apt to overcrowd as they are compelled to produce a large bulk from a small space, but it is not wise to attempt too much.

Continue to make small sowings of Turnips and Spinach; both of these crops require an abundance of moisture to keep them growing. Early thinning should also be resorted to that the plants may gain strength in a small state. We have before advised that Carrots are much sweeter if drawn young, and cannot do better than repeat that advice by stating that for general use seed sown now will give better results as regards roots for storing than that sown early in April. The old orthodox rule was to sow in spring for storing in winter, but experience teaches us that when ground is well cultivated, it is far better to make small sowings at intervals for general use, relying on seed sown about this time of the year for roots to store for winter, allowing them to remain in the ground as long as possible in the autumn.

CELERY that was sown early should now be got into the trenches, for like all other plants, there is no advantage gained by allowing them to be overgrown before being put out. When plants flag to any serious extent this is a sign that proper cultivation is not given them. Those from the later sowings ought to be pricked out as they become large enough to handle, allowing a distance of 2½ in. between the plants. Cauliflower that was planted out early in the last month will be greatly benefited by having liberal doses of manure water. It is impossible for the ground to be too rich for this crop. Weeds will now be growing apace, therefore the hoe should be kept at work in fine weather, taking care in doing so not to injure the plants, as many which might have been fine roots are spoiled by being scarred with the hoe when young. It should always be the rule to hand weed round all plants for a distance of at least 2 in. from them, which precaution will prevent any mishap in this respect. A close look-out should now be kept for the Onion fly; dusting with soot ought not to be neglected.—*Kitchen Gardener.*

The Orchid Grower's Calendar.

THE DEGENERATION OF ORCHIDS.

SEVERAL opinions have been put forward in the gardening papers from time to time as to the probable cause of so many Orchids dying out, that I feel constrained to have my little say about the matter.

The up and down the country notion is very good, and is no doubt answerable for a great number of deaths. Locality too has been thought by good men to have a more or less deleterious effect on this aristocratic family of plants. I am not, though, a great believer in the locality craze. Of course, I am putting close proximity to the Metropolis and all other large centres out of the reckoning, as it is well known that in and near large towns it is impossible to get so much light and pure air—two essentials in the culture of Orchids—as you do in the country.

My opinion based on a twenty years' experience, is, that the position, elevation, and kind of structures some gardeners find themselves hampered with have more to do with failures when attempting the culture of this beautiful class of plants than any other yet advanced.

In building glass houses there is too much hanker-

ing after scenic effect rather than putting up structures suitable for growing plants. Again, those that build houses do not know really what is required; it is not their business. They naturally erect houses that catch the eye rather than for general utility; and who can blame them? To those intending putting up a range of Orchid houses, I would suggest that they should first visit some of our large Orchid growing establishments, private or otherwise, and see for themselves the kind of house that seems best adapted to each particular species. A little forethought in this direction would, I am sure, bear good fruit. Having made up your mind as to the kind of structure to be erected, the effective heating of the same must be considered. This is of the greatest possible importance. A badly heated house is the curse of all gardeners. Sufficient piping should be put in so that the required temperature can be kept up without having to make the pipes so hot that on entering the house the atmosphere strikes you as being too dry and unwholesome. Plants never thrive on dry hot air, it is so unnatural to them.

A great many failures, I cannot help thinking, should be laid at the door of those that are constantly settling forth that such and such an Orchid can be grown cool. Cool Orchids there are, but not in the sense often implied. You may, in the perusal of, say, a catalogue, find it stated that the particular Orchids to be sold were found growing at an elevation of some 8,000 ft. above sea level where it was not unusual to find them covered at daybreak by frost. Quite so, but for how long? not long enough to do any harm; besides, under natural conditions the plants are better seasoned, and able to stand any fluctuation in temperature that may and does occur in their native habitats.

Another cause, to my mind, is that they do not get the nourishment in the way of plant food under cultivation as they undoubtedly do under natural conditions. In their own homes there is always a certain amount of decomposition going on amongst the vegetation underneath them. The heavy dews with which they are enveloped at night must of necessity benefit them greatly, likewise the heavy falls of soft water in the rainy season; how different is this to the hard water we are only too often compelled to use.

How changed are those conditions under our forced hot-water system. Yet, given a fair chance, they even do better than they did in their own homes. Some there are, and always will be, that absolutely refuse to do well for long; but, generally speaking, it may be said that we have mastered their requirements, and only when an attempt is made to grow them in too low a temperature, or in unsuitable houses do they fail to please.

To beginners I would say, First see that you have properly heated structures in which to grow the plants; secondly, do not try to grow more than the staff you intend to keep can properly manage; thirdly, always buy good, sound plants; and fourthly, deal with the best firms; it is cheapest in the end.—*C.*

Gleanings from the World of Science.

THE undermentioned subjects were brought before the Scientific Committee of the Royal Horticultural Society on the 26th ult.

Vine Leaves with Gummy Exudation.—Some leaves were received from Mr. F. M. Gulrin, Iscoed, remarkable for a stickiness. This appeared to be attributable to green fly, although none was present. The exudation is the result of puncture.

Paeonies, Decayed.—Mr. F. F. Freeman sent some leaves which appeared to have decayed at the junction with the stem. They were forwarded to Mr. W. G. Smith for examination for the presence of fungi.

Ribes sanguineum, Growth of.—Mr. Henslow described a rather curious case of a bush growing by the south side of some palings. It had sent up a number of shoots on the north side. The former half was in full leaf bearing very few racemes; while that on the other side was covered with flowers, the foliage being scarcely apparent.

HINTS FOR AMATEURS.

Tulipa biflora.—The flowers of the Tulip, whether it be of the earlier flowering species and varieties, or the more refined and highly bred florists' Tulips which flower in May, are, as a rule, borne singly upon the flower stalk or scape, but there are very few rules without an exception or exceptions, and we have an instance of this in *Tulipa biflora*, a Caucasian species, which found its way to this country about the year 1806. The specific name, "biflora," would denote, of course, that there are two flowers to the scape, but however true this may have been of the wild plants it is no longer true of the cultivated ones; indeed, "multiflora" would be a much more appropriate name, for the scapes are "many-flowered," the number varying from five to eight or nine, seven and eight being very common numbers. *Tulipa biflora* is exceedingly interesting from a botanical point of view, seeing that it forms a connecting link between the genus *Tulipa* proper, and the sub-genus *Orithya*. It is not, however, of its botanical affinities that we wish now particularly to speak, for the plant has another side, that of horticultural value, to which it may be profitable to draw attention. For a sheltered nook in the rock garden lovers of hardy plants will find it a real gem of great beauty, and as it is easy of cultivation it is a plant that the amateur will do well not to overlook. This year it was in full flower by the middle of April, and very pretty it looked, in spite of the fact that the fore part of April was anything but genial. The flowers are rather small as compared with the size of other Tulips, but then their number more than compensates for this. The colour is a delicate cream-yellow, with a slight flushing of green on the outer side of the segments.

Tulipa undulatifolia Boissieri.—Tulips are generally cultivated for their flowers, but in one or two instances we have amongst them plants possessed of distinctly handsome foliage. One of these, *T. Greigi*, we noticed a week or two ago, and in *T. undulatifolia Boissieri* we have yet another that is almost worth growing for the sake of its foliage alone, which, with that of the type *T. undulatifolia*, is distinct from that of any other Tulip. The leaves are long, and narrow in proportion to their length. The margins of the leaves, as the specific name denotes, are much waved and undulated, presenting, in fact, a series of strong curves. The colour is deep green. The flowers are very showy, and will compare favourably with those of any other form for beauty. They are rich crimson in colour, with a black centre, surrounded with a narrow yellow zone, and stellate in shape, the segments being rather narrow. The height of the plant is only about 6 in., so it should be given a position where it will not be overshadowed by taller and more vigorous growing subjects.

Tulipa Leichtlini.—Whilst speaking of beautiful species of Tulips we cannot refrain from making mention of *T. Leichtlini*. With the two already spoken of it is of great beauty, and a charming plant for a nook in the rockery. The flowers are of medium size. The inside is pale flesh-pink, with a bright yellow base, while the outside is a rich coral-red. The mixture of colours is thus very handsome and effective. The height of the plant is from 5 in. to 6 in. The only thing that militates against the plant is its price, which, to tell the truth, is somewhat high, but then it is so beautiful.

Arabis albida is neither a new nor a rare plant, but its great value for spring bedding purposes compels a note. If hardy, free-flowering, easily cultivated subjects such as this were taken up and properly utilised our gardens would be much gayer during the early part of spring than they are. The plant is only from 6 in. to 9 in. in height, and hence it can be usefully employed for covering the spaces between taller growing subjects; indeed, we have noticed that it has been effectively employed in this way in association with Tulips at Regent's Park. As an edging for beds or borders it is likewise all there, and there are many less showy plants than it in the rockery during April and May. The flowers are pure white, and are very freely produced in terminal racemes over a long period, whilst the habit of the plant is close and trailing, and it loves to form close tufts of greenery, out of which the flower scapes rise with a freedom that not infre-

quently endangers the safety of the plant; indeed, the tufts are simply masses of white. Such a subject as this should be in every amateur's garden. *Arabis albida* is a native of Tauria and the Caucasus regions, having been brought to this country a little over a hundred years ago. It is occasionally met with in gardens under the name of *A. caucasica*.

Under cultivation this species has given rise to at least one variety of considerable merit—the silver variegated one known by the name of *A. a. variegata*. It is, perhaps, not quite so free-flowering as the type, but the foliage is prettily variegated, and is thus showy when the plant is out of bloom, in which respect it may be said to score off the plain green form.

A. procurrens variegata is a variegated form of the dwarf, Servian species, *A. procurrens*, which commences to flower earlier than *A. albida*, although the two may be seen in bloom together. This is much dwarfer in stature than *A. albida*, and may be roughly considered a miniature of it.

A. lucida foliis variegatis is a long name under which another handsome *Arabis* has to labour. The flowers are white, and the foliage a pretty mixture of green and gold. This should be grown with the silver-variegated varieties of *A. albida* and *A. procurrens*, if only for the sake of contrast. The plants run to about 6 in. in height.

A. rosea should not be lost sight of. As the specific name suggests, the flowers are of a rose colour, very soft and delicate. It is a native of Calabria, and its height is about that of *A. albida*. These two species make a capital pair.

As we have previously mentioned, all the Arabises or Rock Cresses are very easy of cultivation. They will grow almost anywhere if sufficient light be given them. On dry, sandy banks, for instance, where most other plants would languish and ultimately die, they do well, and flower with surpassing freedom. Propagation is fully as easy, and the amateur may take his choice between root divisions, cuttings, or seed. Perhaps the surest way is to divide the roots after flowering has ceased for the season. Cuttings put in during the summer also root freely enough, and if looked after will make good plants by the following spring. Seed should be sown as soon as it is ripe, and may be put either in the open ground or in pans placed in a cold frame; in any case artificial heat should not be given.

Fritillaria macrophylla.—The changes which are ever occurring in the nomenclature of plants are exceedingly puzzling to the amateur and professional gardener alike, and some of us are apt at times to think that this changing of names is done out of pure spite, or merely a desire for a change. This, of course, is not so, as the correct affinities of a plant can only be obtained after a vast amount of trouble, but the puzzlement that is brought about by the changing has still to be reckoned with. Very few plants, indeed, have been so hardly treated as *Fritillaria macrophylla*, for in addition to this name it has been called both *Lilium roseum* and *L. thomsonianum*, whilst the changes have been rung on these names in a most provoking manner. First the plant is a *Fritillaria*, then it is a *Lilium*, and both genera are to be found in use in different parts of the country. Many of our amateur readers may be inclined to ask, and not without good reason, how they can possibly be expected to know and use the right name of a plant that has so many aliases, and over which authorities disagree so much. The *Index Kewensis* has adopted the name of *Lilium roseum*, but we have referred to the plant under the name under which it is most frequently met, viz., *Fritillaria macrophylla*. This was the name given to it by David Don, who was the first to describe it.

According to Dr. Wallace, in his "Notes on Lilies," the plant is "a native of the Western Himalayas, extending from Afghanistan eastwards by way of Massoorie and Nepaul. It has been gathered by nearly all the collectors who have visited that region. In the eastern part of its range the height which it attains above the sea-level appears to be from 5,000 ft. to 6,000 ft. . . . It seems to have been first introduced into cultivation by Loddiges, who flowered it in 1844. Captain Strachy sent it to Kew in 1853 from Kumaon."

To pass from the botanical affinities of the plant, no matter whether it be *Lilium* or *Fritillaria*, it is a distinctly handsome thing, and a gem for pot culture. It is about 1 ft. in height, and the flower scape bears a number of medium-sized, rose-coloured flowers,

which are broadly funnel-shaped, and have the tips of the segments slightly reflexed. It is totally distinct from anything else.—*Rex*.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Fern Pots.—*P. Ford*: You would be able to obtain earthenware pots suitable for hanging against a wall from any good maker of flower pots. If your order is not large enough to send direct to them we should imagine you would have no difficulty in getting them through your local sundriesman. The kind of Fern pocket you mention with one side flat, and a hole in the top for suspending it is made, but we do not often see them in use. The Ferns do very well in them, but our own objection to them is that they look rather glaring. We should prefer to have wooden receptacles made, and to cover these on three sides with sheets of cork. These would come quite as cheap as the earthenware pots, and in our opinion look far nicer, but tastes differ.

Pots for Selaginellas.—*P. Ford*: Selaginellas may be grown in the ordinary pots, but we prefer pans from 4 in. to 6 in. in depth, and either square or round in shape. These pans give the large amount of surface room which Selaginellas like, without the unnecessary quantity of soil which the use of ordinary pots entails.

Gloxinias.—*E. P.*: The Gloxinia leaves have been scorched by exposure to the sun. You must shade them. There are no signs of insect attacks.

Mealy Bug on Streptocarpuses.—*Karl*: Mealy bug is very partial to Streptocarpuses, and now that you have allowed your plants to become badly infested you will find some difficulty in getting rid of the pest. We have found that dipping the plants in a fairly strong mixture of Lemon Oil insecticide to be the best method of cleaning them speedily and safely. Lay the plants on their sides after they have been dipped, so as to prevent the insecticide from getting amongst the roots.

Thinning Grapes.—*E. P.*: It is almost impossible to give you full instructions on paper as to the way to thin Grapes. A practical demonstration is necessary, and would teach you more in two minutes than we could with pen and ink in a week. As your Grapes are Black Hamburgs the operation is easy enough, seeing that the berries generally set in threes. The middle berry of each three is generally the largest, and must, therefore, be left, cutting away the one on either side of it. In thinning you should first of all remove all the inside berries, that is, those that are borne towards the centre of the bunch. The smallest ones in the outside ranks should follow next, and finally, if it is required, a few of the large ones may be taken out, but this is rarely necessary at the first attempt. If you can get a practical man to show you, do so, if not, proceed cautiously on the lines we have indicated.

Shrubby Calceolarias.—*D. James*: You will do well to plant the Calceolarias out now if the bed is ready for them, but if frost comes they will require protection. It is better, however, to do this than run the risk of spoiling them by leaving them in their present crowded condition for another fortnight.

Chrysanthemum Golden Queen of England.—*Mum.*: In a lately issued list of too much alike Chrysanthemums which will not in future be accepted upon the same stand by the National Chrysanthemum Society, Golden Queen of England, John Lambert, Emily Dale, and Emily Dale improved are all bracketed together. This means that the four varieties that you mention as being so much alike are recognised as being so by the committee appointed by the N. C. S. to inquire into the matter.

A North Frame.—*Seasons*: There are numbers of plants which can be grown to advantage in a frame facing to the north, and although a frame having a southern aspect is naturally more useful we should not advise you to take the trouble of shifting it unless you are obliged to do so from lack of under-glass space in the latter position. A north frame, having a bottom of clean coal ashes, and not too deep, is a first-class place for Cinerarias, and if you grow any of these handsome plants you will do well

EARNOCK CONSERVATORY IN DECEMBER.

The accompanying illustration shows the interior of the beautiful conservatory at Earnock, Hamilton, N.B., the residence of Sir John Watson, Bart. His gardener, Mr. James Moir, also sent us a photograph of the interior of the Chrysanthemum house, both pictures being taken in the first week of December last. Naturally, the bigger and finer display of the

main ranges of glass and other houses. The interior is occupied with tall Tree Ferns and Palms, so that the flowering plants were merely added to brighten the effect at the dull period of the year. Chrysanthemums, *Primula obconica* and other subjects were stood round the sides of the central bed; and as the illustration shows, baskets of *Nephrolepis* and *Adiantum caudatum* were suspended from the roof. Chrysanthemums can evidently be made to produce a respectable display in the moist climate of



EARNOCK CONSERVATORY IN DECEMBER.

to bear this fact in mind. Then again, Tuberoses which were potted up at the commencement of the year, and have been growing slowly, may well remain in such a position until it is desirable to introduce them to heat. Then resting plants, such as Nerines, Freesias, and Lachenalias, find safe asylum during their rest. Ferns do well in such a place, and various other plants, whose flowering season it is desired to retard more or less, may well be placed in it. You will find plenty of stuff to fill a medium-sized frame of this kind, and to fill it with advantage.

popular Autumn Queen was in the Chrysanthemum house. The plants are grown for decorative purposes at Earnock, and considering how fresh they were in the first week of December, it would scarcely describe them properly to say they are merely grown for autumn display, autumn and winter being more appropriate terms under the conditions.

The conservatory is a fine structure situated amidst beautiful surroundings in the pleasure grounds which are planted with numerous fine old trees and shrubs. It is therefore isolated from the

Hamilton during winter under the care of Mr. Moir.

China Grass is largely cultivated in Japan for the purpose of manufacturing paper and twine. In order to maintain its price at a uniform figure and keep down competition, large companies have been formed to supply cultivators with plants and give the necessary instructions for growing them. The farmers are bound to return the crops at a fixed price.

BELGIAN NURSERIES.

III.—MM. DE SMET, FRÈRES, GHENT.

SITUATED at Ledeborg, a north-eastern suburb of Ghent, is the horticultural establishment of MM. De Smet, Frères, who grow a few specialities, and grow them well. As an article of commerce *Araucaria* must be of leading importance, judging by the enormous quantities grown in this establishment alone. M. de Smet informed us that 50,000 cuttings are rooted on the premises every year. Every cutting is inserted singly in sandy soil and covered with a miniature bell glass not much larger than a tumbler. A houseful of these was an interesting, because unusual, sight. In other houses the plants may be met with of all sizes, to meet the requirements of different customers, and to serve for all purposes to which this useful decorative subject may be put. There are thirty houses of *Araucarias* on the establishment, which will give some idea of the extent of the industry. Some of the houses consist of blocks of four, built practically as one. In one house we noted three plants grown in a pot, a method of culture we sometimes met with in the case of Palms in other nurseries.

Palms constitute another speciality, more important in fact than *Araucarias*, for sixty houses are entirely devoted to them. *Kentia belmoreana* varies from 1 ft. to 8 ft. in height, all being clean and well-furnished specimens, according to their size. *K. fosteriana* is the less important of the two, but the quantity in stock is nevertheless great. House after house is entirely filled with one or both of these species, showing that, commercially, they are amongst the most important of Palms. One curvilinear house was interesting as being a remnant of the old nursery of the well-known house of Verschaffelt, which no longer exists. Such plants as *Verschaffeltia splendida* and *Fittonia Verschaffeltii*, &c., recall the name of the old firm at one time established in this neighbourhood. M. de Smet requires but a short time to show visitors over his nursery, for he can open one of the doors of a block of fifteen houses, and say "*Kentia belmoreana*" when he has given the name of all the plants they contain. One house is filled with seedlings of *Areca sapida*. Another is filled with species of *Cocos*, of which *C. weddelliana* seems always to be the most important in Belgium. A great curiosity we noted while inspecting the houses was one built of cement, not merely the walls, but the sash bars large and small on which the glass rests. Cement would appear to be more durable than wood or iron, but time alone can tell.

Sweet Bays (*Laurus nobilis*) constitute the third great speciality, for they meet the visitor at every turn in the open air at present. They are raised from cuttings, and grown in the form of pyramids and standards. The pyramidal form we think the most interesting, though that may be purely a matter of opinion. There is an avenue, 150 yds. in length, of shapely and trim pyramids grown in tubs stood in the open for the summer. The strength of the central stem of young plants gives evidence of the vigour of growth, in the earlier stages of the specimens at least. During winter they are housed in a huge structure, consisting of an iron framework, covered with wooden laths, over which additional protection may be given in winter, when the weather is severe. Hotwater pipes in the interior give sufficient heat to keep frost at bay.

One house is filled with various flowering *Anthuriums*, including *A. scherzerianum*, its varieties and allies. *Aspidistra lurida* and *A. l. variegata* are well grown. *Tillandsia hieroglyphica* is also a noteworthy plant, whose foliage is covered with peculiar bronzy markings comparable to Egyptian or other hieroglyphics. Between the blocks of houses, but in the open air, is an avenue of large plants of *Dracaena lineata*, which may be put to various useful purposes in the flower garden or in house decorations.

IV.—M. COPPITERS, GHENT.

The horticultural establishment of M. Em. Coppiters is situated at 341, Chaussée d'Anvers, Mont St. Amand, Ghent, a northern suburb of the latter, but beyond the ancient boundary of the city. As the name indicates, the nursery is situated on the causeway leading to Antwerp, and so thickly are similar establishments planted here that the suburb might be regarded as a little town of nurseries.

M. Coppiters grows a great variety of fine foliage

and decorative plants. One large house is filled with *Kentia fosteriana*, 6 ft. to 12 ft. in height, and *Latania borbonica*, in well-furnished specimens. In another house *Kentia belmoreana* occupies the prominent position. *Dracaenas* may be regarded as a speciality here, for several houses are more or less completely filled with a great number of varieties, both green, variegated and highly coloured. Amongst the former were fine specimens of *D. lineata* and *D. australis aurea striata*. Seedlings of *Clivias* are raised in some quantity. *Aspidistra lurida*, *A. l. variegata*, *Araucaria excelsa* and *A. e. glauca* are plants continually in request for decorative purposes.

Another house contains a collection of many named varieties of *Dracaena* with highly-coloured foliage, amongst which we should mention *D. Lindeni*, *D. massangeana*, *D. Doucetti* and *D. Bruanti* all well known and generally useful. The last named is notable for the bronzy hue of its younger leaves. *D. Dannalli* would come into the same category, but the leaves are merely tipped with bronze. The younger leaves of *D. terminalis* are bright red; while the broad leaves of *D. stricta* are much variegated with that colour. A large batch of *Cypripedium insigne* is grown for the sake of cut flowers.

Several other houses are filled with fine-leaved *Dracaenas*, which M. Coppiters knows how to turn out in clean, healthy condition. We could only note the finer and more distinct varieties. Very fine is *Mme. Fred. Bergmann*, with short, broad, bronzy leaves, having red edges. On the contrary *Lord Wolseley* is characterised by its long, narrow, spreading leaves of a rich bronzy hue, margined with red. A handsome variety is *Prince Manouq Bay*, with large reddish-bronze leaves, which, when young, have quite a reddish-purple hue, and stand out quite conspicuously amongst a collection. *De Smetiana* is equally if not more beautiful, for the young foliage is of a beautiful dark rose, the undersurface being more intensified, and some of the young leaves are pale. The plant is of good habit, grows vigorously, and might be grown as a substitute for *D. amabilis*, which is well known in Britain, and shows a similar range of colour. We noted, however, a fine batch of the last named, in specimens 3 ft. to 3½ ft. in height. The plants were quite small and young in January last, so that they have made splendid growth, plunged in leaf soil. Several of the leading commercial varieties are grown in batches of several hundreds.

The vigorous growth and clear variegation of *Phrynium variegatum* is also noteworthy. Here it seems to get taller than we are accustomed to seeing this handsome plant. In other parts of the nursery Palms again take prominence, including *Latania borbonica* and *Kentias* in plants of useful size, and well furnished with foliage. Along with them, but occupying the side benches, are small plants of *Ficus elastica* (propagated from cuttings of the tops of shoots, which, when rooted, form useful plants), small trees of *Araucaria excelsa*, *Aspidistra lurida variegata*, *Dracaena Bruanti*, and others.

Palms, *Dracaenas*, and Indian *Azaleas* may be considered the specialities of this establishment being abundantly represented by various species and varieties. Several frames were already filled with varieties of Indian *Azaleas*, put out to make their growth during the summer months. The rest were still growing in leaf soil upon the benches of numerous houses, except a quantity of plants of market size, which were in pots.

THYRSACANTHUS RUTILANS.

THIS handsome stove subject seems to have fallen upon evil days of late years and to a very large extent to have been consigned to the regions of oblivion, to which many a pretty plant has preceded it. At one time it was almost a constant occupant of collections of stove plants; now it is but comparatively rarely met with. This is all the more to be regretted when we consider its extreme beauty and usefulness, as well as the great easiness with which it may be grown. It is perfectly safe to assert that there are numbers of plants that one meets frequently in various parts of the country to which *Thyrsacanthus rutilans* can give points. Visitors to the Drill Hall recently could scarce help noticing the brave display that a batch of it made in the group of miscellaneous plants put up by Messrs. Wm. Cutbush & Son, of Highgate, N.

Propagation may be easily effected by cuttings,

and the time of the year is now with us when these cuttings should be inserted. After the old plants have done flowering the points of the young shoots should be taken off at a length of three or four inches. In order to facilitate subsequent shifting these cuttings are best put only one in a thumb pot, the soil being rather sandy. Place these cuttings in a propagating frame having a temperature of not less than 65° Fahr.—if 68° so much the better—and keep them moist and well shaded. In a very few weeks they will have made plenty of roots to warrant them being taken out of the frame and stood on a shelf near the glass. As soon as the roots touch the sides of the pots they should be given the first shift—into 4 in. pots.

The plants we usually see are grown with a single stem only, but if stopping is practised they may be obtained having a bushy head of several branches. A good specimen of this kind in a 10 or even a 12-in. pot is a fine sight, although the single stemmed plants lose nothing of their elegance by comparison. When large specimens such as this are desired, the plants should be in their flowering pots by the beginning of July.

Ordinary plants should receive their final shift into 6-in. pots not later than the middle of July. The soil in each case should be composed in staple of good loam with a fifth part each of cow manure and leaf soil, with sand.

During the summer months the plants may be accommodated in frames, but as the year wears on and the temperatures begin to fall all round they should be removed to a warm pit or stove. Red-spider is somewhat partial to the plants, but this may be kept down by frequent and copious syringings. Mealy bug, too, will have to be watched for and kept down. After the pots have become filled with roots liquid manure may be freely given, an application of soot-water once a week being of the greatest value. Liberal feeding is naturally of the greatest importance to those plants which have to flower in rather small pots, but the usefulness of such plants for decorative purposes well repays any trouble that may be bestowed upon them.

HOW A KNOWLEDGE OF BOTANY IS A HELP TO GARDENING.

(Concluded from p. 572.)

Now we will pass from the organs of nutrition, and look at the organs of reproduction. These consist entirely of the flower.

It often happens that a flower has only one coat or one set of floral leaves, and in all instances where this occurs you will find that it is the calyx that is present, and the corolla absent. These form a subclass known as the monochlamydeous, which means one coat; and where this happens the calyx sometimes becomes coloured; take the *Begonia* as an instance. Then, again, in the case of *Lilies* both the calyx and corolla are coloured. The *Tulip* is another instance.

Then in speaking of flowers without a knowledge of botany, can we define these different forms so easily as one can do that has a knowledge of botany? If one is speaking of complete flowers botanically it usually means those which have the calyx usually green, and the corolla coloured. On the other hand, if you speak of those flowers which have a calyx only, or both coats and coloured, as in the *Tulip*, *Arum*, and *Poinsettia*, you would call such structures a perianth from a botanical point of view.

Now we will look for a moment at the symmetry of the flower. You will always find that the different parts of a flower are arranged in twos, threes, fours, fives, or multiples of those numbers. In monocotyledons there are the threes; in the dicotyledons, twos, fours, and fives. So you see that if a plant has five sepals it may have ten, twenty, thirty, forty, or fifty stamens.

Then, again, the situation of the stamens plays a very important part in connection with the classification of plants. Now in the dicotyledons the stamens occupy three different positions. Sometimes they grow upon the thalamus when they are called hypogynous. When they grow on the calyx they are called perigynous; thirdly, on the ovary they are called epigynous. In the case of the *Orchid* tribe, where the stamens and pistil are united, the flower is called gynandrous, forming a column.

The pistil, as you all know, is the innermost part,

and occupies the centre of the flower. This also consists of parts which are often united, and correspond in number with the other parts of the flower, unless there is a suppression of parts.

One point more before we leave the essential organs of the plant, and that is, it is most important that a gardener should have a knowledge of the sexuality of plants. When a flower has both stamens and pistil it is called hermaphrodite; when, on the other hand, stamens only exist it is called staminate; if a pistil only it is pistillate. When both the organs are carried by one plant but in separate flowers, the plant is called monoecious; when they are borne on different plants the latter are called dioecious, that is to say, plants which carry only one sexual organ.

Well, then, I maintain this to be very important in connection with fruit growing and seed saving to have a knowledge of these things; because, if a man wants either fruit or seed, the pollen from the stamens must be brought into contact with the pistil. If the flower contains only one sex it is necessary to see that the flower becomes properly fertilised; and if the plant should be dioecious greater care will have to be bestowed.

Amongst professional men many a good crop is lost of Cucumbers, Melons, Vegetable Marrows, &c., through the picking off of the male blossom before the pollen is ripe. These flowers are quite as essential as the female flower, with the fruit attached to it.

Another great advantage we get here through a knowledge of botany is that the male blossoms do not punish a plant or in any way retard its free bearing; because, as soon as the pollen is ripe, the functions of a male flower are performed, no matter how long it may remain on the plant afterwards. In the case of the female quite a different nature of things exists. If a female blossom is allowed to remain upon a blooming plant, when the seeds are commencing to swell, these are absorbing the very life of the plant, because if seed is allowed to ripen the plant has attained the end of reproducing itself for which it came into being.

I shall say nothing upon fertilisation except it be that of the Fern, in which quite a different state of things happens from flowering plants. The spores, as you know, are usually borne upon the back of the frond. When the spores are sown under favourable conditions and germinate a little flattened body is developed, known as the prothallus; and it is upon this little flat body that the organs equal to stamens and pistil are developed, and are called antheridia (male organs), and archegonia (female organs). After these little organs reach maturity the archegonium becomes fertilised, and the future plant commences to grow from this very spot.

Here cross-fertilisation becomes a tedious business. How is it to be accomplished? Well, I believe in the principal of sowing two or more distinct varieties or species of spores in the same pan, and by so doing there is a possibility of cross-fertilisation taking place, through the movement of small insects, or probably by the air. Here again, I claim that a knowledge of botany will help a gardener.

Now, briefly, a few words upon classification. The sub-kingdom of flowering plants is divided into two classes as we have already seen, dicotyledons and monocotyledons. These are again divided up into sub-classes. The dicotyledons contain four sub-classes, the monocotyledons contain two, and the acotyledons two. These sub-classes are again divided up into orders, orders into genera, genera into species.

The four sub-classes of the dicotyledons are very easily distinguished from each other. Thalamiflorae have the stamens situated on the thalamus; and as we saw just now the stamens are hypogynous. The second is the Calyciflorae, which have the stamens situated on the calyx and are called perigynous, which means around the ovary. The Corolliflorae have stamens usually united to the petals; the Monochlamydeae have flowers with the calyx only.

In monocotyledons there are two sub-classes, namely, the Petaloideae, and Glumiferae. The Petaloideae include Orchids, Lilies, and Tulips; and all flowers with a coloured perianth belong to this class. Glumiferae include our cereals, grasses, etc. Acotyledons are divided into two sub-classes, namely, Acrogenae, and Thallogeneae. The first are plants with a distinct stem such as Ferns and Mosses, whilst the latter have no distinct stem and

leaves. They include lichens, Mushrooms, and other fungi.

Therefore, before we can determine the name of a plant, we have to know its class, sub-class, order, genus, and species. In calling a plant by its name we mention the genus and species. This subject of nomenclature is of great importance to the gardener, and one which would take some space to treat it as it should be. I hope I have made it plain that botany is a help to gardening. Another thing I will also say without fear of contradiction, that there is no man nor class of men by whom botany can be acquired so easily and thoroughly as by the gardener; because not only has he the theoretical part of the science, but also the practical part to deal with in the cultivation and management of plants. All the different aspects of plant life come before him, so by a little observation the practical gardener can become a professional botanist. Wherefore, let us do our best to attain a thorough knowledge of the profession (gardening), and nothing will help us onward to this goal better than a knowledge of botany.

This occupation of ours is almost I may say hereditary; it has come down to us all through the ages from our first parents. It was the art—ah! and the science—which first engaged the attention of man, and it will engage his attention to the end. We find also further down in history that the cultivation of gardens followed very closely upon civilisation; wherever a nation sprang up gardening was a prominent art. The Romans in all their conquests throughout the world never forgot to forward the cultivation of vegetables and other plants. Sir William Temple says, "Gardening has been the common favourite of public and private men, a pleasure of the greatest, and a care of the meanest; and, indeed, an employment and a possession for which no man is too high and none too low."

Do not for a moment think, although the profession of gardening has come down through so many centuries, that the whole field of plant improvement has been traversed, nor that there is little more to be achieved. Nay, far from it; there is a vast field ahead of us, where much remains to be done in the cultivation and improvement of plants. Therefore, let us do our part in this great work, for there are rich blessings yet to be attained which providence has ordained for industry.—R. Hodder.

MORLAND NURSERY, SOUTH NORWOOD.

WHEN Mr. F. C. Bause first set up his establishment at Portland Road, South Norwood, in the year 1884, he had already acquired great renown as a cultivator and hybridiser of Caladiums, Crotons, Dracaenas, and other fine foliage plants. These were taken up with renewed vigour in the Morland Nursery, with the result that numbers of fine things own this place as their home—the spot where they first found the light. Since the comparatively early death of Mr. F. C. Bause, at the age of fifty-six, in October, 1895, the business has been carried on by the eldest son, Mr. C. F. Bause, aided by his brother-in-law, Mr. Luther, and the usefulness and fame of the nursery has in no way decreased.

There are in all some seventeen glasshouses, all of them roomy, well appointed, and well stocked with superb collections of the various plants that are taken up.

Of Crotons it has never fallen to our lot to see a finer batch, for the richly-coloured foliage was such that is very seldom seen so early in the year, even on good plants. The collection is an exceedingly rich one, for it includes nearly a hundred varieties, amongst which we find a wonderful variety of colour, size, and shape of leaf. The rough distinction between broad-leaved and narrow-leaved forms has been broken down, for a number of intermediate ones have been raised. The older sorts, such as *C. evansianus*, *C. Weismanni*, and *C. Queen Victoria*, are not made a specialty of; they are left to the market growers, and the whole of the energy is applied to the care of the choicer and newer varieties. Of these Golden Ring is certainly one of the finest Crotons that was ever sent out. As a decorative plant there are no Crotons to beat it, its long, arching, green and gold leaves of medium width, with their gracefully undulated margins, being as suitable for dinner-table decoration as they are

imposing in the warm conservatory or stove. Baron Alphonse de Rothschild is the name given to a new broad-leaved variety whose leaves exhibit a rich shade of orange-red, flushed with green. This variety received the Gold Medal at Paris two years ago, and is specially to be recommended on account of the fact that the leaves assume their characteristic colouring at a very early stage, which cannot be said of many other Crotons, and of none to the same degree as of this one. Madame Baillon is a new French variety that is thought well of. The leaves are broad, the colours being green and gold, with rose petioles.

One large house contained an especially fine lot of plants amongst others of such handsome varieties as Prince of Wales, Princess of Wales, Aigburth Gem, Reedi, Flambeau, Flamingo, Magnificent, and Albert Truffaut. Here they were in all sizes from the lately-struck cutting to the noble plant in an 8-in. pot—something to suit all buyers, both big and little.

To keep up such a big stock of plants entails a great deal of labour, and we were informed that cuttings are taken whenever they can be obtained, although spring cuttings are favoured as they strike quicker and make better plants.

Dracaenas are grown in even larger numbers than the Crotons, and they are in equally as good condition. There we saw *D. pendula*, one of the first plants sent out by Mr. Bause, and one that for a number of years has proved itself well worthy of all the commendations lavished upon it from time to time. For general purposes, however, it must now take a second place to Lord Wolseley, also a dark variety, but with rather narrower and less pendulous leaves, and more pyramidal habit. This variety makes a capital table plant, and being a remarkably good doer should find a place in all collections of stove plants. Mr. Bause has a magnificent stock of this *Dracaena*, and some particularly fine specimens in 7-in. pots were eloquent witnesses of capable management and careful cultivation.

Princess Charles of Denmark is a new variety of considerable merit that originated from a batch of seedlings. It is a noteworthy addition to the *D. terminalis* type. The narrow leaves, however, have a gracefully-arching tendency, and the whole plant is very elegant in appearance. The colour is dark olive green with a carmine-red margin of variable width. *D. Alexander Laing* is another handsome narrow-leaved variety of high decorative quality. There again we have a carmine margin to the olive-green leaves. It makes very useful stuff in 48-sized pots.

Other well-known forms, such as *D. goldieana*, *D. Lindenii*, and *D. Exquisite*, are grown in some quantity, whilst the very distinct *D. godseffiana*, and the prettily variegated *D. sanderiana* are likewise well looked after. *D. Laingii* is one of the handsomest of the very narrow leaved section. It has slightly broader leaves than the graceful *D. Doucetii*, and the colours are much the same, green and white, although in *D. Laingii* there is the addition of a pink flush to the middle of the leaf. Of green-leaved varieties the only one that is grown is *D. Danalli*. We noticed a grand batch of this in an old house that was on the place when Mr. Bause went, but which before that date had been used as a vinery.

Palms are grown in great numbers, but they are chiefly of such forms as find a ready market. The two *Kentias*, *K. belmoreana*, and *K. fosteriana* find a place near the top of the list, for they are favourites everywhere. The same may be said of the elegant but more delicate *Cocos weddeliana*. These are to be seen in all sizes from the seedling, with only two or three small leaves, up to noble plants in 7 in. and 8 in. pots, several houses being entirely filled with them. *Geonoma gracilis* is also grown to an unusual extent, and we were practically pleased with the fine batches of various-sized plants that were to be seen. We have never before seen so many plants of this pretty Palm collected in one place. *Phoenix rupicola* is another favourite, indeed it probably commands a more ready sale than any other of its congeners, which is not surprising when we consider its beauty and tractability.

Amongst miscellaneous foliage plants which are deserving of increased attention from the gardener we may mention *Leea amabilis splendens*, with its singularly handsome olive-green leaves with white midribs and veins. This plant is rather tender, and

we do not often see it in such fine condition as it is with Mr. Bause. Under good cultivation, such as is given it at Morland Nursery, it grows vigorously, as was testified by some grand bushy plants which were only in 48s. *Heliconia illustris rubricaulis* is another subject that claims a place in all collections. It grows freely, may be propagated readily, and soon makes fine specimens even when in comparatively small pots. When in condition there is no gainsaying the nobility of its appearance or its value for decorative purposes.

SOCIETIES.

ROYAL HORTICULTURAL.—May 10th.

THERE was a considerable amount of variety at the meeting on Tuesday last, more in fact than we have occasionally seen at this particular period of the year. Orchids were prominent, and so were Tulips, hardy herbaceous plants, flowering shrubs, Roses, Indian Azaleas, Auriculas, Crotons, and other subjects.

Messrs. J. Veitch & Sons, Ltd., exhibited a large and very varied collection of Orchids, abundantly flowered and set up with Palms and Ferns. Prominent amongst other things were *Laelia purpurata*, *Cattleya Mendelii*, *C. Mossiae*, *C. lawrenceana*, numerous plants of *Laelia Latona Odontoglossum Edwardii*, *O. Hallii*, *O. luteo-purpureum*, in fine varieties, *O. crispum*, showing a considerable range of colour, *Epidendrum Wallisii*, *Cymbidium lowianum* and others. Showy and distinct were such bigeneric hybrids as *Laeliocattleya wellsiana*, *L. Ascania*, the hybrid *Dendrobium Stratius* (*D. japonicum* x *D. dalhousieanum*) and the pure what *Cattleya intermedia alba*, the choicest thing in the group (Silver Flora Medal).

Messrs. Hugh Low & Co., Bush Hill Park, Enfield, set up a fine group of *Laelia purpurata*, *Cattleya Mendelii* and *Odontoglossum crispum* in great variety. Amongst the more interesting and less common subjects we noted the beautifully marked and lined *Bulbophyllum claptonense*, *Laeliocattleya schilleriana*, *Oncidium concolor* and a fine variety of *Odontoglossum triumphans* (Silver Banksian Medal).

MM. Lucien Linden & Co., 117, Rue Belliard, Brussels, Belgium, exhibited a collection of cut flowers of *Miltonia vexillaria*, *Odontoglossum crispum* and *O. Pescatorei*. A splendid panicle of *O. Pescatorei* carried sixty-five flowers. The varieties of *O. crispum* bore large, round flowers mostly having white flowers, but some of them shaded rose.

Welbore S. Ellis, Esq. (gardener, Mr. W. S. Barrell), Hazelbourne, Dorking, staged a small group of *Odontoglossum crispum* in variety, and two splendidly grown *Miltonia vexillaria*, richly coloured and profusely flowered.

Major Joicey (gardener, Mr. F. J. Thorne), Sunningdale Park, Sunningdale, Berks, exhibited a grand piece of *Anguloa Ruckeri*, for which he received a Cultural Commendation, and an equally fine piece of *Eriopsis rutidobulbon*, having a curiously wrinkled pseudobulb. Walter Cobb, Esq. (gardener, Mr. Howes), Dulcote, Tunbridge Wells, showed the richly-coloured *Laeliocattleya Hippolyta Dulcote* var.

Messrs. J. Veitch & Sons, Ltd., staged the beautiful new hybrid *Spathoglottis aureo-viellardi*. Thos. Statter, Esq. (gardener, Mr. R. Johnson), Stand Hall, Manchester, received a Cultural Commendation for *Cypripedium macrochilum giganteum superbum*. C. L. N. Ingram, Esq. (gardener, Mr. T. W. Bond), Elstead House, Godalming, staged the bigeneric *Laeliocattleya Fascinator*. Fred Hardy, Esq. (gardener, Mr. Stafford), Tyntesfield, Ashton-on-Mersey, staged *Soprocattleya George Hardy*, *Cypripedium Goweri*, *Cattleya Laura-Mossiae*, &c. J. Gurney Fowler, Esq. (gardener, Mr. J. Davis), Glebelands, South Woodford, exhibited *Cattleya intermedia Fowler's* var.

A nice group of small but shapely and well-grown Crotons, interspersed with Ferns and *Panicum variegatum* was exhibited by Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton. Among the varieties of Crotons shown were *C. Reidii*, *C. Golden Ring*, *C. Aigburth Gem*, *C. Thompsoni*, *C. Gordoni*, and *C. Warreni*, all of them well-coloured samples (Silver Banksian Medal).

The hardy flowers sent by Messrs. Paul & Son, of Cheshunt, included sprays of *Cerasus Avium flore*

pleno, *C. Myrobalan pendula*, and *Cydonia Maulei*. There were also panfuls of the pretty *Phlox atropurpurea*, P. G. F. Wilson, *Hutchinsia alpina*, and *Saxifraga Wallacei* (Silver Banksian Medal).

On either side of the doorway, Messrs. Wm. Paul & Son, of Waltham Cross, Herts, put up a group of Roses. Here there were to be seen some large pot plants of such varieties as *Caroline Testout*, *Violette Bowger*, and *Jeannie Dickson*. The blooms of *La France*, *Medea*, and the pretty *Apricot-hued Queen Mab*, were some of the best of the cut flowers shown (Silver Flora Medal).

Messrs. W. Cutbush & Son, Highgate, N., put up an exceedingly showy group of miscellaneous plants. In the background was a row of *Wistaria sinensis*, and in the front of this were clumps of *Azalea mollis*, and such *Ericas* as *E. Cavendishii*, *E. ventricosa magnifica*, and *E. perspicua nana*; also fine clumps of *Boronia heterophylla*, and *Hydrangea Thomas Hogg*. Ferns, *Isolepis gracilis*, and Japanese Maples afforded the necessary reeneries (Silver Banksian Medal).

Mr. Charles Turner, The Royal Nurseries, Slough, contributed a quantity of small well-flowered Azaleas, amongst which were such handsome forms as *President Van Imschoot*, *Dryade*, *Ami Chas. Vermeire*, *Louise Cavalier*, *Marie Vervaene*, *Joseph Vervaene*, and *President A. d'Haene*. Three plants of each variety were shown, and these were placed together in baskets to form a single mass. The same firm showed capital samples of the grand *Malmaison Carnation Princess May*, and a single plant of the *Polyantha Rose Thalia*.

The cut Roses sent by Mr. George Mount, Canterbury, were really superb. The blooms were not only large, but of perfect form, and rich colour. *Catharine Mermet*, *Ulrich Brunner*, and *Mrs. John Laing* were represented by a large stand of two dozen blooms of each variety, and in addition to these there were fine blooms of *General Jacqueminot*, *Niphotos*, *Catharine Mermet* and *Gabriel Luizet* (Silver Flora Medal).

Sprays of hardy flowering and foliage shrubs came from Messrs. J. Cheal & Sons, Crawley, Sussex; also sprays of bedding *Violas*, in which there was a good collection of varieties, *A. J. Rowberry*, *Colleen Bawn*, *Crimson King*, *Blue Cloud*, *Blue Gown*, and *Archie Grant* being some of the finer forms.

Messrs. R. Miller & Co., 267, Fulham Road, S.W., sent white and crimson *East Lothian Stocks* in pots, also a special strain of *Pyrethrum aureum*.

Messrs. W. Balchin & Sons, of Hassocks, Hove and Brighton, have a great name as cultivators of hard-wooded subjects, and on this occasion they contributed a quantity of fine young plants of *Boronia serrulata*, *B. heterophylla*, and *Erica perspicua nana*. There was also a very pretty batch of the bright blue *Browallia elatior*.

Mr. A. Tulett, Crocken Hill, Swanley, had a basketful of plants of the new and very free-flowering zonal *Pelargonium A. Tulett*, a sport from the well-known *F. V. Raspail*. Mr. J. Gilbert, Dyke, Bourne Laues, had a hatch of the handsome *Aнемone King of Scarlets*.

Messrs. J. Veitch & Sons, Ltd., Chelsea, showed a number of interesting and beautiful plants, amongst them being *Citrus trifoliata*, *Daphne Cneorum major*, *Hydrangea japonica Mariesii*, *Rubus deliciosus*, *Cytisus Schipkaensis*, and *Notospartium junceum*. They also had a fine plant of *Acer platanoides marginata alba*.

A very interesting exhibit was made by Mr. David Storrie, St. Madoes Cottage, Glencarse, Carse of Gowrie, Perthshire, in the shape of a strain of sweet-scented giant border Auriculas. This strain has been obtained by Mr. Storrie after fifteen years continuous selection from the progeny of one yellow-flowered plant. The strain was a very fine one, both individual flowers and umbels being of great size. *Souvenir de Helen Theresa*, *Miss Constance*, *Souvenir de Sir James*, and *Miss Evelyn* were some of the most noteworthy of the named sorts. Some magnificent forms of Alpine Auriculas were sent by Mr. J. Douglas, Edenside, Great Bookham, Surrey. *Dean Hole*, *Perfection*, *Zixa*, *John Gilbert*, and *Captain* were the best of the varieties shown. A huge inflorescence of *Dracaena indivisa* was contributed by B. Bennett, Esq., Cheverells Park, Dunstable.

The hardy flowers sent by Messrs. Barr & Sons, of Long Ditton, exhibited a vast amount of variety. *Iris*, *Primula cortusoides* in variety, *Fritillaria*

recurva, *Orchis papilionacea*, and *O. italica* were all noteworthy. The Tulips, however, attracted by far the greatest amount of interest. The collection of Darwin varieties was very comprehensive, and included such distinct and handsome forms as *Glow*, *The Sultan*, *Hecla*, *May Queen*, *Aurora*, and *Apricot*. The species of Tulipa comprised *T. retroflexa*, *T. strangulata*, the curious *T. viridiflora*, *T. Batalini*, and *T. fulgens*. The so-called Cottage or May-flowering Tulips were represented by *Picotee*, *elegans*, *elegans alba*, *Buenaventura*, *Blue Flag*, and *maculata Brilliant*. There were also a few samples of the quaint *Parrot Tulips*. A Silver Gilt Medal was awarded.

Mr. W. James, Woodside, Farnham Royal, Slough, sent an interesting batch of hybrid *Cinerarias*, obtained by crossing *C. cruenta* with the garden *Cineraria*, and recrossing the progeny with *C. lanata*.

At a meeting of the fruit and vegetable committee a Silver Knightean Medal was awarded to Mr. G. Norman, gardener to the Marquis of Salisbury, Hatfield, Herts, for three boxes of grand samples of Royal Sovereign Strawberry.

Mr. J. Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton, received a cultural commendation for a dozen fruits of *Nectarine Cardinal*. A similar award went to Mr. John Ryder, gardener to the Dowager Countess of Limerick, for two dishes of Peaches.

Six dishes of Apples competed for the Veitch flavour prize. Hereford Pearmain shown by Mr. R. Bullock, gardener to C. P. Serrocold, Esq., Taplow Hill, Maidenhead, was first; whilst *Colville Rouge*, sent by Mr. George Woodward, Barham Court Gardens, Maidstone, was second. Only one dish of Pears was forthcoming, and that of the variety *Baurré Bretonneau* to which the second prize was given.

Mr. George Wythes, gardener to Earl Percy, Syon House, Brentford, had six dishes of forced French Beans. There was a collection of Radishes on the tables illustrative of the produce of a number of seedsmen. Several Awards of Merit were given, for which see a succeeding issue.

ROYAL BOTANIC.—May 11th.

THE summer show of this society was held on the above date at Regent's Park, when a fair quantity of material was forthcoming, but chiefly in the miscellaneous exhibits, for the competitive classes were very poorly patronised. The weather was fine and bright, but gusty, and tried considerably the tent in which, as usual, the exhibits were accommodated.

In the scheduled classes, Mr. G. Cragg, gardener to W. Walker, Esq., Winchmore Hill, received first prize, for a group of Orchids. Messrs. G. Jackman and Sons, Woking, obtained similar honours for ten pot Roses, distinct, showing fine samples of *Crimson Rambler*, *Mme. Lacharme* and *La France*. Mr. W. Rumsey was second, with much smaller but healthy plants. Mr. G. Kelf won first prize for six specimen Palms. *Areca lutescens*, *Chamaerops humilis*, and *Latania borbonica* were his strongest plants. Mr. Empson, gardener to Mrs. Wingfield, Amptill House, Amptill, Bucks, scored for two specimen *Dracaenas*, showing *D. sanderiana*, and *D. Lord Roberts*.

Mr. W. Rumsey obtained first prize for the group of Roses, and showed some very clean and good material. Mr. Empson had the best six fine foliage plants; Mr. G. Kelf coming in second. Mr. G. Cragg, gardener to W. Walker, Esq., Winchmore Hill, was first for six Orchids, whilst Mr. G. Kelf had the best six fine foliage plants in the gentlemen's gardeners' and amateurs' class; Mr. Empson being second. Mr. G. Mout won chief honours for two dozen cut Roses; Mr. W. Rumsey being second.

The miscellaneous exhibits, as has been mentioned, constituted the bulk of the show.

The four large central beds surrounding the fountain in the large tent were occupied by some imposing and exceedingly showy groups.

Mr. H. B. May, of Dyson's Lane Nurseries, Upper Edmonton, had a group of small but well-flowered pot plants of *Rose Crimson Rambler*, interspersed with *Spiraea astilboides floribunda*, and *Acer Negundo*. Ferns were tastefully employed as a ground work; and there were also some late plants of *Begonia Gloire de Lorraine*, and some handsome pieces of *Hydrangea Thos. Hogg*, and *H. hortense* (Large Silver Medal).

Messrs. Wm. Paul & Son, Waltham Cross, sent some nice pot Roses and a quantity of cut blooms of the same for which a Silver Gilt Medal was voted.

The showiest exhibit in the whole tent came from Messrs. John Laing & Sons, of Forest Hill, S.E. It consisted of a great variety of flowering and foliage plants, amongst which were some capital Crotons, Dracaenas, Caladiums, and Palms in variety amongst the foliage element, whilst Gloxinias and Ericas were wonderfully bright and good (Silver Gilt Medal). The Messrs. Laing also had a table of very handsome floral arrangements, set off with pot plants and draped with sprays of Smilax. A basket of Irises, Liliun Harrisii, and Pelargoniums with Croton leaves and sprays of Asparagus was specially worthy of note. A bouquet of Roses and Lilies of the Valley was also good (Large Bronze Medal).

Messrs. B. S. Williams & Son, of Victoria and Paradise Nurseries, Upper Holloway, N., had a nice group of Orchids, and with them showed Clivias, Ericas, Anthuriums, and the new American Canna Mrs. Fairman Rogers in capital condition (Silver Gilt Medal).

A showy exhibit of miscellaneous flowering plants set up with Palms and Ferns came from Messrs. Wm. Cutbush & Son, Highgate, N. Erica candidissima, E. ventricosa minor, Boronia heterophylla, and the fine Malmaison Carnation Princess of Wales were the choicest of the flowering element (Large Silver Medal).

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., had a varied group of hardy plants for which a medal was given. Tulipa Greigi, Epimedium alpinum and Dodocatheon jeffreyanum were in grand condition, whilst a collection of hardy Orchids was very interesting (Small Silver Medal).

The Caladiums sent by Messrs. John Peed & Sons, of Roupell Park Nurseries, Norwood Road, S. E., were of that high quality that we expect to see from this firm. There were some grand specimen plants of such varieties as John Peed, Excellent, Pavis de Chevannes, and Triomphe du Comte, whilst the smaller samples of Rose Laing, Lady Mosley, Duke of Teck, and Louis Van Houtte were equally bright (Silver Gilt Medal). A collection of Dracaenas was also contributed by the Messrs. Peed, and consisted of well-grown and shapely plants of a number of leading varieties, likewise cut blooms of single tuberous Begonias and Gloxinias.

Mr. Kelf, gardener to Mrs. Abbott, South Villa, Regent's Park, received a Small Silver Medal for a semi-circular group of Palms, Liliiums, Caladiums, and miscellaneous foliage plants. This was a meritorious exhibit.

The specimen Azaleas from Mr. Charles Turner, Slough, were first-class, for all the plants were well flowered, and in excellent trim. Reine des Pays Bas, Mme. Hermann Seidel, Rosa Mundi, Charmer, Ceres, Kronprinzessin Victoria, and Louise Cuvelier were some of the best varieties. Mr. Turner also showed Rose Thalia and Malmaison Carnation Princess May (Silver Gilt Medal).

A very charming exhibit of Japanese Maples, varieties of A. palmatum was made by Messrs. John Waterer & Sons, Ltd. (Large Broze Medal).

Cardinal Nectarine, both in plucked fruit and on the trees, was again well shown by Messrs. T. Rivers & Son, of Sawbridgeworth, Herts. (Silver Gilt Medal).

Messrs. A. Young and Co., of Stevenage, Herts, had a collection of hardy flowers (Large Bronze Medal).

Mr. George Mount, of Canterbury, sent some magnificent cut roses. Catherine Mermet, Mrs. John Laing, and Ulrich Brunner were Mr. Mount's best varieties (Small Silver Medal).

The hardy cut flowers from Messrs. Barr and Sons, of Covent Garden, consisted chiefly of Tulips, of which a great variety was shown. The Sultan, Picotee, Hecla, King Harold, T. retroflexa, and T. maculata Brilliant were some of the finest forms, and a few bunches of Parrot varieties were also in evidence. A Silver Medal was awarded for this grand display. A Bronze Medal went to Mr. A. Smith, Downley, High Wycombe, for a quantity of good Marechal Niel Roses. The floral table sent by Mr. J. Prewett, of 11, Lancaster Street, Bayswater, was very pretty. Some tastefully executed and imposing floral devices came from Messrs. B. S. Williams and Son (Small Silver Medal).

A splendid collection of vegetables and fruit was

staged by Mr. J. Empson, to whom a large Silver Medal was given. Beans, Peas, Potatos, Asparagus, Tomatos, and saladings in variety amongst the vegetables were of the best, and the fruit was represented by Bananas, Strawberries and Apples.

NATIONAL TULIP.—May 11th.

THE annual show of the National Tulip Society was held in conjunction with the Royal Botanic Society's summer show at Regent's Park, the exhibits being staged in the long corridor.

There was rather a dearth of material, as far as quantity went, and the blooms, too, were inclined to be smaller than usual, doubtless owing to the malign influence of the late cold weather, for the season this year is fully ten days late. The chief feature of the exhibition was a splendid collection sent by Messrs. Barr & Sons, of Long Ditton. The following were some of the finest varieties in their respective sections:—Rose breeder: Mabel, Lord Derby, Lady C. Grosvenor, and Annie McGregor. Rose rectified: Annie McGregor, Aglaia, and Alice. Bizarre breeder: James Wild, Wm. Lee, Sam Barlow, and Dr. Hardy. Bizarre rectified: Colbert, Sir Joseph Paxton, Sam Barlow, and Lord Stanley. Bybloemen breeder: Miss Hardy. Bybloemen rectified: Friar Tuck, Talisman, and Lord Denman. A Gold Medal was deservedly awarded.

Mr. C. W. Needham showed a collection of three blooms each of twenty-five varieties of English florists' Tulips. They comprised some excellent flowers of Mabel, Lord Derby, Adonis, Talisman, Sir Joseph Paxton, Chancellor, Modesty, and Mrs. Hardy.

In the competitive classes, Mr. Alfred Chater, Cambridge, was placed first, for twelve dissimilar rectified varieties. He showed Duchess of Sutherland, Sarah Headley, Gucedo, Arion, Glory of Stapleford, Mrs. Jackson, Richard Headley, and Sam Barlow among his best. The last named variety was adjudged to be the premier flamed bloom in the show. A. D. Hall, Esq., Wye, Kent, was second for the twelve, having good blooms of Comte de Vergeunes, Duke of Devonshire, Sir Joseph Paxton, and Annie McGregor; Mr. Chas. W. Needham, Rayton, Lancashire, was third; Messrs. Barr & Sons were fourth. The best feathered bloom, a variety named Industry, was in the Messrs. Barr's twelve.

In the smaller class for six dissimilar, rectified, Mr. J. W. Bentley, Middleton, Lancs., came to the front, showing Annie McGregor, Lord Stanley, Adonis, Comte de Vergeunes, Wm. Wilson, and Bessie. Mr. A. Chater, and Mr. Charles W. Needham were awarded equal seconds.

Three flamed Tulips, one of each class, were best shown by Mr. J. W. Bentley, who had capital blooms of Lord Stanley, Mabel, and King of the Universe; Mr. C. W. Needham was second; and Mr. A. Chater, third.

Mr. J. W. Bentley was placed first for the Barlow prizes for a pair of rectified Tulips. He showed San Josef, and Duke of Devonshire. Mr. A. D. Hall was second with Sir Joseph Paxton, and Comte de Vergeunes. Mr. A. D. Hall received first for six breeder Tulips. He had grand samples of Mabel, Glory of Stakehill, John Heap, Lloyds 200, Annie McGregor, and Excelsior. Messrs. Barr & Sons were second, and their stand contained the premier "breeder" bloom in Goldfinder. Mr. J. W. Bentley was third.

In the smaller class for three breeder varieties, Mr. J. W. Bentley was first, showing Mabel, Storer's Seedling, and Glory of Stakehill. Mr. C. W. Needham was second.

QUESTIONS AND ANSWERS.

* * * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Aerial Roots on Vines.—R. S. W.: It is quite a common thing for Vines to produce roots in clusters

from the old rods in the interior of vinerias and other houses. The warm, moist air of the house encourages their development; but you must seek elsewhere for the cause. They mean that the proper roots in the soil are not performing their functions properly. They may be in a wet or damp, cold soil, so that some of them may have perished in winter. The border should be examined to see if the drainage is good, and whether there is a drain or a proper and natural escape for the superfluous moisture in the border. If not, you had better take out the soil in September, or in case the Grapes are still hanging it might be done in March before the Vines begin to grow. September is the best time if you could manage to have the Grapes removed. After making the drainage good, put some turves over the brick bats used for drainage, cover this with a layer of soil, and then carefully spread out the roots of the Vines about 9 ins. from the surface, and cover with soil. Shade the house for about a week to prevent the Vine leaves from flagging till the roots have taken fresh hold of the soil. They will be established before winter. Do not place a pot under the air roots nor encourage them in any way. They will die of their own accord when the wood ripens in autumn.

Book on Table Decorations.—E. E.: There was a book on floral decorations by Miss Hassard, but we believe it is out of print, and can only be obtained second hand by a rare chance now and again. We understand that Messrs. S. Perkins & Sons, Coventry, Warwickshire, issue a pamphlet or small hook on the subject, but whether it is illustrated we have not heard. You could ascertain by writing to the firm at Coventry, which is noted for floral decorations generally. There does not seem to be a good handbook on the subject, probably because fashions in decorations are continually changing. You should make a point of visiting some good shows where floral decorations are well done, and so get a few hints upon which you can act and work up fresh devices for yourself. You only want a start, and with a little care and observation you will soon get a good notion of the subject.

Bedding Arrangements.—Box. We should have liked to know the colours of your Begonias, but in the absence of the same we should say plant No. 4, with scarlet Begonias; No. 10, with orange Begonias; No. 9, with rose varieties; and No. 12, with white varieties. These would not clash with the Roses in the centre, nor outside of the design. Mesembryanthemum would answer in Nos. 4 and 10 as a groundwork, but we should like something green in No. 12 not to clash with the white, and No. 6 might be done to match No. 12. Use Herniaria or Mentha gibraltaria, but if you have not got either you can use the yellow Mesembryanthemum. The Begonias may be put further apart if you use a groundwork. Edge them with blue Lobelias. Plant Nos. 3 and 7 with Pelargonium Flower of Spring, mixed with blue Violas, and edged with Iresine. No. 3 will be close to No. 12, but we would aim at getting the lighter colours towards the centre. Nos. 1 and 9 might be planted with Pelargonium Mr. Christine, edged with Pelargonium Mrs. Pollock to tone down the dark Roses at the circumference. Nos. 2 and 8 might be planted with Pelargonium Crystal Palace Gem, which will be an intermediate shade between Nos. 1 and 3 on the one hand, and Nos. 7 and 9 on the other. Edge No. 2 and 8 with a double line of blue Lobelias. Nos. 5 and 11 could be planted with bronze Pelargonium Marshal MacMahon, edged with Echeveria. By-the-bye you have a number of small ones edged with Echeveria, so that those edgings which we have already named in those cases may be omitted. The design is rather complicated, and we have arranged the colours as well as we can with the material you have in stock. The central line, including the bed of Rose Gloire de Dijon, contains seven beds which come in contrast with so many others that great caution is needed to avoid their clashing with one or other of the rest. Unless you employ Pelargonium H. Jacohy in Nos. 2 and 8, we do not see where else you can place them without clashing with other beds, and even then they would be close to the dark Roses on the circumference of the plan. We shall keep your plan for a week or two, so that if you have other suggestions to make we can refer to it. Your second plan arrived as we were going to press, but you will see that we have adopted the beds in pairs exactly as you have marked them.

Watercress Culture.—D. W. D.: The Watercress (Nasturtium officinale) is a common British weed, often choking up small streams of clear, running water, so that the streams you mention should answer admirably. It should grow freely with you, for it does so, to our knowledge, only a few miles to the south of your locality. We have seen the stems 6 ft. long, and choking up the waterway. Seeing that you do not know the plant, the best way would be to order some Watercress seeds from your seedsman, telling him to get them for you if he does not keep them in stock. The seeds are small, so that a small quantity will give you many plants. The best way to proceed would be to sow the seeds in boxes, pans, or in an

open border, keeping them moist till they get a good start, if the weather should make watering necessary. Then proceed to make a bed for the permanent plantation. The best plan would be to dig out a square bed of the size you want a little above the bed of one of the streams you mention. Place a layer of clean river gravel over the surface of the bed after putting in a layer of good loam mixed with leaf soil and sand. The gravel is merely to make a clean bottom. Higher up the stream cut out a little ditch or channel or even put in a drain of drain pipes, so as to lead a small quantity of water into the Cress bed. About 3 in. or 5 in. of water will be a sufficient depth in the bed, above which you may provide an overflow into the stream again. You should provide for raising or lowering the level of the water at the outlet. When your plants are sufficiently strong, plant them 1 ft. apart each way in the bed. Water should be kept slowly running over the bed to keep it clean.

Vine Leaves, Spotted and Scalded.—*Alister*, and *W. A.*: After examining the Vine leaves you sent us, *Alister*, we are fully convinced that your supposition about the dull weather is the correct one. At all events that is at the bottom of it. The leaves are very thin and flabby, and the excess of moisture has caused the spotting. The larger, brown or withered, patches are due to scalding by the sun striking upon them while they were wet with condensed moisture. You should ventilate more freely early in the morning, and, if necessary, get a little brisk heat by the aid of the hot-water pipes, so as to dispel the moisture. It will take a little more fire-heat to do this, but it will enable you to give plenty of air to strengthen or harden the leaves. You can economise sun-heat by closing at 3 p.m. or soon after, according to the heat of the sun, at the same time syringing and damping down the house thoroughly. Ventilate again early in the morning, and so continue through the season. The leaves you sent us, *W. A.*, were scalded, as gardeners say. The house has been kept rather close, and the sun has acted upon the leaves when drops of moisture were on them. Ventilate early in the morning, as above advised, and we think your Vines will soon get over the difficulty. The dull weather and lack of sunshine has much to answer for. The above cases occurred hundreds of miles apart, yet we have no doubt the cause is the same, the dull weather being general over the British Isles.

Book on Bedding Out at Hampton Court.—*A. B.*: A "Guide to Hampton Court," containing bedding designs, was published by the superintendent some years ago and was sold by him at the gardens till quite recently at least. There is a new superintendent there, and we are not sure whether he still continues the sale of the book, which was priced at 6d., if we rightly remember. You could write to the "Superintendent," Hampton Court Gardens, Middlesex, and we think he will put you right. Messrs. H. Cannell & Sons, Swanley, Kent, also offer a small book containing sixty bedding designs, which they send post free for six stamps.

Vanda Suavis Bare at the Bottom.—*T. E.*: You should have no difficulty with healthy plants, which are generally furnished with an abundance of good roots all up the stem. The bare part of the latter could be cut away so that the good foliage could come down to the pots. This should be done while the young roots are just commencing to grow, which you can easily determine by watching the tips which become greener than the older portions, or even the tips themselves while growth is stationary. If the plants are somewhat top-heavy you can steady them with a stake till the young roots have taken firm hold of the fresh material. This has often been done by gardeners, and the plants get over the operation without apparently having suffered in the least, by a little careful treatment while the young roots are taking fresh hold. Keep the atmosphere fairly moist, but not stagnant, throughout the twenty-four hours of the day.

Names of Plants.—*L. M.*: 1, *Forsythia suspensa*; 2, *Kerria japonica flore pleno*.—*S. G.*: *Dendrobium speciosum*.—*Alister*: 1, *Doronicum Pardalianchus*; 2, *Helonias bullata*; 3, *Adonis vernalis*; 4, *Hacquetia Epipactis*; 5, *Garrya elliptica*; 6, *Polypodium vulgare cambricum*; 7, *Libocedrus decurrens*.—*W. G. B.*: 1, *Saxifraga Stracheyi*; *Doronicum plantagineum*; 3, *Phlox subulata Nelsoni*; 4, *Ophiopogon japonicus*; 5, *Lychnis alpina*; 6, *Primula veris*.—*J. C. S.*: 1, *Lamium maculatum*; 2, *Arenaria trinervis*.—*A. C.*: 1, *Dendrobium findlayanum*; 2, *Odontoglossum odoratum*; 3, *Odontoglossum crispum ruckerianum*; 4, *Cattleya schroderae*.—*M. W.*: 1, *Pyrus floribunda*; 2, *Pyrus spectabilis*; 3, *Magnolia soulangeana*; 4, *Akebia quinata*.

Communications received.—*A. D. Webster*.—*L. Upcott Gill*.—*Toogood & Sons*.—*J. S. Virtue & Co.*—*E. & B. May*.—*W. Swan*.—*M. M'Laren* (next week).—*Geo. Duthie*.—*Holly Bush*.—*Amateur* (please send your name and address, not necessarily for publication).—*R. W.*—*G. B.*—*Western*.—*Nemo*.—*W. H.*—*J. C.*—*T. A.*—*R. S.*—*F. Sander & Co.*—*J. Veitch & Sons, Ltd.*

TRADE CATALOGUE RECEIVED.

JOHN LAING & SONS, Forest Hill, London, S.E.—Descriptive Catalogue of Hardy Perennials.

FIXTURES FOR 1898.

MAY.

- 18.—York Florists' Exhibition.
- 18.—Alexandra Palace Show (3 days).
- 25.—Temple Show (3 days); Bath and West of England at Cardiff (5 days).
- 27.—Manchester Whitsuntide Exhibition (6 days).
- 28.—Cheltenham Show (2 days).

JUNE.

- 8.—Royal Botanic Society's Floral Fête (two days).
- 14.—Royal Hort. Society's Committees.
- 15.—Grand Yorkshire Gala (3 days).
- 20.—Royal Agricultural Show, Birmingham.
- 22.—Jersey Rose Show.
- 23.—National Society's Rose Show at Bath.
- 28.—Royal Hort. Society Committees; Special Rose Show; R.H.S. of Southampton (2 days).
- 29.—Richmond Horticultural Society; Croydon Rose Show.

JULY.

- 2.—Rose Show at Crystal Palace.
- 5.—Hereford Rose Show.
- 6.—Farningham Rose and Horticultural Show.
- 6.—Co. Boro' of Hanley Floral Fête (2 days).
- 6.—Tunbridge Wells Rose Show.
- 7.—Woodbridge Rose Show.
- 9.—Manchester Rose Show.
- 9.—Garden Party and Exhibition, N.A.G.A.
- 12.—Wolverhampton Floral Fête (3 days).
- 12.—Royal Hort. Society's Committees.
- 13.—Ipswich Rose Show.
- 13.—Durham and Newcastle Hort. Society's Show (3 days).
- 14.—National Rose Show at Halifax.
- 20.—National Carnation and Picotee Society, at the Crystal Palace.
- 21.—Sidcup Rose Show.
- 26.—Royal Hort. Society's Committees.

AUGUST.

- 1.—Beddington, Carshalton, and Wallington Show.
- 1.—Leicester Show (2 days).
- 1.—Northampton Hort. Society (2 days).
- 9.—Royal Hort. Society's Committees.
- 10.—Bishops Stortford Hort. Society's Show; Hastings and St. Leonards Hort. Society's Show.
- 10.—Salisbury Show.
- 10.—Etwall & District Show.

INDEX TO ADVERTISEMENTS.

| | |
|---------------------------------|--|
| Auction Sales. | Lawn Mowers. |
| Protheroe & Morris.....578 | Lloyd, Lawrence & Co....591 |
| Catalogues. | Ransomes, Sims & Jefferies, Ltd.578 |
| Barr & Sons.....577 | A. Shands & Son, Ltd....590 |
| Bunyard & Co.....577 | Manures. |
| J. Forbes.....579 | C. Beeson.....577 |
| Kelway & Son.....577 | Chemical Union.....577 |
| J. Peed & Sons.....579 | Clay & Son.....591 |
| Simpson & Son.....577 | W. Colchester.....577 |
| R. Smith & Co.....577 | Homco.....577 |
| Sutton & Sons.....577 | Lawes'.....590 |
| Chrysanthemums. | Meggitt's.....577 |
| Devon Nursery.....577 | Munnure.....577 |
| Florists' Flowers. | Native Guano Co.....578 |
| Cheal & Sons.....579 | Standen's.....590 |
| J. Douglas.....577 | W. Thomson & Sons... 578 |
| Kelway & Son.....577 | Miscellaneous. |
| Keynes, Williams, & Co. 579 | British Carpet W.aving Co.592 |
| Lister & Son.....579 | Cadbury's Cocoa.....592 |
| R. Owen.....577 | Cooper's Cycles.....578 |
| J. Peed & Sons.....579 | Epps's Cocoa.....590 |
| J. J. Upton.....578 | Gishurstine.....577 |
| J. Wells.....577 | Juno Cycles.....591 |
| Flower Pots. | Smyth's Baskets.....577 |
| Sankey & Sons, Ltd.571 | Netting. |
| Fruit Trees. | H. J. Gasson.....578 |
| G. Bunyard & Co.577 | A. Potter.....577 |
| Garden Sundries, &c. | H. Robinson.....577 |
| J. Arnold.....577 | Orchids. |
| Corry & Co.577 | J. Cypher.....579 |
| Hirst, Brooke & Hirst. ...577 | W. L. Lewis & Co.....577 |
| Jadoo Fibre.....579 | P. McArthur.....579 |
| Leeds Orchid Co.591 | F. Sander & Co.....577 |
| Porter's Stakes.....577 | Publications. |
| G. H. Richards.....578 | GARDENING WORLD.....591 |
| "Summer Cloud".....578 | Macmillan & Co.....579 |
| Wood & Son, Ltd.579 | Ogilvie.....591 |
| Heating Apparatus. | Roses. |
| W. Cooper, Limited...578 | J. Cocker & Sons.....577 |
| Messenger & Co., Ltd. ...591 | Seeds. |
| Thames Bank Iron Co...577 | Carriers.....579 |
| Horticultural Bullders. | Simpson & Son.....577 |
| J. Boyd & Sons.....577 | Sutton & Sons.....577 |
| W. Cooper, Ltd.578 | R. Sydenham.....577 |
| J. Gray.....577 | Situations, &c. 578 |
| Hypolite.....577 | Tents. |
| W. Richardson & Co.590 | A. Potter.....578 |
| J. Weeks & Co., Ltd.577 | Weed Killers. |
| Hose. | Acme Chemical Co.578 |
| F. Reddaway & Co., Ltd. 578 | Boundary Chemical Co. 577 |
| Insecticides. | Wood & Son.....579 |
| Corry & Co.577 | |
| Gishurst Compound.....577 | |
| Nicotine Soap.....578 | |
| XL All.....578 | |

USED IN THE ROYAL GARDENS & PUBLIC PARKS

SHANKS' STANDARD LAWN MOWERS

WITH PATENT AXLE SPRINGS

FOR HAND, DONKEY, PONY, OR HORSE. SIZES 6' TO 48'

WITH GEAR OR CHAIN

& SIDE WHEEL MOWERS

LIGHT AND HEAD

WITH OR WITHOUT BOXES. SIZES 6' TO 20'

OF ALL IRONMONGERS, SEEDSMEN &c

A. SHANKS & SON, Ltd.,
ARBROATH, and Bush Lane House, LONDON.

STANDEN'S MANURE. TRADE MARK.

ESTABLISHED OVER 30 YEARS.

Exceeds all others in General Fertilising Properties and Staying Powers.

Promoting a rapid, healthy, and robust growth to plants generally.

It is a clean and dry powder, with very little smell. Its highly-fertilising properties render its money value, in comparison with other Manures, at least double; very small quantities will produce favourable and lasting results.

ANALYSIS ON APPLICATION.

Sold in Tins, 1s., 2s. 6d., 5s. 6d., and 8s. each; and in Kegs, well secured, to prevent loss through exposure, 28 lb., 10s. 6d.; 56 lb., 18s.; 112 lb., 32s.

To be had from all Seedsmen and Florists.

MANUFACTURERS—**CORRY & Co., Ltd., London.**

PARISIAN BLINDS.

Awarded over 50 Prize Medals.



GLASS HOUSES
Of all kinds.

HEATING APPARATUS
for Horticultural Buildings, Dwelling Houses, and Public Buildings.

NEW CATALOGUE FREE.
W. RICHARDSON & CO.,
DARLINGTON.

THE MOST NUTRITIOUS.

EPPS'S
GRATEFUL COMFORTING.
COCOA
BREAKFAST AND SUPPER.

THE CARNATION; ITS HISTORY, PROPERTIES, and MANAGEMENT; with a descriptive list of the best varieties in cultivation. By E. S. Dodwell. Third edition, with supplementary chapter on the yellow ground. Price 1s. 6d.; post free, 1s. 7d.—PUBLISHER, 1, Clemeat's Inn, Strand, London, W.C

THE IDEAL FERTILIZER

LAWES' HORTICULTURAL MANURE

LAWES' HORTICULTURAL MANURE

**NEXT
WEEK'S
NUMBER**

OF THE

"GARDENING WORLD"

WILL CONTAIN A

Full & Descriptive Account

OF THE

GRAND SHOW

IN THE

TEMPLE GARDENS,

INCLUDING

**Orchids, Begonias, Roses,
Caladiums, Hardy Trees
and Shrubs, Herbaceous
Plants, &c., &c.**

WITH

ILLUSTRATIONS

OF

Several

New Plants

Exhibited.

IT WILL BE

PUBLISHED

at 9 a.m., on

THURSDAY,

MAY 26TH.

PRICE

ONE PENNY.

VIOLAS.

Best bedding varieties. The following at 1/6 per doz., 10/- per 100:—Ada Adair, Archie Grant, Ardwell Gem, Border Witch, Bridesmaid, Blue Gown, Blue Stone, Bullion, Councilor Waters, Cecilia, Countess of Hopetoun, Devonshire Cream, Florizel, Favourite, Intrepld, Jackanapes, John Shires, J. B. Riding, Leezie Lindsay, Lord Elcho, Mrs. Baxter, Maggie, Mary Jack, Mrs. Charles Turner, Marchloess, Max Kolb, Pembroke, Princess Louise, Prince of Wales, Princess Beatrice, Rosea Pallida, Sunset, Sulpbur Gem, Sovereign, Skylark, Sylvia, True Blue, The Mearns, Violetta, White Empress, William Neil. Many other varieties in stock, including the newest introductions, Joseph, Hamlet, Kitty Bell, Iris, &c. Special prices to the trade.

Managers, HOOD GARDENS, TOTNES.

KEYNES' CACTUS DAHLIAS.

Best Plants. Best Varieties. Moderate prices.

Send Post Card for Catalogue.

About half the good varieties in commerce were raised here.

KEYNES, WILLIAMS & COMPANY,
Dahlia Growers, SALISBURY.

BOUGAINVILLEA CYPHERII.

Grand new plant, largest and best coloured Bougainvillea ever offered, a splendid grower and remarkably free bloomer. Awarded First Class Certificate at the Wolverhampton Floral Fete, 1896, and also at the Oxford Commemoration Show, 1896, and also the Gold Medal at Shrewsbury Great Royal Commemorative Show, 1897, for the best new plant in the exhibition.

JAMES CYPHER has great pleasure in offering this grand novelty. Plants ready end of May, price 10/6 each.

Exotic Nurseries, CHELTENHAM.

LISTER'S SPECIALITIES.

PANSIES, Fancy and Show.—Our unrivalled competition vars. are now offered at 3/- per doz.; 2 doz., 5/6. All the latest and best vars. only grown, all sure prizewinners anywhere. With every doz. is enclosed new vars of 1898. **VIOLAS**, 1 doz. Champion vars., 1/6; 2 doz., 2/6. Blue, White and Yellow, separate or mixed colours, 25, 2/6; 50, 4/6.

DAHLIAS, from any section of our world-renowned collection, Show, Fancy. True Cactus, Pompon and Single, 1 doz. superb plants and vars. 3/6; 2 doz., 6/6.

Summer **CHRYSANTHEMUMS**, 1 doz. best selected vars., 2/3. Every plant offered is in the best of health, true to name and carriage paid. Cash refunded if unsatisfactory in any way. Our **NEW BOOK ON THE PANSY, DAHLIA**, etc., 7d.; free on all orders of 5/-. New Plant List free.

LISTER & SON, Florists, ROTHESAY.

Caladiums

FINEST COLLECTION in the World. We make a speciality of CALADIUMS. Gold Medals Manchester & Leicester. Silver Cup, R.H.S., &c.

Satisfaction guaranteed. JOHN PEED AND SONS, West Norwood, London.

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

1898. FORBES' CATALOGUE 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants

is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and price of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other Valuable Information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,
Nurseryman, Hawick, Scotland.
ESTABLISHED 1870.

GLOXINIAS

FINEST MEDAL COLLECTION * IN THE WORLD. *

Send for CATALOGUE to
JOHN PEED & SONS, West Norwood, London

VIOLAS ! VIOLAS ! VIOLAS !

20,000 of the three following vars. to offer cheap:—

Blue Gown. Best Blue.
Christiana. Best White.
Oriole. Best Yellow.

5/- per 100; 1/- per doz.; post free. Special price per 1,000 on application.

J. J. UPTON,
The Nurseries, IRLAM, near MANCHESTER.

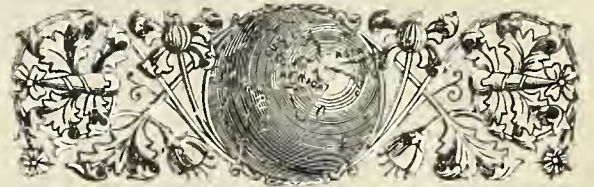
THE ROYAL HORTICULTURAL SOCIETY'S
ELEVENTH GREAT ANNUAL
FLOWER SHOW,
IN THE INNER
TEMPLE GARDENS,
(Thames Embankment).
May 25th, 26th and 27th, 1898.
R. H. S. Office, 117, Victoria St., Westminster.

ROSES, strong H.P.'s., competition varieties 6/- doz.
VIOLAS, strong plants, bedding varieties, 1/9 doz., 10/6 100.
VIOLAS, strong plants, competition varieties, 2/6 doz.
FANCY PANSIES, best varieties for competition, including many of recent introduction, 3/6 doz.

All Post Free for Cash with Order, from—

J. GRIEVE & SONS,
REDBRAES NURSERIES.
BROUGHTON ROAD, EDINBURGH.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Malda Vale, London W.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, MAY 21st, 1898.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, May 23rd.—Sale of Lilies, bedding and ornamental plants, by Messrs. Protheroe & Morris.
TUESDAY, May 24th.—Sale of Orchids by Messrs. Protheroe & Morris.
WEDNESDAY, May 25th.—Royal Horticultural Society—Temple Show (3 days).
FRIDAY, May 27th.—Manchester Whitsuntide Exhibition (6 days).
Sale of Orchids by Messrs. Protheroe & Morris.

A SALT-WATER FLOOD ON CULTIVATED LAND.—Those living on the coasts of the south-eastern counties of England as well as on the tidal reaches of the rivers, will remember the high flood that occurred owing to the strong up-channel gale that resulted in heaping up the waters in the German Ocean on the 29th November last. Many parts of the low coast line of Essex were flooded with the briny waters of the sea, the calculation being that 50,000 acres of land were covered, and damaged in proportion to the time that elapsed before the waters drained away. On some farms this occurred in six hours, while in other cases it varied from twenty-four hours to six or eight days. In one district the water remained on the land for eight weeks, and elsewhere it has been flooded continually ever since. Much of the sea wall was broken down and where the damage has not been repaired, the land gets flooded at high tide every day. The damage done consists chiefly in the saturation of the land with a deposit of salt. An examination of the state of the land has been undertaken by the County Council of Essex; and a report is drawn up by Mr. T. S. Dymond, which appears in the issue of *The Journal* of the Technical Laboratory, Chelmsford, just to hand.

Crops of Peas and Tares have suffered severely, even where the land was only flooded for a few hours. Half a crop of wheat will be obtained from land that was flooded, so that this crop has suffered less than the leguminous subjects. Grass pasture has suffered least of all and may ultimately show that it has benefited. All the crops are dead on land that has been flooded periodically since the high tide of November last. The outlook is hopeful for

coming crops on land that was only a short time under water. Wheat that had been sown just previous to the flood has since germinated and is now looking well. Turnips are sending out fresh roots that do not appear to suffer from the salt still remaining in the soil. In order the more fully to test the condition of the soil and its influence upon various plants, Mr. D. Houston undertook a series of experiments. Flower pots were filled with soil taken from two of the flooded districts, and seeds of Mustard, Turnips, Mangolds, Beet, Cabbages, Peas, red Fescue and creeping Bent grass were sown in the same. All of them have germinated and are now doing well.

Analyses of the soil show that, where flooding occurred, about 0.2 per cent. of salt is deposited in the surface layer, and this would amount to 2 tons per acre, which if applied to growing crops would be injurious. Land that has not been flooded contains only 0.01 per cent. of salt. Samples of soil taken from numerous localities give a varying per cent. deposit of salt, according to the depth or duration of the flood, but a glance at the table giving the percentage shows that a little patience is all that is necessary for Nature to repair the damage. The rains have evidently been doing their work before the analyses were made for the greater percentage of salt now occurs at some distance below the surface, or even in the subsoil. An interesting case occurs at Tillingham where the land was enclosed or reclaimed in 1871. About 8 in. below the surface is a compact layer of vegetable matter, consisting mostly of seaweed, which has retained a considerable amount of salt at that depth. At West Thurrook the salt was most abundant in the first inch of soil, which was flooded for eight weeks. The analysis was made before any rain had fallen after the draining of the land, a fact which readily accounts for the salt being on the surface. On the contrary salt has been brought to the surface by evaporation, just as, under ordinary conditions, a coating of nitrates may be deposited on the surface of soils during dry weather.

The injury done to the land by salt indirectly has been more harmful than any direct injury to the roots of plants. Earthworms have been killed in the flooded portions, so that the natural means of draining and aerating the soil do not now exist. This is more particularly serious on heavy clay lands, because in the absence of drainage it will take a much longer period of time for the rainfall to wash the salt away and aerate the soil. The first remedy will be the removal of the salt from the soil. This may be done by providing means for the water to drain away from the soil, and rain will do the rest. The growing of special crops to absorb the salt would take many years to fully accomplish, and is therefore impracticable. The cereals are least liable to injury on land containing salt, but they absorb only a very small percentage during a growing season. When the salt has been sufficiently washed out by rain for earthworms to exist, it would, we think, be a good plan to resow the land with a fresh stock of worms obtainable from land having an over-abundant supply. Amongst the crops suggested for the salt land no mention has been made of Seakale or Asparagus, which surely could be turned to profitable account in some of the districts at least.

Caltha palustris as Food.—It is stated in a recent issue of *Gardening* (American) that some of the early settlers in America cooked and ate as greens the stalks and young leaves of the Marsh Marigold, *Caltha palustris*. In view of the acrid and poisonous principle that characterises the order Ranunculaceae this is somewhat surprising. The "greens" would, we imagine, be rather "strong."

The Cowslip.—In this country the popular name of "Cowslip" is given to *Primula veris*, but in the "States" it is applied to *Caltha palustris*, known here as the Marsh Marigold.

Unprofitable Orchid Culture.—A Cornish gentleman, who was an Orchid enthusiast, for some years spent £600 annually in the pursuance of his pet hobby. He died, as people have a knack of doing, the greenhouse fires were let out, and the whole collection was sold for £3, rather a serious depreciation upon the nominal value. It only goes to show that Orchids will not stand neglect.

A Green Primrose was brought to us a few days since by Mr. J. C. Stogdon. The flower was of the ordinary size, and perfectly green, but the segments were cut at the edges like leaves. The green Primrose, although it may be a curiosity to many, is really an old favourite which has been lost sight of for some time and again revived. As a matter of course several popular names have been bestowed upon it at various times and in different parts of the country. Of these Jack-in-the-Green, Pantaloons, and Galigaskins are some of the most noticeable.

Chestnut Sunday.—Last Sunday was "Chestnut Sunday," but the weather clerk was in a most unpropitious humour. The day was wet, cold, dark, and miserable, and the famous avenue of Bushey Park was, as a consequence, well nigh deserted. The boats which ply between Hampton Court and the London piers carried very few people, and even they did not appear to greatly enjoy themselves. It will take a full week's bright sunshine to bring the Chestnuts to their best, so what with the weather, the unreadiness of the trees, and the consequent lack of people, "Chestnut Sunday" was so only in name.

Sutton's Cycling Club.—Ever on the watch for means of affording healthful pleasure and instruction to their employés, this, the formation of a cycling club, is again encouraged by Messrs. Sutton & Sons, of Reading. The club is under the presidency of Mr. Martin J. Sutton, M.P., the other partners of the firm being vice-presidents. A neatly printed, single-fold card gives the list of officers and the rules of the club, as well as the projected excursions for the year 1898. These fall into two divisions. The entries in the first take place on Wednesday afternoons. There are ten of them, commencing on May 11th, and continuing fortnightly up to and including September 7th. Places of interest within a radius of 20 miles of Reading are to be visited, and these include Basingstoke, Silchester, Burnham Beeches, Virginia Water, Aldershot, Nettlebed, Windsor, and Finchhampstead, besides the trip to Great Marlow, which took place on the 11th inst. The second section is for evening runs, and a blank space, to be filled in as the season wears on, has been left for these. Altogether, the idea is a happy one, and worthy of the generous spirit that animates the governing partners of the renowned seed firm.

The Modest Violet.—It seems, at first sight, rather curious that Napoleon, the proud Dictator of Europe should have chosen as his emblem the modest Violet, and yet he did so, although the selection was made at a time when the great warrior's star was in obscurity. He remained faithful to his choice, however, through his life, for on leaving France for Elba he is reported to have said, "I shall return with the Violets," and he did return. On the eve of his second and final banishment to St. Helena, he gave a Violet to an English naval officer, in whose charge he was, but whether as a prophecy of his second return or not is not known. The Violet thus became closely associated with the fortunes of the Napoleonic dynasty, and during the reascendency of the house of Bourbon it was dangerous to wear the Violet publicly, as it was still regarded as the Napoleonic flower. With the second Empire came the revival of the popularity of the Violet, and curiously enough Louis Napoleon owed to it his escape from the fortress of Ham, at which place he was a prisoner. A package of Violet plants had arrived, and the prison officials were so much occupied with planting them that they forgot all about their royal prisoner, who, promptly availing himself of the opportunity, escaped.

Oranges from California.—No fewer than 12,000 carloads of Oranges are being, or have been, shipped from southern California this year, which, at present prices, will realise some £1,200,000. The estimated loss by frost was 2,000 carloads, representing a money value at current prices of £200,000. The greater part of the produce is from the celebrated Navel Orange, of which the first plantation was made at Riverside, California, in 1877—twenty-one years ago.

A Yorkshire Lecture.—On the 4th inst., Mr. T. Reddington gave the last of his series of four lectures at Scarborough. On this occasion he took for his subject "Flowers and the Flower Garden." Dealing first with the position of the flower garden he recommended a piece taken from the kitchen garden as likely to give satisfaction. He cautioned his audience against choosing draughty corners, for cold draughts were injurious to plants in the open as well as to plants in the window or the greenhouse. He spoke of various soils, and gave directions for improving such as were unfit. Manures also came in for discussion. In conclusion he made some remarks about window plants generally, and advised them as to the sort of soil to use for various plants and the method of preparing it for use.

Loughborough Gardeners met on Tuesday evening, the 3rd inst., to hear a paper upon the "Cultivation of Azaleas and Camellias," by Mr. J. Smith, gardener to J. Griggs, Esq., of Mountfield. The subject was handled by the essayist in a capable manner. He advocated the potting of the plants just after growth had commenced, and recommended plenty of heat and moisture throughout the growing season. After the buds were set the plants should be stood outside to ripen their growths. The soil given Camellias should be rather more loamy than that supplied to Azaleas. A brisk discussion took place after the reading of the paper. A number of exhibits was forthcoming from various sources, including some well-flowered Azaleas from Mr. Smith.

Praying for the Crops.—The 14th inst. being the fifth Sunday after Easter, and Rogation Day, a period for special supplication, a quaint old custom of "praying for the crops," was this year observed at Hitchin, in Hertfordshire, as it has been for several years past. At 2.30 p.m. on the day in question a procession, headed by the choristers and clergy in full canonicals, wended its way through the streets of the old-fashioned market town towards the fields and homesteads in the Walsworth and Parwell districts. A service was performed thus beneath the canopy of the great temple of the sky, special prayers being offered for the crops. On the following day, Monday, the 16th inst., similar visits were made to other districts in the vicinity of the town.

Vegetation in the Cape Verde Islands.—Mr. Boyd Alexander, M.B.O.N., who is evidently an ornithologist, gives a picture, though not a very alluring one, of the vegetation of Sao Nicolau, Cape Verde Islands, in the May number of *Knowledge*. He was on a bird collecting expedition, but frequently alludes to the vegetation. On dropping anchor in Porto Preguiza, the harbour of the above named island, he says that "one seeks in vain for cool verdure on which to look and rest one's eyes." Soft brown hills acutely angled confront the visitor in every direction. The grass which grows on the lower portion is quickly eaten by the goats, and the thousands of locusts that infest the plains. Trees of *Acacia albida* grow here and there on the small plains, but by their stunted appearance show the difficulty they have in getting a foothold, while others are bent double by the north wind. Scarcely any rain has fallen upon the island during the past three years. The village of Stancha occupies the only fertile valley upon the island, and nestles amongst an abundance of tropical growth in the bottom of a dried-up watercourse. Coffee bushes clothe many portions of the steep sides of the valley; and on the higher ground patches of Maize surround the huts of the peasants. Orange trees flourish in the more fertile spots, together with plantations of sugar cane. The fish cane forms an avenue along the banks of a stream; while Cocconut Palms overtop everything else. The foliage of the orange is dark green; the Cocconut is lighter; the Sugar Cane has very light green foliage; and the Fish Cane is of delicate bluish green. Bananas have their leaves torn to shreds by the wind. Maidenhair Ferns hang in graceful festoons from the banks of the stream.

The Present Season promises to be one of the most fruitful on record in Herts, both in field and orchard. Let us hope it will not belie its promise.

Mr. P. C. M. Veitch, of Exeter, we are pleased to learn from J. C. Stogdon, Esq., is rapidly recovering from the serious illness under which he was suffering recently.

Royal Gardeners' Orphan Fund.—We are in receipt of a postcard soliciting the votes and interest of friends on behalf of a candidate for relief from the above fund during 1898. We are somewhat at a loss to account for such a belated appeal seeing that the balloting for candidates for the fund took place at Anderton's Hotel, Fleet Street, E.C., on February 18th last.

New Year's Banquets in Japan.—The first day of the year is so extensively fêted in Japan that even the prisoners in gaol rest and make merry in their dungeons. On this day a Japanese gentleman will find in his room a vase of brass or porcelain containing some sprigs of Fir, Bamboo, or Plum. It is thus that the servants express their good wishes. The Fir, by its constant leafage, signifies long life; the Bamboo, prosperity; and the flower of the Plum, the first flower of the season, white, chaste, and sweet, filling the room with its delicate fragrance, bespeaks the presence of the all-pervading wisdom.—*Revue de l'Horticulture Belge.*

A Generous Donor to Horticulture.—The *Bulletin d'Arboriculture, de Floriculture, &c.*, states that M. Durant-Castelin, sole legatee of M. Dobrée, who died leaving a fortune valued at 30,000,000 francs has given to the department of Loire-Inferieure, France, 300,000 francs for the building and management of a national school of horticulture and viticulture, and 1,000,000 francs for the construction of greenhouses, destined chiefly for exotic and colonial plants, for improvements and ornamentation in the park and its buildings, as well as to constitute capital destined for the maintenance of the park, greenhouses, and dwelling-houses. That national school of horticulture ought to be constructed in the park of Grand-Blotterau, at some distance from Nantes in the commune of Doulon. The departmental commission has accepted the gift of M. Durant-Castelin.

Sale of Orchids at Walton Grange, Stone.—The sale of surplus and duplicate established Orchids on the 11th and 12th inst., at Walton Grange, Stone, Staffs., the residence of William Thompson, Esq., was well attended by nurserymen and amateur buyers of Orchids. Mr. A. Outram, of London; Mr. J. Godseff, of Sander & Co., St. Albans; Mr. Low, of Messrs. H. Low & Co., Clapton; Messrs. Backhouse, of York; and Charlesworth, of Bradford, were the principal buyers in the trade. A splendid show of Orchids, beautifully arranged in the houses attracted great attention, and were much admired by those who had the privilege of seeing them. The plants are in splendid condition, reflecting great credit upon the abilities of Mr. Stevens, who has had the important charge of the collection for so many years. The sale was conducted by Messrs. Protheroe & Morris on the premises of Walton Grange, and many princely sums were obtained for the finer varieties. For instance, *Odontoglossum crispum*, with six pseudo-bulbs, went for £24; *O. excellens* for £21; *Cypripedium insigne* Dorothy, £22; *C. rothschildianum*, £22 1s.; *Cattleya labiata* Peetersi superba, £78 15s.; *Odontoglossum crispum* Katae £21 6s.; *Cypripedium* Charles Richman and *Oncidium ornithorrhynchum* album, £10 10s. each; *Odontoglossum crispum* aureum, £27 6s.; *Cypripedium leeanum* superbum, £31 10s.; *Laelia gouldiana*, £11 11s.; *Odontoglossum wilckeanum* concinnum, £15 15s.; *O. crispum* Stevensii, £115 10s.; *O. Meleagris*, £36 15s.; *O. crispum* Alfred, £25; *O. nebulosum* album, £15 15s.; *O. crispum* Golden Queen, £168; *Cattleya Victoriae* Reginae, £46 4s.; and *Dendrobium splendidissimum* grandiflorum. All of the above went on the first day of the sale. On the second day, *Cypripedium insigne* Dorothy fetched £21 and £22; *Laeliocattleya* Pallas, £12 12s.; *Odontoglossum sceptrum* aureum, £147; *O. ruckerianum* ocellatum, £52 10s.; *O. sceptrum* Argus, £15 15s.; *O. excellens* Thomsoni, £147; and *Cattleya labiata* caerulea, £30. The list is headed by the *Odontoglossums*, while *Cattleyas* and *Cypripediums* follow in this order, showing that choice things still bring their price.—*Rusticus.*

Starlings in great numbers have built their nests this year in the chimneys of Buckingham Palace.

Destructive Fire at Edinburgh.—On the night of the 11th inst. a fire broke out on the premises of Messrs. Mackenzie & Moncur, Edinburgh, doing damage to the extent of £25,000. Fears were for some time entertained that the fire would spread to other properties, but it was finally subdued.

The German Society of Rose Growers.—The Congress of the German Rose Society will be held this year in Gotha, Germany, in conjunction with a Rose show, inside the great Thuringian Industrial Exhibition, from the 10th to the 12th July. All the particulars will be made known through the local committee in Gotha, and the executive of the German Rose Society, of whom also programmes are to be had. This intimation has been furnished us by the editor of *Rosen Zeitung*, the organ of the German Rose Society.

READING GARDENERS.

THE first meeting of the summer season of the Reading and District Gardeners' Mutual Improvement Association was held on Monday evening last, when the chairman of the association, Mr. Turton, presided over a good attendance of members. The subject for discussion was hardy flowers, including shrubs and bulbs. This was introduced by Mr. Townsend, gardener to Sir William Farrer, Sandhurst Lodge, who said that he should refer principally to those varieties which made the garden look gay during the early months of the year and only those which were grown in the gardens under his charge.

The following varieties were touched upon:—Flowering Shrubs: *Amygdalus*, *Abelia*, *Andromeda*s, *Buddleias*, *Berberis*, *Cydonias*, *Cerasus*, *Crataegus*, *Ceanothus*, *Choisya*, *Cytisus*, *Carpenteria*, *Chimonanthus*, *Cistus*, *Cornus*, *Deutzia*, *Daphne*, *Diplopappus chrysophyllus*, *Escallonia*s, *Forsythias*, *Garrya elliptica*, *Genista*, *Iberis*, *Jasmine*, *Kerrias*, *Laburnum*, *Leycesteria* formosa, *Ledum*, *Mespilus*, *Magnolias*, *Nuttallia*, *Pyrus*, *Prunus*, *Philadelphus*, *Ribes*, *Spiraea*, *Sambucus*, *Ulex*, *Viburnum*, *Veronica*, *Weigela*. Bulbs: *Hyacinths*, *Tulips*, *Narcissi*, *Crocuses*, *Aconite*, *Chionodoxas*, *Triteleias*, *Scillas*, *Grape Hyacinths*, *Alliums*, *Ornithogalum*, *Leucojum*, *Dog's-Tooth Violets*, *Trilliums*. Flowers (flowering from February till the early part of May): *Heleborus*, *Violets*, *Arabis*, *Aubrietias*, *Daisies*, *Wall-flowers*, *Myosotis*, *Primroses*, *Polyanthus*, *Alyssum*, *Doronicum*, *Alpine Phlox*, and *Primula Sieboldi*.

A discussion followed. An interesting feature of the meeting was the large display of cut flowers, including *Primula Sieboldi*, *Daisies*, *Myosotis*, *Tulips*, *Trilliums*, *Pansies*, *Lily of the Valley*, *Wall-flowers*, *Narcissi*, *Auriculas*, *Honeysuckles*, *Roses* (outdoor growth), &c. These were contributed by Mr. Turton, Maiden Erleigh Gardens, Mr. W. Smith, gardener to Miss Neild, Greenbank, and Mr. Townsend, the latter exhibiting a splendidly-grown *Anthurium* showing forty-three spathes. A vote of thanks to the lecturer and to those members who had brought the flowers ended a pleasant evening.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

A Fine *Laelia purpurata*.—A beautiful variety of this species was secured for £3 10s. at the Sale Rooms of Messrs. Protheroe & Morris, on the 13th inst., by Mr. G. E. Day, gardener to H. J. Simonds, Esq., Mendham House, Park Place, Leyton, Essex. The sepals and petals are rosy-pink. The lip is the feature of the flower, the large lamina being of a rich, velvety-crimson, while the pale lemon throat is handsomely striated, as usual, with slender purple lines. The variety, therefore, is in keeping with several other fine things that have recently been added to the same collection.

Dendrobium chryseum.—To all intents and purposes this is a rare *Dendrobe* seldom seen in cultivation. The stems are about 1 ft. high, and bear a few flowers in pairs as a rule. The richness of the golden-yellow sepals and petals compensates in a measure for the moderate size of the flowers,

which are not unlike those of *D. Griffithi* in size and colour, though belonging to a different section of the genus. The lip is pubescent on the upper surface, finely toothed at the margins and orange-yellow, with a few slender, brown lines at the very base. For some years past it has been grown and flowered by Mr. W. H. Young at Clare Lawn, East Sheen, Surrey.

Laelia elegans *Monica*.—This handsome variety belongs to the *Schilleriana* type or section of *L. elegans* and possesses all the good qualities of the original though differing somewhat in colour. The sepals and petals are white, faintly shaded with pale rose along the veins and margins, and having a few scattered purple spots towards the apex on either surface. The exterior of the tube of the lip is similar in colour at the edges, passing into white round the sides and back. The lamina and anterior edges of the lateral lobes are rich crimson-purple, the colour becoming wedge-shaped at the base, and then running along the centre of the tube to the very base. The throat and interior of the tube are pale lemon, thus forming a beautiful contrast with the intense hue of the lamina. Some idea of the size of the flower may be gleaned from the fact that it measures fully 6½ in. across the petals. The variety is flowering with Mr. J. Seeger, Bandon Hill, Croydon.

ORCHIDS AT MESSRS. LEWIS & CO., SOUTHGATE.

I WAS very much pleased when visiting this enterprising firm not long since, to find everything that has been said in its favour to be well warranted. As is well known they have for some time made a great mark by importing large quantities annually of free-flowering Brazilian and Mexican Orchids, and as may be expected they are well represented. The spacious *Cattleya* House, which is 130 ft. long and 25 ft. wide, is crammed full of fine unflowered pieces of *C. Mossiae*, of which there are sixty to seventy pieces marked white; quantities of *C. Harrisoniae*, *Laelia purpurata*, *L. tenebrosa*, and *L. praestans*, the varieties of which created such a sensation last year. *Oncidium tigrinum* in the cool house was just breaking strongly into growth. *Oncidium marshallianum*, too, is making good plants. Of *Odontoglossum crispum* there are some 4,000 plants in various stages, several good forms being amongst those in flower. In another division there are grand pieces of the beautiful yellow *Oncidium ampliatum* majus, one with nine spikes, and such spikes, too. The season is, of course, over for *Dendrobes*, but the beautiful *D. dalhousianum* was making a good show. Of imported plants there is a great quantity of *Cattleya labiata*, all ready to break away into growth.—S. C.

PEOPLE WE HAVE MET.

MR. GEORGE WYTHES.

The subject of our sketch is a Worcestershire man, born in 1851, and educated at the Queen Elizabeth's Grammar School, in the old city of Worcester; but both parents dying just as he had entered upon his scholastic course, he unfortunately had to leave school and begin work earlier than most boys (at the age of twelve), and rely upon night schools to gain the necessary knowledge so needful for a gardener. Strange to relate there was no one connected with gardening at any period in the family history; and of the two surviving boys, the eldest and youngest, the latter is the now well-known Syon gardener; the eldest having for the past twenty-five years held a responsible position in the Botanic Gardens, Melbourne, Victoria. Both had a liking for the work, and though much pressure was used with Mr. G. Wythes to turn his attention to other things, by persistence he carried the point and passed the first four years as garden boy in a small place in the city, utilising his evenings in improving himself, there being some excellent night classes.

At the age of sixteen he says "I was very restless and I fear I gave my good old instructor some little trouble by my enquiries as to the name of this or that, and how to grow it; and I think I never was happier than when I obtained for a shilling a bit of Mrs. Pollock Geranium to add to my own collection; and I can assure you shillings with me then were scarce enough, and I never watched a plant grow as I did that one. I had at the time quite a respectable

collection of the tri-coloured varieties. They were at that time much thought of."

At the age which Mr. Wythes thought it time to begin gardening in earnest, and after much thinking he was fortunately sent to the Messrs. Smiths' Nurseries to get a small Conifer, and as it was not a very large order he had a good tramp over their extensive nurseries to get it. He there saw the then senior partner, and told him he was anxious to get into a good garden. In a short time Mr. Smith sent him to a newly made place, Whitbourne Hall, Herefordshire. Here there was a splendid collection of trees and shrubs, and ample glasshouses, but none too much labour. Here he served the usual three years, and though the pay was small, and there was many a struggle as to ways and means, he got a good insight which proved valuable in later days.

From Whitbourne Hall Messrs. Smith sent him as journeyman to Abernant House, Glamorganshire, and though the gardens probably did not exceed 20 acres some forty men were employed, as the owner was member for the district, and the gardens were thrown open weekly; and being a great mining district it was thickly populated. Stove and greenhouse plants were specialties: Pine Apples also. There was a greater number of plants than is generally seen in private establishments; but Mr. Wythes' department was the flower gardens which were made most attractive, there being an enormous herbaceous border in addition, and a good collection of plants. At the end of a month he was offered the foreman's place in this department, but refused it as he was much younger than his brother journeymen.

He did not stay quite a year at Abernant, as he was offered the foreman's situation at the Hendre, Monmouth, then, as now, a leading garden for fruit culture, but of late years greatly enlarged by that excellent cultivator, Mr. Thomas Coomber. His stay of three years at the Hendre was most beneficial as he never remembered seeing better Grapes; and Pines were well done. To show how his employer, Lord Llangattoch, valued his work, the gardener leaving, Mr. Wythes was asked to take his place; but though he greatly appreciated the trust reposed in him he felt he had not obtained sufficient experience to fill so responsible a position, and declined.

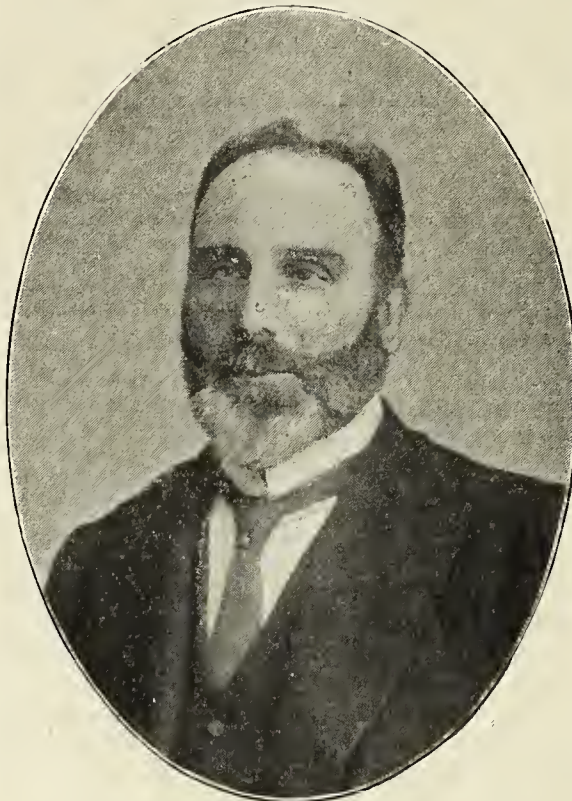
His next move was to Knowle House, Sidmouth, Devon, a large garden with much glass and beautifully situated. Here he was general foreman under a most kind and genial gardener, Mr. Emleigh, for a short time, but was unable to stay, his health being indifferent. He then went to the Duke of Bedford, Woburn Abbey, Beds., but was only here twelve months, as the then Duke pulled down the large conservatory and plant houses, and did not rebuild the department under the charge of Mr. Wythes.

He was employed at the nurseries of Messrs. Veitch & Sons, Chelsea, for a time, going from there to Lord Waveney's, Flixton Hall, Suffolk, under Mr. Fisher, an excellent all round gardener, and a specially good fruit grower. Whilst here he had a much better berth offered him, to go to Stourton Hall, Lincolnshire, much glass having been erected, and he accepted. He made but a short stay of twelve months only, as, owing to insufficient labour, good results were impossible.

His next move was an important one, as he was wanting a head gardener's place, having had a fair innings, as will be seen. Messrs. Dickson, of Chester, having done much planting at Stourton Hall, he went to the nurseries and stayed some months, after which he accepted the position of foreman at Alexandra Park, Manchester, under the superintendent, Mr. Manderson, a genial employer, and whom he much respected. Here was ample scope for a man. The park was some eighty acres in extent; a large staff of men was employed, and the park being just made, needed considerable attention to make it attractive. Here at that time both spring and summer bedding were great features.

At the end of three years, through the kindness of Lady Llangattoch, he was offered the position of head gardener to H. W. Freeman, Esq., at Thirlestaine Hall, near Cheltenham. He found this more congenial to his taste, as the work was more varied, and his employer being fond of his garden, he encouraged his gardener in every way. He well remembers the first spring exhibition in Cheltenham his employer drove him to. After walking round the show Mr. Freeman remarked "now if you can do us credit show what you like, but good things." His task at Thirlestaine Hall was a pleasant one. Mrs.

Freeman was fond of Orchids, and houses were quickly built by the best friend a gardener ever had, namely, Mr. Jas. Cypher, as he not only grows plants well, but never minds what trouble he takes to further a gardener's interest, and give friendly advice, yea, and help also if needed. Mr. Wythes



MR. GEORGE WYTHES.

owes a deep debt of gratitude to him for the many kindnesses he received from him and his family whilst in Cheltenham.

It was to be regretted that his stay here was under five years, his employer dying; but during that time he was very successful at the Cheltenham shows, of which there were three large ones yearly, in addition to the Chrysanthemum show which was not connected with the county of Gloucester. His success was mostly with Orchids, stove and greenhouse and foliage plants. For two years he was the chairman of the Gardeners' Society. To leave Cheltenham and many kind friends was a wrench to him.

He was fortunate, however, in being appointed head gardener to the Rt. Hon. Lord Hatherton, Teddesley Park, Penkridge, Staffs., out of many applicants, and in one of the prettiest spots in the kingdom at the foot of the Cannock Chase, and with a most kindly employer. Here again, death after a period of three years, caused changes. The gardener's noble employer dying, Lady Hatherton, sister to His Grace the Duke of Northumberland, recommended him to fill his present post, the seat of Earl Percy, Syon House, Brentford, Middlesex. He will always remember the great kindness he received from her ladyship and the family, at Teddesley Park, whose whole interest was to make those employed on the estate feel they had a friend, and to study their welfare. Mr. Wythes has now been ten years at Syon, following a worthy man, but one difficult to follow, as he had made a name in the horticultural world. He has, nevertheless, endeavoured to keep up the gardening interests of the place and that with signal success. He has been assisted by a willing staff, and always grateful, according to his wont, acknowledges many kindnesses at the hands of new friends, since he settled in the neighbourhood of London. The accompanying portrait will recall the features of the man, in whose company we have spent many a pleasant hour, examining the gardens, houses, grounds, and fine collection of trees at Syon House.

PLANTS RECENTLY CERTIFICATED.

THE undermentioned awards were accorded by the Royal Horticultural Society on the 10th inst.

Orchid Committee.

SPATHOGLOTIS AUREO-VIEILLARDI, *Nov. hyb.*—The parentage of this hybrid is expressed in the name given it. The flowers are similar in size to those of

the parents, and produced in a short raceme. The sepals are soft primrose tipped with pale rose. The petals are elliptic, coloured like the sepals, and spotted with rosy-purple on the lower three-fourths of their length, the yellow and the spotting being introduced by *S. aurea*. The terminal lobe of the lip is wedge-shaped, tapering into a long, yellow spotted claw. The hatchet-shaped side lobes as well as the terminal one are carmine-crimson. The hybrid is very pretty and well deserved the First-class Certificate. Messrs. J. Veitch & Sons, Ltd., Chelsea.

LAELIOCATTLEYA FASCINATOR, *Nov. hyb. bigen.*—This bold and showy bigeneric hybrid was obtained from *Laelia purpurata* crossed with *Cattleya Schroderae*. The sepals and petals are soft mauve-pink. The lamina of the lip is wavy, crimson-purple; the interior of the tube is white overlaid with soft yellow along the middle, except towards the base, where there is a band of fine crimson lines. First-class Certificate. C. L. N. Ingram, Esq. (gardener, Mr. T. W. Bond), Elstead House, Godalming.

LAELIOCATTLEYA HIPPOLYTA DULCOTE *VAR. Nov. var.*—In this handsome Orchid we have a richly coloured variety of a hybrid of which there are now several varieties in cultivation differing chiefly in colour. The sepals and petals are rich orange, the latter being shaded with red towards the apex. The lip has an orange-yellow tube, lined with red, and its lamina is wavy and crimson-red. First-class Certificate. Walter Cobb, Esq. (gardener, Mr. Howes), Dulcote, Tunbridge Wells.

SOPHROCATTLEYA GEORGE HARDY, *Nov. hyb.*—The flowers of this bigeneric hybrid are strikingly distinct. The parents were *Sophronites grandiflora* and *Cattleya Acklandiae*, the latter being the pollen bearer. The pseudobulbs are about 1½ in. long, and carry two lanceolate leaves. The sepals are lanceolate-oblong, the petals elliptic, and all are red with a few crimson spots towards the apex. The lamina of the lip and the tips of the lateral lobes are carmine-red. The throat and base of the side lobes are yellow, lined with red. It is a little pet. Award of Merit. Fred Hardy, Esq. (gardener, Mr. Stafford), Tyntesfield, Ashton-on-Mersey.

CATTLEYA INTERMEDIA FOWLER'S VAR. Nov. var.—The sepals and lanceolate petals are white, faintly suffused with blush-lilac. The tube of the lip is similar; but the bifid lamina is crisped, wavy and crimson-purple; the side lobes are creamy. The curved column is pale purple. The variety is certainly a pretty one. Award of Merit. J. Gurney Fowler, Esq. (gardener, Mr. J. Davis), Glebelands, S. Woodford, Essex.

Floral Committee.

ALYSSUM SAXATILE FLORE PLENO.—The golden-yellow flowers of this variety are perfectly double, but otherwise like the type. It should make a handsome and useful border, rockery, and bedding plant. Award of Merit. Messrs. Paul & Son, Cheshunt.

ALPINE AURICULA ZIXA (Douglas).—The large flowers have a rich, golden-yellow centre, a black ground and an orange-red edge. Award of Merit. Mr. James Douglas, Edenside, Great Bookham, Surrey.

ALPINE AURICULA PERFECTION (Douglas).—Flowers of large size, with an intense golden-yellow eye, a small area of maroon body-colour, and a broad crimson margin. Award of Merit. Mr. J. Douglas.

ALPINE AURICULA DEAN HOLE (Douglas).—Flowers of large size, the ground maroon, and the broad edge rich crimson-red. All the three Alpines are very choice. Award of Merit. Mr. J. Douglas.

YELLOW BORDER AURICULAS.—During the past fifteen years Mr. David Storrie, St. Madoe's Cottage, Glencarse, Carse of Gowrie, Perthshire, has been working up a magnificent strain of yellow border Auriculas, all of which have been evolved from a single plant. The plants varied from 6 ins. to 10 ins. in height or more and carried large trusses of deliciously scented flowers varying from rich golden-yellow through many shades to creamy-yellow, nearly white. They had been grown, wintered, flowered, and seeded in the open air, without protection. They are the result of selection from a sweet-scented variety that originally cropped up in a batch of ordinary border seedlings, and have been fertilised naturally by insects, the raiser merely selecting the finest flowers and most vigorous plants. Some of the best have been given names. The

paste round the centre shows that they belong to the show type, though no attempt has been made to make them florists' flowers. Award of Merit for the strain.

AZALEA MME. JOSEPH VERVAENE.—The double flowers of this charming Indian Azalea are of great size, soft salmon-pink and silvery-white towards the edges. There is a patch of crimson spots on the upper segments. Award of Merit. Mr. Charles Turner, Slough.

AZALEA AMI CHAS. VERMEIRE.—Here the single flowers are of good average size and intense crimson-red with a few spots on the upper segments. Award of Merit. Mr. Charles Turner, Slough.

Fruit and Vegetable Committee.

RADISH SUTTON'S FORCING.—This and all the other varieties mentioned below have been on trial at the society's gardens at Chiswick. Sutton's Forcing, White, Olive-shaped, is a variety that is clear in colour, and grows very quickly, so that it is useful for forcing under glass, and early use from the open ground. Award of Merit. Messrs. Sutton & Sons, Reading.

RADISH FIRST OF ALL.—In all respects this is closely similar and equally valuable as the previous sort. Award of Merit. Messrs. Barr & Sons, King Street, Covent Garden.

RADISH SUTTON'S FORCING CARMINE OVAL.—Root intense or bright carmine-red, smooth and early. Award of Merit. Messrs. Sutton & Sons.

RADISH FIRST OF ALL SCARLET OLIVE-SHAPED, is similar in form to Carmine Oval, and of good quality. Award of Merit. Messrs. Barr & Sons.

RADISH WOOD'S FRAME.—In this we have a long, tapering, pale pinkish-red sort, the only long type that received an Award of Merit. Messrs. Watkins & Simpson, Strand, London.

Floricultural Certificates of Merit were awarded to the under-mentioned subjects by the Royal Botanic Society at the summer show, held on the 11th inst., at Regent's Park:—

BEGONIA EARL OF DARTMOUTH.—A large, double-flowered tuberous Begonia, with rich scarlet flowers of great depth. Messrs. John Laing & Sons, Forest Hill, S.E.

CHERIANTHUS HARPUR CREWE.—This is a valuable double-flowered Cherianthus. The blooms are of medium size, bright yellow, very sweet scented, and produced in great profusion. This plant should not be lost sight of in spring bedding arrangements. Messrs. Barr & Sons, Covent Garden, W.C.

TULIP GLOW.—Here we have one of the finest of the Darwin section of May-flowering Tulips, and one that should prove useful for bedding purposes. The flowers are of medium size, rich crimson in colour, with the characteristic black base, round which, however, runs a narrow zone of yellow. Messrs. Barr & Sons.

TULIP SALMON KING.—Another of the Darwin Tulips that will make a capital hedder. The colour is not salmon, as the varietal name would suggest, but cherry-scarlet, and very bright and showy. Messrs. Barr & Sons.

AZALEA LE PRINTEMPS.—This is a handsome variety of *A. indica*, with medium-sized, single flowers of a bright crimson-magenta hue. There are a few dark maroon blotches on the base of the upper petal in the tube, but they are not very conspicuous. The variety is very free, and should prove of service. Mr. Charles Turner, The Royal Nurseries, Slough.

AZALEA AMI VICTOR CUVELIER.—A fine, semi-double variety of *A. indica*. The flowers are large, rather flat, open, and rosy-pink in colour, with a silvery margin. The upper petal is blotched heavily and flushed with crimson maroon. Mr. Charles Turner.

AZALEA LOUISE CUVELIER.—This is another beautiful form of *A. indica*, but the flowers are very double, and pure white, although occasionally they have a broad, conspicuous, radial scarlet stripe. The great substance of the petals seems to indicate a variety that will take kindly to forcing for cut flowers, and that will become very popular for this purpose. Mr. Charles Turner.

AZALEA MADAME JOSEPH VERVAENE.—For description see above. Mr. Charles Turner.

AZALEA AMI CHARLES VERVAENE.—For description see above. Mr. Charles Turner.

Botanical Certificates were accorded the following:—

CALADIUM GUARALINGUETOR.—The *Caladium* which is to bear the burden of this somewhat outlandish name is an exceedingly handsome one. The lobes of the large cordate leaves are more strongly produced than usual. The colour is deep carmine, with veins and midrib still a shade deeper. The narrow green margin is prettily waved and undulated. Messrs. John Laing & Sons.

DRACAENA ROSE LAING.—This is a welcome addition to the *D. terminalis* section. The leaves are of medium width, the lower ones bronzy-green in hue, flushed and streaked with carmine, the upper ones being bright rosy-carmine. The contrast between the two sets of leaves is very effective. Messrs. John Laing & Sons.

ADONIS PYRENAICA.—This is one of the most showy and useful members of the genus. The plant grows from a foot to 18 in. in height, and strong clumps throw up numerous stems which flower at the apices. The leaves are very much divided, and resemble those of Fennel to some extent. The flowers are of great size, bright golden-yellow in colour, and nearly sessile upon the stems. Both flowers and foliage are thus exceedingly showy. As the specific name suggests the plant is a native of the Pyrenees, but although it was introduced as far back as 1817 it is yet comparatively rare in cultivation. Messrs. Barr & Sons.

THE PLANT HOUSES.

THE STOVE.

In this department the summer routine of treatment is now, or should be, in full swing. Warmer nights and days are with us, and less fire-heat will as a matter of course be needed. An occasional cold night, however, warns us that a bright look out must be kept upon the thermometer, for anything like a heavy drop in the temperature of the house is to be avoided. Through the night the thermometer should be kept up to 70° Fahr., and on bright days it will rise close to 80°, which will not be a whit too high, seeing that so many plants are making young growths. Air should not be given too liberally yet, for the tissues of these young shoots are very tender and ill-fitted for battling with cold draughts. By dint of judicious shading, and frequent dampings down in conjunction with the regular morning and afternoon syringings, it will be easy to keep the house at a reasonable temperature without rushing on a lot of air.

With many plants, particularly those which were potted within the last two months, it is yet too early to think of giving stimulants, but there are some that did not receive a shift this year, and others that were only top-dressed. These will benefit by a manurial stimulant of some kind. For *Crotons* and *Dracaenas* we have found nothing better than Clay's Fertiliser, which helps wonderfully to put the colour on. For *Palms*, a pinch of nitrate of soda given about every ten days will work wonders with plants that have put on the sickly yellow hue so indicative of starvation. The only objection to the employment of this manure is its great strength, which is such that it should never be trusted in the hands of a careless or inexperienced workman, for in such a case more harm than good will result from its use, or rather abuse. Liquid cow manure will be found capital stuff for such things as *Caladiums*, and *Coleuses*, and *Ferns* of all descriptions.

WINTER-STRUCK CROTONS.—In establishments where the demand for a consistent supply of young plants is heavy, it is occasionally necessary to put in cuttings whenever they can be obtained. The cuttings taken in the winter, however, rarely do so well as the others, for the long period of stagnation seems to severely handicap the after chances of the plant. It will be well, therefore, to take off the tops of those that will make good cuttings, and start them afresh. Being fairly firm and wiry they are almost sure to root if properly looked after, and they make plants much quicker than the old plants would have done. The potting up of the spring hatch of cuttings, which are now rooted, should be taken in hand as soon as possible. The compost may contain rather more peat for these young plants than is given to the older specimens, also a larger proportion of sand.

EUPHORBIA JACQUINIAEFLORA AND E. (POINSETTIA) PULCHERRIMA.—Cuttings of these should still be secured as they are thrown up by the old plants. The potting on of the rooted cuttings in the early batches must likewise receive attention. After potting they should be kept in the propagating frame for a few days if space can be spared; if not a place on a shelf near the glass is the next best thing for them. Some of the old plants of *E. jacquiniaeflora* may well be grown on for another season, and as they have now had enough rest should be shaken out and re-potted. Give them a high temperature and rather dry atmosphere.

ACALYPHIAS.—Both *A. musaica* and *A. marginata* are handsome and useful foliage plants, but they are of most service in a small state. It is advisable, therefore, to keep up a constant supply of plants in 48's and 32's, which are the handiest sizes for general decorative work. After the spring cuttings have got a start they will do fairly well in a frame during the summer months, where they will colour much better, owing to the greater amount of light that can be given them. In the stove they must take the shade with the other plants.

GARDENIAS.—The cuttings which were put in at the end of March are now ready for their first shift—into 3 in. or 4-in. pots. The soil should consist of two parts of good loam and one of peat, with sand, and a few pieces of charcoal. Pot fairly firmly, and place them on a shelf near the glass, or, better still, in a frame in one of the warm houses. Keep them close for a time, and syringe regularly morning and afternoon. The watering-can must be used very carefully at this stage of their career.

Pits and Frames.

For the last few weeks the hosts of bedding plants have been choking up every available inch of frame space, but with the transference of some of these plants to the open air at the beginning of the past week some relief from the crush has been given, and by the end of the month things will be normal once again.

TUBEROUS BEGONIAS.—Where large plants are required it will be well to look over the stock and select some of the strongest, giving them a shift on into a larger pot. The remainder of the plants will do as they are for pot room, but they will require a little feeding later on—for the present they do not stand in need of it. Up to this time the stems have been stout enough to support their own weight, but staking will soon require attention. On basket plants, too, a start must be made to draw the growths gradually, but they must not be forced.

CINERARIAS.—The first sowing of seed, which was made the second week in April, was to supply plants for very early flowering—in November and December. Such plants are useful in some establishments, but they are not grown to any great extent. The second sowing, to be made now, will furnish plants that will bloom in succession to these early ones at the beginning of the next year. This is quite early enough for most people, and thus the May sowing is usually the first with them.

COCKSCOMBS.—In order to induce these to take on a dwarf habit, and at the same time to produce large 'combs,' it is often necessary that the young plants should go through a starving process. This is best done when they are in small 60-sized pots, preparatory to their final shift into the flowering size. Another plan of obtaining dwarf plants is to allow them to make their combs, and then if the plants are too tall to cut off the comb with a fair length of stem, and some leaves attached, pot this up into a smaller pot, and plunge upon a brisk hotbed, when the cutting, for such it really is, will soon make roots.

CELOSIA PYRAMIDALIS PLUMOSA.—Make another sowing to supply a hatch of plants for late work. The seed will germinate very quickly now, and the subsequent growth of the seedlings will also be rapid. Pot off into 48's and 32's, according to the strength of the plants, those that are now in small 60's. Keep them near the glass, give plenty of water, and syringe freely to keep down red spider—their greatest pest.

ZONAL PELARGONIUMS FOR WINTER FLOWERING.—As soon as the cuttings are well rooted pot them off into large 60's. Stopping may be resorted to after they have recovered from the check. A little more heat than is usually given to these plants is of advantage now to start them growing strongly, but it must not be overdone.—A. S. G.

HINTS FOR AMATEURS.

Hardening-off Bedding Plants.—We are once again close upon the heels of the bedding-out season, so close indeed that it is of paramount importance that what time remains should be properly utilised in preparing as far as possible the plants for an outdoor life. Many subjects that will ordinarily grow in a comparatively low temperature have been luxuriating in heat during the spring months in order that the requisite stock of plants may be furnished by propagation, and in addition there are numbers of others that really require a high temperature at all times; also seedlings of plants almost innumerable that have passed their babyhood in warm pits and houses, and are now fast developing into sturdy young plants. All of these need a special education before they can be safely transferred from the shelter of glass structures to the open ground; they must be inured to stand the lower temperatures, their tissues must be toughened to resist with the minimum of injury to themselves cold winds and rains, for it is quite likely that they will have to contend with both, and the gardener gives this special education by the process that he pithily calls "hardening-off."

It does not take a very vivid imagination to see that the sudden transition from heat to cold must be injurious to a high degree. But the plants are now in heat and there is the other probable extreme looming in their near future. The only thing to do, therefore, is to effect a gradual transition, of which each stage shall not be sufficiently great to do direct damage to the things subjected to it, but which, on the other hand, will be a preparation for the next. Plants are like human beings in many ways—they may be trained to stand a good deal by means of suitable preparation, for they have within themselves the power of adapting themselves to circumstances to an extent that comparatively few appreciate. In employing this their adaptability to attain his own ends, the gardener then is only taking advantage of a potentiality wherewith Nature has endowed all her children. It would be somewhat late in the day had this "hardening-off" process only commenced in this, the third week in May; it should have been begun at least a fortnight ago, or better still with the beginning of the month, and thus only the final stage will be wanting to complete the education of the hardier plants.

Zonal Pelargoniums.—For the last six weeks these, with the exception of the later cuttings, have all been in cold frames. First of all the frames were kept rather close, then air was gradually admitted, and then the lights were pulled off altogether during the day, but pushed on again at night. Now the light may be left off all night unless frost threatens, when, of course, on they must go. It is more than likely that the frame room will be wanted for sheltering other more tender plants, and hence the Pelargoniums must be shifted out of it, and stood in a sheltered corner out of doors, where, in addition to the natural shelter afforded by position, further covering may be given if it becomes necessary—which may the fates forbid. The late struck cuttings that were potted up singly in small pots at the beginning of the month have now got a sufficient start. They should be shifted at once, therefore, to a vacant frame, kept close at first as the older plants were, and gradually inured to free ventilation, also as the others were. Ivy-leaved varieties may be treated in similar fashion.

Heliotropes, Verbenas, Iresines, and Coleuses are all of them much more tender than the "Geraniums," and if possible these should be kept in the frames until the last moment. At the time of writing the weather is anything but genial, cold rain and even colder winds are making it uncomfortable for man and beast as well as plants. Such things as Iresines and Coleuses too are particularly liable to receive damage when the low temperatures are combined with too much water at the root, and when they are put out of doors they naturally have to take and put up with all the rain that falls. The result is that exposure to such untoward conditions causes many to damp off.

Seedlings.—These require the greatest care of all, for in addition to having to get over their liking for heat they have not yet passed entirely out of the baby stage, and with it the tenderness that accom-

panies it. Too much water at the root is as injurious to them as it is to the Iresines and Coleuses, and hence it is almost as important that they should be shielded from cold rains as from low temperature.

Sub-tropical Bedding Plants.—In these we may include many Palms, together with other ordinarily stove foliage subjects as Acalyphas and Musa Ensete, flowering plants like Cannas, Erythrine Crista-galli, Plumbago capensis, P. rosea, and such annuals as the Castor Oil Plants. These have to undergo a preparatory training similar to that given the smaller subjects, but their greater height and bulk renders the frames that are employed for the smaller plants of no good. For these subjects, therefore, it is necessary to have a roomy, cool house, in which they will not be crushed up against the glass, and the ventilators of which may be opened more and more each day in the same way as the lights of the frames.

Tuberous Begonias.—These constitute such an important feature in the flower garden that any extra pains that may be taken to secure superior plants are well repaid. We always follow the plan of taking out the plants from the boxes in which they have been started into growth, and planting them out in a prepared bed of light, rich soil, placed upon a hotbed, and covered by a frame. This intermediate shift is given not later than the beginning of May, and great care is subsequently taken in the matters of shading, watering, syringing, and airing. The plants are now a mass of fine, stout foliage, and as the glass is so close they are all dwarf and sturdy. Air is given them pretty freely in the daytime now, although up to the present it has been taken off at night. During the coming week, however, if the weather be at all suitable a little air will be left on at night, so that the plants will ere long be fit for their final transference to their flowering quarters. Frost, however, may even yet make its appearance, and it must be watched for vigilantly, for with the leaves so close to the glass they would suffer almost as much as if they were out of doors. In the event of even a slight frost, therefore, the frames must be warmly covered.

Seedling Begonias.—The raising of these handsome plants from seed is a hobby that specially recommends itself to the amateur, for with a packet of seed purchased from a reliable source he has every prospect of getting a number of good things. Moreover, he has not to wait, as in the case of many other seedlings, for years before he can see the result of his labours, for if he sows fairly early, and has a fair amount of luck, he will be able to tell what the plants are like, and whether they are worth saving or not in the first season. Of course, with the seedling plants there is no necessity to harden them off so quickly for planting in the open, but they may and should be kept growing on under glass until the summer is fully here, when they will grow quite as fast out of doors as they would under glass, provided a warm and sunny spot be given them. Just now the young plants are in the boxes into which they were pricked off from the seed pans, and in these they may remain until there are signs of crowding, which, if growth proceeds as it ought to, should be by the end of this month or the beginning of next. The present is a rather critical time with the young plants, for there is a great tendency to over-water them, when the soil becomes sour and unkindly, and the vigour of the plants crippled. Consistent shading will be necessary, for whilst under glass the foliage burns very quickly.

Violets.—It is now high time that something was done with these or the season will be too short to obtain good, sturdy plants by the end of September, when it will be time to put them in the frames again. The frames in which the old plants were accommodated last winter were lifted off them at the end of last month. This was rendered necessary by the large amount of room needed by the bedding plants, and the Violets would, of course, take no hurt, as the most of the flowers were over by that time. The old plants should now be rooted out, and divided up into single young crowns, with two or three leaves and a few roots attached. These divisions may straightway be consigned to the open, and the old plants thrown away. If there is a vacant place on a north, east, or north-east border this should be selected for the Violets, as they will be there less liable to the attacks of red spider than they would in a sunnier locality. The best method is to plant in rows about 1 ft. apart, leaving 9 in.

between each plant in the rows. If the showery weather that we are now having continues, the Violets will soon take a hold of the ground, but if dry weather supervenes immediately after planting, watering must be resorted to. All the subsequent attention that will be necessary will be further watering, and keeping them clear of weeds. An occasional stirring of the soil by means of the Dutch hoe will be of great service.

Richardias have now finished flowering for the season and may be kept rather drier at the root than formerly, so as to give them a period of partial rest before they are planted out in the open border to make their growth for the season, or re-potted, according to which system the amateur prefers. Each plan has its advantages, but we should recommend planting out as being most suitable for the amateur to follow, for it is always best to have as few pot plants as possible to water during the summer months.—*Rex*.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Ten-Week Stocks Dying.—S. O.: With the information contained in your letter it is impossible for us to say definitely what is the cause of your seedling stocks going off. Do the young stems show evidence of rotteness near the point of contact with the soil? If so, you have probably over-watered them. If this is not the case you have most likely committed one of the mistakes in pricking them off that *Rex* speaks of in his recent article on seedlings, which see.

Polygonum cuspidatum.—This is the plant you speak of, *R. Stueud*, as being employed to a considerable extent in town gardens. It is a fairly good town plant, but it is apt to become sadly besmirched by the smoke. When placed in more favourable surroundings there is no finer sight than a good clump of it with its numbers of pure white flowers arranged in long, graceful sprays. We should not advise you to plant it in your garden unless you have plenty of room. It throws up a lot of suckers for some distance around the old stool.

Mignonette in Window-box.—I should like to fill one of my window-boxes with Mignonette this year. Which would be the better plan—to sow the seed in the boxes, or to sow in other pots or boxes and transfer the plants to the window boxes as soon as they become large enough.—*G. Laithway*.

Mignonette does not take with great readiness to transplanting, although the operation may be performed if care is taken; hence we should certainly advise you to sow the seed in the window box straight away. The plants may be afterwards thinned as required.

Size of Pots.—E. A.: The following are the diameters in inches, inside measurement, at the rim of the pots of the following sizes:—small 60's, 3 inches; large 60's, 4 inches; 48's, 5 inches; 32's, 6 inches; 24's, 7 inches; 20's, 8 inches; 16's, 9 inches; and 12's, 10 inches.

Large Chrysanthemums.—*Amateur*: You will find the following the eight largest-flowered varieties of those you have enumerated in your list, taking them in order, as you have written them down:—Phoebus, Lady Ridgway, Baron Hirsch, Emily Silsbury, Edith Tabor, Silver King, Col. W. B. Smith, and Charles Davis.

Lily of the Valley Crowns are of no use after they have been forced, *T. W.* The flowers are produced chiefly at the expense of the nourishment stored in the swollen crowns, root action being comparatively weak.

Violet Comte de Brazza.—E. S.: We do not know whether you could obtain divisions or crowns of Violets from nurserymen. You see if they supplied orders of this kind they would be spoiling their trade for plants in the autumn. You can only write to one and ask.

Cineraria Seed not Germinating.—*Ohio*: There may be several reasons why your Cineraria seed has not produced plants. The first is that the seed is bad, but, on the other hand, if you procure it from a trustworthy source this reason need not be entertained. Then again, you may have sowed too deeply

GREENWICH PARK.

IN connection with Greenwich Park, an interesting event takes place on Saturday the 21st inst., when the ceremony takes place of opening the grounds belonging to the Ranger's Lodge for the use and

crown property, are now added to Greenwich Park, which, like Kew, is a royal park, under the charge or care of the Chief Commissioner of Works.

Some little time ago Mr. A. D. Webster, a great authority on all that pertains to woods, forestry, and ornamental plantations, was made superintendent of the park, and ever since has been closely engaged in effecting improvements in every corner of it with the object of bringing it in line with the modern requirements of this thickly populated and fashionable, south-eastern suburb of London. Mr. Webster has made no attempt at remodelling the grounds, but has been and is renovating them upon the old lines so as to maintain the quaint, antique English style as much as possible.

As the Ranger's Grounds are the object of the present ceremony, we may here pass them in review, entering the same by the superintendent's lodge on the south side of the park. A great mound of soil here has been converted into an American garden. After clearing away the old tangle of rubbish, much peat was added to the natural soil, which was then planted with *Andromeda floribunda*, *Azalea mollis*, *Kalmias*, *Heaths*, *Menziesias*, in variety, *Rhododendron praecox*, *R. p. Early Gem*, choice hybrids of *R. ponticum* and many other subjects of that class. Even here some fine old trees exist, including the Tulip tree (*Liriodendron tulipifera*) and the Tree of Heaven (*Ailantus glandulosa*) each about 65 ft. high, also a fine specimen of the rare *Pavia flava*. By the path side is a unique specimen of the common Thorn, measuring 52 ft. in height, and girthing 7 ft. at ground level.

A little further on is The Dell (see accompanying illustration), a deep hollow, which has been partly cleared of old shrubbery and replanted with American shrubs. Some old specimens of the Pontic Azalea (*Rhododendron flavum*), several fully 12 ft. high, are now in full bloom. The Snowy Medlar (*Amelanchier canadense*) has just gone out of bloom. Fine old deciduous Oaks, Elms, and other deciduous trees occupy the high grounds.

A little further on the visitor comes upon a redoubt (see illustration) constructed or thrown up in 1863 by H. R. H. the Duke of Connaught while residing at the Ranger's Lodge, and then known as Prince Arthur. Near the latter building is a neatly constructed and curious bath supposed to be between 200 and 300 years old. It was covered by a house which fell to ruins over the site, and when the debris was cleared



THE DELL, RANGER'S GROUNDS.

or watered too heavily; indeed, it seems probable that a combination of these two is the reason for the failure, having caused the seed to rot. Do not throw the seed-pan away yet, however, for you may get a few plants out of it yet.

Isolepis gracilis.—*E. Seville*: You may readily multiply this pretty edging plant by splitting it up into pieces. From your large plants in 5-in. pots you should easily get four good pieces, each of which will be quite large enough. Pot the divisions up into 3-in. pots, using rather light soil and draining the pots fairly well. If you have a warm house or pit, place the divisions in it for a week or two to give them a start; after that, they will be ready for the conservatory.

Lifting Tulips.—*C. T.*: When the stalk of the Tulips can be bent without breaking, the plants may safely be lifted. They should then be laid in ashes to finish ripening.

Plants for hanging Pots.—*Enquirer*: There is quite a number of plants that you can have in small suspended pots in your greenhouse besides Ferns. Amongst variegated subjects there is nothing finer than *Sibthorpia europaea variegata*, and *Nepeta Glechoma variegata*, to which attention has lately been drawn in the Amateurs' page. The dwarf blue *Lohelias* are also very bright and showy, whilst the common yellow-musk *Mimulus moschatus*, and its large-flowered and exceedingly handsome variety, *M. m. Harrisonii* are both good. The chaste little *Campanulas*, *C. isophylla*, and *C. i. alba* have been so often alluded to that it is almost unnecessary to mention them again. *Thunbergia alata* and its varieties will also flower in your house if you raise them and grow them on to a good size in a gentle heat before consigning them to the cooler quarters. A rather uncommon plant, but one which makes a pretty subject for hanging pots is *Fuchsia procumbens*, and you ought to get it, as it is easy to grow, and may be propagated to any extent by cuttings.

Tomatos, Melons, and Cucumbers.—You evidently intend to have a mixture, *U.* We have frequently seen Melons and Cucumbers grown in the same house, but never the three together. However, you can but try. The Tomatos and Melons will need all the sun you can give them, and the Cucumbers like the shade, so as your house is a lean-to, plant the two first-named in the front bed, and the Cucumbers in the bed behind. We shall be glad to hear how the experiment succeeds.

enjoyment of the public. On two previous occasions we announced that the said grounds were to be opened; and in the interim extensive preparations have been made to put them in order for public enjoyment, the date of opening being selected in honour of the Queen's birthday.

In 1753, Philip, Earl of Chesterfield purchased the house now known as the Ranger's Lodge on the south side of Greenwich Park. Besides, the Earl of Chesterfield, other notable personages have lived in the house, including the Duke of Montagu, the Duchess of Brunswick, sister of George III., Prin-



REDOUT MADE BY H.R.H THE DUKE OF CONNAUGHT.

cess Sophia Matilda of Gloucester in 1816, Lord Haddo, afterwards Earl of Aberdeen, and Lord Wolseley, who was the last to live in it. Prince Arthur, afterwards and now Duke of Connaught, stayed at the Ranger's Lodge from 1862 to 1873 while pursuing his studies at Woolwich. The house and kitchen garden are to be let or sold, while the pleasure grounds, extending to some 13 acres of

away the bath was discovered underneath. On entering the old kitchen garden, which has been allowed to relapse into a wild state for many years past, we found it to be quite in the old English style, oblong in outline and surrounded with high brick walls. The vines in an old vinery still continue to flourish, but they have been tended by a caretaker. In the garden Forget-me-not (*Myosotis sylvatica*),

Pansies, *Impatiens Roylei*, and Thistles flourish side by side. The kitchen garden is not to be opened to the public, but will go with the Ranger's Lodge when it finds a tenant.

Immediately outside of the kitchen garden are some grand old trees, including *Pyrus Malus floribunda*, 25 ft. high, and profusely laden with blossom now falling; also *Quercus castaneaefolia*, 55 ft. high; a huge, spreading, and drooping Copper Beech, covering an area 63 ft. in diameter; numerous Hollies and Evergreen Oaks, all doing well; and a fine specimen of the Hornbeam, having a stout trunk and broad head. Old Lilacs in variety are now in full bloom. A well furnished specimen of the Snowy Medlar, 30 ft. high, was a grand sight till quite recently. The Walnut and Mulberry are represented by fine specimens, while there are giant Spanish Chestnuts. Every part of the Ranger's Grounds has a secluded appearance, still retaining the character of a pleasure ground belonging to a private establishment. The old Oak fencing has given place to neat iron railings, which, while excluding the fine herd of 100 deer, admit the public by cradle gates. Though only about six miles from London Bridge, the visitor, when inside these grounds, might imagine him or herself 50 or 100 miles from town. Walks have been made or re-made and gravelled, while the fine old turf is soft for the feet. The new entrance from Blackheath is through a beautifully designed wrought iron gate.

Greenwich Park, as a whole, has an area of over 200 acres, and in the matter of the natural scenery excels every other London park. Very little, if any, of it is really level, but undulated in every direction, so that strangers are continually finding themselves on a hill, or in a deep hollow, with sharply ascending or descending slopes. It is traversed in every direction by avenues, intersecting one another, of trees, of which by far the most dominant is the Spanish Chestnut in gigantic, patriarchal specimens, which must have braved the storms of hundreds of years. They certainly are one of the leading features of the park, and help largely to make it unique in or near London. Many of the trees are singularly thickened and bulb-like close to the ground line. Hundreds of them have immense boles with a girth of 12 ft., 16 ft., 22 ft., and 26 ft. There are several of them in the Ranger's Grounds, including one with an immense trunk, dividing into huge limbs about 10 ft. from the ground. Some of these we intend reproducing on a future occasion.

One avenue of moderate length consists of Horse Chestnuts now coming into bloom. Passing these, going in the direction of the Greenwich Observatory from the Ranger's Grounds, the visitor soon comes in sight of that world-famed pile of buildings and domes. On the way, some twenty-three tumuli or barrows are encountered, forming grassy mounds, supposed to be the burial place of Danes, by the side of an ancient highway now green and almost obliterated. The observatory stands on a mound from which one can look down upon the ancient village and Greenwich Palace where Queen Elizabeth lived, also the Naval College, and the Thames with its teeming life and shipping. The grand old river forms a sharp bend here, and appears to be flowing back in the direction from whence it came, the Isle of Dogs on the opposite shore forming the obstruction which diverts the waterway.

Proceeding in the direction of One Tree Hill also opened to the public on Saturday, Queen Elizabeth's Oak comes in view, an immense old bole that has been dead for the last twenty-three years, but being covered with Ivy is still green, it must be 800 to 1,000 years old, being headless, hollow, and probably as large in the time of good Queen Bess as now, for the interior is chipped smooth, the wall pierced to form a small window, and the floor furnished with wooden seats round the sides and conforming to the interior. Close by it is a young Oak, about 13½ ft. high, planted on the Diamond Jubilee day of her Majesty Queen Victoria. Not far off is a rustic fountain constructed of huge blocks of granite. On ascending the opposite side of the gully the grounds of One Tree Hill are entered. Seats are to be placed on a flat area, on the top from which magnificent views are obtainable in every direction, including the finest view of the observatory and river to be had. A little beyond is the steep slope known as the "rolling hill," down which children delight to roll. Some bare ground beneath high Elms in another direction is to be covered with

sand for the enjoyment of children, out of the way of danger from bicycles, machines, deer, &c. A new road down the hill to Greenwich Park station has been made by Mr. Webster in this locality.

Not far off is an enclosed area set apart as a nursery for the rearing of trees, shrubs, herbaceous plants, &c., for planting in the park. A greenhouse gives shelter to the Pelargoniums, Fuchsias, and other bedding plants intended for the park. Not far off is the paddock in which the deer bring forth their young in June and July, and in which they may be penned when occasion requires. The Blackheath avenue is bounded by a double row of noble trees, consisting largely of Spanish Chestnuts, Oaks, Elms, and Horse Chestnuts, the first named predominating. It was opened for carriage traffic only about twenty-three to twenty-four years ago, and is now much frequented by bicycles and vehicles of every description.

The ornamental grounds formerly known as the wilderness is a beautifully undulated area of the park which has been improved and planted by Mr. Webster, and opened to the public during the past year. The deer are excluded from this portion by a neat iron fence, owing to the fine plantations which everywhere abound. A lake or ornamental piece of water has been planted with Water Lilies, including the beautiful *Nymphaea alba rosea*. The Cape Pondweed is also established. Around the lake are plantations of Bamboos; pink and white Thorns; masses of double Gorse, now a blaze of orange-yellow; Mountain Ash, Almonds, *Olearia Haastii*, Magnolias, and other choice shrubs, all supplied from the nurseries of Messrs. James Veitch & Sons, Ltd., Chelsea. Specimens of almost every flowering and ornamental tree and shrub, grown by that firm, have been planted in suitable positions to determine which will succeed best. Masses of German Irises, Dornicums, and other herbaceous plants are now in full bloom.

On emerging from this pleasant spot we found many old gravel paths turfed down, and grass walks lined off and regularly mowed for the enjoyment of the public in fine weather. The trees used all to be surrounded, each one individually, by a circular fence, but those eyesores have now been obliterated, as unnecessary by the exclusion of the deer. The White Beam tree (*Pyrus*) scattered through the grounds is at present very effective. What was a gravel hole four months ago is now a rosery planted with a mass of wild Roses. Lord Penzance's Sweet Briars have also been added to the collection. Rhododendrons, Portugal Broom, and other fine shrubs surround the rosery. Turner's Hybrid Oak (*Quercus Turneri*) originated here through natural agencies, as well as at other places. It is a hybrid between *Q. Cerris* and *Q. Ilex*. Beds of Hyacinths and Tulips are out of keeping with this semi-wild and beautiful place, and are to be turfed down. A bandstand has been erected, the pitch of which was made under the instructions or advice of Mr. Dan Godfrey, and a chaste and highly ornamental fence is being placed around it. Music will be dispensed here on Sundays and Thursdays. The thousands of well-dressed people who flock here show how they appreciate this beautiful park, which, though very ancient, as indicated by the patriarchal trees alone, has been thoroughly adapted to modern requirements, the imprint of the present superintendent's hand being largely visible in almost every corner and retreat of it, but particularly in the recent additions.

BOUGAINVILLEA GLABRA.

As a climber for the roof of the stove or other warm house the value of *Bougainvillea glabra* is well known to British gardeners. Rightly or wrongly the idea is held, however, that the plants will not flower in a young state, and hence we rarely see them treated as pot subjects, excepting in the case of large balloon-shaped specimens. A recent issue of *The Florists' Exchange* gives an illustration of a houseful of *Bougainvilleas* supposed to be *B. glabra*, growing in 4-in. and 5-in. pots, every plant being full of bloom. It is even stated that the plants will flower in 2½-in pots. If this be true here is a wrinkle for English growers, unless the plant be not really *B. glabra*, in which case the sooner the variety or species becomes known to British horticulture the better.

HARDY HERBACEOUS PLANTS.

THE rains of the early part of May have already worked a wondrous change in all our hardy plants. They had been having but a poor time of it through April for the rains that ought to have come did not, and what with bright sun in the day and cold nights, growth was necessarily slow and attended with some danger. They have made up for lost time, however, during the last fortnight, growth having been remarkably rapid.

Arabis albida.—There are not wanting people who decry planting showy subjects in large masses as productive of a vulgarly garnish effect, but for all that the practice has something to recommend it. The easiness with which *Arabis albida* may be propagated either by cuttings, root division, or seed, and the fact that it will grow and flower on dry banks where many other less common and more particular things would not, should induce us not to lose sight of it in making spring bedding arrangements. A good sized clump or collection of clumps in the rock-garden are moreover not to be despised.

Claytonia sibirica.—The genus *Claytonia* does not bulk largely in hardy plant collections, but *C. sibirica* is well worthy of notice as a good plant for growing in the shade. It forms rather dense tufts or clumps, and the shining green, succulent leaves are not without a charm of their own. The flowers are produced with fair freedom in racemes, and are individually about half-an-inch in diameter, and bright rose in colour. They have a pretty star-shaped appearance owing to the fact that each of the petals is deeply bifid.

Stylophorum diphyllum.—This showy member of Papaveraceae is just now in capital condition. At first sight the plant looks like a glorified form of *Chelidonium majus*, for the foliage and habit favour the latter subject a good deal. There is no mistaking the bright yellow flowers, however, for they are fully three or four times as large as those of the *Chelidonium*. There is no more easily suited subject than that under notice for it will grow almost anywhere, and in almost any soil. It appears, however, to be partial to a shady position, for comparing some plants lately that were growing in the shade with those that were in the open the former appeared to have larger and finer flowers than the latter. The height of the plant varies from 1 ft. to 18 in. and the habit is naturally bushy and tufted, although when the shade is too close it is apt to exceed this height and to take on a rather more straggling appearance; but this is only what might be expected. It commences to flower before the spring has very far advanced and continues to bloom throughout the whole of the summer, so that it has a fairly lengthy flowering season. *S. diphyllum* is a native of North-Western America, and made its appearance in this country about the year 1854. It is occasionally met with under the name of *S. ohioense*, and has also been placed by some botanists in the genus *Chelidonium*.

Azalea procumbens is the name generally given in gardens to this pretty, but small, trailing, evergreen shrub, although it would be more correctly called *Loiseleuria procumbens*, in commemoration of the French botanist Loiseleur des Longchamps who lived in the early part of the present century. Other names have not been wanting, moreover, for it has been placed in both the genera *Chamaecistus* and *Chamaeledon*. At this time of the year the plant is fully as beautiful as during its flowering time in July for the tips of the young growths are prettily suffused with pink, and have a charm and elegance peculiarly their own. The most suitable soil is a rather sandy peat, and excellent results are obtained by treating it as an undergrowth plant in conjunction with other taller-growing things that also like a peaty soil. If a position is assigned it in the rock garden the soil should be well drained and a close watch should be kept upon it, for from its very diminutiveness it is apt to be lost sight of.

Adonis pyrenaica.—There is quite a number of pretty subjects in flower just now, but none of them has more claims upon the attention of the hardy plant grower than this *Adonis*, for both foliage and flowers are handsome, and either of them alone would be sufficient justification for its inclusion amongst all collections. The large bright yellow flowers are produced over a considerable time, and with the much-divided, light green foliage give a pretty effect. The rains seem to have given unusual lustre to the flowers, and the

foliage is all the better for having some of the April dust cleansed from it. As the specific name suggests *A. pyrenaica* is a native of the Pyrenees, from whence it was brought to this country as far back as the year 1817. With Messrs. Barr & Sons, at Long Ditton, it grows very vigorously, but it is most in evidence in protected parts of the nursery where, in addition to protection from cold winds and frosts, a light shade has been afforded it through the day.—*Plant Lover*.

NOTICES OF BOOKS.

BRITISH ORCHIDS: containing an exhaustive description of each species and variety. By A. D. Wehster, Author of *Hardy Ornamental Flowering Trees and Shrubs*, *Hardy Coniferous Trees*, *Practical Forestry*, &c. Second and Enlarged Edition, Illustrated. London: J. S. Virtue & Co., Limited, 26, Ivy Lane, Paternoster Row, E.C. 1898. Price 5s.

In response to repeated inquiries after "British Orchids," the author has been induced to prepare a second edition of his book, which now extends to 128 pages of large octavo size, exclusive of a good general index, index of illustrations, and a table of contents. Except, perhaps, in the case of British Ferns, it rarely occurs that a single family of British plants is accorded the honour of a book entirely devoted to its interests. The author rather pleads the poverty of the British Isles in Orchids, which number only forty species, or slightly over, by comparing them with the 300 or more which are native of Java, though Great Britain is fully $2\frac{1}{2}$ times as large as that East Indian island. Nevertheless, the British Orchids are all interesting, some of them particularly so, and several of them are really handsome.

There are twenty-two chapters in the book, sixteen of which are devoted to as many genera, by which the family is represented in our flora. The first chapter is devoted to a general review of the Orchid family; the second to classification; and the last four to cultivation, fertilisation, enemies, and distribution. These odd chapters deal with the science and practice of the subject, and are therefore fraught with interest to many, particularly since the remarkable methods of fertilisation peculiar to several of them were studied by Darwin and others. Many gardeners would like to cultivate British Orchids, but few of them have been so successful as Mr. Wehster evidently has been, for he here gives the results of his own experience and practice. He makes no attempt to laud his own successes, however, but frankly acknowledges the successes of many cultivators from the time of Gerard in 1597, to the present day, including several enthusiasts still alive and amongst us. It may interest would-be cultivators to know that British Orchids may be removed from their native wilds at any period of their growth even when in full bloom; but he warned his readers to lift the plants most carefully so that neither tubers nor roots may in the least be damaged. We have seen most flagrant cases of carelessness in this respect, and short of nailing or sewing the broken pieces together, the transplanters could scarcely have treated the plants with less regard to their chances of survival. For many years Mr. Wehster cultivated nearly every British species, though as far as we see he does not state the locality where this was done. "No doubt soil and situation require careful consideration in the cultivation of British Orchids," he states, and in this we quite agree. It reminds us of what Emerson said of the sparrow:—

"I thought the sparrow's note from heaven,
Singing at dawn on the alder hough;
I brought him home, in his nest, at even;
He sings the song, but it cheers not now,
For I did not bring home the river and sky;—
He sang to my ear,—they sang to my eye."

We note with satisfaction, however, that Mr. Wehster, although he imitated nature to the extent of using limestone blocks or boulders for those requiring chalk or lime, and elevated some portions of his bed for those that affect dry situations, he did not follow her slavishly. Instances occur in other families of plants, where the cultivator reaps a larger measure of success by adopting methods of his own, and this is what the author advocates as a result of his own experience. Some would-be cultivators are impressed with the idea that most of the British Orchids require lime or chalk if success is to

be assured. We have seen such species as *Orchis maculata*, *O. latifolia*, *O. carnea*, *O. mascula*, *Habenaria hifolia*, and others making a more rampant growth and producing finer spikes of bloom in heavy clay soil, overlying the old red sandstone formation, in the alluvium of river beds, and in the peaty soils of woods, than we have yet noted upon the chalk.

The sixteen chapters devoted to the descriptions of species, their distribution, and hints upon the culture recommended for individual species, are full of interest. Under *Goodyera repens* we note that slugs are their dread enemies which will eat the plants bit by bit close back to the roots. Cultivators of exotic species often relate, with real sorrow, their experiences in this respect; a perusal of the book also shows how nearly several of the British species have been exterminated by various causes, and the preventable ones are most to be regretted and deplored. The interesting discussion upon the evicted Orchid of Ireland in 1886, does not escape the author's notice, but receives a due share of attention. We refer to *Spiranthes romanoviana*, which has been destroyed in one of the few localities in which it existed in Ireland, by the draining of the land, which was planted with Potatoes in one spot, and sown with Oats in another. Such is the fate of other British plants. *Cypripedium Calceolus*, and *Epipogium Gmelini* are also on the verge of extinction. Very interesting are *Malaxis paludosa* and *Liparis Loeselii*, the only British species having a tendency to be epiphytal. There are illustrations of many of the species scattered throughout the book, which every lover of this interesting family should possess.

THE YELLOW SPORTS OF CHRYS- ANTHEMUM MME. CARNOT.

IN the fifth line from the bottom of the paragraph, "Yellow Sport, &c." page 583, the words "He also said," is an error. Did I put that? [The words had some marks which we took for inverted commas, and thought they were meant for a quotation. Hence our alterations, which we admit. ED.] I meant it was myself who did not know the conditions of the schedule, because Mr. Mease's man called it Yellow Mme. Carnot. I said this is not Yellow Mme. Carnot (G. J. Warren); I should label it Primrose Mme. Carnot, which he did. That caused the hother; for the schedule said they must be varieties already in commerce, and Primrose Mme. Carnot was not in commerce; hence the hother. It was quite innocently done, and I am sure Mr. Mease would not have done it in contradiction to the rules had he known it was distinct from G. J. Warren. Mr. Mease's man had plenty of spare blooms with him, so that he was not pushed at all.—*W. Wells*.

THE sport which originated at Balcombe Place Gardens, Sussex, is certainly getting it hot—Ah! poor G. J. Warren. When anything is affected with heat or jaundice, many pin great faith in water as a cooler and cure, selecting some of the wells or other that abound in the land. But apart from this it does seem strange that such an excellent cultivator as Mr. Wells should have to cross such a high expanse of water before he could detect any difference in the shades of Warren and Mrs. Mease. Perhaps it was the salt that exerted its bleaching influence upon the petals. But, no, Mr. Beckett, the judge himself says he has grown the bloom in question as pale in colour, which was identical with the blooms staged at the Aquarium by Mr. Mease as Yellow Mme. Carnot.

Nay, it seems probable that Mr. Mease has had a leak sprung upon him prematurely; for he instructed his assistant to name it Yellow Mme. Carnot, and this, coupled with Mr. Wells' defiance of anyone detecting any difference, excepting in colour, leaves us in doubt as to Mrs. Mease having a long lease of separate existence. The names of *Chrysanthemums* and synonyms are legion and bewildering. They land our judges between the horns of dilemmas, and promote discussions upon things infinitesimally small. For it is almost needless to say that the transfusion of the pigments in the colourations of flowers can be altered slightly by placing them more or less in light and shade.—*B. L.*

Pineapples at the rate of 10,000 a week throughout the year are imported into London.

MIRAMAR, EXMOUTH.

THE seat of J. Gordon, Esq., is just now very interesting. The grounds are full of spring flowers of the usual class as well as many of the rarer forms. Being situated not far from the coast on well elevated land, and having a light sandy soil, it is surprising how early and free many things come on compared with others but a short distance away, where the soil is heavy and winds at times strong and keen. In one quarter I noticed on the carefully-kept grass plot a number of pyramid Apple and Pear trees, some 6 ft. high, full of fruiting spurs, perfect in form, and remarkable for vigour and cleanness. The Pears were mostly gone out of flower, and were setting well with fruit. The Apples were gay with their blossoms, which were large, intense in colour, and most attractive. Really, to see a lot such as these was a pleasant surprise, for though not quite in the pleasure grounds, they were still apart from the kitchen garden, in a well-kept portion with clipped hedge, well-mown grass, and neat square or diamond-shaped spaces about the trees, which would doubtless have a good mulching as the fruits swell and call for greater support.

Passing into the Vineries, I was again much pleased. The clean rods, many jointed, had produced stout growth, and leathery leaves; and the abundance of fine bunches now in flower or just setting, gave evidence of good attention on the part of Mr. Ide, who planted these some eighteen years ago; and leads one to expect a good display on the exhibition hoards next autumn, as has been the case in previous years. In the Orchid houses I noticed *Cattleya lawrenceana* with seven spikes of its bright, showy blooms; *C. Mossiae* and *C. Mendelii* in various shades, *C. amethystoglossa*, *C. intermedia*, &c. *Laelia purpurata*, *L. tenebrosa*, &c., were just coming on; *Dendrobiums* mostly over, but *D. dixanthum*, seldom seen, was gay with bright yellow blooms on its long, tapering bulbs. *Maxillaria Turnerii* was a mass of flower, and *Epidendrum rhizophorum* was gay with its scarlet and orange blossoms. *Vanda tricolor*, with six spikes, was also very creditable, and *V. t. Patersonii*, with two spikes of its highly-coloured and densely-spotted flowers, called up memories of shows at Manchester in days gone by. *Cypripediums* were very numerous and gay, a very fine form of *C. exul* striking the eye immediately on entering. *Cymbidium eburneum*, *Cattleya citrina* on blocks, and many others deserve mention; but these will give a slight idea of some of the good things grown here.—*W. Swan, Exmouth*.

BARE SPACES UNDER TREES.

I HAVE frequently noticed in otherwise well-kept gardens large bare spaces under trees where this condition of things prevails in conspicuous positions. The aspect of affairs is highly unsatisfactory; and although the choice of plants suitable for the clothing of these barren spots is a rather restricted one, what few things there are available for the purpose are well adapted for planting in the positions indicated. The foremost plant is the Ivy, and where large spaces are sought to be covered chiefly by it, the great variety of foliage both as respects form and colour embraced among the many varieties, which are now obtainable at a moderate cost, should lead those who are about to carry out work of this kind to plant as a groundwork the ordinary Irish Ivy. Either brick hurrs or the hutt of the roots of trees may be scattered about and plants of either variegated or distinct foliage varieties trained over them.

Ivy is not one of the quickest things in establishing itself, especially under the condition of things I am here contemplating, where the soil will be in an exhausted condition and permeated with roots. A good dressing of fresh soil should be spread on, say from three to four inches, more if available will be better, having first broken up the old soil. This will give whatever is planted a good start, whether Ivy or the few other things we are about to specify, which afterwards will be well able to take care of themselves.

The creeping rooted St. John's Wort, *Hypericum calycinum*, is possibly next to Ivy the best plant we have to grow under the shade of trees, and when established will require but little attention beyond cutting back the old growths occasionally. We have seen it flowering well under these conditions,

although, when planted on the banks of a running stream the flowers and growth are much finer. Another good plant is *Euonymus radicans variegata*, of which we learnt to our cost the rabbits are very partial to, so that wherever these rodents have access it is inadmissible, for they eat it off faster than it grows. The sweet Woodruff (*Asperula odorata*) has a good effect under the shade of smaller growing trees and shrubs. Where the space to be covered is of only limited area, we have often when passing patches of this after a warm shower been at a loss, till we discovered its presence, to think where the smell of new made hay was coming from. When in flower it is one of the prettiest white flowers imaginable.

Then there are again the Vincas, the large common one (*V. major*), being the best. Of this there is a beautiful golden margined variety. The type will grow anywhere and in almost anything; but about the end of the present month they are apt to get a bit shabby. If so, cut them over and they speedily furnish the ground again. *Vinca minor*, and its silvery variegated form are also available; but it takes more time to cover the ground with them. To give variety in foliage plant among these spreading plants a few clumps of the Male Fern (*Lastrea Filix-Mas*), and the sword fern (*Polystichum angulare*). The first being quite deciduous will have to be cut over in the autumn. As the Ivy grows it must be prevented, by cutting it back at intervals, from climbing too far up the trees. I have found the young strands of Ivy of a year or two's growth much admired when used for decorating church pillars on festive occasions.—*W. B. G.*

GARDENING FOR CHILDREN.

It has often occurred to me as to whether we are giving that encouragement to the younger portion of the community we ought to do in gardening. It must be clear to all thoughtful and observing minds that if you want a profession or art to develop and extend then one of the best methods is to encourage the rising portion of the community, as it is far more easy to bring these to new ideas than those of more ripened years.

This is most forcibly seen in the encouragement that is given in schools, &c., with a view to develop and bring out the ideas and powers of the young. I am aware much is done in industrial schools and elsewhere in the way of teaching them horticulture, but this does not apply to our village life. It may be said here they have an opportunity of learning it in their own parents gardens. True, but children want encouragement as well as grown-up people.

There is now a very large number of villages, &c., that have their cottage flower shows to encourage the love and produce of the garden by the cottager and amateur, and I am glad to say they have done noble work in many places. But what have these societies done to encourage the young? I say absolutely nothing to speak of. Some may say that we give prizes to children for collections of wild flowers, &c. This is true, but how can this be looked on as help towards cultivating a garden? Often, as I look on these when I am judging them at these country shows, I am apt to think they do more harm than good, seeing that they encourage these children to rob the hedgerows, &c., of much beauty to bring to shows to answer no good end. I am very doubtful if the collecting of these wild flowers has more than one end, namely, that of obtaining the prize.

If our flower shows are to do the work they have done in the past, in what way could they advance the cause better than by giving prizes to the young for material cultivated by themselves?

To illustrate my idea, what could encourage them better than by offering three prizes, for, say, three or four plants of any kind grown in pots? Or again for the best produce of any kind in the way of vegetables? If something as a change is wanted prizes might be offered for a bunch of cut flowers obtained from plants grown by the exhibitor. Another way of stimulating the young is to offer prizes for a given piece of ground which has the best vegetables growing on it and to be cultivated by the one competing.

Some may say they doubt whether many of these may be obtained honourably. Be this as it may, I have quite as much faith in children's honourableness as in those of more ripened years in such matters. Why could not the Gardeners' Mutual

Improvement Societies adopt something of the kind for their younger members?

I note the mutual society at Sherborne does this at their annual exhibition, and it is gratifying to see that Chard Flower and Fruit Society has adopted the idea by offering prizes for three pot plants grown by children under fourteen years of age. This is the way to infuse a love into, and to extend the art of gardening in the future.—*J. Crook.*

THE WORKING VALUE OF FUELS.

IN some experiments carried on at the New York State Veterinary College it was found that the heat lost by ventilation was 39 per cent. of the whole, and my attention has been called to the fact that these figures, which may be taken as correct, differ seriously from those given in my book on the "Commercial Uses of Coal Gas," where the amount lost in Messrs. Walker's bottling stores is given as varying from 22½ to 25 per cent. The explanation is simple—the minimum ventilation required in living rooms is 500 cubic ft. of air per hour for each adult; in bottling stores only a fraction of this is required, in fact, no provision whatever is made for ventilation, and all which takes place occurs from leakages and the constant opening of doors for the passage of trucks and barrels. The figures given by me are clearly stated as being observed results in practice in bottling stores only. I had no opportunity before the book was published of making exact experiments in living rooms, these being very difficult, if not impossible, under ordinary conditions in any house, the speed of the air currents in the flues varying almost from minute to minute.

Recent experiments in rooms where the ventilation is controlled and can be measured have established a rule which may be safely relied on for every practical purpose. The accepted standard is the British Thermal unit, *i.e.*, the amount of heat necessary to raise the temperature of one pound of water one degree Fahrenheit, and one unit is required per hour for each degree rise of temperature over the outside for each square ft. of glass, or for every 4 square ft. of exposed wall, and two-thirds more for the loss of heat by ventilation in ordinary living rooms. The loss of heat in living rooms is an unknown quantity, as it varies in every room, and in the same room from hour to hour, but taking the theoretical value of coal gas at 660 British Thermal units per cubic ft., that of coal 13,000 units per lb., and of coke 10,000 units per lb., it becomes easy to calculate the effective value, and the loss of heat in different systems.

A flueless gas stove may be taken as the highest type of efficiency, and using this 1 cubic ft. of gas per hour will be required for every 660 square ft. of glass or every 2,680 square ft. of exposed wall, for every one degree rise of temperature over the outside, and, in addition to this, two-thirds of cubic ft. for loss by ventilation. Taking a room 22 ft. square and 10 ft. high, with all walls exposed, 2 cubic ft. of gas per hour will maintain a rise of three degrees over the outside, allowing for the average window surface.

The exact figures for warm air stoves with flues, and for open fires, are not available, and perhaps not possible, but for average practice, it may be taken that nearly one-half the total heat is lost in a warm air stove with a flue, and two-thirds with an open fire. This can hardly be considered as all loss, as the ventilation necessary for comfort and health cannot be always obtained without some assistance, and the so-called loss may be partly taken as useful work done. The whole subject is beset with variations and difficulties, and any standard can be proved to be seriously wrong in individual cases, but the figures given may be taken for average work. It must be clearly understood that the figures given are for maintaining the heat, not for raising the temperature of any room quickly, for which a much larger fuel consumption is required.

HEATING PLANT HOUSES.

These figures work out in practice in greenhouse heating, where steady temperatures are required, night and day, and the loss from any system of boilers or stoves, can be readily calculated, a matter of interest to nurserymen whose fuel consumption is a question of vital importance. The loss in most forms of boilers is enormous, and the subject needs careful consideration. For this purpose the calculation is exceedingly simple, on the basis of 10,000 units per lb. of coke. One pound of coke burnt per

hour will give a rise of 10 degrees for every 1,000 sq. ft. of glass, or 4,000 sq. ft. of exposed wall, not allowing for loss by ventilation. For this one-half more fuel must be allowed; this gives us the maximum possible duty, and a comparison with the fuel burnt gives the waste.

Where the fuel heat is not utilised, there is no doubt that at least 50 to 60 per cent. of the fuel is completely wasted in most of the systems at present in use, and the value of the fuel is not considered as it should be. In my own case, with a Chatsworth boiler, burning gas coke, and heating a range of houses 45 x 30 ft., one-half of which is kept at a tropical temperature, the flue heat not being used, the calculated consumption is 8 lbs. per hour by theory, allowing one-eighth loss for wind, as the houses are on high ground, and rather exposed (this wind allowance will vary in different districts). The actual winter average is 11½ lbs. per hour, showing a waste of 31½ per cent., nearly one-third of the fuel; this being with a first-class boiler, clean, well set, carefully fired, and of the correct size for its work. It is doubtful if better results could be obtained in practice under any ordinary conditions.

The following rule may be taken as a guide for coke-fired greenhouse boilers:—

For every 1,000 sq. ft. of glass, and for every 4,000 sq. ft. of exposed wall, for each 10° rise of temperature over the outside.

Loss through glass and walls 16 ozs. per hour.

„ by ventilation 8 ozs. „ „

„ „ wind (average) .. 3 ozs. „ „

„ „ boiler and flue .. 13 ozs. „ „

Total 2½ lbs.

Three-fourths of the flue loss can be recovered by taking these under the beds in the houses. Any fuel consumption over this may be taken as waste which can be prevented.—*Thos. Fletcher, F.C.S.*

INTERESTING PLANTS.

THE third of the series of botanical and horticultural demonstrations that has been arranged by the Royal Horticultural Society to be given during the year by Professor Henslow attracted a capital audience on the 10th inst. Philip Crowley, Esq., occupied the chair.

In his opening remarks the lecturer dealt with Alpine plants generally—such plants as are found in the Arctic and Antarctic regions, and in high altitudes on the rest of the earth's surface. He said that three things were to be noticed about them:—first, they were much dwarfer than other plants; secondly, the flowers were more abundant; and thirdly, more brilliant than those plants in lower altitudes. Some families, such as the Primulaceae, stood out conspicuously in the Alpine floras. *Primula Auricula* was mentioned as one of the most notable plants of this order. The modern race of *Auriculas* was probably derived from several species, but the exact parentage of the race was unknown. He pointed out that whereas the old *Primula Auricula* had the normal number of petals—five—the modern forms had seven or eight, the increase being due to the stimulus of cultivation, the increased nutriment given the plant by the cultivator inducing the change, which had now become permanent. Dr. Weissman believed that no acquired characters were hereditary, but he disagreed with this, and the *Auricula* supported his own views that acquired characters might be reproduced in the progeny. The professor contrasted some of the magnificent yellow-flowered forms sent to that day's show by Mr. David Storrie with the refined Alpine varieties submitted by Mr. Douglas, the latter representing the florists' ideal of refinement. Other plants, such as *Primula involucrata*, *P. Sieboldii*, and *P. farinosa*, were mentioned, the latter being found in Cumberland and also close to the Straits of Magellan. The genus *Androsace*, belonging to the same order was also very largely Alpine. There were many *Saxifragas* too, such as *S. muscosa*, and *S. oppositifolia* amongst Alpine plants. It was held that the climatal conditions were the cause of the dwarfing, although the effects of climate were often exemplified in other ways. Thus plants which were not woolly in the lower altitudes tended to become woolly in the higher. *Gnaphalium Leontopodium*, the Edelweiss, was cited as a typical Alpine plant. The

Gentians were abundant in Alpine floras, in fact they were all Alpines with few exceptions including *Gentiana Pneumonanthe*, which was to be found in this country, at Swanage.

Professor Henslow then explained the theory that was accepted in order to account for the presence of Alpines in widely severed areas, possessing similar climates. He alluded to the idea that England was at one time part of the Continent, and that the glacial epoch covered the face of the Continent very far to the south with glaciers, and that as the glaciers retreated further north, and the temperature became higher the, then Alpine, plants in the plains retreated or were driven up the hills in search of the lower temperatures they loved. This accounted for the presence of these plants on our highest hills, and also for the destruction of the links that at one time joined them to their relatives in other parts of the world.

The *Medicagos* were the next plants that came in for discussion, allusion being made to the spirally twisted pod or fruit, characterising the genus, as different from the usual straight pod to be found in *Leguminosae*. There were several variations, however, from this curled pod, especially in *M. sativa*, where all gradations from nearly straight to curled were shown. In *M. falcata*, also, the pod was curved like a sickle. It had been suggested that the snail-like appearance of the pod had been adopted by the plant in order to delude certain birds who dashed the fruits about, and thus distributed the seeds.

Bougainvillea was next discussed, and the fact explained that the so-called "flower" was nothing more than three large showy bracts which enveloped the flower proper, which was quite inconspicuous.

Passing to the consideration of double flowers, the lecturer pointed out that a florist could not make a flower double, but must watch for and take advantage of the signs given by nature that she was willing to produce a double flower. The actual causes which produced doubling were not as yet understood. It might be the excess of nutriment; and in connection with this it had been stated that no plant with variegated leaves bore double flowers. *Kerria japonica*, curiously enough, was always single in Japan, but generally double in England. Double flowers of a certain plant were occasionally produced contemporaneously in several parts of the country. Thus there were no double *Primulas* until twenty years ago, when double flowers occurred at the same time over parts of Britain and the Continent. Mr. Engleheart had told him that day that, although they had been trying for years to get a double *Narcissus poeticus*, none had appeared until this year, when it had been forthcoming in three different places.

The different forms of the roots of *Radishes* were finally dealt with. They were the progeny of *Raphanus Raphanistrum*, and of *D. maritimum*, the former probably a mere variety of the latter species. Pliny had much to say about *Radishes*, and amongst other things he stated that the Greeks had found out the way to turn the male *Radish* into the female—the long roots were thought to be the male, and the round ones the female. It had been found by Carrière that this change was quite possible, for he had planted the long ones on hard soil and had discovered that they had a tendency to shorten, and become round; similarly, when grown in soft, light soil, the round roots had a tendency to lengthen. This was only another instance of the adaptation of plants to their environments, and was evidence of the statement that everything in nature tends to become hereditary.

GARDENING MISCELLANY.

VIOLA TRUE BLUE.

IN spite of the influx of new varieties of *Violas* that has taken place of late years there are some of the older sorts that have held their ground successfully amongst the newcomers. Freedom and continuity of flowering are both alike indispensable for varieties that have to be employed for bedding purposes, and refinement of flower, however much we may admire it, and however high a place those varieties possessing it may rank in our estimation, has to take a

subordinate position to these two requisites. True Blue is a notable example of an old form holding its own against newer and more refined sorts. I know of nothing to touch it as a bedder, for the rich blue flowers are produced with almost prodigal profusion, and it is the best of its colour for bedding purposes. Seen in the mass the effect is rich in the extreme. Added to this floriferousness is a hardy and vigorous constitution, and what more do we want? Messrs. Barr & Sons have a nice stock of this variety at Long Ditton, where as it is grown side by side with other sorts its relative value may easily be gauged.—*Wandever.*

THE VARIEGATED CORNISH MONEYWORT.

VARIEGATED plants invariably receive a large meed of praise because they are, so to speak, always in character. Flowering plants, on the other hand, as a rule, are only presentable when the floral organs, for which they are grown, are in the best condition. Many flowering plants, as is well known, are not admissible for decoration nine or ten months out of the year; but with variegated ones this does not apply—they are always with us. The variegated *Cornish Moneywort* (*Sibthorpia europaea*) is not, perhaps, a case in point, as it is too small to create a great sensation in the horticultural world; but to those whose love for plants is not in direct ratio to their size the little plant in question is a gem of the first water. It is not quite so robust as the species, but it is far more elegant, its tiny, round, crenated, money-like leaves being beautifully variegated and produced in great profusion on slender, thread-like stems. It requires a cool and moist atmosphere, and does exceedingly well with Mr. A. Wright, Falkland Park Gardens, amongst the cool *Orchids*, both in pots and on the covered stages. It goes well with greenhouse *Ferns*, and can, therefore, be strongly recommended.—*C. B. G., Acton, W.*

WALLFLOWER HARPUR CREWE.

Those who take delight in good old fashioned flowers would do well to add this fine double yellow variety to their collections of hardy flowers. The plants live for many years provided we get no severe winters, when, of course, *Wallflowers* that have got tall are liable to get cut down. The entire loss of the variety can, however, be readily avoided by taking cuttings during summer or early autumn and inserting them in pots of sandy soil. The cuttings should be shaded somewhat from the glare of the sun during the hotter parts of the day, but not longer. A cold frame will be sufficient for this purpose, as well as for the preservation of the young plants during winter, along with other hardy or half hardy subjects. The stock of young plants may be put out about the end of March or the beginning of April according to the weather and latitude. The old plants may be allowed to remain till they get cut down by a severe winter. It will be safe, however, to keep a few cuttings in frames as a reserve every winter. The yellow, fully double, and delightfully fragrant flowers are produced in abundance. We noted old and young plants in the garden of Mr. William Goldring, of Kew, with whom the variety is a favourite.

BERBERIS STENOPHYLLA.

THIS hybrid *Barberry* was raised by crossing *B. Darwinii* with *B. empetrifolia*, the progeny being intermediate in habit and foliage. The lower leaves are long and narrow, while those on the flowering shoots are shorter, lanceolate or linear, and entire. The orange flowers are usually produced in great profusion, quite rivalling *B. Darwinii* in this respect as well as in vigour. The foliage is more sparsely arranged on the lower part of the stronger growing stems. No collection of *Barberries* can be complete without this handsome garden form; and pleasure grounds from which it is absent lack the presence of a decorative subject of first-class importance. The quantity of flowers, and their rich orange-yellow colour are only to be met with in *B. Darwinii* and *B. stenophylla*. The leaves are dark green, leathery, and equally as fine at mid-winter as at mid-summer. The last-named is perfectly hardy, and shows up well by contrast with deciduous subjects in winter. The flowers are succeeded by blue-black berries.

QUESTIONS AND ANSWERS.

* * * Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as *Carnations*, *Pelargoniums*, *Chrysanthemums*, *Roses*, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Tuberous Begonias.—*Box*: We were a little doubtful about the colours you were going to use, but were of opinion that you would be getting as many colours as your beds would allow. We were fully aware that the four colours coming so near each other in a geometrical design would be somewhat odd, but could not see how to get away from it with four colours to deal with; but since you are resolved to plant two of the beds with scarlet varieties, we see no objection to it. At the same time the other two should be planted with one colour to match, and the result would be a more perfectly balanced combination. If the tubers are small your best plan would be to put them in fairly thickly without carpeting. You require tubers two or three years old to make it worth while planting them widely with a carpet of other plants beneath them.

Dwarf Dahlias.—*Omega*: The best dwarf scarlet, white, and yellow *Dahlias* as far as we know are *Scarlet Globe*, *White Bedder*, and *Yellow Globe*. We do not understand, however, why you should desire dwarf *Dahlias* for cut flower purposes. They are excellent for bedding purposes, if the beds must be dwarf; but we consider them unsuitable for cut flowers because their short, stout stalks are stiff and ungainly when put in vases. We should prefer *Pompons* or *Cactus Dahlias* for cutting as they flower more freely, and if the latter are not too large, they hang gracefully. In the southern counties of England few of the varieties of these two types are very dwarf. A few dwarf ones have been raised but they never become popular, because they produce few flowers compared with those that grow more freely.

Plan of Bed.—*Bedding*: We take it for granted that the bed, of which you send the plan, is of moderate size. If a large one you ought to have a centre of something. On other occasions please state the width of the bed. *Iresine Wallsii* should answer perfectly in the lines you propose. *Pelargonium Robert Fish* would also suit for the six spaces marked No. 2. The two spaces marked No. 3 might be filled with *Pelargonium Lass o' Gowrie*; but you will have to stop some of the shoots to keep it from overtopping the other plants if it grows strongly. We think, however, that it would be an advantage to make it change places with *Pelargonium R. Fish*. The two spaces marked No. 4 might well be filled with *Begonia Vernon Compacta*. You have still two spaces unnumbered; let us mark them No. 5. By filling them with *Begonia Duchess of Edinburgh*, or some other pale variety belonging to the same fibrous-rooted strain, your design would be complete, and we think would look well. Your edging will answer.

Ladies and Orange Blossom.—*Omega*: No doubt there are several reasons why ladies are partial to *Orange Blossom*. The flowers possess considerable decorative value, and are sweet-scented, but the principal reason is one of association. The flowers have been used from time immemorial at weddings for decorating the bride, who would ever after, perhaps, cherish a fond remembrance of them and their use on her wedding day. The daughter catches up the infection from her mother, and so on. We can only imagine there are no ladies about the establishment, or they are plotting to keep you in the dark. That, of course, is their little game.

Leaves of Azalea.—*J. T. Thurston*: The leaves you sent have been injured by thrips, most likely during the dry weather last summer. These little black insects are particularly fond of *Azaleas*, and very mischievous. The plants require careful and constant attention so that the pest may be attacked whenever it makes its appearance. When this happens make a strong solution of soft soap, or *Gishurst Compound*, in water. Lay the plants on their sides on a board placed across the mouth of a large tub. Syringe the underside of the leaves vigorously with the solution, making sure that you thoroughly wet every leaf. The tub will catch the soapy water and enable you to give the plants another turn with the liquid. Wash with clean water an hour afterwards. A good syringing with clean water now and again during the summer months would help largely to keep away these and other insect pests.

Insects in Yineries.—*A. D.*: The larger of the two insects that can fly, was the perfect or fully developed stage of one of the skipjacks; but as you had decapitated the prisoner we shall not attempt to name the species. It does no harm in the winged state, but as a wireworm you probably know what it is capable of doing. By all means destroy every one you can lay hands on to prevent the females from laying their eggs. The small black beetle is evidently a woodborer, but the large pin had smashed it up. The brown, hard beetle that does not attempt to fly

is the Clay-coloured Weevil (*Otiorynchus picipes*), a destructive pest in vineries, Peach houses and in the open garden as well. Destroy every one of them you can find. We have no doubt this is the one that riddled the leaves of your Peaches with holes. Clear away all rubbish that would afford shelter to the weevil. Cement all the cracks and crevices in walls. Then lay down some short boards, slightly raised above the soil to act as traps, which should be examined every morning. You could also spread a white cloth on the ground under the trees attacked before leaving off work at 6 p.m. Go into the houses at night with a lantern; turn on the light upon the trees, giving the trees at the same time a sharp tap with the hand. The weevils will drop on the cloth and should be picked up and destroyed immediately. Persevere till you cannot find any more.

Pear Leaves Blistered.—*M. M'Laren*: The leaves sent are affected with what is known as Pear-leaf Blister, caused by a small mite named *Phytoptus Pyri*, which lives in the interior of the leaves producing the blisters. You cannot apply any remedy that would be effective; therefore, the best plan is to pull off all the blistered leaves and burn them to prevent the mite from going into the healthy leaves. The sooner you do this the better. Some may appear next spring, and you should serve them in the same way till you have mastered the pest.

Apple de Neige.—*M. M'Laren*: This is an older variety than Royal Snow, which was newly introduced to this country about the end of 1896, or the beginning of 1897, from Canada.

Shrub or Small Tree for Town.—*M. M'Laren*: Amongst those we have seen giving satisfaction under the conditions you name are the Hop Trefoil (*Ptelea trifoliata*), Lilac (*Syringa vulgaris*), the Bladder Senna (*Colutea arborescens*), the Lime (*Tilia vulgaris*), Caragana arborescens, Forsythia suspensa, the Flowering Currant (*Ribes sanguineum*), and the White Thorn (*Crataegus Oxyacantha*), and its varieties.

Vines Diseased.—*Holly Bush*: The Vine leaf you sent presents certainly a very curious appearance, and would seem to have been gnawed by weevils, such as the clay-coloured weevil (*Otiorynchus picipes*) or the black Vine weevil (*O. sulcatus*). For remedies see under "Insects in Vineries" above. Keep a sharp look out for weevils, that is, long snouted beetles. They appear to have been punctured in places and might have been injured by small mites when unfolding; but the leaf was too dried up to keep any if they had been there. Leaves with mites travel best with a little damp moss about them.

Nitric Acid at Rothamsted.—*John McEwan*: We can furnish you with the loss of nitrogen per acre in the drainage for nine months in 1895-6. The report was issued before the completion of the year, hence its incompleteness. It is reckoned as nitrogen, not nitric acid, and in lbs. per acre. From soil 5 ft. deep the loss was for September, 0.21; October, 2.00; November, 10.55; December, 4.04; January, 1.60; February, 0.20; March, 3.52; April, 0.14; and May, 0.04. From soil 3 ft. 4 ins. deep the loss of nitrogen per acre was, September, 0.27; October, 2.38; November, 10.84; December, 3.98; January, 1.46; February, 0.20; March, 2.94; April, 0.13; and May, 0.02. We can, if desired, give the losses for the twelve months each of 1893-4, and 1894-5; also the averages for eighteen years, &c.

Names of Plants.—*Wm. Keen*: Your plant is *Echium fastuosum*, one of the shrubby, Canary Island species of Viper's Bugloss.—*J. T. Thurston*: *Fuchsia procumbens*.—*Enquirer*: The green variety of *Arum maculatum*, by some botanists named *A. maculatum* var. *immaculatum*.—*Omega*: The red flower is the Red Campion (*Lychnis dioica*); the other is the English Bluebell (*Scilla nutans*).—*Constant Reader*: 1, is a species of *Bignonia* from the New World; 2, is a *Bauhinia*, which may not be a native of Egypt any more than the *Bignonia*. We do not recognise either species, and both are too unfamiliar to be named from leaves. If they were raised from seeds they may take a good many more years to flower in our climate, because we have too little sunshine, especially in winter. When they flower we should be pleased to find the names for you.—*A. C.*: 1, *Myosotis sylvatica*; 2, *Trollius asiaticus*; 3, *Berberis Darwinii*; 4, *Syringa persica*; 5, *Dendrobium chrysootoxum*.

Communications Received.—*Thos. Fletcher*.—B. L.—C.—W. H. Patterson.—*M. Temple*.—*Sutton & Sons*.—*W. J., G.—E. Ballard*.—*W. P.—D. Stuart*.—*A. Grigor*.—*Anderson*.—*James Gooden*.—*H. & C.—J. L.—A. M.—H. W.—D. Davis*.—*T. J.—Lamb*.

TRADE CATALOGUE RECEIVED.

W. J. GODFREY, Carnation Specialist, Exmouth, Devon.—Special List of New Tree or Winter-blooming Carnations.

FIXTURES FOR 1898.

MAY.

- 25.—Temple Show (3 days); Bath and West of England at Cardiff (5 days).
- 27.—Manchester Whitsuntide Exhibition (6 days).
- 28.—Cheltenham Show (2 days).

JUNE.

- 8.—Royal Botanic Society's Floral Fête (two days).
- 8.—Braintree Show (2 days).
- 14.—Royal Hort. Society's Committees.
- 15.—Grand Yorkshire Gala (3 days).
- 20.—Royal Agricultural Show, Birmingham.
- 22.—Jersey Rose Show.
- 23.—National Society's Rose Show at Bath.
- 28.—Royal Hort. Society Committees; Special Rose Show; R.H.S. of Southampton (2 days).
- 28.—Leeds Gala (3 days).
- 29.—Richmond Horticultural Society; Croydon Rose Show.

JULY.

- 2.—Rose Show at Crystal Palace.
- 5.—Hereford Rose Show.
- 6.—Farningham Rose and Horticultural Show.
- 6.—Co. Boro' of Hanley Floral Fête (2 days).
- 6.—Tunbridge Wells Rose Show.
- 7.—Woodbridge Rose Show.
- 9.—Manchester Rose Show.
- 9.—Garden Party and Exhibition, N.A.G.A.
- 12.—Wolverhampton Floral Fête (3 days).
- 12.—Royal Hort. Society's Committees.
- 13.—Ipswich Rose Show.
- 13.—Durham and Newcastle Hort. Society's Show (3 days).
- 14.—National Rose Show at Halifax.
- 20.—National Carnation and Picotee Society, at the Crystal Palace.
- 21.—Sidcup Rose Show.
- 26.—Royal Hort. Society's Committees.

AUGUST.

- 1.—Beddington, Carshalton, and Wallington Show.
- 1.—Leicester Show (2 days).
- 1.—Northampton Hort. Society (2 days).
- 9.—Royal Hort. Society's Committees.
- 10.—Bishops Stortford Hort. Society's Show; Hastings and St. Leonards Hort. Society's Show.
- 10.—Salisbury Show.
- 10.—Etwell & District Show.

INDEX TO ADVERTISEMENTS.

Auction Sales.
Protheroe & Morrils.....594

Catalogues.
Barr & Sons593
Bunyard & Co.....593
J. Forbes.....595
Kelway & Son593
J. Peed & Sons.....595
Simpson & Son.....593
Sutton & Sons593

Chrysanthemums.
Devon Nursery.....593

Florists' Flowers.
J. Douglas593
Grieve & Sons595
Hood Gardens595
Kelway & Son593
Keynes, Williams, & Co. 595
Lister & Son.....595
R. Owen593
J. Peed & Sons.....595
J. J. Upton595
J. Wells593

Flower Pots.
Sankey & Sons, Ltd.608

Fruit Trees.
G. Bunyard & Co.593

Garden Sundries, &c.
J. Arnold593
Corry & Co.594
Essery's Coal608
Hirst, Brooke & Hirst. ...593
Jadoo Fibre607
Leeds Orchid Co.607
A. Outram607
Porter's Stakes.....593
G. H. Richards.....594
H. G. Smyth594
Wood & Son, Ltd.608

Heating Apparatus.
W. Cooper, Limited606
Thames Bank Iron Co. ...593

Horticultural Bullders.
J. Boyd & Sons.....593
W. Cooper, Ltd.606
J. Gray.....593
W. Richardson & Co. ...593
J. Weeks & Co., Ltd.593

Hose.
F. Reddaway & Co., Ltd. 594

Insecticides.
Exors. Robert Campbell 594
Corry & Co.593

Gisburst Compound593
Wood & Son, Ltd.608
XL All.....594

Lawn Mowers.
Lloyd, Lawrence & Co....607
Ransomes, Sims & Jefferies, Ltd.594
A. Shanks & Son, Ltd....908

Manures.
C. Beeson593
Chemical Union593
Clay & Son.....593
W. Colchester593
Homco.....593
Lawes'.....606
Meggitt's593
Mumure593
Native Guano Co.594
H. G. Smyth594
W. Thomson & Sons....594

Miscellaneous.
Cooper's Cycles606
Corry & Co., Ltd.....594
Epps's Cocaine594
Gishurstine593
Juno Cycles608
Smyth's Baskets593

Netting.
H. J. Gasson594
A. Potter593
H. Robinson593

Orchids.
J. Cypber595
W. L. Lewis & Co.....593
P. McArthur595
F. Sander & Co593

Publications.
GARDENING WORLD.....607
Ogilvie.....607

Roses.
J. Cocker & Sons.....593

Seeds.
Simpson & Son.....593
Sutton & Sons593
R. Sydenham593

Situations, &c. 594

Tents.
A. Potter.....594

Weed Killers.
Acme Chemical Co.594
Boundary Chemical Co. 593
Wood & Son.....608




W. COOPER, LTD.,

Horticultural Providers,
755, OLD KENT RD., LONDON, S.E.

Amateur Span-Roof Greenhouse.

COMPLETE AND READY FOR ERECTION.

| | | |
|-------------------------------|---|-------------------------------|
| 7 ft. by 5 ft. £2 16s. 0d. |  | 9 ft. by 6 ft. £4 0s. 0d. |
| 8 ft. by 5 ft. £3 10s. 0d. | | 10 ft. by 7 ft. £5 0s. 0d. |
| For other Sizes. | | see List. |

Rustic Summer Houses.

LARGE STOCK TO SELECT FROM. FOR OTHER DESIGNS. SEE LIST. £3 5s., complete.




OUR LEADING FEATURE, £4.

Amateur Forcing Houses.

For Cucumbers, Tomatoes, Melons, &c.
From 50s., complete.



Cucumber Frames.

| | |
|----------------------|------|
| One Light. | |
| 4 ft. x 3 ft. | 17/- |
| 6 ft. x 4 ft. | 28/- |
| Two Lights. | |
| 6 ft. x 4 ft. | 30/- |
| 8 ft. x 6 ft. | 50/- |



"COOPER" CYCLES.

Latest Frame, Large Weldless Steel Tubes, Ball-bearings, Tangent Wheels, Break, and Mud Guards. Gent's from £5 10s.; Ladies' from £6, with dress and gear guards. 12 MONTHS' WARRANTY. Lists free. Agents Wanted.




Estimates for Every Description of Horticultural Work, Iron Buildings, Rustic Work, &c., &c., Free on Application. Competition Defied.

Span-Roof Conservatory.
Substantially and Handsomely Built.
Everything Complete and ready for Erection.




Rapid Propagator. For Raising Plants from Seeds, Slips, or Cuttings.



Span-Roof Poultry House.

| | |
|--------------------------------|------|
| 1 ft. 8 in. by 1 ft. 6 in. ... | 16/- |
| Glass not included. | |
| For other Sizes see List. | |

| | |
|---------------------------|------|
| 5 ft. by 4 ft. | 22/- |
| 6 ft. by 4 ft. | 25/- |
| For other Sizes see List. | |



Iron Buildings of every Description.

Churches, Temporary Hospitals, Bungalows. Packed on rail, or erected in any part of the Kingdom. See Section IV. in List. Plans and Estimates Free.



Special Value in Garden Hose.

Hose 60 ft., Rose, Jet, and Self Fitting Tap Union.

| | | | | | | |
|----------------|---------|-------|---------------------|-----------------------------|---------|-------|
| SPECIAL VALUE. | in. ... | s. d. | ARMOURD HOSE.—s. d. | STOUT. | in. ... | s. d. |
| | | | | | | |
| | 12 | 6 | | 1 | 32 | 0 |
| | 16 | 0 | | 1 | 39 | 0 |
| | 19 | 6 | | 1 | 47 | 0 |
| | 23 | 6 | | 1 | 35 | 3 |
| | 20 | 0 | | 1 | 42 | 9 |
| | 23 | 6 | | 1 | 49 | 6 |
| | 21 | 0 | | HOSE REELS. | | |
| | 25 | 0 | | 8s. 6d., 10s. 6d., 12s. 6d. | | |
| | 30 | 0 | | each. | | |

ILLUSTRATED LIST, POST FREE. Large CATALOGUE, 364 Pages, 1,200 Illustrations, Six Stamps.

W. COOPER, LTD., Horticultural Providers, 755, OLD KENT ROAD, LONDON, S.E.

NEW LARGE YELLOW TREE CARNATION.

"DUCHESS CONSUELO" (Dicksons).

Having secured the entire stock of this exquisite variety, we are now booking orders for plants for delivery in autumn at the prices noted below. "DUCHESS CONSUELO" is undoubtedly the finest yellow Tree Carnation yet introduced. The blooms, which are very freely produced, are as large as a Malmaison, reaching 5 in. in diameter, and are of a clear, soft, canary-yellow, petals large, and of great substance. The habit is all that can be desired, and it may be had in bloom all the year round.

| | |
|--|-----------|
| Vigorous young plants in 3½ in. pots | 3/6 each. |
| " larger " " 4 in. " | 5/- " |
| Flowering plants " 5 in. " | 7/6 " |
| Extra large flowering plants in 8 in. pots | 10/6 " |

DICKSONS NURSERIES, CHESTER.

VIOLETS! VIOLETS!! Cheap offer to Clear.

| SINGLES. | | DOUBLES. | |
|-------------------------------------|-------------|--|-------------|
| 25,000 Princess of Wales at | 7/- per 100 | 10,000 Lady Hume Campbell at | 5/- per 100 |
| 50,000 California | 7/- " " | 1,000 Mme. Millet | 15/- " " |
| 400 Victoria (new) | 10/- " " | 300 Neapolitan | 5/- " " |
| 100 Explorateur Dybowski | 8/- " " | 1,000 Marie Louise | 5/- " " |
| 500 Amiral Avellan | 8/- " " | 1,200 Comte de Brazza (or Swanley White) | 5/- " " |
| 500 Princess Beatrice | 8/- " " | 200 Duchess of Edinburgh | 15/- " " |
| 500 Italia | 8/- " " | 100 Double Red | 15/- " " |
| 500 Primavera | 8/- " " | 200 Victoria | 15/- " " |
| 1,000 Czar | 3/- " " | | |

Not less than fifty supplied at 100 rate. These prices are NETT. Cash with order.

THE MANAGERS, HOOD GARDENS, TOTNES.

Caladiums.

Two Gold and many Silver Medals have been awarded to our magnificent collection.

SILVER CUP AWARDED At the R.H.S. Temple Show, on May 19th, 1896.

A New Catalogue of all the best and choicest varieties has just been published, and may be had gratis and post free on application.

Our Selections of Choice named Distinct Varieties, 15/-, 18/-, 24/-, 30/-, and 42/- per dozen.

JOHN PEED & SONS,

ROUPELL PARK NURSERIES,

And at Streatham, S.W. WEST NORWOOD, LONDON, S.E.

JOHN LAING & SONS, NURSERIES, FOREST HILL, S.E.

All patrons are cordially invited to inspect our Nurseries, which are just now in excellent order. All requirements supplied for the garden at moderate rates.

DESCRIPTIVE CATALOGUES POST FREE.

National Telephone—SYDENHAM, 60. CATFORD RAILWAY STATION.

CUTBUSH'S CARNATIONS.

Awarded Seven Gold Medals, Many Silver Cups and Medals at Antwerp, York, London, &c., also Gold Medal at the recent Ghent Quinquennial Exhibition.

SILVER CUP

AT THE TEMPLE SHOW, LONDON, THIS WEEK.

For Novelties and General Varieties of Carnations in the best condition, always apply to

WM. CUTBUSH & SON, Highgate Nurseries, London, N. And Barnet, Herts.

RETARDED LILY OF THE VALLEY CROWNS.

Headquarters at Dersingham.

For prices &c., apply to—

T. JANNOCH,

Lily Nursery, Dersingham, King's Lynn, Norfolk.

DAHLIAS A SPECIALITY.

- 12 Grand New Cactus Dahlias, 9s.; 12x, 4s. 6d.
- 12 Older Cactus Dahlias, 4s.
- 12 Splendid Show and Fancies, 4s. 6d.
- 12 Grand Pompon, fine for cutting, 4s.

My new varieties for 1898.

See Descriptive Catalogue, Post Free.

ALL THE ABOVE CARRIAGE PAID.

G. HUMPHRIES, F.R.H.S.,

The Nurseries, Kington Langley, CHIPPENHAM.

CARTERS' TESTED SEEDS.—
In sealed packets. Post free. Price 2/6, 3/6, and 5/- each.

CALCEOLARIA, CARTERS' VICTORIA.
—The finest in the world. Real gems of splendid habit.

CINERARIA, BRILLIANT PRIZE.
—Brilliant colours, endless variety. The grandest strain ever seen.

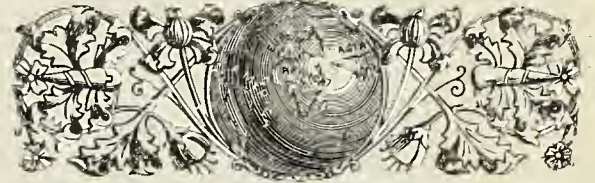
PRIMULA, HOLBORN PRIZE.—
Grand blossoms of rich colours. Single varieties, choice mixed colours; double varieties, choice mixed colours; single, in separate colours, viz., blue, scarlet, rose or white; double, in separate colours, viz., crimson, lilac, rose or white.

GLOXINIA, CARTERS' INVINCIBLE.—
Magnificent blooms, brilliant colours. These cannot be surpassed.

The above in sealed packets, post free; price 2/6, 3/6, and 5/- each.

CARTERS, THE QUEEN'S SEEDSMEN,
237, 235, and 97, HIGH HOLBORN LONDON.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Malda Vale, London W.



"Gardening is the purest of human pleasures, and the greatest retirement to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, MAY 28th, 1898.

TEMPLE SHOW OF 1898.—The eleventh great annual exhibition on the Thames Embankment, inaugurated by the Royal Horticultural Society, cannot on this occasion be described as larger than in any previous year, for it reached the impassable limit some years ago. The Inner Temple Gardens are of moderate extent, and the Benchers cannot allow any more tents or larger ones to be put up. There were 105 exhibitors, however, against 83 last year, which is evidence in itself of advancement. What falling away there may be in some directions is more than made up in another. The greater number of exhibitors means that some of the former ones have had their space reduced, so as to admit the extra 22. The staging ran to 12,000 sq. ft., but over three times this amount was applied for some time ago. The gangways under canvas were more extensive than the staging space; but this is always an absolute necessity at the Temple Shows, in order to accommodate the vast concourse of people which congregates during each of the three days to inspect a display which is difficult to realise without having seen it. If other evidence were needed of the growing popularity of the society and its general progress, it need only be mentioned that 325 fellows, and 2 associates have already joined it this year, with the prospect of a great many more before the end of the season, while 12 provincial societies have become affiliated with it. Various alterations were made in the arrangements of some of the tents to meet the differences in the nature of the exhibits, so that the show was by no means a repetition of last year.

The Orchids were not so numerous as we have seen them, but the deficiency in numbers was quite made up in the better quality of the useful and most decorative kinds—a tribute we should impute to the cultivator. Many regretted the absence of Baron Sir Henry Schroder, who does not exhibit every year; but the superb exhibit of the president, Sir Trevor Lawrence, Bart., was in its usual good form. The amateur element was further supported by fine exhibits from Earl Percy, Sir Frederick Wigan, Bart., W. Thompson, Esqr., Ludwig Mond, Esqr., H. S. Leon, Esqr., and others

who had smaller exhibits. There were many interesting Orchids, as may be seen by reference to our report, but the lions of the display were *Odontoglossums*, *Cattleya Mossiae*, *C. Mendelii*, *Laelia purpurata*, *Cypripediums*, *Oncidium ampliatum*, *O. marshallianum*, *Masdevallia Veitchi*, &c. Nurserymen exhibiting Orchids were represented by Messrs. Hugh Low & Co., F. Sander and Co., James Cypher, W. L. Lewis & Co., Charlesworth & Co., B. S. Williams & Son, and M. Linden, the latter with some others representing our Continental neighbours.

Foliage groups and flowering stove and greenhouse plants were more numerous, if anything, than on previous occasions, and in spite of the sunless nature of the past winter and spring, the exhibits were very creditable indeed. Evidence was not wanting that greater taste in arrangement was displayed by several of the exhibitors than last year, and they were certainly a long way ahead of their achievements at the earlier shows held in the Inner Temple Gardens. *Caladiums* were a strong feature in tent No. 5, the exhibits apparently getting larger and finer every year. Sunshine is necessary to bring out the brilliant colouring of these gorgeous, tropical, fine foliage subjects; but all things considered they would have been difficult to beat or even to match at any provincial or even Continental show. *Malmaison* and other *Carnations* were magnificent and more tastefully set up than ever we have seen them before. The new *Acalypha Sanderi* was the wonder and astonishment of all who saw it for the first time. The large groups of *Clematis*, *Roses*, *Gloxinias*, *Phyllocacti*, greenhouse plants in great variety, hardy herbaceous plants, rockeries of alpiners, and other exhibits made up a varied and magnificent assemblage of early summer and late spring flowers combined. Not the least important part of the show by any means were the fruit and vegetables, the latter being represented by *Peas*, *Cucumbers*, and *Tomatos* grown in pots as well as by gathered samples, besides many others making up some large exhibits. The fruit trees also attracted great attention on the part of visitors, and are always a source of profound interest to gardeners.

A substitute for silk is now prepared from wood-pulp, and is said to be so perfect as to deceive the most expert observers.

Poor Jobbing Gardener Again.—Gentleman: "Well, my man, what is that plant?" J. G.: "Why, that is an ample lobster, sir." (*Ampelopsis*).—*Patterson*.

A pair of *Tomtits* have built their nest in the letter-box attached to the workhouse at Uttoxeter, and the hen is now sitting on her eggs. She seems in no way disturbed by the dropping of letters in the box, which is going on constantly.

Leaf-cutter Bees.—Mr. Fred. Enoch, F.L.S., F.E.S., continues his story about British bees in the May number of *Knowledge*. Thirteen photographic illustrations of the leaf-cutter bees at their work of cell-building and the rearing of young, serve to give some idea of the marvellous ingenuity displayed by these carpenters of nature in the construction of their homes. There seems to be no scamping nor jerry building with these industrious workers, which carry on their work with remarkable precision without having served an apprenticeship. The interest which these bees would have for the gardener lies in their disfiguration of certain of his plants, but particularly *Roses*, the leaves of which soon become riddled with holes of two different forms, circular and oblong. The former are about as exact as a compass could make them. While the entomologist can not only look upon this sort of work with equanimity but with delight, the gardener is equally provoked to wrath at the disfigurement of and injury to his *Roses*.

Mr. R. Weller, F.R.H.S., who has been 11½ years at Glenstal Castle (4 years as head gardener, 5½ years as steward and gardener, and 2 years as steward to Sir C. Barrington, Bart.), has been appointed steward and gardener to Captain Green, Cretans-town, Newbridge, Co. Kildare, Ireland.

Mr. William Minty, after nine years' service with Mrs. Wood, Isle of Raasay, Kyle of Lochalsh, N.B., has been appointed head gardener to C. W. Dyson Perrins, Esq., Ardross Castle, Alness, Rosshire, N.B. We understand his predecessor at Ardross Castle Gardens, Mr. Massie, is retiring from the gardening profession after more than thirty years' service.

Frost in May.—A correspondent, writing from the modern Athens, says that the weather there has been very cold of late, last week having been especially bad. *Pelargoniums*, *Lobelias*, and *Pansies* have all been frosted and spoilt. *Potatos* have likewise been "nipped," and many fruit trees have had a rough time of it. This is much worse than our experience in the south, which, during the week in question, was anything but a pleasant one.

Field Mushrooms.—A trifle early as yet, you will say, to write anent these. My little boy of 5½ years brought in two very fine "*Agaricus Campestris*" on Sunday last, from the park. This is the earliest date I recollect seeing out-of-door Mushrooms, and it cannot be owing to any warm weather we have had this season; on the contrary, I do not remember having such cold days and nights during the month of May for some years past, and the only reason I can assign for it is the deluge of rain we have had during the present month, which amounts to 3.38 ins. up to Monday, the 23rd inst.—*J. M., Bicton, Devon*.

Saxifraga granulata.—One of the prettiest of wild plants on the banks of the Thames between Kew and Oxford, and on the meadows adjoining it in many localities, is this *Saxifraga*, which has larger flowers than many of the cherished exotic species. The stems grow about a foot in height or often under that, but are sufficiently tall at the time of flowering in May as to surmount the grass amongst which it grows. The double form is pretty frequent on rockeries and in collections of herbaceous plants, its flowers lasting longer than those of the single form. The specific name applies to the miniature tubers at the root by which the plant is perpetuated from year to year.

The Postmen's Park.—Arrangements have been proceeding for some time past for the purchase of a piece of land in the city of London, known as the Postmen's Park, much frequented by postmen during the dinner-hour and other leisure time. The vicar and churchwardens of St. Botolph, Aldersgate, have just purchased of the City Parochial Trustees the adjoining land in Little Britain, on condition that the western portion be handed over on June 24th on the payment of £6,000; and that the eastern portion be handed over on the payment of a further £6,000 if made within the next two years. By this arrangement the public garden will be enlarged and prevented from falling into the hands of the builder. £3,000 is still required to complete the second purchase.

Naturalisation of Flowering Plants.—A very interesting paper on this subject was read at the last meeting of the Irish Gardeners' Benefit Association, by Mr. J. A. Campbell, of St. Anne's. The essayist advocated the widespread planting of bulbs in all parts of the garden and grounds, wherever there was an opening. He referred to the broad acres of Mayo, Glencomb, near Tuam, as a happy example of the results produced by the naturalisation of suitable plants, amongst others of *Narcissi*, *Aquilegias*, *Antirrhinums*, *Geranium sanguineum*, and *Potentilla dubia*. At Dalkey, *Cineraria maritima*, *Valerians* and *Veronicas* grew freely on the cliffs, and added much to the beauty of the surroundings. In Trinity College Gardens, Dublin, *Daffodils* and other wild flowers abounded, especially in the grass. Straffan, the seat of Major Barton, was another example of the grand effects produced by the naturalising system. *Snowdrops* especially were freely employed at that place. Mr. Campbell also drew the attention of his audience to the saving of labour that might be affected by planting in wild or semi-wild surroundings, for once they were planted, many subjects were then able to look after themselves.

Kew Palace was opened to the public on Saturday last.

The Madder Plant (*Rubia tinctoria*) is cultivated in Hindustan, and furnishes the dye known as Turkey red.

Fruits of Bragging.—A man, having boasted a good deal, was asked if he had grown diatoms. Yes, he had, in a greenhouse, in 48's, and had flowered them as well, but had forgotten what the flower and foliage were like.—*Patterson*.

Greenwich Park.—The grounds lately attached to the Ranger's House, Greenwich Park, were thrown open to the public on Saturday last (21st inst.) in honour of the Queen's birthday. The welcome change which took place in the weather on that day was more encouraging to the people than it had been the two previous days. The site chosen for the opening ceremony was at the foot of a large tree in the centre of the grounds. The Vicar of Greenwich, at 12 o'clock noon, expressed thanks on behalf of the parish for this gracious gift of Her Majesty the Queen to the public.

Royal National Tulip Society.—The next exhibition of this society will be held at the Free Library, Middleton, near Manchester, on Whit Tuesday, May 31st, 1898. The exhibition will be open to the public from 1 p.m. until 8.30 p.m. The balance sheet for 1897 shows the society to be flourishing financially. The receipts totalled £43 9s., and the expenditure was £37 2s. 11d., thus leaving a balance to the credit of the society of £6 6s. 1d. This compares very favourably with the balance of 18s. 2d. carried over from 1896. Exhibition Tulips in many cases are still in perfection about London, so that they should be in their prime as far north as Manchester. The Hon. Secretary is James W. Bentley, Esq., Stakehill, Castleton, near Manchester.

Violet Culture in Germany.—A large quantity of Violets is grown in France, and we generally speak of our supplies coming from thence as if no other country on the Continent gave the matter any attention. It is evident, however, that Violet culture in Germany is an industry of no small importance. *Moller's Deutsche Gartner-Zeitung*, for the week ending Saturday, May 21st, devotes an entire issue to the consideration of the subject. The best Violets and their culture are dealt with, after which there follow articles on Violets as grown in private establishments and by nurserymen. The three newer varieties are Kaiser Frederick, Kronprinzessin Viktoria, and The California. A considerable number of other varieties are passed under review, some of which are well known in Britain. Illustrations of the Violet houses in several German nurseries show that this popular winter and spring flower is extensively grown under glass, planted out in beds and on benches, much after the style of the American method of growing many things. They are evidently grown to great perfection by several cultivators.

Border Auriculas.—There is no question but that these old fashioned border flowers have a great fascination for the general public. Independently of their beauty and their fragrance, they appeal to the lovers of spring flowers by many ties of early associations. Mr. A. Grigor, gardener to Alex. O. Gill, Esq., Fairfield, Aherdeen, sends us two boxes of cut flowers from the open border where they had been subjected to exceptionally cold weather and sleety showers for ten days or so previous to the time they were cut. The trusses had stout stems, 6 in. to 8 in. in length, and each truss in many cases consisted of 20 to 30 flowers, indicating remarkable vigour. As a rule, however, the flowers were less numerous and larger. Most of them belonged to the show class, as indicated by the ring of paste round the centre. Mr. Grigor's flowers were mostly very dark, ranging from purple to violet, crimson and maroon, sometimes nearly black. A few were coppery and others inclined towards yellow. Some were intermediate between the show and Alpine types, being edged, and a few of them were strictly Alpines. We should recommend Mr. Grigor to get more of the Alpine blood into his strain, or to get a packet of Alpine Auricula seed with the view of getting bright colours and golden centres if possible. As it is the strain is good for border Auriculas, but Alpines would add greatly to the value, the beauty and sprightliness of the whole.

William Ewart Gladstone.—Born at Liverpool on December 29th, 1809, and dying at Hawarden on May, 19th, 1898, the great statesman who has just passed away was in his eighty-ninth year. He entered Parliament at the age of twenty-three and served his country for nearly seventy years. The brilliancy of his Parliamentary career will never be forgotten; but amidst his incessant energy over a wide and varied field the domain of horticulture was not by any means beneath his notice, nor neglected by him. As a woodsman it is well known that he possessed great skill, and on occasion did not disdain to wield the axe himself. On many occasions he has delivered lengthy speeches to large and delighted audiences on the subject of horticulture and fruit-growing for jam-making and other commercial purposes, and no doubt a large number of his countrymen profited by his encouragement. The annual flower show at Hawarden was opened by him on many occasions, and his lengthy speeches on gardening and kindred matters were listened to with wrapt attention.

Royal Caledonian Horticultural Society.—At a meeting of the council held in Edinburgh on May 18th, the "Neill prize" was awarded to Mr. Thomas Lunt, gardener, Ardgowan. A fund was bequeathed to the society in 1851 by Mr. Patrick Fraser, LL.D., who had for many years acted as secretary, for the purpose of the interest being applied in furnishing a medal or other reward every second or third year to a distinguished Scottish botanist or cultivator. Part of the prize must be expended on plate or books bearing a suitable inscription. Amongst those to whom the prize has been awarded are the following: Mr. James McNab, Curator of the Royal Botanic Garden, Edinburgh; Professor Balfour, Edinburgh; William Thompson, gardener, Dalkeith Park; John Webster, gardener, Gordon Castle; David Thomson, gardener, Drumlanrig; Isaac Anderson Hendry, of Woodend; William Young, Assistant Secretary of Royal Caledonian Horticultural Society; Malcolm Dunn, Dalkeith Palace Gardens; Professor Bayley Balfour, Edinburgh; Alexander Kirk, Alloa; Robert Lindsay, late Curator Royal Botanic Garden, Edinburgh.

CALCEOLARIAS AT READING.

At the Portland Road Nurseries of Messrs. Sutton & Sons, Reading, a long, span-roofed house, in three divisions, is filled from end to end with Calceolarias in the full blaze of bloom. The seed was sown last June, so that the plants are scarcely twelve months old. They are grown in 10-in. pots, stood on fine river gravel from the bed of the Thames, spread over the corrugated iron benches. The plants are remarkably dwarf, say about 12 in. above the surface of the pots, and form spreading, flat-topped masses of bloom, entirely concealing the foliage, except at the base. The tall plants that were at one time grown here have been reduced in stature, and the flowers enlarged, so that the strain has now reached that state of perfection which makes it difficult to see where or in what direction they can be further improved. The flowers may be compared to great inflated boxing gloves, or large Strawberries of the flattened or compressed types. A few blooms are distinctly heart-shaped, being prolonged into a short, rounded point in front. They have entirely lost the old elongated and slipper form. On the whole, however, they are comparatively uniform in shape, but most diversified in colour, no two scarcely being exactly alike, except the self-coloured varieties.

The standard of merit from a packet of seed is so high that little attempt is made at naming varieties, except in the case of Cloth of Gold, a beautiful golden-yellow variety which has been perpetuated true from seed for many years. Like the rest of them, it is now dwarf, and the flowers enlarged. The mildness of the past winter, and the light, airy character of the frames and houses are conducive to this result. Being always near the glass, abundantly ventilated, and kept cool and moist by the wet gravel beneath them, and otherwise well attended to, have combined to produce the plants which visitors cannot but admire. No finer decorative plants could be placed in the conservatory at this season of the year; yet there is nothing to prevent any gardener from pursuing the same methods, and obtaining similar results, provided he has a suitable house of

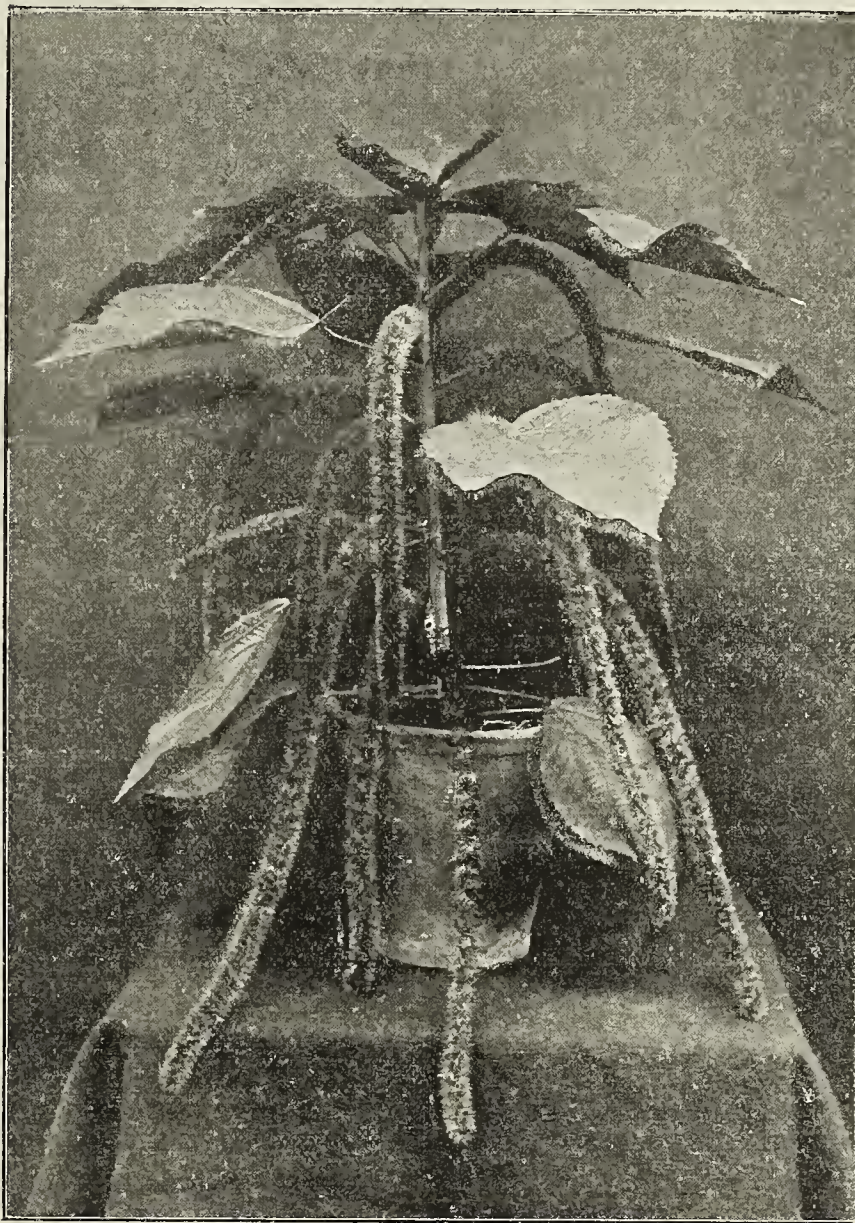
the required dimensions for accommodating his plants after they have to be removed from the frames which sheltered them during summer and autumn.

To adequately describe the colours would be a difficult task, for they range from the darkest maroon-crimson to the lightest cream, the markings of the spotted sorts being intricate and hieroglyphical. Amongst the selfs are crimson, maroon-crimson, golden-yellow, soft yellow, and primrose, fading to creamy-white. A plum-coloured sort is shaded with rose in front. Many resemble pastry or confectionery, one type of the former being crimson above and citron beneath, as if it had a cap of chocolate. Others are blackish-crimson, crimson, and rosy-red with a few yellow spots. Bronzy or coppery varieties are thinly spotted with crimson. Very handsome are the crimson flowers marbled with gold, others akin to them being marbled with crimson and yellow in about equal proportions. The creamy-yellow and creamy-white sorts mottled with purple or crimson are also chastely pretty in their soft hues.

comparable to it in the wide domain of cultivated flowers, the work of nature having been developed or evolved in a way that redounds to the credit of the hybridist and cultivator.

TUBEROUS BEGONIAS.

THERE has been so much written respecting this charming and valuable class of plant that I always approach the subject with a certain amount of diffidence. The facts of the case respecting both the improvements effected among them and the magnitude to which the culture of them has attained are most startling. It seems but as yesterday that they were in their infancy, and now the little one has become a thousand. The leading nurserymen were proud to show a stock of a few hundreds, and now the stocks run up to hundreds of thousands. Messrs. Laing's nurseries are crammed with them just now, this year's seedlings being reckoned at a quarter of a million; and whilst the quantity grown is on the increase the quality still improves both as respects



ACALYPHA SANDERI (See p. 619).

Other golden grounds are marbled with golden-brown and maroon-crimson hieroglyphical markings. A most remarkable development of this occurs where the golden ground is marbled with massive blotches of hieroglyphical forms, in two shades of crimson, dark spots being studded over the lighter blotches. It is, perhaps, impossible to account for the peculiar form the markings take, but something akin to it occurs in certain species of Stanhopea. Other shades of colour are salmon mottled with crimson; salmon shaded pink-cerise, and spotted crimson; cerise and crimson, spotted with gold; and pinkish-heliotrope and cream. A great curiosity in its way is a tricolor with crimson, rose, and pink flakes on a yellow ground, recalling what occurs in the flaked and mottled flowers of the florists' types of Antirrhinum belonging to the same family as the Calceolaria. In the way of spotted, marbled, and variegated flowers nothing can match this class of plants for cool conservatory work. The quaint form of the inflated pouch or lip has nothing

size and form of flower. The advance made among the doubles places them in the first rank of decorative flowering plants, either in the conservatory or flower garden. As bedding plants they have a great future before them, making a great display of colour. The erect stemmed ones of dwarf habit should be selected for this purpose. I took particular notice of the following:—Duke of Fife, rosy salmon, very large double flowers, erect; Duchess of Northumberland, bright salmon, extra large flowers; Dr. Nansen, single, large salmon-scarlet; Britannia, single, golden bronze; Countess of Pembroke, single, charming pink; Lady E. Smith, single, cerise and white, very distinct; Lady Plowden, single, a superb white; Countess of Dudley, double, creamy white, fringed petals; Lady Dunsary, double, pink; Lady Amphyl, single, splendid salmon, fine habit; Mrs. Arnold, single, yellow, first rate; and Fringed White, single. Almost every shade of colour can now be obtained among Begonias except blue. At the same time I noticed one which is a near approach to purple.—W. B. G.

THE TEMPLE SHOW.

May 25th, 26th, 27th.

As we go to press on Wednesday, the gates have admitted the general public to one of the finest shows that has been held by the Royal Horticultural Society, in the Inner Temple Gardens. The morning was cloudy and dull, but mild and dry. As far as the plants were concerned it was an ideal day for a show, because there was nothing to make either the flowers or foliage fade. The public was coming inside in great crowds, all highly delighted with the display provided.

ORCHIDS.

Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking, occupied his usual position in the big tent with a magnificent group of Orchids, profusely flowered. A large piece of *Cymbidium lowianum* occupied the centre and on either hand were masses of *Miltonia vexillaria* in various

Oncidium marshallianum had a most gorgeous effect. Amongst the numerous pieces of *Odontoglossum crispum* and its allies, as well as the pure white *Cattleya Skinneri alba* and *C. intermedia Parthenia*, there were bright bits of colour in *Miltonias*, *Cattleya lawrenceana*, *C. Mendelii*, *C. Mossiae*, *Aerides crispum*, *Warneri* and *Masdevallia Veitchi*. *Cypripedium callosum Sanderaae* was a pretty green veined variety. The miniature prodigy, *Eria extinc-toria* will not stay at home on the occasion of this show.

The Right Hon. Earl Percy (gardener, Mr. G. Wythes), Syon House, Brentford, had an extensive exhibit of Orchids, prominent amongst which were great masses of *Cypripedium barbatum grandiflorum*, *Laelia purpurata*, *Cattleya Mossiae* and *C. Mendelii*, all of which showed evidence of good cultivation. He also had choice hits of *Vanda teres*, *Laelia tenebrosa*, *Odontoglossum Edouardi*, *O. Reichenheimii*, *Coelogyne dayana*, *Oncidium*

the ground at the end of the stage. Amongst the Orchids were bold and massive clumps of *Laelia purpurata*, *Oncidium sarcodes*, *O. ampliatum majus*, *Odontoglossum crispum*, *O. luteo-purpureum*, *O. hystrix*, *Miltonia vexillaria*, *Cypripedium mastersianum* finely coloured, and others. Choice was the large plant of *Coelogyne dayana*, and *Cypripedium callosum Sanderaae*, *C. hellatulum album*, *C. concolor bellatulum*, a hybrid *Odontoglossum*, *Cattleya Wageneri*, *Maxillaria sandariana*, &c., equally so.

H. S. Leon, Esq. (gardener, Mr. A. Hislop), Bletchley Park, Bletchley, Bucks, staged a grand group of *Laelia purpurata*, *Cattleya lawrenceana*, *C. Mossiae* and *Odontoglossum crispum*. He had choice plants in a fine form of *Cattleya Skinneri oculata*, *Oncidium concolor superbum*, *Dendrobium nobile Bletchley Park var.*, &c.

Messrs. Charlesworth & Co., Heaton, Bradford, had a large and imposing display of *Oncidium ampliatum*, in huge panicles, *Odontoglossum crispum*, *O. Pescatorei*, *Masdevallia Veitchii*, *Miltonia vexillaria*, *Laelia purpurata*, and *Cattleya lawrenceana*, all of which were shown in massive, well-grown, and profusely flowered pieces. Interesting or new sorts were *Epilaelia Charlesworthii*, *Laelia elegans*, *Cattleya Ferdinand Denis*, *Laelia cinnabrosa*, and *Laeliocattleya Admiral Dewey*.

Messrs. B. S. Williams & Son, Upper Holloway, had a bold and showy display of *Cymbidium lowianum*, *Vanda suavis*, *V. tricolor*, *Miltonia vexillaria*, *Oncidium concolor*, *O. marshallianum*, *Miltonia vexillaria*, *Odontoglossum crispum*, *O. cirrhosum* and others. Amongst the interesting bits were *Laeliocattleya Latona*, *L. intermedio-flava*, *Pescatorea Lehmanni*, &c.

Ludwig Mond, Esq. (gardener, Mr. J. O. Clarke), 20, Avenue Road, Regents' Park, had a group of *Cymbidium lowianum*, *Oncidium ampliatum majus*, *Miltonia vexillaria*, *Cattleya Mossiae* and other showy subjects.

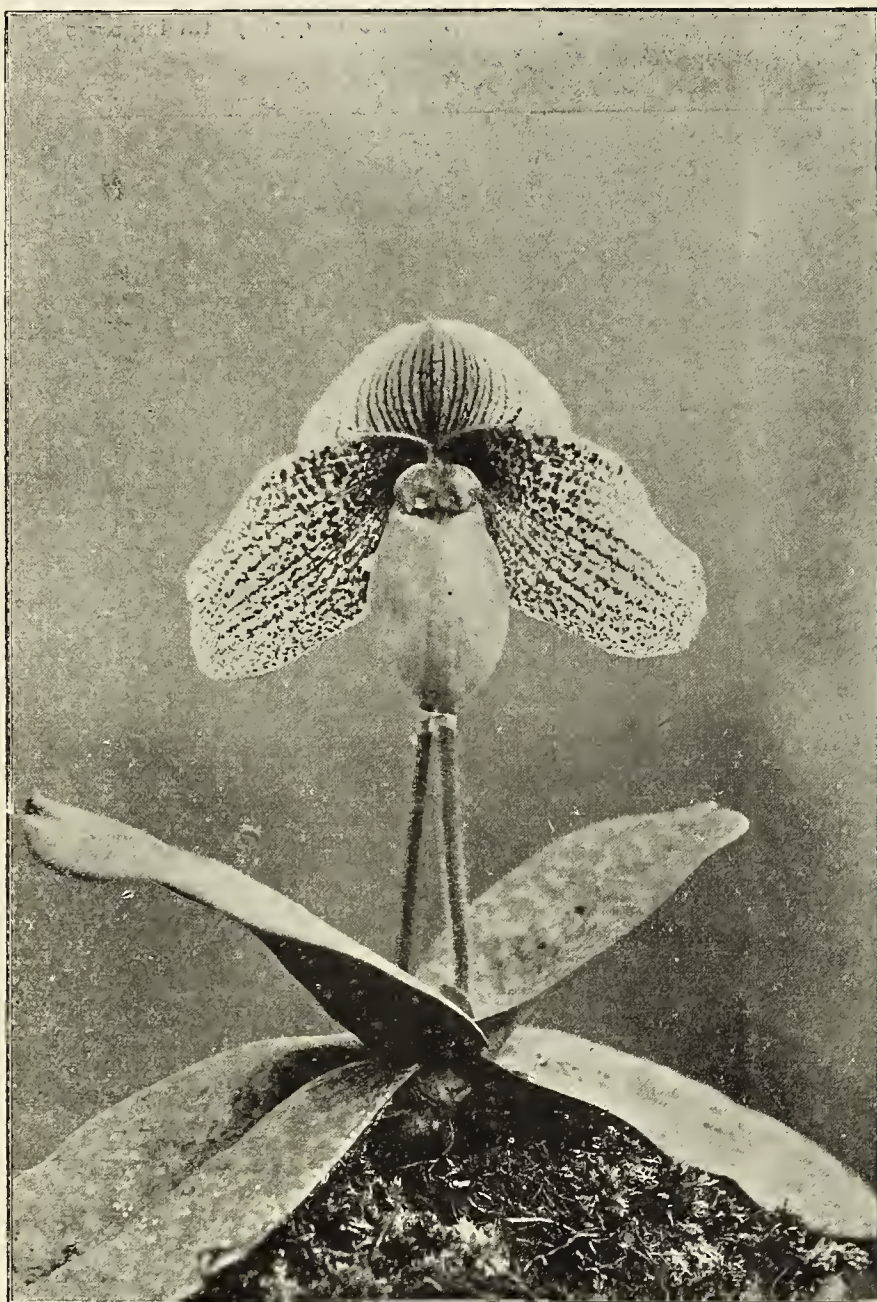
W. Thompson, Esq. (gardener, Mr. W. Stevens), Walton Grange, Stone, Staffs, had a small group of very choice *Odontoglossums*, including magnificent forms of *O. crispum thompsonianum*, *O. wilckeanum grandis*, *O. crispum Lily*, *O. c. Dorothy*, and other choice sorts. A special Cultural Award was accorded by the Orchid Committee.

Messrs. Hugh Low & Co., Bush Hill Park, Enfield, staged a large and very valuable group of Orchids, the leading features of which were *Laelia purpurata*, *Cattleya Mossiae*, *C. Mendelii*, *C. lawrenceana*, *Oncidium sphacelatum*, *O. ampliatum majus*, *O. tetracopis*, *Odontoglossum crispum*, and other species. New or choice things were *Laelia elegans Lowiae*, *Odontoglossum hybridum*, *O. crispum Dieudonné*, *O. c. W. E. Gladstone* (In Memoriam), *Cypripedium Gertrude Hollington* and several fine new *Cattleyas*.

M. A. Madoux exhibited a few choice *Odontoglossum* and *Cattleyas*, a choice one being *Odontoglossum charlisianum*, in the way of *O. rechfordianum*, (Award of Merit), *O. Trianaei*, with large spots on sepals. M. Chas. Vuylsteke had a plant of an artificially raised hybrid between *Odontoglossum crispum* and *harryanum*, fairly intermediate between the two. It gained a First-class Certificate.

Messrs. W. L. Lewis & Co., of Southgate, staged a good group which unfortunately did not show itself off to advantage, owing to the bad light in which they were situated. The background, consisting of some good *Laelia purpurata* and *L. p. russelliana*, *Oncidium ampliatum* adding relief to the prevailing colour, numerous *Odontoglossums* and *Cypripediums*. Of the latter, *C. Gertrude Hollington Southgate var.* was particularly fine, also *C. Evenor*. The rare *Epidendrum hastatum* is a gem with dark coloured segments and a pure white lip; the plant had seven flowers. A bright spot of colour was added to the group with *C. intermedia var. "Stanley Mohhs."* The sepals and petals are spotted with violet-purple, and the lip of a deep violet-purple.

CYPRIPEDIUM GERTRUDE HOLLINGTON SOUTHGATE VAR.—The first raised seedlings of this hybrid were obtained from *C. hellatulum*, crossed with the pollen of *C. ciliolare*. Since then the reverse cross has been made, so that there are really several varieties clustered round the more typical or first-named form. The variety under notice is the finest of all. Its distinguishing feature is that it has taken the *C. hellatulum* form with its fine dorsal sepal, and broad, massive petals heavily blotched with blackish-



CYPRIPEDIUM GERTRUDE HOLLINGTON SOUTHGATE VAR.

colours, likewise *Laelia purpurata*, *Cattleya Mossiae*, *C. Mendelii*, *Odontoglossum crispum*, and *Masdevallias*, all in a most pleasing variety of rich colours. Some of the finer things in this exhibit were *Cypripedium Olenus Burford* variety, *Schomburgkia tibeticus*, *Epiphronitis Veitchi*, *Macodes Petola*, *Epidendrum Randii*, *Cymbidium tigrinum*, and *Cypripedium grande atratum*, the latter being a superbly coloured variety. On a small table in front of the group were interesting gems such as *Aganisia caerulea*, *Habenaria rhodochila*, *Masdevallia obrieniana*, the Blue Dendrobe (*D. Victoriae Reginae*), *Renanthera imshootiana*, *Masdevallia Arminii*, *M. shuttryana Chamberlain's var.*, *Saccolabium miniatum*, *Microstylis macrchila*, and many others, making a very attractive exhibit.

Sir Frederick Wigan, Bart. (grower, Mr. W. H. Young), Clare Lawn, East Sheen, occupied the next space in the centre of the tent. Along the back row the long, drooping spikes of *Cymbidium lowianum* intermixed with masses of *Laelia purpurata* and

marshallianum, &c., making an imposing group of large size.

M. S. Cooke, Esq., Kingston Hill, Surrey, had a cheerful little group of *Odontoglossums*, *Brassias*, *Miltonia vexillaria*, *Laelia tenebrosa*, *Cattleya Acklandiae*, *Cymbidium lowianum*, and several *Masdevallias*.

Mr. James Cypher, Orchid grower, Cheltenham, had a large and imposing exhibit dominated by fine varieties of *Laelia purpurata*, *Oncidium marshallianum*, *Miltonia vexillaria*, and *Odontoglossum crispum*, beautifully tinted and spotted, and in great profusion. Very fine also were *Cattleya lawrenceana*, *C. Skinneri oculata*, *C. citrina*, *C. schilleriana*, *Dendrobium Dearei*, *Cypripedium rothschildianum*, *Oncidium Krameri*, *Epidendrum vitellinum majus*, and many other useful subjects. The plants were profusely flowered.

Messrs. F. Sander & Co., St. Alhans, occupied the end of the central staging on both sides with their Orchids, while their new plants were arranged on

crimson on a white ground. The flower measures 4 in. across the petals, which are $1\frac{1}{2}$ in. broad. The dorsal sepal measures 2 in. in width. The accompanying illustration will give an idea of this fine new variety, shown by Messrs. W. L. Lewis & Co.

Mr. Burkinshaw, of West Hill, Hesse, York, had three good plants in *Cypripedium rothschildianum*, *Cattleya Mossiae-Barkeri*, with white sepals and petals, and a slatey-blue lip, *C. Mendelii Ameliae* is a splendid white form, the only colour being a small blotch on the front portion of the lip. Award of Merit.

Some exceedingly fine things came from M. Jules-Hye-Leysen, of Ghent, including *Odontoglossum sceptrum*, *O. Vuylstekeanum*, *O. polyxanthum*, and a home-raised *O. wilckeanum*. The finest, however, was *Miltonia bleuana rosea gigantea*, with eight enormous flowers, and a singularly striated hybrid between *Cattleya lawrenciana* and *Laelia cinnabarina*.

Messrs. Linden, of Brussels, put up a large group of their spotted and otherwise distinguished *Odontoglossums*, principally *O. crispum* and *Pescatorei* the following being a few of the most striking:—*O. richardianum*, a prettily spotted one of the Andersoni section; *hunnwellianum superbum*; a bright *O. polyxanthum* named *expansum*. *O. crispum decorum* is a grand thing, with peculiarly incurved segments, with large, bright chestnut spots; *O. venustum* is a good variety of *O. rochfordianum*, and gained a First-class Certificate. *O. Pescatorei bellatulum* is a very pretty form, with triangular blotches on the sepals (Award of Merit); *O. crispum rubellum* has poorly shaped flowers, but handsomely blotched segments; *O. crispum zebrinum* is a very pretty flower, profusely spotted with chestnut (Award of Merit). There were numerous others, all of good quality, and varying degree of beauty. At one end was a grand batch of *Cypripedium lawrencianum*, and a splendid bit in flower of *Cypripedium gowerianum*.

CALADIUMS.

THE interest in this highly ornamental class of plants is still unabated, for Messrs. J. Veitch & Son, Ltd., Chelsea, surpassed all previous efforts in their grand display in the big tent. Their largest plants formed huge masses of gorgeous colours. They were grown in tubs and large pots so arranged that the public could get a good general view of them. Notably fine amongst the giants were Mrs. Harry Veitch, netted and heavily shaded with red on a white ground; Baron Adolphe de Rothschild, red with pink blotches; Mme. John Box, soft rosy-pink with dark veins; Raymond Lemonier, red, margined with greenish-yellow; Gaspard Crayer, with a red centre radiating along the course of the principal veins; George Berger, rosy-red with a broad pale border; *Candidum*, with slender green veins on white, and remarkably dwarf; Mme. Groult, shaded with red and netted with green on a white ground; *Williamsii*, soft rosy-red, edged green. New varieties, a size smaller, included *Pantia Ralli*, bronze, blotched with cream and pink; John Lovatt, crimson, with a broad green border; and Sir Julian Goldsmid, rich crimson, almost covering a paler ground, new last year, and one of the finest sorts. Of the same size and particularly choice were Louis A. Van Houtte, bronzy-red and dwarf; Noaksi, bronze and crimson veins; Marquis of Camden, pink and white, heavily veined with crimson; Silver Cloud, creamy-white, blotched green; Lord Derby, translucent pink, with green veins; Assurgay, rosy-pink, handsomely netted green; Comte de Germiny, dwarf, salmon-red; Sir Henry Irving, white, with broad green border; *Triomphe de Comte*, brilliant carmine and green netting; *Duchess de Montemarte*, white, with green blotches; and Mme. Pynaert, a magnificent crimson-red. The small plants round the front of the group included many of the finest in cultivation, and words can scarcely convey their subtle shades of colour. Some of them were Sir Oswald Mosley, crimson-claret; Princess Olga, bronzy-red; *Duchess of Teck*, red and gold; *Oriflamme*, red and green border; Mme. Schmidt, magenta-red; *Golden Queen*, self pea-green; *Lady Northcote*, dark bronzy-red, and one of the best; *Lady Mosley* translucent pink; *Chelsea Gem*, dwarf, red; *Edith Luther*, salmon-pink, with paler blotches; *John Luther*, crimson-rose, and one of the finest new sorts; *Ignati*, translucent pink; *Leonard Bause*, cream; *Her Majesty*, creamy-white, with green veins; *Rose Laing*, a charming soft pink;

Duchess of Fife, cream with rosy veins; *Prince Edward*, cream, with scarlet veins; and *The Mikado*, metallic red centre, with olive-green border. The group was large and the finest of its class in the show, reflecting credit on the cultivator, Mr. Tivey.

As specialists in the cultivation and improvement of the *Caladium*, Messrs. John Peed & Sons, of Roupell Park Nurseries, Norwood Road, S.E., have acquired a great name and fame. On this occasion, as on previous ones, they showed a superb representative collection of the varieties of this noble foliage plant. The exhibit occupied some 300 square feet, and this area contained about forty plants in as many varieties, and of different sizes. The health and vigour of the plants were remarkable throughout, some of them being veritable giants in point of size, whilst the colouring was all through up to the highest standard of excellence. In the back row were some high specimens of such varieties as Mme.

sorts, and its silver counterpart *Argentine* was equally noteworthy. *Princess of Teck*, Mrs. John Peed, Thomas Peed, *Le Nain Rouge*, *Ibis Rose*, and *Ibis Rouge* were all remarkable for the high development of colour. The comprehensive character of the exhibit was completed by samples of the charming dwarfs, *Minus Erubescens*, and *C. Argyrites*.

Messrs. John Laing & Sons, Forest Hill, London, were to the fore with a splendid group of *Caladiums*, forming a large group in tent No. 5. From the commencement of the Temple Shows, Messrs. Laing, when showing have always been strong in this class of plants. A few graceful Palms formed a back ground, in front of which the *Caladiums* were arranged, the larger pieces at the back, and gradually succeeded by smaller ones. The leaves of John Laing, with a carmine centre and creamy edges, were very conspicuous. Those of Mme. Mitjama were nearly of a uniform red. The bronzy-crimson



DRACAENA SANDERI (See p. 619).

J. R. Box, Comtesse de Malley, Mme. Groult, Gaspard Crayer, and Excellent, the last named measuring fully 5 ft. in diameter, by 4 ft. in height. In the row in front of these was a magnificent plant of Mrs. Harry Veitch, certainly the best we have ever seen of it. The rich crimson carmine leaves were of enormous size, and in our opinion this was the handsomest specimen in the whole exhibit. Such varieties as *Rose Laing*, *Candidum*, Mme. E. Pynaert, *Silver Cloud*, *Charlemagne*, *Princess Royal*, and *Baron Adolphe de Rothschild* were also all represented by large and magnificently developed plants. Amongst the smaller specimens which were dotted about among the larger ones, and occupied the front ranks, were some of the most refined and delicately coloured of all. Here we noticed the new forms, H. J. Chapman, with its rosy pink and white leaves with carmine veins, and *Charlotte Hoffman*, a small leaved, pure white variety. Amongst the others *Golden Queen* was the best of the self yellow

and pink blotched leaves of *Baron Adolphe de Rothschild* mark this as a good exhibition sort. The carmine-red and bronze of *Sir Julian Goldsmid* mark this as one of the finest of last year's introductions. Grand new varieties in this collection were *Lady Mosley* of a bright crimson-red, edged green; *Marquis of Camden*, bronzy-red and netted with green on a creamy ground towards the sides; and *Sir William Broadbent*, with a red-rayed centre and the rest blotched with white on a green ground. The huge leaf of *Stanstead Gem* have carmine nerves, the rest being netted with white and green. Striking were the leaves of *Altaire*, having a carmine centre and broad green edges. The intense carmine-crimson rayed centre of *Barao de Marmore* also showed up prominently in this group; and a fine contrast was made by *La Duchere*, having a broad green border surrounding a rose-red centre. The bronze-red of the massive leaves of *Flambeau* merged into a dark olive-green border. *Hermine* was notable for its

carmine-crimson leaves of massive breadth. The carmine centre of Excellent, and the creamy marbling on the outer border also marked this as a meritorious sort. The broad, shield-like leaves of Rose Laing were delicately shaded with pink on a creamy ground. In striking contrast to the creamy ground of Mme. Kochlin were the bright blood-red blotches. Amongst the dwarfier sorts Ladas, with its large, rich, rosy-red leaves, was very noticeable. The delicate pink veins of Martha La Forge made a chaste tracery on a creamy ground.

GLOXINIAS.

THE fine display of Gloxinias made by Messrs. J. Veitch & Sons, Ltd., in former years was more than sustained by their profusely flowered and grand strain. The plants were grown in 48 and 32-sized pots, yet bore from fifty to sixty flowers and buds each; in some cases this number was greatly exceeded, thus establishing the free-flowering character of the strain. Where such a high standard of merit can be sustained from seeds it seems superfluous to give names to the seedlings; yet so fine are some of the sorts that names are given to preserve their identity. Amongst those we noted were the violet-purple Cicera and Irene deepening to maroon in Electra, which had a black spot at the junction of every two lobes, the edge in all three cases being white. The large flowers of Cordelia had six to seven imbricate segments densely spotted with violet. The broad blue border of Cygnet Improved was also fine. Very floriferous were the rosy-scarlet Eclatant; the soft scarlet, rose-edged Seraph; the scintillating scarlet of Mars; the pure white Virginalis, which sometimes carries one hundred flowers and buds; Flambeau Improved brilliant scarlet and free; the large, crimson-scarlet Columbus; and Evatina, densely spotted with rose, and having a band consisting of darker spots. The quantity of fully opened pure white flowers of Galatea marked this out as a most valuable variety. Many of the varieties had two rows of segments, making a distinct break. Six to seven segments in a flower are now quite common, and include Adine, crimson with broad white border, and Cordelia, already mentioned. The dwarf and sturdy habit of Mars, Adine, and others, was notable. The crimson lobes and white edge of Oberon were very decided; and the same may be said of the delicate blue band on a white ground of Alraine; the velvety-maroon and blue edge of Sidonic; and the purple of Achilles extending in the form of broad, rounded rays out of a white throat. Hebe was intense crimson and a great improvement on Monarch; and the intense crimson of Empress of India was fortified by great substance. It would be futile to attempt grasping all of the shades of colour. Drooping flowers are not neglected, and Eveline was a very fine white in this section. The bigeneric hybrid Gloxinera Brilliant, having scarlet and rose flowers, still reminded us that Gloxinia and Gesnera are capable of being crossed. Mr. West, who has charge of the Gloxinias has done his work well.

Messrs. John Peed & Sons occupied 100 sq. ft. with some of their choicest Gloxinias. The plants, which were all in 32's and 48's, were of named varieties, of which the Messrs. Peed have a capital collection. The setting of Maidenhair Fern served admirably to show off the bright colours of the Gloxinias, and gave both finish and variety to the group. One of the finest of the varieties on view was one named Mrs. G. W. Sawday. This was a pure white flower of the highest type—large, well opened, of good substance, and perfectly erect on scapes of great strength and medium height. Aigburth Crimson was equally conspicuous by reason of the richness of its crimson flowers. This is a very free-flowering and valuable form. Duchess of York, lilac; Exquisite, pink; Ethel, deep purple; and Pelina, light blue with a pure white throat were other good sorts that gave a good account of themselves.

Messrs. J. Laing & Sons staged a group of their fine strain of Gloxinias, showing large self, edged, and spotted types, generally well defined. Some of them were named, including Mrs. Laing, with large violet flowers and a broad white border to the segments. On the contrary, the violet flowers of Lady Edridge faded to a paler blue edged like an Alpine Auricula. Handsome was John Laing, the crimson flowers of which faded to a rose edge. Most of the group, however, which was arranged close by the Begonias, consisted of unnamed seedlings. Very

choice was that having purple lobes, and a white border spotted with blue. The flowers consisted of seven segments. Other handsomely spotted sorts were scarlet, spotted on the white border; purple in the tube and spotted with violet on a white ground; and that which was spotted with dark blue on a sky blue ground. Gloxinias are certainly showy and sprightly flowers of great decorative value. A group of Streptocarpus, exhibited by the same firm, may also be noted here. The great size of the flowers was a notable feature of the strain. They varied from dark violet-blue, through various lighter shades of the same colour to a dead white, marked with violet bands in the tube. A variety named Gigantea exhibited great vigour and large, deep blue flowers. Very choice was that named Her Majesty, being pure white, except the violet in the throat. Others had lavender, rose, and purple flowers of great merit. The well-flowered plants consisted of last year's seedlings of a strain to which Messrs. Laing have been devoting considerable attention for some years past.

The Gloxinias sent by Messrs. H. Cannell & Sons, consisted of some wonderfully handsome varieties, and a considerable range of colour was apparent. The varieties were all named, some of the best being White Queen, Perfection, Princess of Wales, Prince of Wales, and Fetunia. Maidenhair Fern was used as a setting for the plants. The shades of green thus obtained were very striking.

The Anglo Continental (late Ohlendorff's) Guano Works, 30, Mark Lane, E.C., sent a batch of Gloxinias grown with their special guano, which is evidently a good plant food.

A small group of seedling Gloxinias was forthcoming from Messrs. A. W. Young & Co., of Stevenage, Herts:

BEGONIAS.

TUBEROUS Begonias have always been a strong and noticeable feature of the Temple Show, and attract attention by the brightness of their large and strong flowers. The plants are also dwarf and fresh in spring and early summer. Lack of space prevents extension and limits the size of the groups.

Messrs. J. Laing & Sons, set up a bold mass of single and double varieties, a large proportion of which were select, named sorts. The doubles were massed in the centre, with the single sorts at either end. Some Cocos stood here and there, relieving the blaze of colour, and the group was finished off with an edging of Isolepis. Countess of Dartmouth, with large double white flowers, is a choice new variety for this year. Equally fine in its way was a new sort with broad-petalled, primrose flowers. A number of seedlings included double blush-pink, salmon-rose, and red flowers, the latter being carried erect and suitable for bedding. Very fine sorts were Clio, large, crimped and yellow; Dr. Jim, fiery scarlet; Duke of Fife, a salmon-rose sort, excellent for bedding; Lady Tweedmouth, a fine cerise colour; Miss Griffiths, goffered white and blush, making one of the largest and most refined flowers in cultivation; Lady Powerscourt, delicate salmon; Lady Gifford, rich pink with broad petals; and Diamond Jubilee, a full yellow. All of the above were double varieties of great merit. Single flowered sorts were abundantly represented and fine in form. New varieties for this year were Lord Charles Beresford, fiery scarlet; Model having perfectly circular rosy salmon flowers, in keeping with the name, and of excellent habit; and Lord Dartmouth, having maroon-crimson flowers, several times the size of those of its antetype, Duke of Edinburgh. Striking bicolors were Esther Smith, cerise with white centre; and Duchess of Westminster, carmine with white centre. A sweet-scented variety is Marechal Niel. Other good singles were Viscount Grimston, intense crimson; Dr. Nansen, bright salmon; Lady Amptill, soft salmon-pink and pretty; Mrs. Davis, a fine yellow; and Countess of Aberdeen, pure white. One of the most distinct in the group was the fringed, flesh-coloured Duchess of Fife, possessed of close and bushy habit.

In tent No. 3 there was an exceedingly bright and showy group of tuberous Begonias sent by Mr. H. J. Jones, of Ryecroft Nursery, Lewisham, S.E. All Mr. Jones' Exhibits are characterised by taste and skill in setting up, as well as by the excellence of the material of which they are composed, and this one was no exception to the general rule. Maidenhair Fern was freely used as a setting for the Begonias, and the elegant Cocos weddelliana formed

an excellent background, and dotted about over the whole area served to give the group both height and lightness. The general contour of the exhibit presented three mounds, of which the central one was the highest and the most massive. The plants, which were all in 32's and 48's, were sturdy and short-jointed subjects, and in the glory of their first flowers made a pretty picture. Both single and double-flowered sections were shown, and the colours varied from pure white to intensest crimson. The double flowers in particular were noticeable by reason of their size and refinement, the Camellia type being here well represented. Most of the plants shown were unnamed seedlings, but some of the finer forms were named. Of these we must make mention of H. J. Jones, a grand double flower of bright crimson-scarlet, and one of the finest in the whole exhibit.

A magnificent display of tuberous Begonias came from Mr. J. R. Box, the West Wickham Nurseries, Kent. Both single and double flowered sections appeared to great advantage, for not only were the plants well foliated and flowered but the individual flowers and leaves were of large size, and the colours of the former very brilliant. Canary bright yellow; Hecla, rich rose; Distinction, rose-pink, edged cerise; and Belona, large, pure white were the best named, single varieties. Of the double Defiance, rich crimson-scarlet; The Bride, creamy white; Harmony, salmon-pink; and Opal, salmon, were the best. There was a background of Keatias to the group, Maidenhair Ferns were interspersed with the plants, and the edging was composed of Caladium argyrites and Isolepis gracilis.

Messrs. H. Cannell & Sons, of Swanley, Kent, had a small group of tuberous Begonias. The rich crimson, double, Lord Rothschild was the best variety here. There were several good single forms but these were unnamed with the exception of Miss A. Stewart, yellow; W. H. Foster, rich scarlet-rose; Miss Newman, salmon, and one or two others.

The tuberous Begonias submitted by Mr. T. S. Ware, of Hale Farm Nurseries, Tottenham, N., were from all points of view first class. There were comparatively few single flowered varieties shown, but these were of the very finest. They included Mrs. Sharp, white and rose; Bexley White, pure white; Alba fimbriata, pure white with fimbriated margins; and Attraction, bright bronzy yellow. The double flowers constituted by far the larger bulk of the exhibit, and it would be difficult to overpraise their beauty and choiceness. Mr. James Portbury, bright scarlet; Samuel Pope, creamy pink, edged rose; Mrs. John Fowler, white; Her Majesty white, with gophered petals; Duchess of Devonshire, flesh pink; and Pride of Kent, rose, were the cream of the collection. Cocos weddelliana was dotted here and there along the bank of flowers, and the margin was of Isolepis gracilis, interposed with the variegated Poa trivialis.

CROTONS.

A BEAUTIFULLY arranged and highly-colored group of Crotons was set up by Messrs. J. Veitch & Sons, Ltd., who had over three dozen of the best varieties in cultivation, representing the broad and narrow-leaved sections with other characteristic types. Broad-leaved varieties were well represented by Baroness James de Rothschild, Evansianus, Warrenii, Queen Victoria, Prince and Princess of Wales, and others. Some of the above are notable for the length of their leaves and beautiful colours rather than their breadth. The three-lobed leaves of Disraeli are very distinct, and the variety has long been a favourite. Hawkeri is handsomely variegated with creamy-white, and Reidii shows a similar combination. The rich yellow of Johannis has always been popular and much admired. Of another type are Caudatus tortilis and Golden Ring, whose colours are supplemented by the peculiar twisted form of the drooping leaves. Aigburthensis is essentially a narrow-leaved form, much in request for table decoration. Other grand forms, furnishing endless variations of beautiful colours were Sunbeam, Emperor Alexander III., Goldii, Aigburth Gem, Mortii, Thomsoni, Rodeckianus, Challenger, Alice, Flamingo, Sinitzinianus, Dairsii, Elegantissima, Magnificent, Delight, Gordoni, Superba, Eugenie Chantrier, Newmanni, Hammondi, &c., all in the finest condition.

NEW PLANTS.

At the northern end of the central stage in the large tent, Messrs. F. Sander & Co., St. Albans, set up a

magnificent group of new plants, amongst which there was a number of subjects that cannot fail to figure largely in the horticulture of the immediate future. The most conspicuous and perhaps the most valuable of these novelties was the magnificent *Acalypha Sanderi*, which was shown in all sizes from plants four to six months old, clothed with leaves right down to the pots to standards with a clear stem of from two to four feet. The new *Acalypha godseffiana* was also much in evidence. As a subtropical bedding subject this should prove very useful. Not less noteworthy was a new and very showy *Haemanthus*, to which no name has yet been given, but which is sure to be heard of again. *Caladium Ami Schwartz*, *Panax mastersiana*, *Kentia sanderiana*, and *Licuala Jeanenceyi* were other striking novelties. In addition to these there were staged grand specimen pieces of *Dracaena Van Belti*, and handsome clumps of *D. sanderiana*, and *D. godseffiana*.

ACALYPHA SANDERI.—There are something like 220 species of *Acalypha* known to science, and to this number the present species must be added. Of all that number surely some or more of them will prove valuable for horticultural purposes. That under notice is a native of New Guinea, and is the most remarkable species we have ever seen. All the other *Acalyphas* in gardens are grown solely for the sake of their beautiful foliage; the glory of *A. Sanderi* is its flowers, which are small individually, but produced in dense masses upon long, pendent spikes like ropes of crimson-velvet, or, as we formerly remarked, like *Love Lies Bleeding*, belonging to a different family. The accompanying illustration (p. 615) scarcely does justice to it, for we have seen some of the spikes not far short of 2 ft. in length, though the average would be less. The large, ovate leaves are dark green. Young plants have upright stems, from which the spikes depend, but older ones give off branches horizontally, while the flowers are brought even into more prominence, by being clear of the foliage.

PANDANUS SANDERI.—This will constitute a beautiful companion to *P. Veitchi*, of which it has the habit, though nothing seems to be known of the wild original. The last named has dark green leaves with white margins. *A. Sanderi* has sword-shaped, recurving leaves, finely serrate at the edges with small spines. They are banded and lined all over with golden yellow, green stripes alternating in about equal proportions. Messrs. F. Sander & Co. are to be congratulated upon both of the above acquisitions to gardening. Both of the plants are certain to find their way into many gardens before this time next year. (See p. 617.)

An interesting exhibit of *Anthuriums*, all of them seedlings from the well-known *Anthurium scherzerianum* was made by M. L. de Smet-Duvivier, Mont St. Amand, Ghent, Belgium. A considerable range of differentiation was manifested in these seedlings. *Prince of Wales* with its huge scarlet spathes is simply an improved form of the parent; *A. s. formosum* has deep crimson spathes; and *A. Baron Schroder* is only a few shades lighter. *A. Senateur Montefior Lewis* has a white spathe curiously mottled with scarlet.

Half-a-dozen samples of the elegant, narrow-leaved *Dracaena Kippisii* were shown by Messrs. Dicksons, Ltd., of Chester. This *Dracaena* has the makings of a good table plant.

Baskets of the new *Dracaenas Rose Laing* and *Distinction* were submitted by Messrs. John Laing & Sons.

GREENHOUSE PLANTS.

MESSRS. J. CARTER & Co., High Holborn, London, exhibited a large and mixed group, in which their *Calceolarias* were the dominant feature. The plants were grown in 24-size pots, dwarf, and extremely varied in colour and markings. The crimson varieties were very numerous, some being dark, and others of a fiery glow. Some were finely spotted with crimson on an apricot ground; orange, and beautifully spotted; rose, marbled with crimson, and handsomely marbled with crimson on an orange ground; glowing red and marked with yellow; and crimson on the top, and yellow beneath. There were several shades of yellow, of which the darkest was named *Cloth of Gold*, and a sulphur one, *Princess of Wales*. To these a strong contrast was furnished by plants having maroon-crimson flowers, giving place to rose beneath; purple flowers, marbled with yellow; maroon-carmine and maroon-

crimson, the latter shades being numerous. All these colours and markings need to be seen to be fully comprehended. Their bizarre colours were toned down or contrasted with the fragrant *Lilium Harrisii*; the graceful panicles of the white *Saxifraga Cotyledon pyramidalis*; the plummy white of *Astilbe (Spiraea) japonica*; fragrant, white *Intermediate Stocks*; and *Streptocarpus*, in blue, white, and rose varieties. Some tuberous *Begonias* added fresh colour of quite a different type. Single and double *Petunias* furnished bits of purple, intense violet or purple blue and white. Around the sides were some pots of a large spiked variety of *Mignonette*, sweetly scented. *Mimulus*, grown in small pots, supplied an old-fashioned flower of great beauty, but in modern strains with flowers of huge size. That named *Queen's Prize Yellow Ground* had its markings on a yellow groundwork. A fine form named *Gloriosa* was heavily blotched with rich dark crimson. The *Queen's Prize White Ground* also explains itself. *Princess Beatrice*, heavily blotched and marked with crimson on a white ground represented this strain. *Ruby* belongs to *Mimulus cupreus*, and has very large flowers for this type. All these useful conservatory and hardy subjects occupied the whole of the centre of tent No. 1, and the above-named flowers, being surmounted by a central ridge or chainwork covered with plummy *Asparagus* and ornamental seaweeds of the same colour, the display was very effective. *Duke of York Tomatos*, *Cucumbers*, and *Daisy Peas* added much to the general appearance of the exhibit.

One of the principal features of the show is the magnificent group of plants exhibited by Messrs. Wm. Cutbush & Son, Nurserymen, Highgate, arranged at one end of the large tent with *Palms* and *Bamboos* at the back, and a series of small groups composed of *Lilium Harrisii*, *Crimson Rambler Roses*, *Spiraeas* in the centre, two groups of tree *Carnations* in the corners, edged with *Ferns*, and *Erica ventricosa magnifica*. Between is a grand arrangement of *Souvenir de la Malmaison Carnation* varieties, including *Madame Adelina Patti*, *President McKinley* (both new), and older sorts—*Charles Freemantle*, *Princess May*, *Princess of Wales* and *Blusb*. Also included are plants of *Calla Elliottiana*, *Browallia elatior*, and small *Cocos*, the whole finished off and edged with *Maidenhair Fern*. This important exhibit occupies about 400 square feet.

Leopold de Rothschild, Esq. (gardener, Mr. J. Jennings), Ascott, exhibited a fine bank of *Malmaison Carnation* plants, well grown and beautifully set up, at the end of the *Orchid* stage.

Messrs. Geo. Jackman & Son, Woking, exhibited a large group of new, hardy hybrid *Clematis*, the plants trained balloon shape, and others loosely on stakes. *Sir Trevor Lawrence*, bright in colour; *Duchess of York*, bluish; *Duchess of Albany*, *Countess of Onslow*, and *Grace Darling* are the most attractive. Mr. W. Icton, Putney Park Lane, had a large and attractive group of decorative plants, including *Palms*, *Dracaenas*, *Crotons*, *Caladiums*, large, well-flowered masses of *Lilium Harrisii* at the back, with *Caladiums*, *Heaths*, *Oranges*, *Ferns* and *Lycopodium* intermixed.

Mr. Charles Turner, Slough, exhibited two groups of choice *Pelargoniums*. There were among them well flowered specimens of *Iona*, *The Shah*, *Magpie*, *St. Blaise*, *Marguerite*, *Ed. Perkins* and *Lady Isabel*. Mr. Turner also had a nice group of tree *Carnations*, and the large bank of *Roses* from Slough divided these two groups at the end of the large tent.

Messrs. John Waterer & Sons, Ltd., Bagsbot, had a large display of hardy *Rhododendrons*, composed of tall standards and bushes, all well flowered and forming a very pleasing feature.

Messrs. R. & G. Cuthbert, Southgate, had a group composed of well bloomed *Azalea mollis* and *sinensis*, and intermediate hybrids, *Anthony Koster* being among the latter, a beautiful form of good shape and substance, in colour a lovely yellow; there were also some similar good plants of *A. rustica fl. pl.* forming dense clusters of blooms.

Messrs. W. Fromow & Sons, Sutton Court, Chiswick, exhibited a pretty group of Japanese *Maples* and *Lilium Harrisii*.

Messrs. Richard Smith & Company, Worcester, maintained their reputation with a magnificent exhibit of *Clematis*. Very beautiful in form is the

white *C. Mrs. George Jackman*. Other good varieties are *Madame Van Houtte*, *Marie Lefebvre*, *Blue Gem*, *Princess of Wales* among singles; and *Countess of Lovelace*, *Enchantress*, *Lucie Lemoine*, *Venus Victrix* and *Belle of Woking*, doubles.

Messrs. Kelway & Sons, Langport, exhibited a group of well-flowered *Paeonies* and *Pyrethrums*, but the large flower pots and numerous stakes employed were too conspicuous to please the eye.

Messrs. Cannell & Sons, Swanley, put up a charming collection of *Cannas* at the end of one tent in great variety, very bright and pleasing in effect.

Messrs. T. Cripps & Son, Tunbridge Wells, had a collection of Japanese *Maples* in variety.

Mr. A. Tulett, Green Court Nurseries, staged plants of a sport from *Pelargonium V. Raspail*, free flowering double scarlet.

Mr. W. Palmer, Junction Road, Andover, had several pots of *Lobelia Blue Queen* and *True Blue*.

Messrs. Paul & Sons, Cheshunt, staged a collection of dwarf well flowered *Cannas*.

Mr. Amos Perry, Winchmore Hill, put up a group of zonal *Pelargonium King of Denmark*, good trusses of semi-double salmon coloured flowers also *Tulips* and herbaceous cut flowers. From Messrs. F. Miller & Co., Florists, Fulham, came baskets of plants of *Spiraeas*, *Lobelia*, *Mignonette* and *Petunias*. Mr. Frederick Perkins, Leamington, had a dozen well grown plants of *Carnation Primrose Queen*, beautiful soft colour. A variety of plants in flower and foliage came from the *Jadoo, Limited*, Exeter. Messrs. R. Wallace & Co., Colchester, exhibited a large collection of *Lilies*, *Iris*, *Watsonias* and others (see list).

From Reid's Nursery, Beckenham Hill, came dwarf plants of *Rhododendrons* and some small plants of *Pelargonium Remembrance of Rotterdam*.

Messrs. W. Balchin & Sons, Hassock's Nurseries, exhibited a beautiful collection of greenhouse plants, which included quantities of *Boronia heterophylla*, *B. serrulata*, *Genetyllis tulipifera*, *Erica Spencerii*, *E. candidissima*, *E. Cavendishii*, *E. ventricosa rosea*, and the showy blue *Leschenaultia biloba major*.

From Mr. John Forbes, Hawick, came a bright group of *Carnation Yuletide*, a perpetual flowering, brilliant scarlet variety, well worthy of extensive cultivation. He also showed a collection of bedding *Violas*.

A yellow Tree *Carnation* was exhibited by Messrs. Dicksons, Ltd., Chester, named *Duchess Consuelo*, the flowers resembling a *Malmaison* in shape.

CACTI.

MESSRS. J. VEITCH & SONS, LTD., seem determined to maintain their reputation for hybrid *Phyllocacti*, whose huge flowers, gorgeous colours and subtle tints and shades make them the aristocrats of the order to which they belong. There are no spines and no shaggy old man in the genus *Phyllocactus*. Messrs. Veitch had a general collection of new and older varieties numbering seventy-two distinct, named, varieties in flower and bud, and 350 plants. About 120 of them were seedling hybrids, flowering for the first time. In the general collection very choice were *Romeo*, light red and pale purple edge; *Agatha*, rose-pink; *Dante*, a fine rose; *Ensign*, orange, shaded with scarlet; *Niobe*, deep crimson-scarlet, with a purplish centre; *Jessica*, delicate, soft pink; *Thalia*, crimson, shaded violet; *Rose Perfection*, bright rose; *Brilliant*, vivid scarlet; *Exquisite*, fine, rose-pink; and *Homer*, red with a violet centre. The acme of delicacy is reached in *Vesta*, which is white. The creamy-white *Cooperii* is also very choice, forming a strong contrast to such as *Grand Monarch*, crimson-scarlet, with violet centre; *Plato*, deep crimson, shaded scarlet; *Eurasian*, a very large, dark scarlet flower shading to a magenta margin; and the crimson *Venus*, shaded violet. The bright rose-pink of *Sirius* was a pleasing foil to the light, scarlet-crimson of *Hecla*. *Ovis* was a fine rose variety; and *La Reine*, soft light pink. Mr. Heal is no less successful in the hybridising of this showy class than of *Amaryllis*, *Streptocarpus*, and *Rhododendrons*. Some of his latest acquisitions are *La Belle*, *Epirus*, *Timora*, *Portenia*, *Marsus*, *Norma*, *Cato*, *Melia*, *Sylvia*, *Scipio*, *Dorian*, *Cordelia*, *Lorina*, *Rowana*, *Gerona*, *Iantbe*, *Minos* and *Nemesis*, in endless combinations of colour.

A very neat group of *Cacti* was staged by Mr. G. J. Pritchard, 78, Godwin Road, Forest Gate, E. In all there were twelve genera represented. The two gems of the group with regard to rarity were

Pelycyphora pectinata, and *P. aselliformis*. There was a fine specimen of the crested *Mamillaria*, *M. nivea cristata*, which was shown in the same pot with the type. Other *Mamillarias* were *M. longinamma*, *M. crassispina*, and *M. Nicholsonii*. *Cereus peruvianus mostrosus* was another notable plant, its gnarled and contorted presence being apparently very interesting. A grand sample of *Melocactus biformis* was shown in robust health. The same might indeed be said of the whole collection.

ROSES.

A GROUP, occupying one end of the large tent intermixed with Palms and edged with Ferns, was put up by Mr. C. Turner, of Slough, Crimson Rambler both as standards and trained up the pillars forming a background. This was also trained as a bush, lighting up the whole group with admirable effect. *Francisca Kruger* with its delicate yellow flowers was much admired, the scent being very delicate. The old *La France* was well shown, as was *Junno*, *Marie Baumann*, *Comtesse de Serenzi*, *Mme. Victor Verdier*, *The Bride*, and *Souvenir de Madame Verdier*.

Messrs. W. Paul & Son made a magnificent display with Ramblers as standards as well as trained plants. Teas were well to the fore in this group, comprising such varieties as *Corinna*, *Medea*, *Sylph*, and *Souvenir de Madame Verdier*. This group was edged with cut Roses in boxes, which in our opinion somewhat marred the effect.

Messrs. Paul & Son, of Cheshunt, occupied one corner of the large tent, and made a magnificent display. *Diana*, a very pretty rose of the Rambler type, with white flowers, attracted much attention. The Roses in this group were clean and well grown, *Ulrich Brunner* standing out well amongst such varieties as *Souvenir de S. A. Prince*, *Captain Hayward*, and *Caroline Testout*.

Messrs. F. Cant & Co., of Colchester, had a neat, small group in the centre of the adjoining tent, comprising such well-known varieties as *Mme. Falcot*, *Niphotos*, and *La France*. A peculiar small-flowered *Polyantha* form named *Thalia* was very striking.

At the end of this tent a group, put up by Mr. W. Rumsey, Waltham Cross, consisting of standards, trained plants, and cut blooms edged with Ferns, made a nice arrangement, *Mme. Hoste*, and *The Queen* being amongst the best.

There was also a group of a single variety named *Carmine Pillar*, exhibited by Mr. J. Russell, of Richmond, which was very showy. The flowers are fairly large, of a bright red with a light centre. This will doubtless make a companion to Rambler.

FERNS.

The collection of Ferns shown by Mr. H. B. May, of Dyson's Lane Nurseries, Upper Edmonton, was a remarkably fine display of choice material. There were none of the so-called market Ferns, whose very easiness of culture, combined with their beauty, has caused them to be grown in their thousands each year, but instead, the rarer and choicer forms were shown, and these, by their evident health and fitness, not less than by their elegance and variety, gave to visitors a good representation of the wide range of type that is to be found amongst Ferns as a class of plants. The exhibit in question occupied about 250 square ft., and in this space were congregated a large number of magnificent specimens, although there was no duplication. For rarity the special feature was a single plant of *Polypodium Mayii*, a new form that cannot fail to do credit to Mr. May. This was covered and shielded from profane touch by a large bell-glass, and the delicacy of its tints were well shown up by a setting of the golden *Selaginella kraussiana aurea*. This *Polypodium* has the same glaucous hue as *P. aureum* and *P. glaucum*, but in a much greater degree. The lobes of the leaves are broader, whilst the whole leaf has a graceful droop that goes well with the much crisped and charmingly undulated margins. The venation stands out clearly by reason of the almost translucent character of the leaf, and the fact that the veins are of a lighter blue than the surrounding tissues. The *Gymnogrammes* were strongly represented by some superb samples. There were, in all, about a dozen forms, of which we may mention *G. flavescens*, *G. chrysophylla grandiceps* and its strong-growing form *G. c. g. superba*, *G. Mayii*, and *G. schizophylla elegantissima*, with very finely cut and elegant fronds. A fine specimen of *Davallia fijiensis robusta* was most conspicuous by reason of its size and vigour, and the same may be said of *Platyterium*

grande. *P. aethiopicum* and *P. Willinckii* were suspended above the other plants on the stage, and thus had every chance to display their charms. *Asplenium caudatum* was employed in the same way. The distinct *Asplenium Mayii*, with its deeply lobed fronds, and the closely allied *A. ornatum* were much admired, whilst the noble fronds of *A. Nidus musaeifolia* formed a great contrast to them. Of *Pterises* there were the handsome *P. Reginae* and *P. R. variegatum*, as well as the noble *P. ludens* and the equally distinct *P. sagittifolia*. *Adiantums* were represented by *A. elegantissimum*, the new *A. hemsleyanum*, and *A. fasciculatum*, three very beautiful forms. The genus *Pellaea*, which contains several highly ornamental subjects was represented by *P. cordifolia* and *P. ternata*.

A number of the smaller growing forms was accommodated upon diminutive tree stumps, in which situation they formed a pleasing feature of the group. *Drymoglossum piloseloides*, *D. spatulatum*, and *D. Nephrolepis pectinata* were all shown thus. We must not forget, moreover, to pay a tribute of praise to the way in which the staging was carried out, for the characteristic beauties of each plant were well brought out, and the smaller plants equally with the big ones were able to give the public the full benefit of their charms.

A meritorious and tastefully set up group of exotic Ferns came from Messrs. J. Hill & Son, Lower Edmonton. It was composed of a great variety of material, amongst which were grand specimens of such things as *Pteris tremula smithiana*, *Davallia fijiensis plumosa*, *D. mooreana*, and *Asplenium caudatum* suspended above the stage. On the stage itself were such popular Ferns as *Blechnum occidentale*, *Adiantum scutum roseum*, *A. macrophyllum*, *A. Farleyense*, and *Lygodium scandens*, all of them in considerable numbers and in first-rate condition.

As in former years Messrs. W. & J. Birkenhead, Sale, near Manchester, staged a capital exhibit of the kind of Ferns they grow at their nurseries, both exotic and hardy forms being on view. The familiar glass case with its "filmy" occupants was also present. On this occasion it was filled with pot plants of such choice things as *Trichomanes maximum*, *T. radicans cambricum*, *T. r. dissectum cuneatum*, *Todea superba* and other *Trichomanes*, and *Hymenophyllums* in variety. The rest of the exhibit outside of the glass case contained a large number of small and medium sized plants, amongst which we noted *Davallia pentaphylla*, *D. fijiensis elegans*, *Adiantum trapeziforme*, *A. lawsonianum*, *Alsophila pinnata*, and *Onychium japonicum*. There were some pretty crested forms among the hardy element, and the hardy *Maidenhair*, *Adiantum pedatum* was well shown in this section.

HARDY HERBACEOUS PLANTS.

THE hardy flowers contributed by Messrs. Barr & Sons, of Covent Garden, constituted a brilliant and very comprehensive display. The miniature rockery, which was last year such a successful departure, was repeated with even greater success this year. The creeping *Arenaria halarica*, and the larger flowered *A. montana* were tastefully employed to clothe the nakedness of the stones, whilst *Ranunculus pyrenaica*, peeping out here and there from crevices and cranies, looked thoroughly at home. Masses of *Gentiana verna*, *Primula rosea*, *P. farinosa*, *Saxifraga Phei*, *Cistus purpureus*, and *Androsaces* added plenty of colour. We should also not forget to mention the pretty and distinct *Viola pedata*, and its variety *V. p. bicolor*. A background to the rockery was furnished by *Cytisus scoparius andreanus*, and *C. albus durrens*. Flanking the rockery on either hand were masses of cut flowers and plants in pots, the whole forming a capital representation of the wealth of material that the lover of hardy flowers has at command. Amongst the cut flowers a collection of bedding *Violas* included such useful sorts as *True Blue*, *Colleen Bawn*, *Nellie*, *Sulphur Gem*, *Duchess of Fife*, *J. B. Riding*, and *Floriel*. *Gladiolus Colvillei alba*, *G. C. Blushing Bride*, *Heuchera sanguinea splendens*, *Papaver Beauty of Livermere*, *Eremurus robustus*, *E. himalaicus*, *Geums*, *Irises*, *Pyrethrums*, single and double, and *Darwin Tulips* were all in the best of trim. The double *Poet's Narcissus* was also well shown. It is not unlike a *Gardenia* in form and smell, and should prove very useful for cutting. Amongst the plants, *Cypripedium calceolus*, *Orchis italica*, *O. bombilifera*, *Spanish Iris*, in variety, more especially the forms *Golden King* and *Snowball*,

Trollius Orange Glohe, *T. napelliformis* were very noteworthy. *Fritillaria recurva*, with its handsome red-orange flowers, was very conspicuous, and attracted a good deal of attention. *F. Elwesii* was likewise well shown.

These, with the cut flowers, were distributed over the available space in tents Nos. 1, 2, and 3.

Mr. F. G. Foster, Brockhampton Nurseries, Havant, staged forty bunches of cut Sweet Peas in as many varieties. They were cut from pot plants grown in a cool house, and were prettily made up with the foliage of *Carex variegata* and *Eulalia japonica* with small *Adiantums* interspersed. *Lady Mary Currie*, *Golden Gate*, *Aurora*, *Isa Eckford*, *Royal Rose*, *Shahzada*, and *Queen Victoria* were some of the best forms.

From Mr. George Edom, Walton-on-Hill, Epsom, Surrey, came a collection of cut florists' Tulips. The flowers were in grand condition considering the advanced season, both colour and size being above the average. *Annie McGregor*, *Rose Hill*, *Mrs. Schofield*, *Mrs. Hardy*, and *Goldfinder* were the finest of the breeder forms, and *Lord Frederick Cavendish*, *Adonis*, *Samuel Barlow*, *Annie McGregor*, and *Duchess of Sutherland* the premier rectified blooms.

Messrs. J. Cheal & Sons, of Crawley, Sussex, put up a charming miniature rockery, prettily furnished with various Alpines, including *Phlox G. F. Wilson*, *P. violacea*, *Papaver miniatum*, *Lithospermum prostratum*, all in bold masses. In the cut flowers shown by the same firm the chief feature was the collection of bedding *Violas*. Here there were many pretty varieties, some of the finest being *Colleen Bawn*, *Iona*, *Florize*, *Archie Grant*, *Hamish*, *Bullion*, *A. J. Rowberry*, and *Border Witch*.

On the left-hand side of the entrance to No. 2 tent, Messrs. Geo. Jackman & Son, of Woking, had a collection of choice herbaceous plants. There were large clumps of *Iris germanica* *Mme. Chereau*, *J. g. Bacchus*, single and double *Pyrethrums*, in variety. *Tree Paeonies*, *Haddesi*, and *Mme. Rattier*. *Centaurea montana ruhra* was very gay, and the bright yellow of *Cheiranthus Marshalli* was fully as conspicuous. We must also make mention of the choice *Incarvillea Delavayi* here just commencing to bloom.

In the western end and in the centre of tent No. 2, the hardy flowers, sent by Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester, were staged. A special feature here was a quantity of *Liliums* in pots, all of the pots being full of flower, dwarf and sturdy. *L. thunbergianum atrosanguineum*, *L. t. alutaceum*, *L. t. brevefolium*, *L. t. marmoratum aureum* were the most noteworthy. By the side of the *Lilies* appeared a collection of hardy *Cypripediums*, chief of which were *C. calceolus*, *C. parviflorum*, *C. occidentale*, and *C. aculea*. In another part of the group a batch of *Lilium rubellum* was well to the fore, as the beauty of the species would entitle it to be. *Fritillarias*, *Calochortuses*, *Ixias*, and the various *Irises*, shown by the Colchester firm, were all of them choice and well found.

In the hardy flowers sent by Mr. Amos Perry, Winchmore Hill, N., the majority were cut. A hold mass of *Tulipa gesneriana* occupied a central position, and around it were grouped *Trollius*, *Ranunculus aconitifolius flore pleno*, *Lupinus*, *Aquilegias*, and *Centaureas* in variety. *Camassia Leichtlinii* was one of the notables.

Messrs. A. W. Young & Co., of Stevenage, Herts, had a collection of cut hardy flowers and plants, in which *Lilium Harrisii* figured conspicuously.

Messrs. Isaac House & Son, Coombe Nurseries, Westbury-on-Trym, near Bristol, staged a splendid lot of sprays of Bedding *Violas* with their own foliage. *Border Witch*, *A. J. Rowberry*, *Archie Grant*, *Amy Barr*, *Bullion*, *Wm. Haig*, and *Ira Fergusson* were some of the best. Small plants in pots were on view, thus exhibiting the habit of some of the forms. Amongst the plants the variety *White Empress* gave a good account of itself. A couple of stands of single blooms of fancy *Pansies* appeared in the front rank. These were very good considering the somewhat unfavourable character of the season.

The western end of No. 3 tent was devoted to a choice collection of cut hardy flowers sent by Mr. T. S. Ware. A huge spike of *Eremurus elwesianus* was the most conspicuous occupant of this group. *Irises*, *Lilium*, *Saxifragas*, *Epimedium niveum*, *Trolliuses*, *Lupinus*, *Paeonies*, *Lilium*, and *Irises* were present in considerable variety, and there were also such high-class things as *Cypripedium calceolus*, *Iris Mariae*,

and *Ramondia pyrenaica*. All the plants were stood upon the ground, and this made it somewhat difficult to look at them to advantage.

The miniature rockery put up by Messrs. James Backhouse & Son, York, was certainly the finest effort of its kind in the whole of the show. Amongst the plants were to be seen very many floral gems of great beauty and value, not the least interesting being the hardy Orchids. *Armeria setacea*, *Gentiana acaulis*, *G. verna*, *Sarracenia purpurea*, *Daphne cneorum* and *Morisia hypogaea* are a few of the dwarf subjects that were in the the front ranks. In the background appeared *Iris*, *Tolliuses*, *Ranunculus cortusifolius* and small pieces of *Pinus cembra*. Two grand pans of *Cypripedium calceolus*, and two other pans of cut Water Lilies were shown by the same firm.

ORNAMENTAL TREES AND SHRUBS.

Messrs. W. Fromow & Sons, Sutton Court Nursery, Chiswick, W., had a varied and showy group of Japanese Maples in pots, varieties of the versatile species *A. palmatum*. The range of cutting and colour of the leaves was very great, and the exhibit formed a capital representation of the utility of these subjects for conservatory decoration, whilst they are perfectly hardy. *A. p. marmoratum*, *A. p. dissectum palmatifidum*, *A. p. variegatum*, *A. p. sanguineum*, and *A. dissectum purpureum* were some of the finest forms. An edging to the group was furnished by the dwarf and handsome *Aralia pentaphylla variegata*.

Messrs. Thos. Cripps & Sons, of Tunbridge Wells, had an exhibit of similar material. This was split up into two groups, one of which appeared on either side of the eastern end of Tent No. IV.

The greater part of the hardy trees and shrubs were accommodated upon the grass outside the tents, where they appeared to much greater advantage with their setting of green grass than they possibly could have done under canvas.

Messrs. J. Cheal & Sons, of Crawley, Sussex, made a unique exhibit by planting a large oblong bed with a variety of foliage and flowering plants. Of the latter there were some beautifully flowered pieces of *Rhododendron Fred Waterer*, *R. John Waterer*, *Azalea amoena splendens*, and *Kalmia glauca*, whilst foliage subjects were represented by such things as the elegant *Sambucus serratifolia*, *Acanthopanax pentaphylla variegata*, *Cupressus lawsoniana filifera glauca*, *Taxus baccata lutea*, and other green and golden Conifers. The edging was of *Eurya latifolia aurea*.

A magnificent array of fine foliaged trees and shrubs came from Messrs. Fisher, Son, and Sibray, Handsworth Nurseries, Sheffield. The material was split up into two distinct groups, the smaller of which was stellate in form. This contained well grown and shapely little specimens of *Acer japonicum crataegifolium*, *Cornus sibirica elegantissima* and *Acer reticulatum*. The plants in the larger group as well as those in the smaller were bedded in and their roots hidden from view by a carpet of moss. The larger group occupied a space of about 50 ft. in length by 12 ft. in width. It contained in addition to larger samples of the plants mentioned as being in the smaller group a splendid collection of varieties of *Acer japonicum*. The new *Persica purpurea* was also very noteworthy. *Quercus concordia*, *Q. macrophylla* *Andromeda japonica alba magnifica*, *Euonymus Silver Gem*, *Betula purpurea* and *Hedera arborea Crippsii* were shown in dwarf, but bold and telling masses in the foreground, the outline being a series of short curves with an edging of *Euonymus argenteus*. Considerable taste was displayed in the arrangement, for there was a great wealth of material on hand and it was displayed to the fullest advantage.

Messrs. Paul & Son, the Old Nurseries, Cheshunt, showed a number of cut sprays of *Rhododendrons*, and a collection of Bamboos. These included several mammoth specimens in large tubs.

From Mr. John Russell came a bright and varied assortment of Acers, Ivies, and miscellaneous foliage shrubs. *Cotoneaster horizontalis* was also very conspicuous and in capital condition. In the background the variegated *Acer Negundo* was represented by a number of fine plants. *Acer palmatum niveum*, and *A. p. dissectum* were in excellent form. A double row of *Euonymus latifolius albus* made an appropriate edging.

A new variegated Holly called Golden King was

shown by Messrs. Little & Ballantyne, Carlisle. It is a distinct improvement upon the old Golden Queen.

Yet another group of the evidently popular Japanese Maples was contributed by Messrs. John Waterer & Sons, Ltd., Bagshot, Surrey. *A. palmatum dissectum purpureum*, *A. p. d. variegatum*, *A. p. atropurpureum*, *A. p. d. ornatum*, *A. p. insolutum*, *A. p. roseum marginatum*, and *A. p. tricolor* are a few of the many fine forms which were exhibited here.

On the eastern side of the large tent a superb collection, both in point of size and merit, of hardy flowering shrubs displayed to visitors what Messrs. James Veitch & Sons, Ltd., can grow at their nurseries at Coombe Wood. *Rhododendrons Sappho*, *Lord Eversley* and *Prometheus*, hybrids of *Azalea mollis* and *A. sinensis* in variety, *A. glauca stricta*, *Cytisus scoparius praecox* in 4 ft. standards, *C. s. andreanus*, in 6 ft. standards, *Hydrangea japonica Mariesii*, and *H. hortensis rosea* were all magnificently flowered. Of the rarer subjects *Andromeda speciosa cassinefolia*, *Philadelphus Lemoinei*, *P. coronarius Boule d'Argent*, and *Ceanothus veitchianus* were exceedingly showy. *Vitis heterophylla variegata* was likewise in capital trim, being well variegated and in vigorous health. Nine grand spikes of *Eremurus himalaicus* scattered in the front ranks of the group were much admired, and clumps of *Lilium Harrisii* in the background added their quota of beauty to the general effect, which was imposing in the extreme.

FRUIT.

FRUIT under glass has long been a specialty with Mr. Jas. Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton, and on this occasion his exhibit was fully worthy of his reputation. It consisted of Figs, Peaches, Nectarines, Cherries and Strawberries, both plucked and shown in cases, as well as in position upon the trees. In the background was a row of Vines carrying full crops of large bunches for pot Vines. Both Early Rivers and Cardinal Nectarine were well shown, the fruit which was of medium size and upwards, being in every case highly coloured. Some of them were very large, nine of them plumping the scale at 3 lb. 3 oz. Fig St. John, Strawberries Royal Sovereign, Auguste Nicaise, and Louis Gautier, and Cherries Frogmore Early Bigarreau, Bigarreau de Schreken, Early Rivers, Empress Eugene, and Guigne Annonay were all of the highest quality. The condition of the trees, moreover, was fully on a level with the quality of the fruit. Several Plums were shown but they were not so forward as the remainder of the fruit, but they, like them, bore heavy crops. All of them were in pots of various sizes. This exhibit was certainly one of the best efforts, if not the best, Mr. Hudson has yet made.

Messrs. T. Rivers & Son, Sawbridgeworth, also made a magnificent display with pot fruits, but in this case the exhibit was confined to Nectarines, Figs, Plums, Peaches, and Cherries. Of the Nectarines Early Rivers was surely never shown in better form, for the trees, although only small ones, were heavily cropped. Peach Hale's Early, was in similarly good condition. May Duke Cherry was represented by some heavily-laden standards. The Fig was White Marseilles.

In order to demonstrate the way in which Apples may be kept through the winter, spring, and on into the summer so as to join hands with the new crops, Messrs. Bunyard & Co., of Maidstone, staged a grandly representative collection of seventy dishes in as many varieties. All of the fruit was in a splendid state of preservation, shrivelling being almost entirely absent, and from its appearance one would surmise that it was December instead of May. Amongst the numerous varieties it seems invidious to particularise, for they were all good. We may, however, mention Hornead's Pearmain, Calville Rouge Precoce, Chelmsford Wonder, even better for keeping than the well-known Newton Wonder, which was also shown, King of Tomkin's County, Tibbit's Pearmain, Seaton House, Sandringham, Lane's Prince Albert, Hoary Morning, and Bramley's Seedling. Figs and Pears in pots were shown in the back ground, and here, too, we observed samples of the new Strawberry-Raspberry, a Japanese fruit that evidently partakes of the characters of the Strawberry and Raspberry.

VEGETABLES.

THE exhibit of Giant Early Marrowfat Peas of Messrs. Sutton & Sons, Reading, was particularly interesting on account of the revolution which this Firm has effected in the culture of this important vegetable. By the introduction of their new race of Early Giant Peas, possessing as fine a marrowfat flavour as the maincrop varieties, the public can now obtain the choicest Peas ready for use even before the small round-seeded sorts are seen in the greengrocers' windows. It will be remembered that the Peas exhibited by Messrs. Sutton at the Temple Show in 1895 were sent by command to Windsor Castle, and graciously accepted by Her Majesty the Queen. The varieties exhibited were Sutton's Early Giant, Seedling, Excelsior, Bountiful, Empress of India, and A1. Messrs. Sutton also make a grand display of Cucumbers, amongst which Sutton's Peerless, Matchless, Pride of the Market, Improved Telegraph, and A1 are remarkably well shown, particularly the latter variety. The Peas were shown in baskets containing about half a bushel in each. Early Giant was perfect, both as regards pod and seeds, and Sutton's Seedling reminded one of May Queen. Pride of the Market Cucumber, and Sutton's A1 were shown in grand form, as also was Sutton's Every Day.

Messrs. Carter & Co., made a grand display of their Model Cucumber, Climbing French Bean, Darby Stratagem, Daisy and Early Morn Peas, and Duke of York Tomato. And a large collection of vegetables from Mrs. Wingfield (gardener, Mr. Empson), Ampthill, consisting of Peas and Beans in pots, Broccoli, Leeks, new Potatos, Cucumbers, Asparagus, Mushrooms, etc., occupied a large portion of one side of the tent, and the Leeks for the time of the year were particularly fine.

The Horticultural College, Swanley, sent a collection of vegetables comprising Cucumbers and Peas growing in pots. The former was surrounded by small pots of the latter, and these were interspersed with New Potatos, Asparagus, Tomatos, French Beans, and Broccoli, the whole making a very tasteful arrangement.

Mr. Beckett, gardener to Lord Aldenham, exhibited a very fine lot of vegetables, comprising Early Red Milan Turnip, Moon's Cream Marrow, Carter's Perfection Tomato, Sharp's Victor Potato, Holhorn Model and Lyon Leeks, Flower of Spring Cabbage, Perfection Broccoli, and Colossal Asparagus. A collection of Rhubarb was sent by Mr. Frank Chapman, Colchester. The same exhibitor also sent a collection of Asparagus.

MISCELLANEOUS.

The Jadoo Company, Ltd., Palace Gate, Exeter, had a very interesting exhibit of plants grown in Jadoo fibre. These included *Stephanotis*, *Pandanads*, *Dracaenas*, *Caladiums*, *Acalyphas*, *Liliums*, show *Pelargoniums* and *Strobilanthus dyerianus*. All of them were in the best of health, and evidently take kindly to the Jadoo. Some of the plants were in glass pots, and through these the freely interlacing and fleshy roots could be readily seen.

Miss Emmett, 239, Ladbroke Grove, W., exhibited a case of very life-like wax models of Orchids, similar to those fashioned by her for the Royal Gardens, Kew, and the British Museum.

TREE FERNS AND SURFACING.

It is not uncommon to see old tree Ferns in tubs struggling for an existence. It is not always suitable to cut them over at the surface of the soil and re-tub them; but we know that by judicious surfacing they will grow and remain in good health for many years. The surface of the soil is removed several inches deep and replaced with sandy loam and bone meal, made thoroughly firm. Clay's Fertiliser is capital for keeping the plants in healthy growth through the summer. Other fertilisers also do well when not too liberally supplied. We have some plants which have been in the same tubs a dozen years, and the fronds (which started freely into growth at the new year, average 9 ft. (or more) in length. They stand strong heat, and some are often in a temperature near to freezing point, but when kept very cool and airy their growth is shorter.—M. T., Carron, N.B.

Newport, U.S.A., possesses a "Purgatory," and a little way out of it is "Paradise."

QUESTIONS AND ANSWERS.

Bedding Arrangement.—*Bedding*: We consider that *Peargonium Robert Fish* should be placed in the centre as it grows taller, as a rule, than *Begonia Vernon compacta*. By planting the latter in the patches No. 2, it would throw the darker colours as well as the dwarfier plants towards the outside where they would be best seen, and would certainly look better a short way off. Moreover, the darker colours should always be kept towards the outside of a bed, or of a design. *Santolina incana* will answer very well for the dividing lines between the above two. Top the plants by pinching them when on a level with the flowering subjects. *Echeveria secunda glauca* will make a very good edging to the whole.

Double Polyanthus and Green Primrose.—*W. Angus*: The double crimson form is a variety of the garden Polyanthus; but though the crimson petals are very numerous, they are very small, and we do not think it has ever been named. Numerous forms have been raised at one time or another from partly double flowers; but yours were so completely double that the ovary has been developed into petals, partly green and partly coloured, so that you cannot raise seedlings from it. The other is a green variety of the Primrose (*Primula vulgaris*), but we do not find that it has been named in an old list of Primroses and Polyanthus before us. For the sake of distinction you may call it the Green Primrose or *Primula vulgaris viridiflora*. It seems to exist in several gardens, for we had it from another correspondent recently.

Fimbriated Polyanthus.—*David May*: The flowers you send were pretty and deliciously fragrant. The principal distinction about them is the fimbriated character of the segments, which have been increased in number from five to six. They are also very much widened, so that there is no room for them to lie flat, the result being that they have become plaited and more or less deeply divided at the outer edges. This latter character is what you should develop. Do not be content with the present form, but fertilise the flowers with their own pollen, and raise seedlings. If you get a number of plants with fimbriated flowers, intercross them and always select the most deeply fringed varieties. You might ultimately raise something very pretty for border work—a new race in fact.

Worm in Raspberry Buds and Canes.—*D. Stuart*: Your Raspberries are very badly infested with the larvae or grubs of a tiny moth known as the Red Bud Caterpillar (*Lampronia Rubiella*), being named red from the colour of the larvae. You have done

right in cutting off all the buds and destroying them; but you might do this at the first indication of the injury. They should really be burned to prevent any of the grubs from going into the pupae state and from thence to the perfect stage to repeat the injury to your plants another year. We recommend you to have all rubbish cleared away about the plants and burned. The old stems, which have fruited, should also be cut away after the fruit has been gathered and burnt. If there are plantations of wild Raspberries in the neighbourhood of your garden, we would recommend you to destroy them completely, by cutting them down, old and young, so as to destroy any larvae that may be in them, and to prevent their breeding there. Unless this is done your cultivated specimens will be liable to infestation from thence every year. It will require considerable perseverance to get rid of the pest. You might even make a fresh plantation with young canes obtained from another source where the canes are clean, planting them in a different part of the garden. This latter plan is of course an extreme measure.

Lily of the Valley.—*Omega*: This will grow in almost any situation and aspect, but it succeeds best where it can get shade and plenty of moisture, not, however, a saturated soil, but such as might be found in some woods under the slight shade of trees. Therefore, if you can find a spot in your garden that is slightly shaded and moist, that is what you should select. Avoid a south aspect near houses or walls. An open situation would be better than that. If the soil is heavy use plenty of leaf soil or old forcing bed manure. Planting should be done about the end of March, before growth commences.

Vines.—*Omega*: The present is a very good time to plant Vines in an outside border. We take it for granted that the plants are now growing in pots, and that the rods will be inside the vinery. If you perform the operation properly, this is the best time for outdoor planting. Keep the atmosphere of the house moist till the Vine roots have taken fresh hold.

Pear Leaves Blistered.—*M. M'Laren*: All the leaves you sent were affected with the Gall Mites of the Pear (*Phytoptus Pyri*). None of the mites ever have wings at any stage of their existence, but when once they attack a tree it is most difficult to get rid of them. Sometimes a tree may continue in fairly good health for many years, when the mite does not make rapid headway; at other times it succumbs rapidly, when there is no hope of saving it. There was no evidence of the blister caused by the Pear

Leaf Blister Moth (*Tinea Clerckella*), the blisters in that case being large and different in appearance. On one leaf we found a few scales of the Pear Oyster Scale (*Diaspis ostreaefomis*). If they are only in limited numbers you could easily sponge them off the young trees. The *Phytoptus* is more difficult to deal with. The only time you can make sure of getting at the mites is when the leaves newly expand. Some time after that they come out of the leaves by a little hole on the under side, and find their way into the young buds, where they take up their quarters, and penetrate the leaves before they expand. Entomologists have not yet been able to tell us when they quit the old leaves; probably they do it at various times, so that any application of insecticide would have to be applied frequently, and then might fail to have any effect upon the mite. You will have to exercise patience, and not destroy valuable trees, but that is ultimately all that the authorities recommend. The mites must breed in spring, for the eggs are laid inside the blister.

Polyanthus Refusing to Bloom.—*M. M'Laren*: The cause of seedlings refusing to bloom for six or seven years is very interesting. We have noted something similar amongst other plants, including Violas, and conclude that there is constitutional weakness or a tendency to malformation, as in the case of your plants, which prevents them from flowering. Such plants can never be serviceable in a garden.

Names of Plants.—*W. J. G.*: 1. *Laelia purpurata* var., in poor condition; 2. *Fabiana imbricata*. It is hardy in the more favoured parts of the country, particularly near the sea coasts, but gets killed in severe winters.—*Jas. Sivewright*: *Epidendrum atropurpureum roseum*; 2. *Aspasia* sp. (see next week).—*E. Ballard*: 1. *Orchis Morio*; 2. *Cedrus Deodara*; 3. *Buddleia globosa*.—*W. P.*: 1. *Staphylea pinnata*; 2. *Acer circinatum* var.; 3. *Thermopsis montana*; 4. *Erigeron philadelphicus*; 5. *Anchusa sempervirens*; 6. *Geranium sylvaticum*.—*William McIver*: 1. *Cypripedium hirsutissimum*; 2. A hybrid *Rhododendron* which we may be able to name later on when in bloom here; yours evidently has been grown under glass.—*J. B.*: 1. *Brassia verrucosa*; 2. *Oncidium flexuosum*; 3. *Maxillaria tenuifolia*.—*A. T.*: 1. *Primula involucrata*; 2. *Paeonia tenuifolia*; 3. *Aesculus rubicunda*.—*Omega*: The Germander *Speedwell* (*Veronica Chamaedrys*).

Communications Received.—John Jackson.—A. P.—W. B. G.—C. B. G.—W. H. Y.—S. G.—G. W. C.—J. M.—T. S. Dymond.—Tomatos.—P. Weathers.—Sutton & Sons.—Toogood & Sons.—J. L.—A. C.—T. W.—M. Temple.—R. H.

SOLD by the PRINCIPAL NURSERYMEN, SEEDSMEN, and FLORISTS in the United KINGDOM.

UNEQUALLED
for
CHRYSANTHEMUMS,
VINES, ROSES, TOMATOS,
&c., &c.

THE CELEBRATED NATURAL MANURE,
OHLENDORFF'S
RAW CHINGHAS
PERUVIAN GUANO.

CONDITION:
THE VERY BEST.

GENUINE and PURE
as Imported.

ANALYSIS
GUARANTEED.

Pure, high-class RAW PERUVIAN GUANO is well known as the most reliable and suitable Manure for all Horticultural Purposes, as it is a product of Nature, and not an artificial compound. CHINGHAS PERUVIAN GUANO is the highest quality imported. To obtain this Guano genuine, go to Seedsmen who sell OHLENDORFF'S GUANOS and MANURES; or, if you cannot get the article locally, the Guano will be sent Carriage Paid for Cash with Order (Prices as below).

THE ANGLO-CONTINENTAL (late Ohlendorff's) GUANO WORKS,

30, MARK LANE, LONDON, E.C.

SOLE IMPORTERS of CHINGHAS PERUVIAN GUANO.

In Bags:—
1 cwt., 25/-; ½-cwt., 14/-;
¾-cwt., 8/6; 14 lbs., 5/-;
7 lb., 3/-.
In Tins:—
3 lbs. 1/6; 1½ lb., 1/-.

CRUSHED BONES,
SULPHATE of AMMONIA,
CRUSHED HOOFS.

Write for Price List—
Sent Free.

OHLENDORFF'S FERTILITY (or GUANO GARDEN MANURE) is a splendid Horticultural Fertiliser.

1 cwt. Bag, 16/-; ½-cwt. Bag, 8/6; ¾-cwt. Bag, 5/-; 14-lb. Bag, 3/-; 7-lb. Bag, 2/-; 3-lb. Tin, 1/-.

SENT CARRIAGE PAID FOR CASH WITH ORDER.

VIOLETS! VIOLETS!!

SINGLES.

| | |
|-----------------------------------|-------------|
| 25,000 Princess of Wales at | 7/- per 100 |
| 50,000 California | 7/- " " |
| 400 Victoria (new) | 10/- " " |
| 100 Explorateur Dybowski | 8- " " |
| 500 Amiral Avellan | 8/- " " |
| 500 Princess Beatrice | 8/- " " |
| 500 Italia | 8/- " " |
| 500 Primavera | 8/- " " |
| 1,000 Czar | 3/- " " |

Not less than fifty supplied at 100 rate. These prices are NETT. Cash with order.

THE MANAGERS, HOOD GARDENS, TOTNES.

50,000 BEGONIAS FOR BEDDING.

Very fine singles, all colours, mixed, 3s. per doz.; 50, 11s.; 100, 20s. Very fine, in eight distinct colours, 4s. 6d. per doz.; 50, 15s.; 100, 28s.

Finest Singles, for conservatory decoration, in twelve distinct colours, 6s., 9s., and 12s. per doz.

Finest Doubles, for conservatory decoration, 6s., 9s., and 12s. per doz.

Do you want best **Caladiums, Dahlias, Fuchsias, Heliotropes, Fancy Zonal and Ivy Pelargoniums, Double Petunias?** Send for full Descriptive Catalogue, free.

H. J. JONES,
RYECROFT NURSERY, LEWISHAM.

1898. FORBES' CATALOGUE 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants

is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and price of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other valuable information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,
Nurseryman, Hawick, Scotland.
ESTABLISHED 1870.

KEYNES' CACTUS DAHLIAS.

Best Plants. Best Varieties. Moderate prices.

Send Post Card for Catalogue.

About half the good varieties in commerce were raised here.

KEYNES, WILLIAMS & COMPANY,
Dahlia Growers, SALISBURY.

TURNIP FLY.

Every Grower (large or small) of Turnips, Swede, or Cabbage, should use the

UNIVERSAL SEED DRESSING,

a certain preventative against fly attacking the seedling leaves of the young plants. Bottles (with full directions) 1/- and 2/6 each. Large bottles, sufficient to dress 40 lbs. seed, 7/6, post free.

BRINKWORTH & SONS, Sole Agents, WINCHESTER.

RETARDED LILY OF THE VALLEY CROWNS.

Headquarters at Dersingham.

For prices &c., apply to—

T. JANNOCH,

Lily Nursery, Dersingham, King's Lynn, Norfolk.

GLOXINIAS FINEST MEDAL COLLECTION IN THE WORLD.

Send for CATALOGUE to

JOHN PEED & SONS, West Norwood, London

Caladiums FINEST COLLECTION in the World. We make a speciality of CALADIUMS. Gold Medals Manchester & Leicester. Silver Cup, R.H.S., &c.

Satisfaction guaranteed. **JOHN PEED AND SONS,** West Norwood, London.

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

Cheap offer to Clear.

DOUBLES.

| | |
|--|-------------|
| 10,000 Lady Hume Campbell at | 5/- per 100 |
| 1,000 Mme. Millet | 15/- " " |
| 300 Neapolitan | 5/- " " |
| 1,000 Marie Louise | 5/- " " |
| 1,200 Comte de Brazza (or Swanley White) | 5/- " " |
| 200 Duchess of Edinburgh | 15/- " " |
| 100 Double Red | 15/- " " |
| 200 Victoria | 15/- " " |

DAHLIAS A SPECIALITY.

- 12 Grand New Cactus Dahlias, 9s.; slx, 4s. 6d.
- 12 Older Cactus Dahlias, 4s.
- 12 Splendid Show and Fancies, 4s. 6d.
- 12 Grand Pompon, fine for cutting, 4s.

My new varieties for 1898.

See Descriptive Catalogue, Post Free.

ALL THE ABOVE CARRIAGE PAID.

G. HUMPHRIES, F.R.H.S.,
The Nurseries, Kington Langley, CHIPPENHAM.



GARDEN SUNDRIES.

SPECIALLY SELECTED ORCHID PEAT

- Black and Brown Peat
- Pot Washing Brushes
- Silver Sand and Loam
- Virgin Cork and Raffia [Twelve]
- Cocoa Nut Fibre Refuse
- Tanned Netting & Tarred
- Leaf and Peat Mould
- Trug Garden Baskets
- Flower Sticks, from 1 to 5 feet
- Specially prepared Mould
- Wooden Labels, from 4 to 12 1/2
- Sphagnum Moss
- Thin Bamboo Canes
- Guano and Dissolved Bones
- Rose and Dahlia Stakes, about 5 feet
- Bones, 1/2 inch and 3/4 inch
- Orchid Baskets and Teak Rods
- Bone Dust, guaranteed pure
- Greenhouse Blinds made to order
- Blood and Bone Manure, highly recommended
- Horticultural Charcoal [Paper]
- Patent Bass Brooms
- Tobacco Cloth, far superior to
- Smyth's Orchid and Hothouse
- Mushroom Spawn
- Shadling
- Russia and Archangel Mats

Write for Price List, free by post.

H. G. SMYTH,

Horticultural Sundriesman,

(By Special Appointment to Her Majesty).

Clark's Mews, High Street, BLOOMSBURY, S.W.

VIOLAS ! VIOLAS ! !

We have to offer in the following varieties :—

| | Per 100 |
|---|---------|
| | s. d. |
| 1000 Archie Grant, blue purple | 10 0 |
| 2000 Ardwell Gem, yellow | 10 0 |
| 2000 Border Witch, shaded pale blue | 12 0 |
| 1000 Bridesmaid, pale yellow | 10 0 |
| 300 Bronze Queen, bronze and purple | 15 0 |
| 1000 Blue Gown, deep blue | 10 0 |
| 1200 Blue Stone, rich Prussian blue | 10 0 |
| 1000 Bullion, golden yellow | 10 0 |
| 1000 Councillor Waters, crimson Purple | 15 0 |
| 200 Cleg Kelly, slate blue | 12 0 |
| 1500 Countess of Hopetoun, creamy white | 10 0 |
| 500 Devonshire Cream, creamy white | 10 0 |
| 300 Favourite, light blue | 12 0 |
| 300 George Muirhead, pale yellow | 15 0 |
| 500 Gold Crest, golden yellow | 20 0 |
| 150 Jackanapes, brown and yellow | 12 0 |
| 250 John Shires, blue | 10 0 |
| 150 Holyrood, blue purple | 10 0 |
| 1000 Kitty Bell, pale lavender | 30 0 |
| 1000 Lord Elcho, golden yellow | 10 0 |
| 200 Lady Dufferin, white striped heliotrope | 10 0 |
| 500 Leezie Lindsay, yellow flushed orange | 15 0 |
| 200 Lucy Ashton, cream edged purple | 12 0 |
| 500 Magic, rosy crimson | 12 0 |
| 500 Mary Jack, cream, edged rosy-lilac | 12 0 |
| 1000 Marchioness, creamy white | 10 0 |
| 500 Mrs. Charles Turner, purple | 12 0 |
| 500 Max Kolb, deep blue | 10 0 |
| 300 Old Gold, golden | 10 0 |
| 2000 Pembroke, best yellow in cultivation | 10 0 |
| 1000 Princess Louise, bright yellow | 10 0 |
| 1000 Prince of Wales, golden yellow | 15 0 |
| 500 Princess Beatrice, rose, dark centre | 10 0 |
| 300 Queen of the Year, china blue | 15 0 |
| 500 Rosea Pallida, pale lilac | 12 0 |
| 200 Sunset, yellow and crimson | 15 0 |
| 500 Sovereign, golden yellow | 12 0 |
| 200 Sylvia, cream white | 10 0 |
| 1000 Skylark, white, edged blue | 10 0 |
| 200 True Blue, dark blue | 10 0 |
| 500 The Mearns, shaded plum | 10 0 |
| 500 Violetta, white, yellow eye | 10 0 |
| 500 Wm. Neil, rose | 10 0 |
| 800 White Empress, splendd white | 15 0 |

Not less than 25 of one variety sold at 100 rate.

12 of the choicest and newest varieties, including Cosmos, Hamlet, Joseph, Rowberry, Isa Ferguson, Pearl, 6s.

12 Choice varieties not in above list 3 6

100 in 50 varieties, our selection 15 0

ALL POST FREE.

SPECIAL TERMS TO THE TRADE.

The Managers, Hood Gardens, Totnes.

CARTERS' TESTED SEEDS.—

In sealed packets. Post free. Price 2/6, 3/6, and 5/- each.

CALCEOLARIA, CARTERS' VICTORIA.

—The finest in the world. Real gems of splendd habit.

CINERARIA, BRILLIANT PRIZE.

—Brilliant colours, endless variety. The grandest strain ever seen.

PRIMULA, HOLBORN PRIZE.—

Grand blossoms of rich colours. Single varietes, choice mixed colours; double varietes, choice mixed colours; single, in separate colours, viz., blue, scarlet, rose or white; double, in separate colours, viz., crimson, lilac, rose or white.

GLOXINIA, CARTERS' INVINCIBLE.—

Magnificent blooms, brilliant colours. These cannot be surpassed.

The above in sealed packets, post free; price 2/6, 3/6, and 5/- each.

CARTERS, THE QUEEN'S SEEDSMEN,

237, 238, and 97, HIGH HOLBORN LONDON.

ORCHIDS of the highest quality, every

plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Matda Vale, London W.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JUNE 4th, 1898.

NEXT WEEK'S ENGAGEMENTS.

WEDNESDAY, June 8th.—Royal Botanic Society's Floral Fete, at Regent's Park (2 days).

Braintree Show (2 days).
Gardeners' Royal Benevolent Institution, 59th Anniversary Dinner at the Hotel Metropole.

FRIDAY, June 10th.—Sale of imported and established Orchids by Messrs. Protheroe & Morris.

A SECOND VISIT TO THE TEMPLE SHOW.—

While hurrying off to press with the report of a show of the magnitude of that held annually on the Victoria Embankment it is impossible to grasp all the details of importance in the bustle of a short, dark morning. There was indeed no rain during the whole of the three days, but Wednesday was very dark all day inside the tents, though Thursday and Friday, till well through the afternoon of the latter, were a great improvement in this respect. The show was not honoured on this occasion by the presence of royalty; but there were several important visitors, including The Right Hon. Joseph Chamberlain, M.P., Sir Wm. Vernon-Harcourt, Kt., M.P., Sir Trevor Lawrence, Bart., president of the society, Lord Kenyon, ex-president of the Shropshire Horticultural Society, Lady Warwick, Baron Schroder, and Captain Holford, besides the benchers of the Temple, judges and justices in great numbers. The cool, dry weather, indeed, brought out such a concourse of the élite and the people generally of London and the provinces during each of the three days, such as has, probably, never before assembled on any one occasion in the Temple Gardens, not even including the time when Plantagenet plucked the white Rose and Somerset the red one. The cool weather was conducive to the comfort both of the people and the flowers, which were in most cases as fresh as when the judges went round on the opening day.

In spite of unanimity of opinion with regard to the quantity and quality of the Orchids, we think the section was well maintained, and that no other exhibition can boast of a finer or more comprehensive representation of the family. It is true that we have nothing of the £1,000 Orchid on this occasion; but we noted several that had an

equal right to that value as some that have enjoyed the title on previous occasions. There was a falling off in the quantity of tuberous Begonias, though the quality was equally good, if not decidedly better, in the matter of refinement of new varieties than last year. The Caladiums were decidedly in advance of last year, in spite of the general lack of sunshine. Ferns were more numerous and better than last year. That shown as *Phlebodium Mayi*, by Mr. H. B. May, is a decidedly distinct thing, but being yet quite young we shall eagerly await its development to the adult stage. The *Phyllocacti* exhibited by Messrs. J. Veitch & Sons, Ltd., constituted the largest, finest, and most varied collection of these gorgeous flowers we have ever seen in one group. The cultivator, Mr. John Heal, well known to the gardening fraternity, is to be congratulated on his skill in timing the flowers to a date, in spite of adverse weather.

Roses are always a feature of the Temple Show, and on this occasion were more numerous and varied than ever. There was a slight falling away in herbaceous plants, particularly cut flowers from the open, owing to the cold, wet and sunless spring, but their absence has been more than compensated by the larger quantity of pot plants of those and allied subjects shown, necessitating the central bed of tent No. 4 for their reception. Amongst them may be mentioned the extensive collection of *Paeonies* shown by Messrs. Kelway & Son; and the magnificent exhibit of *Clematis*, single and double of the large flowering sorts set up by Messrs. Richard Smith & Co., as detailed in our last issue. The hybrids of the *C. coccinea* type shown by Messrs. Jackman & Son, were more numerous and finer than ever they have previously been. Hardy plants were also well represented by Messrs. Barr & Sons, Mr. T. S. Ware, Messrs. J. Backhouse & Son, Messrs. J. Cheal & Sons, Mr. Pritchard, and others. Show and fancy *Pelargoniums* were not shown last year, but made their reappearance in small quantity on this occasion.

A pleasing sign of the times is the increasing attention being given to hardy trees and shrubs, both fine foliage and flowering subjects; for that is how we must translate the meaning of the presence of six fine exhibits in place of the two or three last year. Messrs. J. Veitch & Sons, have had a large group of them every year during the last ten, and we believe it was never finer nor more varied than that sent up from the Coombe Wood Nursery of the firm last week. Outside the tents were several charming groups, including a very effective exhibit of flowering shrubs from Messrs. J. Cheal & Sons, fine foliage shrubs from Messrs. Fisher, Son & Sibray, and Mr. John Russell.

Fruit and vegetables were more numerously represented, and finer than they have been for several years past. The heaps of Peas, in several varieties of half a bushel each, and the quantities of well-grown Cucumbers, exhibited by Messrs. Sutton & Sons, were remarkable for this early period of the year, showing what can be done with their grand new marrowfat varieties. Mr. Empson, gardener to the Hon. Mrs. Wingfield, had a very large and splendid collection of vegetables; while the exhibit staged by Mr. E. Beckett, gardener to Lord Aldenham, was equally noteworthy, and ample testimony to the capabilities of the British gardener when called upon to exert his faculties. Mr. S. Mortimer, Rowledge, was also strong in his specialities in the way of vegetables. The Horticultural College, Swanley, had a highly meritorious exhibit of Peas growing in pots, which can-

not fail to be fraught with an object lesson for the students attending the instruction given there.

The collection of Apples exhibited by Messrs. Geo. Bunyard & Co., was ample testimony of their skill in preserving British grown fruit in an admirable state of preservation—surely to the limit of the capabilities of the first and best of hardy fruits. Of forced fruit trees in pots the large collections shown by Messrs. T. S. Rivers & Son, and Mr. J. Hudson, gardener to Leopold de Rothschild, Esq., were such as rarely come before the public in May. Gathered fruits were well represented by that champion of the north, Mr. McIndoe, gardener to Sir Joseph Pease, M.P. Descriptions of the finest new plants will be found under "Plants Recently Certificated" in another column.

Strawberries and Cream may already be had for 6d. at some of the seaside resorts on the south coast.

Kew Gardens, it is announced, will be opened to the public at 10 a.m. instead of noon as hitherto, commencing on Wednesday, 1st June.

The New Race of Marrowfat Peas shown by Messrs. Sutton & Sons at the Temple Show, as noted in our last issue, again received the highest award in the vegetable division. On a previous occasion by command of the Queen they were sent to Windsor for Her Majesty's inspection and served at the Royal table the same evening. This year two baskets (Sutton's Early Giant) were taken from the show to Marlborough House by command of the Prince of Wales for use at the Derby Dinner given by His Royal Highness.

Gold Medals from the Linnean Society.—At the anniversary meeting of the Linnean Society on the 24th ult., the Gold Medal of the society was awarded to Surgeon-Major George Charles Wallich, M.D., in recognition of his researches into the problems connected with bathybial and pelagic life. In consequence of his inability to attend in person, his son was deputed to receive it on his behalf. At the same time a special Gold Medal was awarded by the society to Sir Joseph Dalton Hooker, G.C.S.I., C.B., P.-P.R.S., on the occasion of the completion of "The Flora of British India," in recognition of the eminent services rendered by him to science during sixty years of unremitting labour.

French Strawberries in Britain.—The crop of Strawberries in the Plougastel district of France for 1897 was estimated at 2,870 tons by the British Consul at Brest. Of this quantity 600 tons were sent to Plymouth by steamers chartered by some of the growers. About 345 tons went *via* St. Malo to Southampton and Paris. The remaining 1,925 tons were retained in the neighbourhood of Brest. The Strawberries arriving at Plymouth are sent off by special trains to London, Liverpool, Manchester, Leeds, Glasgow, and Bristol. Last year two steamers plied regularly between Plougastel and Plymouth, but a third is to be chartered this year by another syndicate of growers. This method of sending fresh fruit has hitherto been very successful.

Phyllocactus latifrons.—The lower part of the stems of this species are round or angular and slender, while the upper portion, but chiefly the branches, are suddenly widened and flattened so as to appear like leathery, oblong leaves. Flowers are produced from the branches in considerable abundance, and the long, funnel-shaped buds expand during the evening revealing a great number of lanceolate, delicate white petals, shaded with amber outside and resembling those of the night flowering *Cereus*. Like many other white flowers they are sweetly scented. The species is one of the strongest growers in the genus, and is of the easiest culture in a rich porous soil, when supplied with plenty of moisture during the growing season, but particularly in hot weather. The plant should be kept rather dry in winter. Well established plants throw up stems 3 ft. to 4 ft. long in a season, and then throw out branches which arch over gracefully. The *Cactus Journal* for May gives a figure of this species, which we think might be tried for the purpose of hybridisation.

Sturmer and French Crab Apples have been coming into Covent Garden, during the past week, in fine condition.

English Peaches and Nectarines are already being sold in Covent Garden, the earlier arrivals of the former fetching from 3s. to 6s. per dozen, and the latter, 4s. to 6s.

The Stirling Seed Establishment, belonging to the well-known firm of Messrs. Drummond & Son, was destroyed by fire on Whit Monday. It is estimated that £10,000 will only just cover the damages.

Gamboge is a Gum resin, which exudes from the stems of several species of tree, and receives different names according to the country from whence it is obtained. Ceylon Gamboge is obtained from *Garcinia Morella*; Siam Gamboge from *Garcinia Morella pedicellata*; and Mysore Gamboge from *Garcinia pictoria*. American Gamboge is the juice of *Vismia guianensis*.

Midland Great Western Railway of Ireland.—This company has generously offered to carry Potato-spraying powder and machines free, at the owner's risk, for the current season. This can scarcely fail to be of the utmost value to growers of the esteemed tuber in the Emerald Isle, and especially so now that spraying as a preventive as well as cure for disease is so extensively practised.

The Rook and Cape Colony.—The writer on African sport and natural history strongly opposes the proposition to introduce the rook into Cape Colony. He remembers the case of the rabbit in Australia, and thinks it would be equally dangerous to introduce the rook to the Cape. If it would flourish and multiply there it might be the means of diminishing the locust pest, and that would far outweigh the damage it might occasion to cultivated crops.

The Myrobolan Plum.—Though this is often recorded as a distinct species, it would seem that the garden form enjoying the name is only a variety. In any case, trees raised from the stones do not come true to the parent tree, but give rise to seedlings, generally inferior to the parent as far as the fruit is concerned. A coloured illustration of a fruiting spray is given in the *Bulletin d'Arboriculture, de Floriculture, &c.*, for April last, showing dark red, globular fruits about the size of a Cherry.

Spring Poetry.—We cull the following from the columns of the *Florists' Review* for April 28th. It is nothing if not original.

Spring! oh, Spring!
You're not such a beautiful thing,
And poets all lie when they sing
Of your manifold charms, naughty Spring!
Meadly Spring!

For 'tis the grower that mighty well knows
You're the cause of one-half of his woes,
And you can't get a price for a Rose
That'll pay for the wear of the hose,
Hang you, Spring!

The Hawthorns on Hampstead Heath.—It is evident that the youth of London has not yet been taught to break away from the old custom of tearing down branches and boughs of the Hawthorn when in bloom. Adults as well as children, however, are guilty of this practice on Hampstead Heath and Parliament Fields, notwithstanding the injunctions of the notice boards. It may be difficult or impossible to stop the practice by the public highways and in country lanes, but surely this cannot be said of a London recreation ground under the care of the the County Council.

Strawberries in Fancy-handle Baskets.—Growers of this soft fruit are now adopting a method of marketing the same in fancy-handle baskets, according to the *Journal of Greengrocery*. The less that Strawberries are handled the better they appear when they reach the consumers, so that if neatly packed in baskets as they are gathered, no further handling is necessary. The baskets come from France, and having thus got the start of us it is considered that English basket makers cannot be expected to turn out so light and serviceable an article at the money. We think, however, that they might be encouraged to furnish a cheap article of their own design for the home growers. They might be used for Peaches, Nectarines, Apricots, and other soft fruits.

Gum is imported into this country at the rate of 327,316 cwt. annually, and the estimated value of it is £1,074,218.

Erratum.—The illustration on page 617 was by a slip of the pen named "Dracaena Sanderi." For this read Pandanus Sanderi, as described on page 619.

The Yeast Plant (*Saccharomyces cerevisiae*) is said to be only rooth of a millimeter in diameter. It must therefore be cultivated in greater numbers than any garden, field, or forest plant.

Eulophiella peetersiana.—A plant of this new and rare species of Orchid was sent to the Sale Rooms of Messrs. Protheroe & Morris on the 27th ult., by M. A. Peeters, St. Gilles, Brussels, and was knocked down at £39.

The Neill Prize.—An Edinburgh correspondent directs our attention to an error in last week's issue, p 615, in the first column. The fund for this prize was founded by Dr. Neill and not Patrick Neill Fraser, Esq., the late treasurer of the Royal Caledonian Horticultural Society, and nephew of the founder. Mr. Angus McLeod, superintendent of the City Gardens, Edinburgh, and Mr. John Paterson, of Saltoun Hall, Haddingtonshire, one of the most outstanding plant judges in Scotland, are two of the recipients of the Neill prize still living.

McDougall's Insecticide Fumer.—The "Fumer" is a handy little article that may be accommodated in the coat pocket, yet one of them is sufficient for a house of 1,000 cubic ft. capacity. It is like a short tin of mustard, the lower portion of which contains a small bit of specially prepared candle, and is perforated at the sides to admit air. The top is a closed box containing the insecticide. Having ascertained the cubic contents of the house, the operator places the requisite number of "Fumers" on the floor, and taking off the top box proceeds to light the candle in the lower one. A round lid, which is soldered or fixed on the top of the box containing the insecticide is then prised off so that the fumes can escape when roused to action by the heat of the candle. The box is replaced over the candle, and the operation is complete. Having lighted and placed all the "Fumers" in this way the gardener can then make his exit leisurely and leave the "Fumers" to do their work. They quickly destroy thrips, greenfly, and other vermin, and leave no bad odour behind as in the case of fumigation with tobacco rag or paper. The "Fumers" are issued by Messrs. McDougall Bros., 10, Mark Lane, London.

Ferns growing in Chancery Lane.—It may be taken for granted that many years have elapsed since Ferns grew wild in this busy thoroughfare of London; yet what shall we say of Ferns which have sprung up without human intervention, and without anyone knowing it until the other week. In a vault of two or more compartments underneath the roadway and the side pavement at 33, Chancery Lane, seedlings of *Scolopendrium vulgare* and *Asplenium bulbiferum* have sprung up in some quantity on the bricks and in the seams between them. There are also some mosses, including a species of *Hypnum*. They occur at three separate places, one under a pavement light, and the other two under coal plates in the pavement overhead. One *Scolopendrium* had a leaf 8 in. long, the other seedlings being much smaller. The pavement light and the coal plates are filled in with thick glass for pedestrians above, and as one stands in the vault the feet of a continuous stream of people may be heard passing over the roof of this curious fernery. The Ferns had come there in the form of spores, which may have blown in at a crack beside the lights or while the coal plates were open. Water may have been the vehicle of conveyance as the vault is damp; and the spores might have been carried down while it was raining. The light that could penetrate through the thick glass had been just sufficient for the germination and development of the seedlings. Our attention was called to the presence of this unsuspected find by Mr. F. Hudson, 1, Houghton Street, Strand, a builder who is now doing some repairs in the vault. The fate of the Ferns, we fear, is sealed under those conditions; but their presence, growing spontaneously in the heart of London, is by no means a common occurrence.

A Professional Bird-catcher.—Berlin employs a bird-catcher at a salary to supply scientific institutions with birds, nests and eggs. He is the only man in the empire who has this permission.

Gooseberries are a glut upon the market, making it self evident that the past winter and spring have not been unfavourable to this crop. Growers would do well to merely thin the crop, leaving a good picking on the bushes for harvesting in the ripe state.

Pilocereus senilis var. *longisetus*.—A contributor to the *Cactus Journal* for April has something to say about the rate of growth of this curious Cactus. He obtained an old plant, amongst some young ones, in the autumn of 1855. From this plant he has taken pieces at various times which now measure 2 ft., 2 ft. 5 in., 1 ft. 6 in., and 10½ in. high respectively, or a total growth of 6 ft. 9½ in. in forty-three years.

Richardia Little Gem.—Many cultivators who have tried this pretty miniature *Richardia* have failed with it. Considering the number of failures with it which we have observed, the success which has attended its culture under the care of Mr. Geo. Reynolds, gardener to Messrs. de Rothschild, Gunnersbury Park, Acton, is remarkable. It has been flowering freely for considerably over two months in the Rose house. The secret of this success consisted in rubbing off all the young tubers when rotting the old ones. When the plants are well into growth they are liberally fed. When the spathes are cut others continue to be thrown up from the same tubers. Five to seven or more spathes would be obtained from a few tubers in a 32-sized pot. From a 12-sized pot an average of twenty-five spathes is secured, while some pots will throw up thirty of them in succession during the course of growth in the Rose house. When the plants have done flowering, or when the space is required, they are placed outside to mature, preparatory to starting into fresh growth. Most of them had been placed out of doors by the middle of May.

MAGNOLIAS.

THERE are a score or more varieties of these lovely flowering shrubs or trees which give us a succession of flowers from early March right up to the appearance of frost. Often we find a few stray blooms in the month of November of *Magnolia grandiflora*. All the species thrive better if given a sheltered position, and a fairly rich soil.

We have some noble specimens in the arboretum here, some of them reaching 50 ft. in height. *M. stellata* was the first to open its flowers with us this season. I consider this is one of the prettiest of the whole family, and is pure white; it flowers very freely, and is slightly perfumed. Ours is only a small hush as yet, but I can well imagine what a grand sight a bush 15 ft. or 20 ft. high would be. It continues in flower a long time; it began early in March, and is still in bloom (the first week in May). It is assiduous, the flowers generally appearing in advance of the foliage, similar to *M. conspicua*, another early kind, and valuable to the planter on account of its earliness. This latter is very fragrant, and opens early in March if given a wall. It attains a height of nearly 50 ft. On account of our fickle springs it often gets much damaged when in flower. There are one or two of this variety named *M. c. soulangeana*, with tints of purple on the petals, and another, *M. c. s. nigra*, with deeper tints. *M. purpurea* is another pretty species, flowering early in spring, but not so fragrant as the last-named; still, it is a desirable kind to plant, and makes an excellent bush.

M. fuscata is the smallest flowered one I am acquainted with, but none the less fragrant; in fact, one flower will scent a large room. Generally speaking, this is a greenhouse species, but it is quite hardy on a south wall, with us in Devon, and retains its narrow green foliage throughout the year. *M. grandiflora*, as its name implies, is a beautiful object when nicely in bloom. It commences to flower in June, and continues up to the time frost puts a stop to it, as before mentioned.

M. glauca is another fine species, with white flowers, and very fragrant. This is an evergreen, and forms a spreading tree 15 ft. to 20 ft. high. *M. glauca thompsoniana* has flowers very much larger than the latter type, and is often called *M. g. major*. The foregoing are the cream of them, I consider, though

we have several other varieties about the grounds, namely, *M. acuminata* (Cucumber tree), with very large leaves and flowers of a glaucous green, and *M. auriculata* (syn. *M. Fraseri*), with yellowish-white flowers. This, too, has very large leaves, and looks well on the lawn, but the wood appears rather crisp, and quickly breaks off when a strong wind prevails if the tree is at all exposed.—*J. Mayne, Bicton.*

CRICKET.

HURST & SON v. GLOSTER & SONS.

THE match was played at Walthamstow on Whit-Monday, May 30th.

GLOSTER & SONS.

| 1st Innings. | | 2nd Innings. | |
|---------------------------|----|---------------------|-----|
| Ayloft, b Swinfen..... | 10 | b Portch | 10 |
| Wood, A.E., lbw Swinfen | 1 | c Sampson, b Main | 14 |
| Hart, c Main, b Sampson | 5 | b Swinfen | 7 |
| Mayhew, lbw Sampson | 3 | b Portch | 0 |
| J. Wood, run out | 3 | run out | 11 |
| Miller, b Sampson | 16 | c Squire, b Swinfen | 4 |
| Deudney, c & b Sampson | 0 | run out | 6 |
| G. Gloster, c Swinfen, b | | | |
| Sampson | 3 | not out | 37 |
| Walter, not out | 1 | not out | 9 |
| D. Gloster, c & b Sampson | 2 | b Portch | 3 |
| Chedley, b Sampson .. | 2 | | |
| Extras | 6 | Extras | 4 |
| | 52 | Declared 8 w'kts | 105 |

HURST & SON.

| 1st Innings. | | 2nd Innings. | |
|---------------------------|-----|------------------|----|
| Portch, run out | 21 | b Hart | 11 |
| Squire, b Miller | 19 | not out | 25 |
| Swinfen, b G. Gloster .. | 38 | not out | 5 |
| Sampson, c Deudney, b | | | |
| J. Wood | 22 | | |
| Main, c A. Wood, b G. | | | |
| Gloster | 3 | | |
| Blyth, b J. Wood | 2 | | |
| Delacourt, b J. Wood .. | 0 | | |
| Jerry, b G. Gloster | 1 | | |
| Laker, b G. Gloster | 0 | | |
| Thake, lbw, G. Gloster .. | 0 | | |
| Turner, not out | 4 | | |
| Extras | 7 | | |
| | 117 | For 1 wicket.... | 41 |

THE RULES OF COMPETITION.

THE recent dispute in your columns, pp. 566-7, and 583, upon the awards given at the Belfast Chrysanthemum exhibition, shows how important a subject this is. No matter what the class is or the geographical position of the show held, abstractions and deviations from rules are highly dangerous, and full of critical explosives, which, sooner or later, are sure to burst forth in front of judges, exhibitors, and the public interested.

It is well to remember a rule is only another name for the whole of the committee, and the sum total of these is law, and judges are subordinate thereunto. Therefore, how imperative it is that all, especially judges, should avoid complication, should keep well to the concrete, and make themselves thoroughly conversant with the true meaning of the schedules that are posted or placed in their hands by the secretary previous to starting on their mission.

To those who have followed the discussion it is quite apparent, even without acknowledgement, that the—taking a thing for granted—the had not seen—the second day's discovery—and the should not have done as I did—conditions were the predominating causes.

What names should have been attached and collarets detached under and around the chests and necks of Madame this and blooms of others, but were not, are inconsequential mistakes and violations, whichever they may be, and are best left for the exhibitors and their assistants to settle amongst themselves.

Disqualification upon a single wrong detail, when every other is of surpassing excellence, is certainly hard, and judges who do so do it very reluctantly, and sympathetically at the same time for the exhibitor. Faults and mistakes are very often dearly paid for; the parties concerned take a lesson therefrom, and are very cautious in after years. 'Tis an old saying that when a director on the railway gets killed we may look out for safer travelling.

I have written this in no spirit of disparagement to anyone. That committees expect too much from their judges in some cases is obvious, and if a timely

disqualification were adopted and adhered to by the committees of many horticultural and floral shows it would not encroach upon the time of the judges, who often have very little margin for proper discrimination.—*A Country Judge.*

PLANTS RECENTLY CERTIFICATED.

THE under-mentioned awards were made by the Royal Horticultural Society, at the Temple Show, on the 25th May:—

Orchid Committee.

CATTLEYA LABIATA MENDELII AMELIA, Nov. var.—Here we have a large and beautiful *Cattleya* of a chaste light colour, the sepals and the back of the petals being faintly tinted with blush on a white ground. The lip was even whiter, with a pale purple blotch on the disc, a lemon throat, and some pale purple lines at the base of the tube. Award of Merit. W. P. Burkinshaw, Esq. (gardener, Mr. J. T. Barker), The West Hill, Hessle, Hull.

MILTONIA BLEUANA ROSEA GIGANTEA, nov. var.—This is notable for its huge flowers which measure 5 in. the long way and 3½ in. across the lip. The latter is white, tinted with blush. The basal third of the petals is rich violet-purple and the rest white. Award of Merit. M. Jules Hye-Leysen, 117, Coupure, Gand.

CATTLEYA MENDELII MRS. E. V. LOW, Nov. var.—The sepals and petals of this handsome variety are of the most delicate blush-white. The lamina of the lip is beautifully frilled or crisped, rather deeply fimbriated and rich, bright purple with a white margin. The throat is golden-yellow. Award of Merit. Messrs. Hugh Low & Co., Bush Hill Park, Enfield.

DENDROBIUM DALHOUSIEANUM SALMONEA, Nov. var.—The sepals and petals of this variety are of a clear yellow, while the two large, salmon-red blotches on the lip make it one of the most distinct varieties of the species we have seen. First-class Certificate. Messrs. Hugh Low & Co.

CATTLEYA MENDELII OAKES AMES, Nov. var.—The petals of this choice and richly coloured *Cattleya* are soft rosy-pink with a large violet-purple blotch at the apex. The sepals are paler. The intense crimson-purple lamina of the lip is the feature of the flower. The throat is pale yellow and the side lobes mostly white. First-class Certificate. Messrs. Hugh Low & Co.

LAELIOCATTLEYA GOLDEN GEM, Nov. hyb. bigen.—This is the progeny of *Cattleya intermedia* x *Laelia flava splendens*. The sepals and petals are golden-yellow, and in shape intermediate between the parents. The tube and side lobes of the lip are pale yellow, while the crisped middle lobe is rich crimson-red, overlying yellow. Award of merit. Messrs. Charlesworth & Co., Heaton, Bradford.

LAELIOCATTLEYA ADMIRAL DEWEY, Nov. hyb. bigen.—This handsome and striking bigeneric hybrid was raised from *Cattleya Warnerii formosa*, crossed with *Laelia elegans Mastersii*. The sepals and petals are of a soft rosy-pink. The lamina of the lip is of a rich crimson-purple, wavy at the margins, and the feature of the flower. The tube is pale purple externally, with a central crimson band internally. First-Class Certificate. Messrs. Charlesworth & Co.

CATTLEYA FERDINAND DENIS, Nov. hyb.—The parentage of this hybrid was *Cattleya Acklandiae* x *C. gigas*, the former being the seed bearer. The hybrid is remarkably distinct. The oblong, blush-pink petals have reddish-purple markings at the apex. The petals are ovate, suddenly narrowed into a broad claw, and rosy-blush with darker veins. The lip has a short, open, and white tube, with pink side lobes. The large, transversely oblong lamina is crimson-purple, with a transverse yellow band at the base. The tube beneath the purple column is rich purple. First-Class Certificate. Messrs. Charlesworth & Co.

ODONTOGLOSSUM CRISPUM DECORUM, Nov. var.—The pure white ground of this variety has a cluster of reddish-brown blotches, more or less amalgamated in one mass on the centre of the sepals. A darker and large blotch on the petals is even brighter. The lip has numerous spots on a white ground. The bright blotches on the pure white ground are very effective. Award of Merit. Messrs. Linden, Brussels.

ODONTOGLOSSUM PESCATOREI BELLATULUM, Nov. var.—The sepals of this wonderfully pretty variety had a large violet-purple blotch towards the apex, and there were one or two smaller blotches on the centre of the petals. The lip had darker violet spots round the crest. The pure white ground of the flower set off the spotting beautifully. Award of Merit. Messrs. Linden, Brussels.

ODONTOGLOSSUM ADRIANAE VENUSTUM, Nov. var.—The sepals of this strikingly beautiful variety are densely spotted and blotched with brown all over a creamy ground. The spotting of the petals is darker and the ground whiter. The brown mottling of the white lip is also very pretty, and completes a highly, meritorious natural hybrid between *O. crispum* and *O. hunnewellianum*. First-Class Certificate. Messrs. Linden, Brussels.

ODONTOGLOSSUM CRISPUM ZEBRINUM, Nov. var.—The blotches on the sepals in this case often take the form of transverse bands, hence the varietal name. They are of a rich, reddish Chestnut, as they are on the petals, but they are roundish on the petals, with numerous small ones at the base. There is also a rich blotch on the lip with a few smaller ones. Award of Merit. Messrs. Linden, Brussels.

ODONTOGLOSSUM CRISPUM-HARRYANUM, Nov. hyb.—In this we have a remarkable hybrid between the two species indicated by the name. The oblong sepals are rich brown, with a yellow apex, and a few yellow bands on the brown. The petals are lanceolate, rich brown, marbled with pale yellow, shaded violet near the base, and yellow at the apex. The lip is flatter than in *O. harryanum*, as are the sepals and petals, creamy-yellow on the upper half, and spotted and blotched with violet and brown on the lower half. First-Class Certificate. M. Chas. Vuylsteke, Loochristi, Gand, Belgique.

ODONTOGLOSSUM CHARLESIANUM, Nov. hyb. nat.—This would appear to be another hybrid between *O. crispum* and *O. hunnewellianum*. The flowers are moderate in size and round. The sepals are heavily blotched with rich chestnut-brown, the blotches or spots on the ovate petals being much smaller. The lip also has three large and numerous small blotches. Award of Merit. M. A. Madoux, Anderghem.

MILTONIA VEXILLARIA EMPRESS VICTORIA AUGUSTA, nov. var.—The sepals of this handsome variety are rosy-pink with white edges, but the petals are dark rose-purple, with paler veins. The lip is darker or more intense rose-purple, with a triangular base of white, on which are the yellow crest and three crimson rays from it. Award of Merit. Messrs. James Backhouse & Son, York.

Floral Committee.

PHYLLOCACTUS EPIRUS.—The flowers of this grand variety are 7 in. across, with numerous bronze, oblong petals of a charming shell pink; the inner ones are the broader, rounded at the ends and cuspidate. The great brush of stamens and the style are white. Award of Merit. Messrs. J. Veitch & Sons, Ltd., Chelsea.

PHYLLOCACTUS AGATHA.—The flowers in this case are smaller, of a soft salmon-red and very distinct. The petals are rounded at the end, cuspidate, and the innermost ones are elliptic. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

LILIUM RUBELLUM.—Here we have a charming new species of *Lilium* like a miniature *L. Kramerii*, with nodding, funnel-shaped flowers, and broad overlapping segments varying from pale pink to reddish purple. In some of the flowers are a few red spots in the throat. First-class Certificate. Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester.

AURICULA SNOWDROP.—While the buds are expanding they are of a greenish-yellow hue, but when fully developed they are pure white, with numerous overlapping petals arranged round one centre, and forming the finest double *Auricula* we have seen. The leaves are devoid of farina, large and obovate-elliptic. Award of Merit. Mr. Richard Dean, 42, Ranelagh Road, Ealing, W.

PHLEBODIUM AUREUM MAYI.—The fronds of this magnificent new form assume a gracefully arching habit. The pinnae are very much broader than in the type, deeply cut into oblong, blunt segments, which are so numerous that they cannot lie flat, but become beautifully undulated. The stipules often assume a purple hue, which is continued along the rachis, and most of the veins, primary and secondary. First-class Certificate. H. B. May, Dyson's Lane Nurseries, Upper Edmonton.

HOLLY GOLDEN KING.—The leaves of this new

Holly are of large size, oblong-elliptic, dark green edged with golden-yellow, fading to a paler hue in winter, when they are hard and leathery. The plant is a sport from *Hedginsii*, and is a remarkably vigorous grower, besides being perfectly hardy in the far north. Award of Merit. Messrs. Little & Ballantyne, Carlisle.

ANTHURIUM SCHERZERIANUM SENATEUR MONTEFIOR LEVIS.—The upper surface of the spathe of this beautiful variety is thickly marked with crimson-scarlet blotches, made up of numerous small spots, scattered over a white ground. The back of the spathe is almost wholly crimson. The leaves are those of the type. Award of Merit. M. L. De Smet-Duvivier, Ghent, Belgium.

ACALYPHA SANDERI.—For description of this striking new plant, see p. 619, and the illustration, p. 615. First-class Certificate. Messrs. F. Sander & Co., St. Albans.

CALADIUM AMI SCHWARTZ.—The leaves of this remarkably distinct and pretty variety are triangular, almost truncate at the base, and of a rich crimson-red with brighter veins and a narrow, olive-green margin. Award of Merit. Messrs. F. Sander & Co.

ARECA ILSEMANNI.—The leaves of this Palm are pinnate with irregularly arranged linear-lanceolate pinnae, of a dark green, and gracefully arching. The young leaves and their petioles are of a rich dark bronze. Award of Merit. Messrs. F. Sander & Co.

LICUALA JEANENGEYI.—The leaves of this beautiful fan Palm are nearly circular, but divided into seven or eight segments that are cuneate, truncate at the apex and crenate there. The petioles have short hooked spines on their edges. First-class Certificate. Messrs. F. Sander & Co.

ROSE AURORA.—This is the latest addition to the ranks of the hybrid Teas. The flowers are large, of great depth and substance, and good shape. The colour is a rich rosy-pink. The foliage is stout, the stems strong, and the constitution sturdy. Award of Merit. Messrs. Wm. Paul & Son, Waltham Cross, Herts.

EREMURUS ROBUSTUS ELWESIANUS.—This is a seedling from the well-known *E. robustus*, but differs from it in being fully three weeks earlier in flowering. It is also a rather stronger grower, and the spike reaches an enormous size, carrying an innumerable quantity of flowers. There is also a shade more pink in the flowers, otherwise they are the same as those of the type. Award of Merit. Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N.

TUBEROUS BEGONIA MR. DUNBAR-WOOD.—Here we have quite a distinct colour break, and a proportionally valuable plant, both for what it is and for what it may lead to. The flowers are of medium size, double, and approaching the *Camellia* type, although they are somewhat loose. The colour is a rich rosy-salmon of great delicacy. Award of Merit. Mr. T. S. Ware.

TREE PAEONY JUAN DE RESZKE.—The flowers of this new tree *Paeony* are of huge size, some of them measuring full 10 in. in diameter. They are pure white, and semi-double. This is certainly one of the finest varieties in cultivation. Award of Merit. Messrs. Kelway & Son, Langport, Somerset.

TREE PAEONY HENRY IRVING.—Here the blooms are also large and imposing, but the colour is deep black-crimson, a most effective hue in the bright sunlight. Award of Merit. Messrs. Kelway & Son.

TREE PAEONY JULIUS CAESAR.—This is a semi-double variety of great beauty. The flowers are fully as large as those of the two varieties mentioned previously, but the colour is a glowing crimson. The petals are prettily serrated. All three of these forms are very free-flowering and perfectly hardy. Award of Merit. Messrs. Kelway & Son.

CALADIUM GUARATINGUETOR.—For description of this *Caladium* see the list of plants certificated at the summer show of the Royal Botanic Society at Regent's Park on May 11th, p. 599. Award of Merit. Messrs. John Laing & Sons, Forest Hill, S.E.

Fruit Committee.

APPLE ONTARIO.—The fruits of this variety are of large size, oblate, and five-angular round the half-open eye, which is situated in a rather deep moderately wide cavity. The skin is bright yellow and richly tinted with red on the exposed side. It is a splendid keeper, as the season amply testifies, and is a kitchen Apple of first-class quality. Award of Merit. Messrs. Geo. Bunyard & Co., Maidstone.

EALING GARDENERS.

ON the 21st ult. about forty members of the Ealing and District Gardeners' Society paid an afternoon visit to Gunnersbury House, Acton, at the instance of that well-known and much-respected horticulturist, Mr. James Hudson, who so ably presides over this establishment. Tea was provided at 6 o'clock, through the generosity of Leopold de Rothschild, Esq., Mrs. Hudson presiding, while Mrs. Snow may be said to have occupied the vice-chair. After full justice had been done to the repast, Mr. C. B. Green proposed a very hearty vote of thanks to Mr. and Mrs. Hudson for their kindness in making such admirable arrangements on their behalf. This was duly seconded by Mr. F. Read, and met with an enthusiastic reception. Mr. Hudson replied very favourably, and said that he was always pleased to assist the members of this society, or otherwise to advance, as far as lay in his power, the interests of gardening generally.

The tea took place in the long room known as the "Museum," overlooking the terrace, the lawn, the lake, and the beautiful trees beyond. These latter being just now in their full spring glory of many hues and tints, the view from the windows was very fine. The Rhododendrons, Azaleas, and other shrubs also contributed to the general effect, while the verdure of the grass was at its very best. The grounds of Gunnersbury House are not extensive, but the art which does mend Nature has been so aptly employed that Nature might well complain that she has been practically superseded.

After an inspection of the scented-leaved Pelargoniums, of which there is a unique collection, the party descended the sloping lawn, noting here and there fine specimen plants, shrubs, or trees. The Judas Tree (*Cercis Siliquastrum*) came in for much comment on account of its associations, and the fact that it was completely smothered with bright purple flowers. Some clumps of hardy Bamboos attracted notice, while the choice assortment of Nymphaeas in the lake, although not in bloom, were much admired. Thence the glasshouses were visited, the ventilation noted, the remarkable productiveness of the fruit trees, the size and quality of the fruit, the vigour and health of the various subjects under Mr. Hudson's care, the order and cleanliness everywhere apparent, the condition of the Vines, Peaches, Nectarines, &c. All these things were so many object lessons to the visitors, and so much testimony to the skill and ability of Mr. Hudson and his staff.

From the fruit under glass to the fruit in the orchard and on the walls is not a long way—except in point of time—for while the former has arrived at the acme of perfection under the watchful eye of the cultivator, the latter has yet to run the gauntlet of the vicissitudes of our changeful climate. The vegetable department also was inspected and approved, and much valuable information thereby imparted. As Gunnersbury House Gardens have been frequently reported on in these columns it is unnecessary to say more than that those who were privileged to perambulate them were amply rewarded, and expressed themselves in such terms as only the practical gardener can.

The Orchid Grower's Calendar.

AERIDES.—This is one of those beautiful genera of Orchids, which at present are somewhat out of fashion, the reason being, perhaps, that they do not lend themselves to the wiles of the florist as do such kinds as Cattleyas, Odontoglossums, Oncidiums, &c. Only in a few representative collections do we find them appreciated as they deserve.

Coming as they do from India and tropical Asia, it is easy to see that to grow them well they should be accommodated with plenty of heat and moisture. Collectors tell us that they are found clinging to branches of trees which overhang running streams of water, so that to succeed we should as far as practicable follow the dictates of nature in this respect by putting shallow tanks underneath the middle stages.

The growing season is from April to October, during which time the night temperature should range from 70° at night to 85° to 90° by day with

sun-heat. They must, of course, be shaded from the direct rays of the sun, or considerable damage will be done to the foliage; but a deep and constant shade should be avoided, or they will flower but sparsely. They may be grown in baskets, pots or pans; but, in any case, the drainage must be ample, so that the copious supplies of water which they require during the growing season may pass freely away.

Sphagnum moss and potsherds broken up fine and mixed are about the best materials to grow them in, although they do not object to a layer of good peat underneath a top-dressing of moss. This genus may be said never to rest, and, as a natural consequence, should never be allowed to get dry. *Ae. crassifolium*, *Ae. crispum*, *Ae. Fieldingii*, and *Ae. Lawrenceae* are some of the best. *Ae. vandarum* differs from those mentioned by having terete foliage, which points to their being found in rather exposed positions, and at times to a lengthened period of drought.

Sir John Kirk grows and flowers it well in a warm greenhouse, where it receives but very little shade, and to him I am indebted for the above hints respecting the climatic conditions in its native home. I should say that his plants are growing on rafts with just enough sphagnum moss to keep them going.

POTTING.—In large collections there is always something that requires doing; and it is better to do it even if the season is a bit advanced, than let it go undone.

CYMBIDIUMS.—We have left our spikes on a long time—in fact, they are only just cut—so that we are late in repotting them. We shall, however, get them done at once, giving a good shift. The compost we find best suited to them is good fibrous loam, peat, and a little cow dung, and sand.

WORKING THE HOUSES.—The principal work now onward is the careful attention to shading, airing, and affording plenty of moisture. Our summers are all too short, so that we must make the most of them by shutting up fairly early, as there is nothing like sun-heat.—C.

Kitchen Garden Calendar.

WEEK'S WORK.—Since my last remarks were penned we have had some very peculiar weather, for on the night of the 12th ult. we registered about 8° of frost, and as this was shortly after a heavy fall of rain considerable damage was done to kitchen garden crops in general. Peas in bloom suffered considerably, as many of the early flowers were killed. Since that date it has rained more or less most days, which has rendered operations on stiff land most difficult, and work in this department has been almost at a standstill. With us about 3 in. of rain has fallen during that period. With such weather weeds grow apace, and as the hoe cannot be plied with much success, recourse must be had to hand weeding as soon as the soil is sufficiently dry to work upon.

All seedling plants should receive attention at the first favourable opportunity. As the soil has now been thoroughly moistened, proceed with the planting out of Cauliflower for Autumn use, also Brussels Sprouts, Borecole, Savoys, and early Broccoli. With regard to all these, if space cannot be found for them to be planted out permanently, better prick them off about 6 in. apart, as they will soon spoil if allowed to remain close together in the seed bed. There has been no lack of all kinds of green vegetables this spring, and the late showers having retarded the tendency to run to seed abundant supplies may be had for some time to come. The tender sprouts of Sutton's Favourite Borecole have been and are still much appreciated, while the supplies of Asparagus have been more plentiful than usual. Where young beds of this vegetable were planted last month the plants have made satisfactory progress. Seedling plants should be thinned to 6 in. apart as soon as large enough to handle, the thinnings if required may be transplanted in rows a foot apart, when they will make strong plants by the autumn.

PEAS for a late crop should be sown. It is not too late yet to sow the best marrow kinds, particularly in the southern districts, but further north the second earlies will stand a more favourable chance should the autumn be wet. Peas sown now will usually

give a supply in September, while those sown about the latter end of June will continue fruiting until quite late in the season should the weather be favourable.

BROAD BEANS are not much in request late in the season, but where a constant change of vegetables is required these will be found very acceptable. There is often much difficulty in growing Broad Beans so late in the season, as the plants frequently suffer from the attacks of Aphis. A moist rather rich soil should be chosen, that the plants suffer no serious check in hot weather. Runner Beans will now be making rapid progress. To prevent the young vines from becoming entangled put the stakes to them as soon as they have made the first rough leaf. These may be successfully grown without stakes by pinching the hearts out of the plants when about six inches high, this will induce them to make lateral growths.

CELERY for a succession may now be planted in the trenches, and young plants in the seed bed should be pricked out. Tomatos should also be planted in warm situations such as a south wall or fence. It is seldom that those planted in the open quarters ripen their fruit satisfactorily, thus causing a waste of time and labour. Ridge Cucumbers that were raised in frames should now be planted on heaps or ridges out in the open. The same remark applies to Vegetable Marrows. Continue to make small sowings of Turnips, as young tender roots are far preferable to those coarse, overgrown specimens one sometimes sees. When the weather is favourable plant out Lettuce, choosing a piece of well manured ground to grow this crop on, for the more moisture the plants have the finer and better flavoured will be the result. Capsicums may now be planted on the warm border, allowing about a foot between the plants. Keep a sharp look out for Aphis, as they are often very troublesome to these plants.—*Kitchen Gardener.*

Gleanings from the World of Science.

AT the meeting of the Scientific Committee of the Royal Horticultural Society on the 10th ult. the undermentioned subjects were discussed.

Morchella, Species.—Some specimens were sent of a small species of this fungus, which appeared in a garden bed; but the locality was not recorded.

Peas, Decayed.—Mr. Cook, The Croft, Detling, Maidstone, forwarded some young plants of the "American Wonder," which had failed to grow. They were sown last November, and while many are doing well, others close by turned a sickly yellow. Mr. Sutton observed that his experience was that no wrinkled Peas, as the above, were suitable for autumn sowing; the skins, being more delicate than those of round Peas, will not stand the winter so well. This was, therefore, the probable cause of failure.

Freesia Bulbs Arrested.—Mr. F. Egbert Hollond, Satis House, Yoxford, sent some bulbs which had been planted last July, had never thrown up any leaves, but had formed fresh bulbs upon the old ones, which had withered. It appeared to be a case common in Potatos, when it is called super-tuberation; fresh tubers being formed at the expense of the old ones. It was possibly due to the Freesia bulbs having been planted at the wrong time of the year, energy being expended in a wrong direction.

Cineraria Hybrids.—Mr. James, Woodside, Farnham Royal, Slough, sent a collection of hybrids raised between *C. lanata* (mother) and the progeny of *C. cruenta* crossed with the garden race. They were a small selection of a numerous progeny, the greater number of which were said to resemble the garden form; but the present ones had a tomentose stem and branches, as well as the under surface of the leaves, which also in form resembled *C. lanata*. The blossoms were rather small, some being a pure white, others mauve, but remarkable for their quantity. Unfortunately the best plant with white flowers refuses to set, much, if any seed; but it was hoped that Mr. James would persevere and try to establish a new race, which would certainly be attractive from the silvery appearance.

Begonia Leaves Diseased.—Mrs. Caddy, Lion Gate Gardens, Richmond, sent some leaves decayed round the margins. They were forwarded to Mr. W. G. Smith for further examination.

HINTS FOR AMATEURS.

BEDDING OUT.

AT last the time has arrived when the multitudes of plants which have been worked up through the winter and spring months may be consigned to their flowering quarters out of doors. The cold weather, which was pretty general through the country last week, has happily given place to a milder and more genial condition of things. The rains have penetrated to a considerable depth, and although at the time of writing the soil is too wet to be worked properly, this need not cause any great amount of fear, since moisture at this time of the year soon dries up, and by the time these notes are in the hands of my readers everything will be in readiness for a start.

First of all the beds have to be cleared of their spring-flowering occupants, and where these were rather later in blooming than usual, for the season after all has not been an early one, some little delay may occur. The earlier Tulips and Narcissi have, of course, been out of bloom for a considerable time, but their growth may not yet have finished. The drought which preceded the recent rains prevented the growth from being very rank, but the rains seem to have given many of the apparently ripening plants a fresh lease of growth. Where this is the case they must not be unduly disturbed. Once the stems of the Tulips can be bent without breaking the plants may be lifted and laid in in ashes or dry soil in a sunny corner of the garden to ripen. Narcissi are even more particular than the Tulips, for they continue to grow for a considerable time. The beds in which they have flowered, therefore, should be left undisturbed until the last moment, when the plants may be lifted and laid in in the same way as the Tulips. Where the Daffodils are planted in the mixed border they should be left undisturbed, and this system should be followed wherever it is practicable. Hyacinths have long since become shabby, and if they have not been already removed should be seen to at once.

In putting out the various subjects that it is proposed should enliven the garden during the summer months some judgment must be used, for even a small garden has usually a sunny as well as a shady side. In larger gardens the variety of positions that have to be filled with something is necessarily much greater, and the wise gardener will so adjust matters that the plants that best love the sun, shall, all things being equal, have the sunniest spots whereon to grow. Generally speaking, all the flowering plants love the sun, although Calceolarias are more partial to the shade. If, therefore, there is a shady corner it should have been given them. We say "have been given" advisedly, for the beginning of May is not a bit too soon to put out the Calceolarias, for they make much better growth, and get a hold of the new ground more easily than they would if left until the end of the month, when the sun is as a rule far more trying. It is a bad practice to keep the poor plants cooped up in frames or pans until they spoil each other, and when sent to the garden look both ragged and ugly.

Now that the actual process of transplanting has begun the amateur will soon discover how much easier it is to "bed out" from pots than from boxes. But this is not the only advantage that the pots have over the boxes, for it is obvious that to simply knock a plant out of its pot does not cause nearly so much disturbance to the plant as it does to dig it out from amongst others in a box. There is apt to be a heavy run on the pots, however, in the months of March and April, and thus boxes have often to be employed just because there is nothing else to use.

Wide versus Close Planting.—This is a point that is likely to cause the amateur some little exercise of spirit, and "how much room shall I give my plants?" is likely to be a common query. The amount of space given must in all cases depend upon whether or not an immediate effect is desired. If it is there is nothing for it but to put the plants so close together that the beds wear a furnished appearance at once. The disadvantage attaching to this system is that as soon as the plants begin to grow at all freely they become crowded, and they are not then in a position to acquit themselves so well as they might otherwise do, unless thinning is practised consistently.

All plants do better for a free passage of light and air all about them, and not merely over their tops, although in the case of purely foliage subjects crowding is not so great an evil, since the crowded parts are hidden from sight.

A good rule to follow under all circumstances is to give each plant at planting time enough room to contain it when it is full grown. Those who do this will not go very far wrong.

There is very little to be said about the operation of planting itself. A trowel will be found the proper tool to use, for there are not many plants of such a size that a spade will be required. If such things as Pyrethrum Golden Feather, Stocks, Asters, Zinnias, and other annuals have to be lifted from the ground or from boxes in which they were pricked off, care should be taken to avoid having too many out of the ground at once. The hot summer sun plays sad havoc with these delicate young plants, and the severe wilting they are likely to get by exposure to its rays generally handicaps them sadly, and if dry weather immediately follows their putting out, is often the beginning of their end. If showery weather follows immediately after the plants have been put out there is very little fear but that they will do well, but if, on the other hand, it is dry it will be necessary to give repeated waterings until the roots have got a hold of the soil, otherwise the poor things will have but a rough time of it.

Plunging Pot Plants.—This practice obtains to some extent in both large and small gardens, although it is not by any means one that should be followed extensively. It may happen now and again that it is desirable to keep the plants in the pots even when they are sent out into the flower garden, and then they are plunged deeply enough in the beds to cover the rims of the pots so that it cannot really be seen without examination but what they are planted out in the orthodox way. There is no doubt that in the autumn the fact of the tender subjects being in pots renders it easier to lift them and place them in security, but this, we think, is more than counterbalanced by the great danger that the plants run all through the summer months of suffering from lack of water. Then again the roots usually grow through the holes in the pots, and at lifting time these roots have to be cut or twisted off in order to get the pots to stand level, and a more or less severe check is the inevitable result. We should advise therefore, to do with as little of this plunging as possible, for generally speaking all plants do far better when planted in the ground than when confined in pots. In the few cases in which plunging may have to be done see to it that during dry weather plenty of water is given to the plants so treated.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Yellow Coleus.—*R. Strong:* The nearest approach to a yellow Coleus which we know is one named Cloth of Gold. The leaves are yellow but for a shading of green, which varies in extent according to the conditions under which the plant is placed.

Tomatos.—I intend making up a bed of soil outside for Tomatos, and should be glad if you will tell me how much soil per plant would be enough. The bed would only be temporary and would be enclosed with boards on three sides, and would have the wall at the back.—*F. Williams.*

In this case you do not want to have too much soil. You will find a cubic foot per plant will be ample. Thus if you put in your plants about a foot apart the bed may be a foot deep, exclusive of drainage, and a foot wide.

Mimulus Moschatus.—Is the little yellow Musk, which is usually grown in pots, hardy? I noticed the other day several fine clumps of it in the open ground. *Amateur.*

Yes, the Musk is hardy and the fact of its being utilised so frequently as a pot plant is due to its beauty and suitability, not to its tenderness.

Azalea mollis losing its Buds.—I have several plants of Azalea mollis in 8-in. pots. They were set

well with flower buds last autumn, and I looked forward to a good show of flowers. For some reason or other, however, the sparrows declared war against them, and picked out fully two-thirds of the buds, for what reason I know not. The buds were simply picked out and thrown down by the side of the plants, and I could not, upon examination, discover any traces of insects to induce the sparrows to do this. Can you assign a reason? And is this a common occurrence?—*A. Wylie.*

Pure cussedness on the part of the sparrows is doubtless the reason. The occurrence is not uncommon. Have any other of our reader's plants suffered in the same way this year?

Vine Leaves Spotted.—*Anderson:* The Vine leaves are badly scorched by the sun. This scorching has been caused by the sun shining directly upon the leaves when the latter are covered with moisture. Although the leaves have not been syringed, as you say, this deposit of moisture is caused by the lowering of the temperature during the night. You must first of all try to prevent the serious lowering of the night temperature, and next you must ventilate the house early in the morning, so that the leaves may be dry by the time the sun gets high enough to burn. If you can manage to leave a little air on the house all night it will be better.

Box Edgings Dying.—Last autumn the Box edgings to several of my flower beds were relaid, but I find there are several dead patches in them. How can I best mend these, must I leave the dead pieces in with the living until next autumn?—*Enquirer.* What is the reason of the deaths?

Taking the second question first, it is difficult to assign the exact reason for the failure of some of the plants to grow. Perhaps they were trimmed too severely; indeed this seems to us the most probable cause, as we have known failure to result in this way in not a few cases. You may try and mend the brown places by planting now small plants with plenty of roots. If the wet weather continues for long they will have a chance, and you must follow it up by waterings as required. If you are successful in mending a few of the bare places it will be something gained.

Tomatos not Setting.—*Tomato:* The dull, sunless weather is no doubt to blame for your Tomatos failing to set. Try and keep a bouyant atmosphere in the house by giving plenty of air and more heat in the pipes. It will be also worth while to pollenise the flowers artificially by brushing them over with a soft brush. Keep all the laterals pinched in pretty closely, but do not defoliate your plants any further than this operation entails.

Lapagerias.—*Ohio:* From the description you give, it would seem to us to be almost hopeless to think of separating the growths. You should not have allowed them to intertwine so closely with each other. An attempt to disentangle them now would inevitably ruin most of the young growths, for they are very soft and easily bruised, and death is sure to follow bruising. You will be able to put matters straight next winter when you prune.

Dahlias.—*Benj. Comble:* The plants may be put out of doors at once. Frost, we are hoping, will not visit us again this side of September. Certainly we have had frosts in June, but to keep the plants out of the ground so long as that would scarcely be advisable.

Top-dressing Fuchsias.—*James R.:* Unless you left room in the pots last March for a further top-dressing, we should not advise you to give it. Even a small further quantity of soil would cause serious difficulties in watering the plants, and you must avoid this. Liquid manure may be given instead of the top-dressing.

Tree Carnations.—*W. Soames:* About the end of the first week in June the tree Carnations may be stood out of doors. They will do better there for the summer than they would under glass. As they are old plants, they will probably throw a few flowers, which should be picked off before they expand, so as to husband the energies of the plants. Give a sheltered position, and attend to the tying in of the shoots as they become long enough.



Rhododendron.
"NATHANIEL BRYSON."



Rhododendron.
"MRS. McMILLAN."

AB.

TWO NEW RHODODENDRONS.

ON the previous page we give an illustration of two hybrid greenhouse Rhododendrons which were raised by Mr. Alexander McMillan, gardener to James Currie, Esq., Trinity Cottage, Trinity, Edinburgh. That named Mrs. Alexander McMillan is pure white, decidedly fragrant, and was raised from Rhododendron veitchianum, crossed with the pollen of a white-flowered seedling raised from Lady Alice Fitzwilliam, a well known and fragrant, popular hybrid, cultivated in many establishments. The hybrid named Nathaniel Bryson was raised from the reverse cross of the same parents, and is also white, with an additional patch of rosy-apricot markings at the base of the two upper segments. The presence of these spots is difficult to account for, seeing that both parents had white flowers, unless one of the parents of Lady Alice Fitzwilliam possessed markings. The Royal Caledonian Horticultural Society honoured each of the above Rhododendrons with a First-class Certificate on the occasion of their spring show, which was opened on the 6th April last. The flowers are shown of the natural size, and the form of the leaves is well indicated by the illustration, which was sketched by Mr. Nath. Bryson, assistant secretary to the Royal Caledonian Horticultural Society. Mr. Bryson is an enthusiastic amateur gardener, who loves and grows flowers, besides sketching and painting those which are new or captivate his fancy. Indeed, the sketching and painting of them seem to be the sister hobby to the love of cultivating them. We recently published the raiser's, Mr. McMillan's, account of his labours amongst this section of greenhouse Rhododendrons.

THE TEMPLE SHOW.

MAY 25th, 26th, and 27th.

(Concluded from p. 621.)

MISCELLANEOUS PLANTS.

A CAPITAL strain of herbaceous Calceolarias was shown by Messrs. H. Cannell & Sons, Swanley, Kent. The plants were dwarf, sturdy, and well-flowered, whilst the individual flowers were much above the average size. There was also a considerable variety in colour. As in the case of the Gloxinias and Begonias shown by the firm, Maidenhair Fern was freely used in the setting up.

The herbaceous Calceolarias sent by Messrs. J. James & Son, of Farnham Royal, Slough, were in every respect a creditable display, and fully up to the high standard for which the James' strain is famous. The plants were exceedingly dwarf, and bore huge heads of mammoth flowers. The colours throughout were good, and ranged from pure white to deep crimson and yellow, with almost innumerable intermediary variations.

M. Koster & Sons, Boskoop, Holland, had a grand array of cut trusses of flower from named hybrids of Azalea mollis and A. sinensis. Both flowers and trusses were of great size, and there were many exquisite shades of orange and yellow.

Mr. Jas. Douglas, Edenside, Great Bookham, sent a number of choice varieties of Alpine Auriculas, of which Solemnis, Ceres, Hecate, Dean Hole, and Delphi were the most noteworthy.

Carnation Primrose Queen, a new yellow tree Carnation of great merit, was shown by Mr. Fred. Perkins, Regent Street, Leamington Spa.

The cut hardy flowers sent by Mr. Maurice Pritchard, Christchurch, Hants, was an exceedingly praiseworthy effort. A fine spike of Eremurus robustus elwesianus was the central feature here, and Pyrethrums, Aquilegias, Trolliuses, Phloxes, and Irises were all very showy.

Messrs. Kelway & Son, Langport, Somerset, staged a magnificent lot of cut hardy flowers. The Paeonies were really splendid. James Kelway, Jean de Reszke, Mr. Chapman, and Julius Ceasar gave a capital account of themselves. In addition to these there were Amaryllis. Delphiniums were well represented. Lupinus polyphyllus Foxi was shown in an imposing mass, and the double-flowered Wistaria sinensis was another noteworthy thing. The whole group, indeed, was a most brilliant display of floral excellence.

The fine batch of Zonal Pelargonium King of Denmark with which Mr. Amos Perry, of Winchmore Hill, was credited in our last issue in reality came from Messrs. A. W. Young & Co., Stevenage, Herts.

FLORAL DECORATIONS.

THESE were all accommodated in No. 3 tent, and comprised some wondrously pretty exhibits.

Mr. Wm. Sydenham, of Tamworth, made a unique exhibit of various floral devices constructed of Violas with appropriate greenery. These were all very handsome, and were the outcome of not a little taste and skill. Sprays of bedding Violas and fancy Pansies were forthcoming from the same source. Of the Violas Masterpiece, Devonshire Cream, Charm-Blanche, Pembroke, Archie Grant, and the new Lucy Franklin were all first-class.

Miss J. Dalton, 28, Pilgrim Street, Ludgate Hill, E.C., had some fine bouquets and vases of flowers; also a massive and imposing wreath of white without a tinge of colour in it.

Mr. W. G. Parkin, 20, Oakdale Road, Sheffield, sent a number of variously shaped vessels filled with flowers, Fern fronds and grasses. The table decorations sent by Miss Edith Langton, The Rowans, Hextable, Swanley, Kent, were both light and elegant.

The Women's London Gardening Association, 62, Lower Sloane Street, S. W., had bowls and bouquets of white flowers set up with Asparagus and grasses in tasteful fashion.

Mr. Moyses Stevens, 146, Victoria Street, Belgravia, did himself great credit in the wreaths and bouquets he contributed, for although they were massive they were not too heavy to serve their purpose.

Mrs. M. V. Seale, The Vine Nurseries, Sevenoaks, had a miniature grotto filled with a great variety of wreaths, crosses, &c. The bouquets and baskets of flowers contributed by Messrs. Perkins & Sons, of Coventry, were as usual in perfect taste, and far ahead of anything else of the kind in the show.

Mr. J. Prewett, 11, Lancaster Street, Bayswater, W., had a showy arrangement of devices, in which rosy-pink Pelargoniums were the flower. The table was draped with sprays of Smilax. Mr. L. H. Calcutt, Fernbank Nursery, Fairholt Road, Stoke Newington, sent a number of massive epergnes in the dressing of which infinite skill was displayed.

Messrs. Jones & Sons, of Shrewsbury, filled a long table with bouquets, sprays, and baskets of flowers in a variety of styles.

Messrs. B. S. Williams & Son, of Victoria and Paradise Nurseries, Upper Holloway, N., exhibited a table of floral decorations. The basket of Orchids here shown was really grand, and the imposing character of its beauty could not well be exaggerated.

FRUIT.

Mr. E. Beckett, gardener to Lord Aldenham, Aldenham House, Elstree, Herts, sent six grand Melons of huge size. The varieties were Blenheim Orange, Aldenham Perfection, Sutton's Ar, Sutton's Masterpiece, The Countess, and an unnamed seedling.

A collection of much smaller Melons came from Mr. Thos. Robinson, Elsfield House Gardens, Hollingbourne, Kent. Mr. John Miller, gardener to Lord Foley, Ruxley Lodge, Esher, had a fine dish of Strawberries.

Mr. Geo. Featherby, The Vineries, Gillingham, Kent, showed some capital bunches of Black Hamburgh Grapes, well finished, and of good size; also dishes of Dryden Nectarine, and Hale's Early Peach.

A collection of fruit exhibited by Mr. McIndoe, gardener to Sir Joseph Pease, Bart., Hutton Hall, comprising Melons, Grapes, Figs, Strawberries, Peaches, Nectarines, Apples, Pears, Citrons, Cherries, Tomatos, and Oranges, called for special comment. The Black Tartarian Cherries were first-class.

VEGETABLES.

MR. W. L. BASTIN, gardener to Alexander Henderson, Esq., M.P., Buscot Park, Faringdon, staged a handsome collection of vegetables, which included new Potatos, Cauliflowers, Cucumbers, French Beans, and Tomatos. There were upwards of a dozen seedling Melons, all fine fruits, shown from the same source.

Mr. W. Godfrey showed a colossal bunch of giant sticks of Asparagus, but which looked tender and inviting, despite its size.

Three trays of fine Mushrooms came from Messrs. Mount Bros., Willow Farm, Canterbury. Mr. John Nicholls, Swain's Farm, Tooting, sent white Celery, which was very good considering the time of year.

Mr. Robert E. Addey, Ealing Road, Brentford, had extensive samples of the Mushrooms he grows

so well, and in such quality for the market. The quality of the material shown was high, and the spawn evidently very productive, judging from the size of the clusters. Cakes of this special "Virgin Track" spawn were also on view.

A splendid exhibit of Tomatos and Cucumbers come from Mr. S. Mortimer, Rowledge, Farnham, Hants. The Tomatos were of medium size, good shape, fleshy, and of great weight, the varieties being Abundance, Best of All, Mitchell's Hybrid, Sutton's Eclipse, Earliest of All, Perfection, Sutton's Ar, and Improved Conqueror. Cucumbers Tender and True, Sulton's Ar, Sensation, Progress, and Lockie's Perfection were likewise well shown.

Mr. Hayes, gardener to the Marquis of Northampton, Castle Ashby, Northampton, staged a comprehensive group of vegetables. The Broccoli, Leeks, and Cabbage were poor, but Turnips, Tomatos, Cucumbers, Asparagus, and Rhubarb were everything that could be desired.

AWARDS.

GOLD MEDALS.

Sir Trevor Lawrence, Bart., Burford Lodge, Dorking, for Orchids.

Messrs. W. Paul & Sons, Waltham Cross, for Roses.

Mr. George Mount, Canterbury, for Roses.

Messrs. J. Veitch & Sons, Ltd., Chelsea, for Caladiums, Crotons and Cacti.

Leopold de Rothschild, Esq., Gunnersbury House, for pot fruit trees.

SILVER CUPS.

Messrs. Jackman & Son, Woking, for Clematis and herbaceous plants.

Messrs. R. Smith & Co., Worcester, for Clematis.

Messrs. Barr & Sons, Covent Garden, for herbaceous plants.

Messrs. Wm. Cutbush & Son, Highgate, for foliage plants, Palms, and Carnations.

Messrs. Charlesworth & Co., Bradford, for Orchids.

Messrs. Hugh Low & Co., Bush Hill Park, for Orchids.

Messrs. Sander & Co., St. Albans, for Orchids.

MM. Linden & Co., Brussels, for new plants and Orchids.

Mr. Jas. Cypher, Cheltenham, for Orchids.

Messrs. Paul & Sons, Cheshunt, for Roses.

Messrs. T. S. Rivers & Son, Sawbridgeworth, for pot fruit trees.

Messrs. Sutton & Sons, Reading, for vegetables.

Sir Fred. Wigan, Bart., Clare Lawn, for Orchids.

Earl Percy, Syon House, for Orchids.

Mr. J. R. Box, Croydon, for Begonias.

Mr. C. Turner, Slough, for Roses, Pelargoniums and Carnations.

H. S. Leon, Esq., Bletchley Park, for Orchids.

Lord Aldenham, Aldenham House, for vegetables.

Sir J. Pease, Bart., Hutton Hall, for fruit.

Messrs. Carter & Co., High Holborn, for vegetables and flowering plants.

Messrs. H. Cannell & Sons, Swanley, Kent, for Cannas, Gloxinias, Calceolarias, Begonias.

SILVER GILT KNIGHTIAN MEDALS.

Messrs. Geo. Bunyard & Co., Maidstone, for Apples, &c.

Mrs. Wingfield, Ampthill, for vegetables.

Mr. S. Mortimer, Rowledge, for Cucumbers and Tomatos.

SILVER GILT FLORA MEDALS.

Mr. T. S. Ware, Tottenham, for herbaceous plants.

Messrs. Perkins & Sons, Coventry, for bouquets.

Mr. H. B. May, Upper Edmonton, for Ferns.

Messrs. B. S. Williams & Son, Upper Holloway, for Orchids and decorations.

Messrs. W. L. Lewis & Co., Southgate, for Orchids.

W. Thompson, Esq., Walton Grange, Stone, for Orchids.

Jules Hye-Leyson, Esq., Ghent, for Orchids.

Leopold de Rothschild, Esq., Ascott for Carnations.

Messrs. W. Balchin & Sons, Hassocks, for Leschenaultias, &c.

Messrs. J. James & Son, Woodside, for Calceolarias.

Messrs. Fisher, Son & Sibray, Sheffield, for hardy foliage plants.

Messrs. Kelway & Son, Langport, for Paeonies, &c.

Messrs. J. Laing & Sons, Forest Hill, for Caladiums, Gloxinias, and Streptocarpus.

Messrs. J. Peed & Sons, Norwood Road, for Caladiums.

Messrs. J. Waterer & Sons, Bagshot, for Rhododendrons,

Messrs. J. Cheal & Sons, Crawley, for flowering shrubs.

SILVER GILT BANKSIAN MEDALS.

Ludwig Mond., Esq., Regent's Park, for Orchids.
Mr. H. J. Jones, Lewisham, for Begonias.
Messrs. Frank Cant & Co., Colchester, for Roses.
Messrs. J. Backhouse & Son, York, for Alpines, &c.
Messrs. R. Wallace & Co., Colchester, for hardy plants, &c.
Mr. George Edom, Epsom, for Tulips.
Mr. J. Pritchard, Forest Gate, E., for Cacti.
Mrs. M. V. Seale, Sevenoaks, for decorations.
Messrs. J. Hill & Son, Lower Edmonton, for Ferns.
Messrs. W. & J. Birkenhead, Sale, for Ferns.
Malcolm S. Cooke, Esq., Kingston Hill, for Orchids.
M. L. de Smet-Duvivier, Ghent, for Anthuriums.
Mr. W. Rumsey, Waltham Cross, for Roses.

SILVER KNIGHTIAN MEDALS.

Horticultural College, Swanley, for vegetables.
Mr. Geo. Featherhy, Gillingham, for fruit.
Marquis of Northampton, Castle Ashby, for vegetables.

SILVER FLORA MEDALS.

Messrs. Isaac House & Son, Bristol, for Violas.
Messrs. A. W. Young & Co., Stevenage, for Gloxinias, &c.
Mr. A. Perry, Winchmore Hill, for herbaceous plants.
Mr. Moyses Stevens, 46, Victoria Street, S.W., for bouquets, &c.
Mr. W. Sydenham, Tamworth, for Violas.
Mr. L. H. Calcutt, Stoke Newington, for decorations.
Mr. J. Prewett, Bayswater, for Azaleas.
Mr. M. Prichard, Christchurch, for herbaceous plants.
Messrs. F. Miller & Co., Fulham Road, for Mignonette, &c.
Messrs. R. & G. Cuthbert, Southgate, for Azaleas.
Messrs. W. Fromow & Sons, Chiswick, for Maples.
Mr. W. Icton, Putney Park Lane, for foliage plants.
Jadoo, Limited, Exeter, for plants.
Messrs. Cripps & Son, Tunbridge Wells, for Maples.
Messrs. Jones & Son, Shrewsbury, for decorations.
Mr. John Russell, Richmond, Surrey, for Azaleas.

SILVER BANKSIAN MEDALS.

MM. Koster & Son, Boskoop, Holland, for Azaleas.
Mr. A. G. Tulett, Crockenhill, Swanley, for Zonal Pelargoniums.
Mr. E. G. Reid, Beckenham Hill, for Rhododendrons.
Mr. F. Chapman, Colchester, for Asparagus.
Mr. W. Godfrey, Colchester, for Asparagus.
Lord Foley, Esher, for Strawberries.
A. Henderson, Esq., Faringdon, for fruit and vegetables.
W. Lawrence, Esq., for Asparagus.

CYPRIPEDIUM EVENOR, SOUTHGATE VAR.

THE accompanying illustration shows the character of this new hybrid variety, which commemorates Southgate, Middlesex, where the establishment of Messrs. W. L. Lewis & Co. is situated. One scape carries two flowers, whose leading and distinguishing feature is the yellow ground colour of *C. concolor* (one of the parents), which is more defined in the Southgate variety than in the others. The flower measures $3\frac{1}{2}$ in. across the petals, which are 1 in. broad. The dorsal sepal is $1\frac{3}{8}$ in. wide. The spotting is also well defined, consisting of small crimson specks, and making this a beautiful and interesting hybrid. It was raised from *C. Argus* crossed with the pollen of *C. concolor* Regnierii. The twin flowers on the scape and the beautiful yellow ground of the segments owe their existence to the last-named variety.

Cheap Seeds.—Some of the American free seeds appear to have been nasty as well as cheap. A gentleman is reported to have weighed in with "a big bunch of the meanest, sourest, cussedest looking Mustard that ever grew on earth," and to have said, "there is your fine Turnips from Government seeds." This Mustard is, moreover, stated to have been "so infernally worthless that green worms and small bugs had starved to death on the leaves." We don't wonder at that farmer kicking.

ORCHIDS AT BUSH HILL PARK, ENFIELD.

THE removal of all the Orchids from the Clapton Nursery of Messrs. Hugh Low & Co. to the above well-appointed nursery having been completed, I was much gratified by being given an opportunity of inspecting them in their new quarters.

The Phalaenopsis House, being the nearest to the office of the establishment, was the first to come under notice. On entering it was apparent that every precaution had been taken to provide the plants with heat and moisture, without which their culture would be impossible.

The plants themselves looked quite at home, and will no doubt uphold the reputation held for years by the firm in connection with this beautiful class of Orchids. The Dendrobe House, which adjoins, contains a magnificent batch of *Dendrobium wardianum*, all making splendid growth, the prices of which are most reasonable. Here there is a great

Mossiae, *C. Mendelii*, *C. Trianaei*, and *C. gaskelliana*. *Laelia purpurata*, too, is in great quantity and in grand condition. There were several *Cattleyas* and *Laelias* in flower, but as the bulk formed one of the leading features of the Temple Show last week, I shall, instead of particularising, advise every one that could not visit the show to make a point of seeing the Messrs. Hugh Low & Co.'s collection at Bush Hill Park.—C.

GARDENERS' CHARITIES.

I do not wish to decry in any way the management of these, but the system and principle on which they are carried out appears to me to be utterly wrong, and the exceeding small number who do subscribe shows that I am not alone in my opinion. A gardener is usually not a person who can afford to subscribe liberally to general charities; it needs all his care to do a little to provide for himself and his family, and



CYPRIPEDIUM EVENOR SOUTHGATE VAR.

quantity of hybrid Dendrobes, and a splendid plant of *D. nobile sanderianum*.

Cypripediums close by were in excellent trim, being represented by some of the best in cultivation, to wit, *C. Gertrude* Hollington, *C. Goweri* magnificentum, &c. In flower were several forms of *C. ciliolare*, and the shy *C. Druryi*. In this division was to be seen a wonderful variety of *Oncidium Papilio majus*.

Passing on, we come to what I shall term my special favourites, the *Odontoglossums*. *O. crispum* is represented by about 12,000 plants, all in excellent health, showing that their requirements are well understood. There was a good quantity in flower, and numerous spikes are fast reaching that stage. The strain is, if I might call it so, a good one; and although at the time of my visit there was nothing approaching their "Queen Victoria" of last year, there were plenty of good varieties and at reasonable prices, too.

Cattleyas are represented by whole housefuls of *C.*

naturally, under the circumstances, his charity begins, as it should, at home. If he subscribes 5s. per annum he gets a vote, and what use is the vote to him? Practically none. All his money may, and probably will, go to someone else, and it is worth while to consider what this 5s. per annum means to him.

If he begins to save this amount from the age of twenty-four, his average expectation of life is forty years more. His 5s. per annum, saved and invested at 4 per cent. interest would at the end of the period amount to the sum of £23 15s. If he saved 5s. per month it would be £285. Why should he sacrifice the certainty of £23 15s. for a simple vote? If the thing is to be a success, the subscriber, who is almost invariably a poor man, must be able to depend on some certain return for his money; 5s. per annum would, if properly invested, provide him with a valuable sick and accident fund, or it would ensure his family the sum of £23 15s. at his death, whenever it occurred.

Very large numbers subscribe to sick and benefit clubs, and these are a very costly luxury indeed. Taking the very best and most liberal of the English industrial insurance offices, it will be found that, on an average for several years past, for every shilling paid in premiums less than $\frac{1}{4}$ d. has been paid back, all the remainder going in expenses, profits to shareholders, &c. What this really means none but those behind the scenes know, but it is a fact that the difference between the premiums paid to one office only exceed the amount paid for claims during the last year by considerably over £2,800,000! In the face of such figures as these one ceases to wonder at the palatial offices, the salaries to officials, and the high price of the shares. Let it be borne in mind that this is only one out of a great many offices, and the loss to the poor workman will be appreciated. If a gardeners' industrial assurance can be inaugurated, dispensing with all the magnificent offices, salaries, and profits, and a fair and certain return for his hard-earned money could be depended on, it would not be necessary to make urgent appeals, they would gladly come in in their thousands, without being asked. At present they naturally like to feel they are saving something, and the Post Office Savings Bank is their best gardeners' benevolent society. Can this be wondered at? And, if I am wrong, will someone set me right?—*Thos. Fletcher, Grappenhall, Cheshire.*

LATE VEGETABLES.

DURING April and the early part of May vegetables (otherwise than those which have been forced) are not in great variety, and where the Cabbage comes in early and Broccoli remain in good condition late in the season, the culinary department will not suffer much.

Looking through the Cabbage plots, to take stock of the earliest and most serviceable varieties, I notice that Hurst's First and Best is worthy of its name; on a sheltered border and also in an exposed position it is the earliest, and the compact, upright hearts are handsome. Veitch's Earliest of All is again first-rate, being early, compact, and handsome. Early Etamps is also good. Winningstadt long stood the test in the north as an exhibition sort—certainly its perfect form and firm heart gives it a good position—but after testing a number of sorts last season to prove the quality of each, Winningstadt was among the most tender and of good quality. There are about a dozen sorts in all here, and scarcely a "bolted" Cabbage among them. Rosette Coleworts have done good service during the winter, and are still in use. It is one of the hardiest of its species, like a huge Brussels Sprout, and may be had when other Cabbages are very scarce.

The Broccoli crop has stood well, for some time past has been in quantity, and I hope to have supplies till Cauliflower is turning in for use. Methven's June is the latest we have had for some years. The plants are strong and promising this season. Veitch's Model is also a very late variety, of even, close growth, and evidently very hardy. I hope to have good heads from it well into June. Cattell's Eclipse, as usual, is still much in favour, but is now (middle of May) nearly over. Gordon's Niddrie, which preceded Cattell's, is a capital sort for Scotland. To get the plants hardy and of medium growth, dwarf, and compact, it is a good old practice to put them into undug ground, if such is at the time of planting at command. In market establishments in the South of England this was almost an established practice, cultivators often inserting the roots with a crowbar.

After Onions are removed, Coleworts are a most suitable crop to fill the space which remains undug, and the Rosette is one of the best for the purpose. We planted our Broccoli last season on the same ground whence the preceding crop was removed. Between the rows, where the old plants were growing, a pointed iron dibber was used with good effect. Watering once, and destroying the weeds as they appeared, was all the cultivation the Broccoli had, and we never had greater reason to be satisfied. Many years ago, when visiting my late friend, Mr. Gilbert, he pointed out an immense breadth of Broccoli, which had been treated as indicated. The plants were (then late in April) in capital condition.

Lettuce has stood well this year, losses having been nil. Bath Cos is best; All the Year Round Cabbage Lettuce is in fine form too. Leeks are

nearly over, but have done well. The Lyon and Musselburgh are highest in favour, and have been so (with us) for some years. Celery is now over, but kept remarkably well. Major Clarke's Red was, as usual, the best keeper, and was of fine quality. Veitch's Early Rose was first-rate, but was used earlier.—*M. Temple, Carron, N.B.*

THE SUMMER SHOW AT THE ALEXANDRA PALACE.

A THREE days' show was opened at the Alexandra Palace on Wednesday the 18th ult. The exhibits, which were not very numerous were accommodated in the Central Hall, a large and roomy place, and one well suited for such a show.

COMPETITIVE EXHIBITS.

The classes according to schedule were very poorly patronised, for strictly speaking there was competition only in one. There were no exhibits forthcoming in several, and the rest had only one each. The good quality of these exhibits, however, secured for them in each case the first award.

POT PLANTS.—Messrs. J. Peed & Sons, Roupell Park Nurseries, W. Norwood, S.E., were the only exhibitors in the class for a circular group of flowering and foliage plants occupying 250 sq. ft. Their exhibit, however, fully deserved the first prize it received, for round the central mound of Palms were staged tuberous Begonias, Boronias, Ericas, Hydrangeas, Crotons, Dracaenas and Ferns in great variety, in capital condition.

The best nine foliage plants were also sent by the same firm, the subjects being Croton Weismanni, Dracaena Gladstonei, D. Lindenii, Phormium tenax, Kentia fosteriana, Pandanus Veitchii, Latania borbonica, Kentia belmoreana and Caladium Mrs. H. Veitch.

Mr. George Cragg, gardener to W. C. Walker, Esq., Percy Lodge, Winchmore Hill, N., won the first award for a group of Orchids filling a table 12 ft. by 4 ft.

CUT FLOWERS.—Messrs. Paul & Son, The Old Nurseries, Cheshunt, were first for the collection of cut hardy flowers filling a table space of 20 ft. by 6 ft. A collection of large trusses of Rhododendrons and Azaleas were the chief feature here.

Messrs. Perkins & Sons, Coventry, were first for one bride's and two bridesmaid's bouquets with magnificent bouquets, in which Odontoglossums, Lilies of the Valley, and Carnations figured conspicuously. We have never seen the Coventry firm put up three finer samples of their art. Mr. Henry O. Garford, Stoke Newington, was second, also with three fine bouquets; and Mr. L. H. Calcutt, Fern Bank Nursery, Stoke Newington, was third.

Mr. George Mount, of Canterbury, scored successes for Roses, for he won the first prizes for both the twenty-four and the twelve blooms. His strongest varieties were Mrs. John Laing, Captain Hayward, Fisher Holmes, Catherine Mermet, Ulrich Brunner, Prince Arthur, and Caroline Testout.

Mr. George Cragg scored for twenty-four bunches of cut flowers, with a showy exhibit.

Mr. Amos Perry, Winchmore Hill, won the first prize for the table, measuring 15 ft. by 4 ft., of hardy cut flowers.

MISCELLANEOUS EXHIBITS.

These comprised a number of interesting and meritorious groups, for which medals of varying values were given.

The premier award, a large Gold Medal, went to Messrs. Wm. Cutbush & Son, Highgate, N., for an imposing circular group of miscellaneous plants. Amongst the flowering element breaks of Malmaison Carnations Princess of Wales and Princess May, Erica Cavendishii, E. perspicua nana, and E. ventricosa coccinea minor were noticeable. These were tastefully relieved by Palms, Ferns, Japanese Maples, and other foliage plants.

A Silver Gilt Medal went to Mr. H. George Bourne, Grove Villa, High Road, New Southgate, for a very comprehensive collection of succulent plants.

Mr. S. Mortimer, of Rowledge, Farnham, Hants., received a small Gold Medal for a magnificent lot of Cucumbers and Tomatos. Of the former there were exceedingly fine samples of such varieties as Pride of the Market, Sutton's Matchless, Progress, Sutton's Ar, and Rochford's Market, whilst Mitchell's Hybrid, Conqueror and its improved form, and Abundance represented the Tomatos.

A small Gold Medal also went to Mr. L. H. Calcutt for a superb table of floral decorations. The central trophy of Irises, Liliun Harrisii, and Fern fronds stood fully 7 ft. above the table. The other epergnes, floral arches, glasses, &c., on the table were both light and elegant, and the effect was completed by the trails of Smilax and Asparagus Sprengeri, which were spread on the cloth.

Mr. James Williams, of 4A, Oxford Road, Ealing, W., had a smaller table, prettily ornamented with the Poet's Narcissus and Yellow Tulips with grasses. A Silver Medal was voted it.

Decidedly the best exhibit in hardy plants, both for quality and comprehensiveness, was the exhibit sent by Mr. T. S. Ware, of Hale Farm Nurseries, Tottenham, N. A small Gold Medal was given it.

The pretty Edwardian ware in a variety of shapes, sizes, and devices, and filled with growing Ferns was a special feature, that was contributed by Messrs. W. Edwards & Son, of Nottingham. These variously sized receptacles on view attracted much attention from their manifest elegance and suitability for the purposes for which they are recommended.

An attractively set-up stand of horticultural requisites was set up by Messrs. W. Wood & Son, of Wood Green. The numerous garden tools, manures, bamboos, shading materials, &c., were tastefully interspersed with waving plumes of grass, both dyed and in the natural colours.

The Ichthemic Guano Company, of Ipswich, also had a stand of their well known fertiliser.

MORLAND NURSERY, SOUTH NORWOOD.

IN addition to the numerous Palms, Crotons, and Dracaenas, which are grown so admirably by Mr. C. F. Bause, at the Morland Nursery, and which we mentioned last week, there are several other noteworthy features. Not the least of these is the collection of Bertolonias. These diminutive, but exceedingly handsome foliage plants do not often find lavished upon them the attention that is commensurate with their beauty. They are rather delicate subjects perhaps, and will not stand the rough and ready treatment under which many stove plants will thrive; in short, they are the aristocrats of the stove, and must be treated as such. At Morland Nursery they are accommodated in a close frame in the propagating pit, the temperature of which suits them exactly. Here they produce large, healthy leaves, and develop to the full those exquisite colourings that are to be found nowhere else in such charming association. B. argyroneura with the multitude of white spots on light green is rendered yet more handsome by the myriads of silvery hairs with which the whole of the leaf is clothed. This is indeed one of the hairiest of all the Bertolonias, and certainly one of the most beautiful. Mme. Alfred Bleu is a new variety of great promise. When properly developed the leaves are of great size, the white spots and mottlings on the light green ground being exceedingly attractive. The same may be said of the rich magenta and olive-green foliage of Mme. August Van Geert Souvenir de Gand which has very prominent midribs and veins of cerise running through a groundwork of dark olive-green. The effect of the association of the two colours is at once rich and striking. Triomphe de l'Exposition is one of the best. Here we have a dark green ground, with pink veins, the whole surface being profusely dotted with small white dots, and prettily crenated.

A collection of Nepenthes is another of the special points of the establishment. Here we noticed that very intractable species N. sanguinea. This is very handsome when it can be got to do well, which, to tell the truth, is only very rarely. The full-sized pitchers are from 10 in to 12 in. in length, bright rosy-red in colour, and are furnished with two wings, which bear a few long, stout spines. We noticed several plants of this rarity, and they all appeared to be growing well. N. Rajah is another species that is one of the most trying to the gardener's patience, for it often refuses to do at all. It is very handsome, this Bornean species, but, like N. sanguinea, a puzzle to the cultivator.

Caladiums are grown largely, but here again it is the finer varieties, particularly the golden and delicate white leaved forms that occupy the bulk of the attention. Still, it must not be imagined that other varieties are neglected, for this is far from being the

case, as the grand samples of such varieties as Excellent, B. S. Williams, Triomphe de Comte, Gaston Chandon, and the handsome silvery-white and pink Rose Laing abundantly testified. Prince of Wales, with its large, rosy-cerise leaves, with gold margins, and Princess Royal are still much in request to-day, and yet they were two of the seedlings raised by Mr. F. C. Bause when at Chiswick. Of the newest varieties, one named Mrs. Bause is a remarkably handsome thing. The leaves are of good size, even on the young plants. They are silvery-white with a green-gold margin, and bright carmine veins. Princess Teck is still a very scarce variety, with the central zone rosy-pink, a green-gold margin, and carmine midribs. Her Majesty is one of the finest white varieties that we have ever seen. It can only be described as a translucent white, so clear and delicate looking are the tissues. Leonard Bause is another fine white, but in this case there is a conspicuous red spot in the centre of the leaf. It is certainly one of the most refined of the numerous varieties of Caladiums now in cultivation.

MANCHESTER WHIT-WEEK SHOW.

THIS annual event was opened on the 27th ult., and continued till June 2nd, in charming weather, and although some considerable doubt existed as to its success, owing to the competition of the Temple Show, it was satisfactory, both to the executive and visitors to find that there was no falling off in the exhibits either in quantity or quality. Some notable features were missing, but others of equal or more importance took their place, which enhanced the value to the general patrons of the society.

COMPETITIVE EXHIBITS.

The Orchids in this department, as throughout the show, engendered the greatest amount of praise and delight both to the expert and amateur.

For the best collection of Orchids in bloom (amateurs), E. Ashworth, Esq., Wilmslow, (gardener Mr. H. Holbrook), secured the premier award with a charming bank, set off to advantage with a plentiful ground work of Adiantums and other Ferns. The chief features were the grand spikes of *Odontoglossums*, *Miltonia vexillaria*, colour being afforded by good varieties of *Cattleya Mossiae*, *Lycaste Skinnerii*, &c. A. Warburton, Esq., Haslingden (gardener, Mr. T. Lofthouse), with a fine lot, well arranged, was second.

In a similar class for nurserymen, Mr. James Cypher, Cheltenham, won with a grand lot arranged in two half circles on the floor, cork and Ferns being freely interspersed amongst the grand specimens of *Laelia purpurata*, *Odontoglossums*, *Cypripediums*, *Cattleyas* in variety, and many other species, making a pleasing and imposing group. Mr. J. Robson, Altrincham, followed with a large exhibit of considerable merit.

For the best collection of *Cattleyas* and *Laelias* (open), Thos. Statter, Esq., Whitefield (gardener, Mr. R. Johnson), won with a grand lot including *Cattleya Mendelii* *superba*, *Laeliocattleya Phoebe*, *Laelia elegans statteriana*, *L. purpurata formosa*, &c. Duncan Gilmour, Esq., Sheffield (gardener, Mr. W. Day), was second.

The first prize for ten specimen Orchids, made-up plants excluded (open), was won by the amateur, E. Ashworth, Esq., with a grand lot, including *Cattleya Mossiae*, *C. Skinnerii alba*, *Laelia purpurata*, *L. elegans*, &c. Mr. Jas. Cypher followed.

For ten stove and greenhouse plants in bloom (nurserymen), Mr. James Cypher won with a good lot consisting of *Pimelea Hendersonii*, *Erica affinis*, *E. depressa*, *E. ventricosa magnifica*, *Anthurium scherzerianum*, *Aphelaxis macrantha purpurea rosea*, *Clerodendron Balfourianum* and *Franciscea eximia*.

For six plants for amateurs, Miss Lord, Ashton-on-Mersey (gardener, Mr. G. Wilkes), won with *Dendrobium fimbriatum oculatum*, well flowered, 4 ft. in diameter, *Clerodendron Balfourii*, *Allamanda grandiflora*, *Anthurium scherzerianum*, and *Ixora Coleii*.

For a group of miscellaneous plants, arranged for effect, not exceeding 200 sq. ft., Mrs. G. Pease, Darlington (gardener, Mr. J. McIntyre), secured chief honours with a well staged lot, chiefly foliage plants, the *Crotons* and *Dracaenas* adding tone to the arrangement; Mr. G. Wilkes was second with plenty of bloom. For the local group of 100 ft. Mr. Wilkes secured first honours.

For the nurserymen, in a space not exceeding 250 sq. ft., Messrs. R. P. Ker & Sons, Liverpool, won with a light and tasteful combination, the pot plants, such as *Crotons* and *Dracaenas*, being richly coloured. *Bamboos* and *Palms* were used for lightness and freshness, colour being introduced with *Rhododendrons*, *Amaryllis*, and foliage *Begonias*. Mr. A. J. A. Bruce followed with more flowers and a greater variety of colour.

For six fine foliage plants Mr. J. McIntyre won with large plants of *Croton Baron Rothschild*, *Phoenix rupicola*, *Cycas revoluta*, and *Kentia fosteriana*.

For twelve *Roses* in pots James Brown, Esq., Heaton Mersey, scored with well-flowered specimens. For ten exotic Ferns (open) Mr. J. McIntyre won with a good lot, *Gleichenia rupestris*, *G. dichotoma*, *G. Mendelii*, and *Davallia fijiensis* being good.

For eight table plants Mr. J. McIntyre won in a strong competition. Mr. G. Wilkes won for *Calceolarias* and *Caladiums*; Mr. J. McIntyre for six *Adiantums* and one Fern; and Mrs. Blair for *Gloxinias*. For ten hardy Ferns Messrs. W. & J. Birkenhead, Sale, won with a grand lot. Mr. G. Wilkes won, for a stove foliage plant, with *Croton angustifolium*, flowering plant, *Ixora Prince of Orange*, and greenhouse foliage plant *Kentia fosteriana*.

Sir Trevor Lawrence, Bart., Burford Lodge, Dorking, secured the Gold Medal for the best hybrid Orchid, with *Cypripedium Olenus*, Burford variety. Mr. A. J. A. Bruce got the Silver Medal for a collection of *Carnations*, not less than fifty pots.

NON-COMPETING ORCHIDS AND FOLIAGE PLANTS. Messrs. J. Veitch & Sons, Ltd., Chelsea, were awarded a Gold Medal for a small collection of great merit, including *Laeliocattleya Eudora* Mme. Albert Pye (a magnificent hybrid, which was greatly admired by the many growers present), *Laelia Latona*, *Cattleya Mendelii*, and others.

Messrs. F. Sander & Co., St. Albans, were also the recipients of a Gold Medal for a collection, including the new *Acalypha Sanderii*, *Dracaena sanderiana*, very fine, *Nepenthes* in variety, and a large and varied collection of Orchids.

Messrs. Fisher, Son & Sibray, Sheffield, also secured the premier honour with a most interesting display, including many varieties of *Crotons* and *Nepenthes*, in robust form, with *Anthuriums* and Orchids in variety, *Cattleya Mossiae Valhallii* being conspicuous.

Messrs. Charlesworth & Co., Bradford, were awarded a Silver Medal for a meritorious bank of Orchids, and *Anoectochilus*, in many beautiful varieties.

Messrs. J. Cowan, Ltd., Liverpool, contributed a good lot of various species of Orchids, which gained the Silver Medal.

Mr. A. J. Keiling, Bingley, received a Silver Medal for *Cattleyas*, *Odontoglossums*, and *Cypripediums* in great variety.

Mr. B. S. Williams & Son, Upper Holloway, London, had a pleasing collection of Orchids, foliage plants, *Ericas* and *Boronias*, which obtained a Silver Medal.

MISCELLANEOUS PLANTS.

Messrs. Sutton & Sons, Reading, received the society's Gold Medal for a wonderful display of herbaceous *Calceolarias*, occupying a space of about 500 sq. ft. with 150 plants, including selfs, blotched, spotted, and tricolor barred varieties, with heavy heads of bloom, the individual flowers being of immense size. This exhibit undoubtedly is as fine of its class that has ever been staged in the north, and may be well described in the words of Mr. Owen Thomas in replying to the toast of the judges at the luncheon as "one of the finest features of the show." The exhibit had hosts of admirers throughout the show.

Messrs. W. & J. Birkenhead, Sale, secured a Silver Medal for a fine table of Ferns in great variety.

Messrs. R. Smith & Co., Worcester, were awarded a like honour for their exhibit of *Clematis*, so well-known at the leading spring shows.

Messrs. John Waterer & Sons, Bagshot, received a Silver Medal for an immense collection of *Rhododendrons*, which filled the lower portion of the annexe. A large number were in bloom with the

majority just bursting their buds, and which will be worthy of a visit during the next three weeks.

Messrs. Dicksons, Ltd., Chester, staged a fine bank of *Acers* in great variety, and cut flowers of *Pyrethrums*, *Iris*, &c.; and *Pansies* and *Auriculas* in pots. Messrs. W. Edwards & Son, Nottingham, staged baskets and stands of their ware and Ferns. The Misses Hopkins, Knutsford, had garden flowers. Messrs. W. Clibran & Son, Altrincham, staged a large collection of *Violas*, *Pansies*, *Calceolarias*, &c. Mr. J. Pinches, Camberwell, London, showed his imperishable labels.

CERTIFICATES OF MERIT were granted to Messrs. F. Sander & Co., for *Acalypha Sanderii*, and for *Licuala Jeanenceyi*; Messrs. John Cowan, for *Cymbidium lowianum* and *Odontoglossum crispum magnificum*; Messrs. B. S. Williams, for *Cattleya Latona*; Mr. A. Warburton, Haslingden, for *Odontoglossum crispum Mortebeckiense*, *Cattleya Mossiae Prince of Wales*, *Cattleya Mendelii Duchess of York*, and *Laelia purpurata backhousiana*; and Messrs. Fisher, Son & Sibray, Sheffield, for *Cattleya Mendelii*, and *Cattleya Mossiae*.

The arrangements were ably carried out by Mr. P. Weathers, curator and secretary. The wealth and beauty of the Orchids and stove and greenhouse blooms were admirably toned down by the festoons of climbing plants on the pillars and roof of the show house; and the large specimen foliage plants formed a fresh and pleasing background to such a galaxy of colour, making it an ideal place for a show of tender plants. The annexe, an ample building of some 450 ft. in length, is more suitable for the exhibits that prefer a cooler temperature. The judges, exhibitors and friends lunched in the dining room under the chairmanship of the president, T. Statter, Esq.

QUESTIONS AND ANSWERS.

Violets for Early Flowering.—*Tomatos*: We should not advise you to attempt growing Violets under glass in summer with the object of getting early flowers next year. They require a great deal of attention to keep them clear of red spider and other vermin, while the plants themselves cannot attain any constitutional vigour. Deeply dig a piece of rich ground at once in a fully exposed position. Ground that holds the moisture fairly well should be selected. Dig a quantity of old hot bed manure and leaf mould into the soil, and when this work is finished line off the ground so that the rows will be 1 ft. apart. You can even take out a shallow furrow along the side of the line with the end of the hoe. Lift a quantity of rooted runners and proceed to plant them with the trowel a foot apart in the furrows. Water the plants in dry weather and they should make bushy specimens before the end of the season. The bed you propose making across the end of your greenhouse should answer very well, provided the house is well ventilated in spring when growth is being made. Plant them in turfy loam mixed with some well decayed manure. This could be done about the end of September, lifting a sufficient number of plants from your stock in the open ground to fill the bed. Put them in just sufficiently thick to avoid crowding. They are most often grown in frames to be near the glass.

Cytisus Adami with Yellow Flowers.—*A. L. W.*: It is a case of reversion to one of the parents of the graft hybrid. The case is of common occurrence. Sometimes pale purple and yellow flowers may continue to be produced for many years by the same tree. In other instances the branches bearing the yellow flowers become so vigorous and grow so fast that the portions of the tree bearing purple flowers get robbed of sustenance and gradually decline in vigour till they at length cease to be produced. If you desire purple flowers only, then the shoots bearing yellow flowers should be removed; but on the other hand if you desire both colours then the shoots bearing yellow flowers must be held in check by reducing their size so that they cannot monopolise the energy of the tree. The necessary pruning may be given when the flowers are fading, but still sufficient to show what they are.

Tomatos in Pots.—*Tomatos*: Plants to be stopped when they have set four bunches of fruit might be grown in 8-in. pots. When the roots have well permeated the soil, and the plants are healthy, you must give them good supplies of water. Whenever a bunch of fruit has set, and the berries are beginning to swell, commence feeding with weak liquid manure twice or three times a week. After all the bunches have been set the liquid manure may be made stronger. Make sure that the pots are well filled with roots before you commence feeding, and do not overwater the plants until that happens. A pinch of nitrate of soda might be put in the water occasionally instead of the liquid drainings of the stables. If you have an artificial fertiliser

already made up with the principal chemical ingredients of plant food, that may be applied judiciously at intervals. For Tomato plants to be grown in a greenhouse till October you could use 10-in. pots, feeding the plants as above mentioned when the soil gets well permeated with roots, and a bunch or two of fruits have set. No feeding should be given until one bunch at least has been set.

Lifting a Holly.—A. J. C.: It is true that large Hollies are recommended to be lifted when they commence to grow; but the operation should have been performed in April or during the first half of May. If the tree is more than 6 ft high we should recommend you to root-prune it about the end of September, and transplant it about the end of April next year. Take out a trench 2½ ft. to 3 ft. from the trunk of the tree, and describing a circle round it, cut back all the strong roots to this distance with a sharp knife to smooth the cut ends, which will throw out numerous small roots before the winter. All roots that penetrate the soil perpendicularly should also be cut. You will then have got the roots within narrow compass, and the tree may be transplanted with safety at the time above stated, by lifting the ball of soil entire.

Brown Fly on Peaches—W. B.: The insects will be mostly confined to the young and tender leaves of the trees, so that you can in a short time go over them and dust all the affected portions with tobacco powder. Before commencing the operation syringe the trees, so as to wet all the foliage equally. This will cause the powder to adhere sufficiently long to destroy the fly. Should it be washed off by heavy rain before the insects have all been destroyed go over the trees a second time, and they will almost certainly be clean after that, if the operation has been thoroughly carried out.

Japanese Maples for Bedding.—J. B.: Plants in pots may be bedded out almost at any time, but if planted at once they would have time to become established before the approach of winter. They are hardier than is generally supposed, so that you may plant them in an open position in your locality without fear of losing them. They should not be exposed to cutting and sweeping winds from the north or east, otherwise the foliage will be liable to injury, making the trees or bushes look stunted. You can so arrange the plants that the bed will look furnished from the first, and so that every alternate bush may be lifted and planted elsewhere before the present bed gets overcrowded.

Large Leaves of Ailantus glandulosa.—S. J.: Plant the trees at regular distances apart and with sufficient room for the accommodation of large leaves, when such develop. The individual specimens should not encroach upon one another. As soon as planted cut the specimens back within a few eyes of the base of last year's wood. Do this every succeeding year in March and strong shoots bearing leaves 2 ft. to 3 ft. in length will be developed. The soil should be rich.

Vines Attacked with Mildew.—J. R.: The sunless, damp weather is responsible for the spread of the fungoid disease known as Oidium Tuckeri. There is no reason why you should not use the mildew composition you mention, ventilating freely afterwards to dispel the moisture which is undesirable in a vinery at present. There is an equally effective method, and though it would take longer time to accomplish, you would avoid wetting the foliage. This is to dust all the affected leaves and bunches of berries with flowers of sulphur, which you may put into a pepper box having a finely perforated lid, and distribute it over the leaves. There is a contrivance known as the "sulphurator" for distributing sulphur, but if you attack the fungus at once you are not likely to have much further trouble with it unless the weather continues wet and dull.

Names of Plants.—A. C.: 1, Narcissus poeticus patellaris; 2, Narcissus poeticus recurvus flore pleno.—Jas. Siewright: 2, Aspasia principissa, a very rare plant.—G. C.: 1, Juniperus bermudiana; 2, Juniperus communis var. Please send older specimens next time with fully developed leaves and fruit whenever you can.—W. B.: 1, Geum rivale; 2, Geranium sylvaticum; 3, Orchis Morio.—T. B.: 1, Oncidium sphacelatum; 2, Oncidium sarcoodes; 3, Cattleya Mendelii var.; 4, Odontoglossum luteo-purpureum; 5, Masdevallia harryana; 6, Cypripedium ciliolare.—H. S.: 1, Primula involu-crata; 2, Daphne Cneorum; 3, Trollius asiaticus; 4, Pyrethrum roseum var.; 5, Phlox subulata; 6, Saxifraga Camposii; 7, Tritelia uniflora.—A. D. W.: The tree by The Dell is Pyrus torminalis, a British tree; the Hawthorn appears to be Crataegus mollis, by others named C. sub-villosa, but we should like to see fruit and fully developed leaves.

Communications received.—W. Mauger & Son. J. Jackson.—Patterson.—Veld.—J. C. S.—Omega.—J. W. Standerwick, G.P.O.—John H. Knowles.—P. Lambert.—R. W.—A. D. S.—T. L.—A. P.—G. T. B.—A. E.—F. Betts.—C. L.—Rob.—T. Renshaw.—A. Erle.—X.—Querist.

Toogood & Sons, Southampton. — Toogood's Yellow Hybrid Turnip, &c.
GEO. HUMPHRIES, F.R.H.S., High Street, Chippen-ham. — A Descriptive Catalogue of Dahlias.

COVENT GARDEN MARKET.

June 1st, 1898.

FRUIT.—AVERAGE WHOLESALE PRICES.

Table with columns s. d. s. d. listing prices for Apples, Cobbs, Grapes, Pine-apples, and Strawberries.

VEGETABLES.—AVERAGE WHOLESALE PRICES

Table with columns s. d. s. d. listing prices for Artichokes, Asparagus, Beans, Beet, Brussels Sprouts, Cabbages, Carrots, Cauliflowers, Celery, Cucumbers, Endive, Herbs, Horse Radish, Lettices, Mnsbrooms, Parsley, Radishes, Seakale, Small salad, Spinach, Tomatos, Turnips.

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

Table with columns s. d. s. d. listing prices for Aium Lilies, Asparagus Fern, Azaleas, Bouvardias, Carnations, Euoharis, Gardentas, Geranium, Lillom longiflorum, Lily of the Valley, Lillac, Marguerites, Marzenhair Fern, Narcissus, Orchids, Pelargoniums, Red Roses, Roses, Tea, white, Perte, Safrano, Pink Roses, Smllax, Tuberoses, Tulips, Violets, Wallflowers.

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES.

Table with columns s. d. s. d. listing prices for Arborvitae, Aspidistra, Azalea, Coleus, Draoena, Dracaena, Eucalyptus, Erica, Ferns, Ficus, Follage Plants, Fuchsia, Heliotrope, Hydrangeas, Ivy, Lillium, Lycopodiums, Lobelias, Marguerite Daisy, Mignonette, Myrtles, Palms, Pelargoniums, Scarlets, Spiraea.

INDEX TO ADVERTISEMENTS.

Index listing various services and products such as Auction Sales, Catalogues, Chrysanthemums, Florists' Flowers, Flower Pots, Fruit Trees, Garden Sundries, Horticultural Builders, Heating Apparatus, Insecticides, Iron Buildings, Lawn Mowers, Manures, Netting, Orchids, Publications, Seeds, Situations, Tents, Weed Killers.

Gardening Charities, &c.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.—Secretary, GEO. J. INGRAM, 50, Parliament Street, S.W.

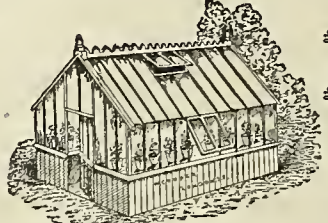
ROYAL GARDENERS' ORPHAN Fund.—Honorary Secretary, A. F. BARRON, Royal Horticultural Society's Gardens, Chiswick, W.

UNITED HORTICULTURAL PROVIDENT and BENEFIT SOCIETY.—Secretary, WILLIAM COLLINS, 9, Martindale Road, Balham, S.W.

W. COOPER, Ltd., HORTICULTURAL PROVIDERS, 755, OLD KENT RD., LONDON, S.E.

Amateur Span-Roof Greenhouse.

Complete and Ready for Erection. For other Sizes, see List. 7 ft. by 5 ft. £2 16s. Od. 8 ft. by 5 ft. £3 10s. Od. 9 ft. by 6 ft. £4 0s. Od. 10 ft. by 7 ft. £5 0s. Od.



RUSTIC SUMMER HOUSES.

LARGE STOCK TO SELECT FROM.

For other Designs see List. £3 5s., complete.



Amateur Forcing Houses.

For Cucumbers, Tomatos, Melons, &c. From 50s., complete.



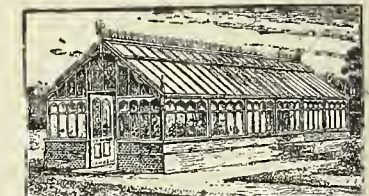
Estimates for Every Description of Horticultural Work, Iron Buildings, Rustic Work, &c., &c., Free on Application. Competition Defied.

"COOPER" CYCLES.

Latest Frame, Large Weldless Steel Tubes, Ball-bearings, Tangent Wheels, Break, and Mud Guards. Gent's from £5 10s.; Ladies' from £6, with dress and gear guards. 12 MONTHS' WARRANTY. List free. Agents Wanted.



Estimates for Every Description of Horticultural Work, Iron Buildings, Rustic Work, &c., &c., Free on Application. Competition Defied.



Span-Roof Conservatory. Substantially and Handsomely Built. Everything Complete and ready for Erection.

Span-Roof Improved Poultry House.

5 ft. by 4 ft. 35/- | 7 ft. by 5 ft. 45/- | 6 ft. by 4 ft. 40/- | 9 ft. by 6 ft. 50/-



Span-Roof Poultry House.

5 ft. by 4 ft. ... 22/- | 6 ft. by 4 ft. ... 25/- | For other Sizes see List.



SAFETY CHICKEN COOPS.

Coops only 4/3 each. 6 for 24/-. 3 ft. Movable Wire Runs, 2/3 each extra.



NEST BOXES.

1 Nest Box 3/-; 6 for 17/6.



Iron Buildings of every Description.

Churches, Temporary Hospitals, Bungalows, Packed on rail, or erected in any part of the Kingdom. See Section IV. in List. Plans and Estimates Free.

ILLUSTRATED LIST, POST FREE. Large CATALOGUE, 364 Pages, 1,200 Illustrations, Six Stamps.

W. COOPER, LTD., Horticultural Providers, 755, OLD KENT ROAD, London, S.E.

TRADE CATALOGUES RECEIVED.

VAN ZANTEN & NIEUWAF, Lisse, near Haarlem, Holland, and 126, West Green Road, Tottenham, London.

VIOLETS! VIOLETS!! Cheap offer to Clear.

SINGLES.

| |
|---|
| 25,000 Princess of Wales at 7/- per 100 |
| 50,000 California 7/- .. " |
| 400 Victoria (new) 10/- .. " |
| 100 Explorateur Dybowski 8/- .. " |
| 500 Amiral Avellan 8/- .. " |
| 500 Princess Beatrice 8/- .. " |
| 500 Italia 8/- .. " |
| 500 Primavera 8/- .. " |
| 1,000 Czar 3/- .. " |

DOUBLES.

| |
|---|
| 10,000 Lady Hume Campbell at 5/- per 100 |
| 1,000 Mme. Millet 15/- .. " |
| 300 Neapolitan 5/- .. " |
| 1,000 Marie Louise 5/- .. " |
| 1,200 Comte de Brazza (or Swanley White) 5/- .. " |
| 200 Duchess of Edinburgh 15/- .. " |
| 100 Double Red 15/- .. " |
| 200 Victoria 15/- .. " |

Not less than fifty supplied at 100 rate. These prices are NETT. Cash with order.

THE MANAGERS, HOOD GARDENS, TOTNES.

50,000 BEGONIAS FOR BEDDING.

Very fine singles, all colours, mixed, 3s. per doz.; 50, 11s; 100, 20s. Very fine, in eight distinct colours, 4s. 6d. per doz.; 50, 15s.; 100, 28s.

Finest Singles, for conservatory decoration, in twelve distinct colours, 6s., 9s., and 12s. per doz.

Finest Doubles, for conservatory decoration, 6s., 9s., and 12s. per doz.

Do you want best **Caladiums, Dahlias, Fuchsias, Heliotropes, Fancy Zonal and Ivy Pelargoniums, Double Petunias**? Send for full Descriptive Catalogue, free.

H. J. JONES,
RYECROFT NURSERY, LEWISHAM.

1898. FORBES' CATALOGUE 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of **Florists' Flowers and Hardy Border Plants**

is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of **Florists' Flowers**, also colour, height, time of flowering, and price of all the best **Hardy Border Plants**, together with their **English or Common Names**, and a mass of other **Valuable Information** that cannot be had elsewhere.

It is in fact a veritable **reference-book**, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,

Nurseryman, Hawick, Scotland.
ESTABLISHED 1870.

KEYNES' CACTUS DAHLIAS.

Best Plants. Best Varieties. Moderate prices.

Send Post Card for Catalogue.

About half the good varieties in commerce were raised here.

KEYNES, WILLIAMS & COMPANY,
Dahlia Growers, SALISBURY.

TURNIP FLY.

Every Grower (large or small) of Turnips, Swede, or Cabbage, should use the

UNIVERSAL SEED DRESSING,

a certain preventative against fly attacking the seedling leaves of the young plants. Bottles (with full directions) 1/- and 2/6 each. Large bottles, sufficient to dress 40 lbs. seed, 7/6, post free.

BRINKWORTH & SONS, Sole Agents, WINCHESTER.

RETARDED LILY OF THE VALLEY CROWNS.

Headquarters at Dersingham.

For prices &c., apply to—

T. JANNOCH,

Lily Nursery, Dersingham, King's Lynn, Norfolk.

GLOXINIAS FINEST MEDAL COLLECTION

* IN THE WORLD. *

Send for CATALOGUE to

JOHN PEED & SONS, West Norwood, London

Caladiums FINEST COLLECTION in the World. We make a speciality of CALADIUMS. Gold Medals Manchester & Leicester.

Satisfaction guaranteed. **JOHN PEED AND SONS,** West Norwood, London.

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER,

Exotic Nurseries, CHELTENHAM.

STANDEN'S

MANURE.



ESTABLISHED OVER 30 YEARS.

Exceeds all others in General Fertilising Properties and Staying Powers.

Promoting a rapid, healthy, and robust growth to plants generally.

It is a clean and dry powder, with very little smell. Its highly-fertilising properties render its money value, in comparison with other Manures, at least double; very small quantities will produce favourable and lasting results.

ANALYSIS ON APPLICATION.

Sold in Tins, 1s., 2s. 6d., 5s. 6d., and 8s. each; and in Kegs, well secured, to prevent loss through exposure, 28 lb., 10s. 6d.; 56 lb., 18s.; 112 lb., 32s.

To be had from all Seedsmen and Florists.

MANUFACTURERS—

CORRY & Co., Ltd., London.

POCKET KNIVES FROM MAKER.



Stag Handle Pruning Knives, a real good article, 1s. 1d. each; Ivory Handle Budding Knives, no better made, 1s. 3d. each; Ivory Handle, 2 blade waistcoat pocket Knife, 1s. 1d. each; Corn Knives, 1s.; Workman's Stag Handle Sheepfoot and Pen Blade, 1s. 1d. The blades of all the above are made from the very best English crucible cast steel. Post free.



J. & H. R. HOUNAM,
Sheaf Island Works, SHEFFIELD.

VIOLAS! VIOLAS!!

We have to offer in the following varieties:—

| | Per 100 | s. d. |
|---|---------|-------|
| 1000 Archie Grant, blue purple | 10 | 0 |
| 2000 Ardwell Gem, yellow | 10 | 0 |
| 2000 Border Witch, shaded pale blue | 12 | 0 |
| 1000 Bridesmaid, pale yellow | 10 | 0 |
| 300 Bronze Queen, bronze and purple | 15 | 0 |
| 1000 Blue Gown, deep blue | 10 | 0 |
| 1200 Blue Stone, rich Prussian blue | 10 | 0 |
| 1000 Bullion, golden yellow | 10 | 0 |
| 1000 Councillor Waters, crimson Purple | 15 | 0 |
| 200 Cleg Kelly, slate blue | 12 | 0 |
| 1500 Countess of Hopetoun, creamy white | 10 | 0 |
| 500 Devonshire Cream, creamy white | 10 | 0 |
| 300 Favourite, light blue | 12 | 0 |
| 300 George Muirhead, pale yellow | 15 | 0 |
| 500 Gold Crest, golden yellow | 20 | 0 |
| 150 Jackanapes, brown and yellow | 12 | 0 |
| 250 John Sbiros, blue | 10 | 0 |
| 150 Holyrood, blue purple | 10 | 0 |
| 1000 Kitty Bell, pale lavender | 30 | 0 |
| 1000 Lord Elcho, golden yellow | 10 | 0 |
| 200 Lady Dufferin, white striped heliotrope | 10 | 0 |
| 500 Leezie Lindsay, yellow flushed orange | 15 | 0 |
| 200 Lucy Ashton, cream edged purple | 12 | 0 |
| 500 Magic, rosy crimson | 12 | 0 |
| 500 Mary Jack, cream, edged rosy-lilac | 12 | 0 |
| 1000 Marchioness, creamy white | 10 | 0 |
| 500 Mrs. Charles Turner, purple | 12 | 0 |
| 500 Max Kolb, deep blue | 10 | 0 |
| 300 Old Gold, golden | 10 | 0 |
| 2000 Pembroke, best yellow in cultivation | 10 | 0 |
| 1000 Princess Louise, bright yellow | 10 | 0 |
| 1000 Prince of Wales, golden yellow | 15 | 0 |
| 500 Princess Beatrice, rose, dark centre | 10 | 0 |
| 300 Queen of the Year, china blue | 15 | 0 |
| 500 Kosea Pallida, pale lilac | 12 | 0 |
| 200 Sunset, yellow and crimson | 15 | 0 |
| 500 Sovereign, golden yellow | 12 | 0 |
| 200 Sylvia, cream white | 10 | 0 |
| 1000 Skylark, white, edged blue | 10 | 0 |
| 200 True Blue, dark blue | 10 | 0 |
| 500 The Mearns, shaded plum | 10 | 0 |
| 500 Violetta, white, yellow eye | 10 | 0 |
| 500 Wm. Neil, rose | 10 | 0 |
| 800 White Empress, splendid white | 15 | 0 |

Not less than 25 of one variety sold at 100 rate.

12 of the choicest and newest varieties, including Cosmos, Hamlet, Joseph, Rowberry, Isa Ferguson, Pearl, 6s.

12 Choice varieties not in above list 3 6
100 in 50 varieties, our selection 15 0

ALL POST FREE.

SPECIAL TERMS TO THE TRADE.

The Managers, Hood Gardens, Totnes.

JOHN LAING & SONS

Beg to Invite their

PATRONS AND FRIENDS TO VISIT THEIR NURSERIES,

JUST NOW IN FINE ORDER.

ALL REQUIREMENTS FOR THE GARDEN AT MODERATE RATES.

Catalogues Post Free.

Catford Railway Station.

Telephonic Communication, "SYDENHAM, 60."

FOREST HILL, LONDON, S.E.

And CATFORD, KENT.

Also the Floral Depot, International Universal Exhibition, Earl's Court, S.W.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. MCARTHUR, The London Nurseries, 4, Malda Vale, London W.



"Gardening is the preest of human pleasures, and the greatest retreachment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JUNE 11th, 1898.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, JUNE 14th.—Royal Horticultural Society: meeting of committees at 12 noon.

WEDNESDAY, JUNE 15th.—Grand Yorkshire Gala (3 days).

THE JOURNAL OF THE KEW GUILD.—

This annual becomes more firmly rooted in the esteem of all connected with it from year to year. The issue for 1898 (No. VI, of the series) is now before us, and is as interesting as any that have preceded it, if not more so. The leading features of arrangement are the same as in previous years, but necessarily differ in detail on account of the numerous bits of biography, auto-biography and the personal experiences of various past Kewites throughout the world. Some may remark that these things can only interest Kewites, past and present; but apart from the fact that there is a good sprinkling of gardeners, who have been at Kew, now settled down in various parts of the British Isles, as well as in other countries of the Old and New World, scattered towards every point of the compass, the stories, incidents and biographies by various writers are of interest to gardeners, whoever and wherever they may be. They cannot be otherwise than finger-marks, guides, or monitors, and "foot-prints on the sands of time" for the younger generation of gardeners, who are preparing to follow in the footsteps of their predecessors, or to chalk out fresh lines for themselves in the pioneer-work of the horticultural world.

The frontispiece is a portrait of Prof. Daniel Oliver, F.R.S., F.L.S., LL.D. (Aberd.), late keeper of the Herbarium. This is followed by a short biography or memoir from the pen of William Botting Hemsley, F.R.S., F.L.S., principal assistant (Phanerogams) in the Herbarium. The venerable professor is now in his 68th or 69th year, living in retirement, as active as ever, and in the enjoyment of good health. He acted as keeper of the Herbarium from 1864 to 1890, working with untiring zeal and setting an example in punctuality to every one during the whole of that time.

He enjoyed a distinguished position amongst botanists, and the esteem and respect of everybody with whom he came in contact.

The report and balance sheet show that the sum of £43 15s. 7d., including a much smaller balance from 1896-7, stands to the credit of the Guild for the past year. The capital account, together with the stock in hand, shows the total assets of the Guild to be £166 17s. 7d. We mention these facts merely to show that the institution stands on a firm basis, and that there will be no difficulty in meeting the annual liabilities, notwithstanding the aloofness of certain of the old members who do not or cannot send their subscription of 1s., for which misdemeanour some would fain scratch the names of the offenders from the list. We think it would be a more important point to settle how long a name may be retained in the annual register, whose present address still remains a blank, since they retired into the bush or backwoods in distant countries.

The changes and improvements in the houses and grounds at Kew, several of which we have mentioned from time to time, are all recorded here, and will be of interest to members at a distance. While His Majesty the King of Siam was sojourning in our midst last year he visited Kew and displayed exceptional interest in plants as well as a knowledge of them. As a memento of his visit he purchased and took with him the prize collection of British plants collected by Mr. D. Tannock in 1896, and numbering some 400 species, all named and mounted. If we were Mr. Tannock we should make a fresh collection and name it the successor to that taken away by the eastern potentate in question, even if it cost us several all night journeys to complete. Several of the writers of short notes are distinctly funny, and the lodgings question is again reviewed. A friend of one Kewite was annoyed at the way in which his provisions found their way into other hands (mouths?), so in bringing home some fresh herrings he removed their eyes to prevent them from straying; but those that turned up at the breakfast table next morning had eyes, but though they could not see, the man to whom they were presented could, and disowned ownership.

Judging from recent discussions in the gardening, but particularly the lay Press, there will be an outburst of indignation (some would say fanaticism) at the appearance of a portrait in the *Journal* of the first lady gardener who has taken sole charge of a garden on the same terms as a man. We refer to Miss Annie M. Gulvin, gardener to J. Brogden, Esq., Iscoed, Ferry-side, South Wales, who gives an account of her first year's experience of the place. The difficulties with which she had to contend were neither few nor small, and even-minded gardeners will, we think, sympathise with rather than chastise her, for the part she has taken in horticultural affairs. The place must have been in a greatly dilapidated condition and overrun with vermin from greenfly to rats, mice and birds, the latter being so daring and confident as to break glass in order to steal the fruit. Her predecessor must have been antiquated, and possibly would be disowned by his brethren of the profession, if all is true regarding the neglect of duty attributed to him. Miss Gulvin has an assistant lady gardener and four men, who having been taught submission, now take their subordinate positions meekly. She has already taken a first prize for vegetables at a local show, and has otherwise given such satisfaction that her salary has been raised £10 a year.

Many other interesting bits are furnished

by old Kewites, including an account of Mr. William Cameron, who left Kew in 1857 and left his footprints in the Botanic Garden, Peradeniya, Ceylon. He was the planter of the giant Bamboos by the river-side in that garden, the pictures of which have astonished many a reader in this country besides ourselves. Mr. Cameron is now a tea planter in the district, and his story is furnished by Mr. MacMillan, the present curator of the Botanic Gardens.

The several accounts of different parts of Africa also make most interesting reading, particularly travel and gardening in Cape Colony, pioneer work in the hinterland of Lagos and British Central Africa, all of which may be read with profit, particularly by those who may ultimately find their way into darkest Africa. The piping times of peace, no less than the piping times of war, are fraught with danger to those who follow the peaceful profession of gardening and arboriculture in distant lands. We are reminded of this in the chapter on "In Memoriam," giving a brief account of six past Kewites who have fallen in the strife more or less recently, including the late Mr. Willey, curator of the Botanic Station at Sierra Leone. Silently and undauntedly the gaps are filled up by brave men from the mother country.

Gardeners' Royal Benevolent Institution.—We learn with pleasure that Messrs. J. Veitch & Sons, Ltd., Chelsea, gave a donation of £20 to the Festival Dinner Fund of this institution, the dinner taking place on Wednesday last.

Mr. G. W. Cummins, late gardener to A. H. Smee, Esq., The Grange, Wallington, Carshalton, Surrey, has been appointed head gardener to W. H. Lumsden, Esq., Balmedie, Aberdeenshire. We wish Mr. Cummins every success in his new appointment, and his numerous friends, we feel sure, will re-echo that sentiment.

Staging Vegetables at Edinburgh.—I notice in the schedule of the Royal Caledonian Horticultural Society that there is an addition of a class for sixteen varieties of vegetables to the class for ten, but exhibitors are asked to stage them on the same space as for ten, namely, on a box or tray 4 ft. by 3 ft. Surely this is an oversight, as the above space is barely sufficient for ten, far less for putting sixteen dishes on it. Why exhibit vegetables on trays at all? We do not see collections of fruit arranged as such; indeed, anyone who has sixteen dishes of vegetables to take by rail has sufficient excess to pay without adding the weight of a staging box. None of the leading vegetable exhibitors in England, such as at Shrewsbury, Reading, the Royal Aquarium, and many others I could mention, see any necessity for it. All that is required is a distinct division between each collection.—*James Gibson, Devonhurst, Chiswick.*

The National Dahlia Society.—We are in receipt of a most useful official catalogue of this society, the appearance of which all Dahlia lovers will cordially welcome. It is compiled upon similar lines to the catalogues sent out by the National Chrysanthemum Society, is well printed, and runs to forty-seven pages of printed matter exclusive of advertisements, and the red covers. The contents comprise a short history of the Dahlia, its bibliography, not as yet very extensive, selected lists of the best varieties of Dahlias of each section, together with the special characteristics of the different sections; and a general alphabetical list of all varieties in general cultivation in Great Britain, with the name of the raiser, and the date of sending out. A good deal of information has thus been collected, and the greatest credit is due to the compilers. Perhaps the "selected lists" above referred to are the most useful portion of the work, for descriptions are attached to each variety. In these lists the arrangement is not alphabetical but according to merit, the records of each flower at the recent exhibitions of the society being taken as the test of merit.

Kew Visitor to Friend.—"These are Orchids, and some of them catch flies and eat them.—*Patterson.*"

The Oldest Tree in the British Isles is said to be the Brabourne Yew, in Kent, the age of which is 3,000 years.

The Smallest Known Plant, says the botanist, is the Yeast. Well, if this is really the case the fruits are most universal.—*Patterson.*

The works of him who builds begin immediately to decay, but those of him who plants begin immediately to improve.—*Old Saying.*

The chap who made that remark had never been in a London back-garden.—*Sniggs.*

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, June 14th, in the Drill Hall, James Street, Westminster, 1.5 p.m. This will be the first meeting at which the Sherwood £10 ros. Silver Cup for annuals and biennials decoratively arranged will be competed for. A lecture on "Orchid Hybrids" will be given by Mr. James O'Brien, V.M.H., at 3 o'clock. Committees will meet as usual.

Galloway Floral Fete.—The date of the Galloway Floral Fete has been altered from August 17th, to August 18th, on which day the management committee has arranged for a military tournament to be given by a detachment of the Argyle and Sutherland Highlanders from Glasgow. The committee have also engaged the band of this regiment for the occasion, which in itself is a sufficient outside attraction. We are informed that this annual fete, which is now the only affair of the kind in Galloway, promises to be even more successful than the one held last year, and we hope these expectations may be realised. The fete is to be held in Kirroughtree Park, Newton-Stewart.

Recorded Sunshine.—The new sunshine recorder which was put into operation at the Greenwich Observatory at the beginning of last year, gave a total of 1,543 hours of sunshine during the twelve months. There were only 1,529 hours of bright sunshine out of the 4,454 hours during the time the sun was above the horizon of our murky skies. The Kew Observatory recorded 1,575 hours of sunshine during 1897, and, as usual, Bunhill Row, London, was again at the bottom of the scale with 1,279 hours of sunshine. The mean temperature for the year was 50.3° Fabr., being 0.9° above the average of the past fifty years. The highest temperature in the shade was 90.2°, which occurred on June 24th. The number of rainy days last year was only 149 in the London district, during which time there was a rainfall of 17.33 in., being 7.21 in. below the average of the last fifty years. The wind had an average velocity of 288 miles per day.

Devon and Exeter Gardeners' Association.—Summer outing: The committee are now able to announce that arrangements have been made for an excursion which they trust will be as enjoyable as any hitherto taken by the association. By favour of His Grace The Duke of Bedford, the members and their friends have permission to visit Endsleigh, one of the most charming family seats in the county. The excursion will therefore be to Tavistock and Endsleigh, on Wednesday, July 6th. The L. & S. W. Railway have been good enough to undertake to provide saloon carriages for the party to and from Tavistock, and Mr. Squire, of the Bedford Hotel, there, has arranged to drive us out to Endsleigh and back in brakes. The party will leave Queen Street Station at 9.5 a.m., and reach Tavistock at 10.45 a.m. Opportunity will then be taken to inspect the various interesting memorials in that historic town, and at 12.30 p.m. a light lunch will be served. The brakes will leave at 1 o'clock for Endsleigh, where two hours will be spent. On returning to Tavistock, a substantial meat tea will be served, and the return journey be made from Tavistock, leaving at 7.55, arriving at Exeter at 9.28. The tickets to members, including railway and brake fare, light lunch and meat tea will be 7s. 6d.; tickets to non-members (friends of members), 10s. All tickets must be taken by Friday, 1st July. No tickets will be issued at the station.—*Andrew Hope, hon. sec., 54, High Street, Exeter.*

The Cottage Grounds in Kew Gardens will be left in their present "semi-wild and exceedingly picturesque state," says the *Journal of the Kew Guild*. The public will have access by a broad path commencing near the Isleworth Gate, passing towards the Kew Observatory, thence turning to the left past the Queen's Cottage to the Cypress Walk. Bluebells and Red Campion are at present the glory of the grounds, and it would be a public loss if either they or the Brambles were destroyed to make room for a public promenade.

A Flower Hunter in Queensland and New Zealand is the title of a book recently written by that intrepid botanist and artist, Mrs. Rowan. In it she relates the discomforts and calamities which attended her in her extensive peregrinations through the countries mentioned. As the result of her travels, Mrs. Rowan has increased her collection of drawings of the flora of these countries to a considerable extent, and she has something to say of snakes and other creeping things which are to be found whilst searching for the flowers. Mr. John Murray is the London publisher of the book, and the price is 14s.

Dutch Horticultural and Botanical Society.—The Floral Committee at the meetings of March 9th, April 20th, and May 11th, 1898, awarded First-class Certificates to Messrs. V. Schertzer & Sons, of Haarlem, for *Primula veris acaulis coerulea* (March 9th); to the botanical garden of Utrecht, for *Cineraria Lynchi* (May 11th); to Mr. Baron van Boetzelaer, of Maartensdijk, for *Eulophiella Elisabethae* (May 11th); and to Mr. A. D. den Older, of Leiden, for *Plantago lanceolata fol. varieg.* (May 11th). A Certificate of Merit was awarded to Mr. Baron van Boetzelaer, of Maartensdijk, for *Stauropsis (Vanda) gigantea* (April 20th).

Rose Show for Newton-Stewart, N.B.—We are pleased to observe that the committee of the Newton-Stewart Floral Fête are to have an exhibition of Roses, herbaceous plants, and horticultural sundries on the 6th of July. Already there is an assurance that the exhibition will be on a very large scale, some of the leading houses having promised to send exhibits, while the enthusiastic manner in which it is being taken up locally augurs well for a successful show. Any seedsman or nurseryman desirous of exhibiting any of their specialities should make early application to the secretary, who will be pleased to allot sufficient space and see to the proper erection of the stand. We wish the exhibition every success.

To Encourage the Children.—The Toronto Horticultural Society proposes to make a most commendable departure from the general routine of the conduct of such societies by presenting 1,000 plants to the children of public schools in the city, such plants to be cared for by the recipients and exhibited by them at the Chrysanthemum show in the fall, when prizes will be given to the best specimens. The children will thus be induced to take a deep interest, which in many cases will be likely to culminate in an abiding one, in plants and plant life, apart from the interest that the healthy, and health-giving competition will inevitably promote. We should like to see the precedent thus established followed in every centre, not only across the Atlantic, but in this country and the Continent as well.

The Lands of Arniston, which belong to the family of Dundas, of Arniston, the head of which house is down for a baronetcy in the list of Birthday Honours, extend to upwards of 10,000 acres in Midlothian, 1,000 acres being well covered with timber. The estate lies at a considerable altitude on the northern slope of the Moorfort Hills, and although naturally in an exposed situation has been so well looked after since it was acquired by the house of Dundas in 1591 that it is one of the most fertile estates in the upper districts of the Lothians. The author of *Waverley* was a frequent visitor at Arniston, for in his diary we find the following entry:—"I am always happy in finding myself in the Old Oak Room at Arniston, where I have drunk many a merry bottle, and in the fields where I have seen many a hare killed." Sir Robert Dundas, the present proprietor of Arniston is an enthusiastic arboriculturist, and the members of the Scottish Arboricultural Society are always certain of a hearty welcome from him.

Violent Contrast.—The Judas-tree and Love-tree are popular names applied to *Cercis Siliquastrum*.—*Patterson*.

The Orchid Houses at Kew have long been inadequate for the proper housing and cultivating of this important and popular class of plants. For some days past they have been undergoing demolition, and are to be replaced by four smaller houses built or constructed on the principles most approved by the leading Orchid-growers. The Orchid pits will also be extended.

They mistook both cause and remedy.—A London suburban gardener, being greatly annoyed by his plant enemies, went across the way to get a bottle of Lemon Oil from the local sundriesman, and was returning with the bottle exposed in his hand. Two missionaries (natives) seeing the bottle and a serious face, and never divining the cause of the trouble to be of the common or garden bug order, held out a tract with the encouraging words, "Here my good fellow, this will cheer you."—*Snaggs*.

Bad for the Glasshouses.—On Saturday, the 14th ult., a severe hailstorm visited Kansas City, Mo., U.S.A. The damage done by the hailstones was very great, their average size being from 8 in. to 9 in. in circumference according to reports, whilst it is stated that some of them weighed from 8½ to 9 ozs. each. Not only glass but crops of all kinds have suffered much, and, in fact, many of them have been totally destroyed by this aerial bombardment. To quote the words of our contemporary, *The Florists' Review*, the place was "simply Deweyized."

The Lily Fields of Bermuda.—It is well known that it is from Bermuda that many of the necessary supplies of *Lilium longiflorum*, and its charming variety *L. l. Harrisii* are annually drawn, but just exactly how these Lilies first got to Bermuda is not known. It is probable, however, that they were first taken thither by some of the English governors, and quickly making themselves at home in the soil and the climate became generally distributed amongst the gardens in the islands. The cultivation of *L. l. Harrisii* for sale was in reality opened up by Mr. F. R. Pierson, of Tarrytown, N.Y., U.S.A., in the autumn of 1881. Mr. Pierson's attention had been previously called to the fact that the Lily grew with freedom in the Bermudas, and this visit which was fated to have such far-reaching results was made as the immediate consequence. Arrangements were made by him with General Russell Hastings for the systematic cultivation of *Lilium Harrisii*, and from this point the industry increased in size and importance year by year until it reached its maximum in the years 1894-5-6. In 1896, the number of bulbs grown amounted to upwards of 4,000,000. Since that time the acreage devoted to the bulbs has decreased, and prices have advanced somewhat, but the industry is still one of the chief sources of revenue to the islanders.

Fruit Prospects in North Britain.—At Saughall the outlook is decidedly favourable. Apples are an average crop; Pears, Raspberries, Gooseberries, Currants, and Strawberries very good, the latter having greatly benefited by the recent copious rains; Cherries, Plums, and Damsons, very fair, and Apricots decidedly above the average. At Ince, despite an abundance of bloom, all except small fruits will be scarce. At Norley, on the other hand, they all promise well. Shocklach has suffered severely from blight, and heavy thunderstorms followed by frost. Plums, Damsons, Pears, and Apples have received a deal of damage. At Backford, the Damson trees have been attacked by green fly, and the prospects of a crop are not inviting. Pears are a full crop in this district, however, and Plums and Apples are fair. Fordsham and Kingsley have both suffered severely from the cold weather and hailstorms of May. The trees bloomed well, and set well for fruit, but the inclement weather has blackened and withered the leaves and fruit. Such Pears as Jargonelle and Hessele, both of them prime favourites in the neighbourhood, are an utter failure. Cherries, however, look well, and are thus an exception among stone fruit, which is poor in this district. The season, which a few months ago looked as if it were going to be early, seems now to be rather backward, so much time having been lost through the very cold spring.

The Daisy did not make its appearance in the Southern States of America till after the civil war; and is believed to have been transported there in the hay sent to feed the army horses.

The Hardy Azaleas in the pleasure grounds at Kew have been in their glory for many days past, the early, midseason, and late varieties keeping up a very lengthened display. Their delicious and powerful Honeysuckle fragrance may be perceived far down the wind on the lee side of the beds; and their masses of brilliant colours may be sighted for great distances down the vistas or grassy avenues between the trees. Some of the shades of colour that may be noted are white, pink, lilac, rose, purple, cream, sulphur, yellow, golden-yellow, orange, orange-red, salmon, red, scarlet, crimson, glowing fiery-red, &c.

The Great Exhibition of British Grown Fruit held under the auspices of the Royal Horticultural Society since the year 1894 is one of the great horticultural events of the year. It is held by the R.H.S. conditionally upon the receipt of donations towards the prize fund of £100, and we are pleased to see that a sufficient sum has been received to admit of the schedules being printed and circulated. The show will be held as usual at the Crystal Palace, the dates fixed being September 29th, 30th, and October 1st. In view of the present general favourable promise for a good fruit year we may expect to see a display fully equal to any that have gone before. Prizes are offered in 172 classes. At the end of the schedule lists are given of the varieties of Apples, Pears, and Plums, each variety being placed in the section in which it will be allowed to be shown by the society. In view of the confusion between culinary and dessert varieties of the fruits named that existed until the R.H.S. took the matter in hand, these lists must be of vital importance to intending exhibitors.

A New Park for Margate.—The good people of Margate are indebted to the public spiritedness of Mr. John Woodward, a native of Margate, and a member of an old Margate family, but now a resident of Croydon, for a very handsome breathing space known as Dane Park. About three years ago certain farm lands situate in the Dane Valley, immediately adjacent to the town, came into the market. Mr. Woodward then conceived the idea of purchasing them, and presenting them to the town as a site for a public park and recreation ground. This he did in February, 1896, and the only conditions attached to his munificent gift were that all the roads of the estate should be fifty feet wide, and that the work of preparation should be completed within twelve months of the following Michaelmas when the tenants should give up possession. The laying out of the park was entrusted to Messrs. Cheal & Sons, of Crawley, Sussex. Mr. Joseph Cheal, the landscape gardener of the firm, has with great success undertaken the laying out and planting of various public parks in different parts of the country, and is the recipient of the Gold Medal given for this class of work at the Gardening and Forestry Exhibition at Earl's Court in 1893. Mr. Cheal has certainly made the most of the natural advantages of the Dane Park, which is twenty-three acres in extent, ten acres of the original purchase having been disposed of to defray expenses. On entering the grounds the visitor is attracted to the lake, a small but picturesque piece of water overhung with fine old trees. There is a miniature island in the centre of the lake, and in the background some imposing rockwork prettily planted with a variety of subjects. Clumps of trees and shrubs, and lines of trees are planted over the whole of the ground. The cricket field, lawn tennis courts, bandstand, shelters, and children's playground are other features that will not lack appreciation. The seats provided are due to the kindness of the Hon. Member for Thanet. The opening ceremony was performed on Wednesday, June 1st, by the Lord Mayor and Lady Mayoress of London, who were received by all the *élite* of the neighbourhood, including the Mayor and Mayoress of Margate (Mr. and Mrs. G. F. Brown). The whole town was *en fete* for the occasion, and the decorations and illuminations were carried out upon an extensive scale. Commemoration trees were planted at the close of the opening ceremony by the Lady Mayoress, the Mayoress of Margate, Mrs. John Woodward, and Miss Coleman.

ORANGE TREE IN GUERNSEY.

WE have pleasure in enclosing photograph of an Orange tree growing in our island, and if you reproduce it in your valuable paper, we think it will interest and possibly surprise many of your readers. The tree itself is a proof of our mild climate. It was planted in the year 1853, against a dwelling house, the property of John de Jersey Lainé, Esq., in the parish of St. Saviour's; the aspect is due south, hence it has the benefit of all the sunshine we enjoy. It covers about sixty-four superficial feet, and is loaded with fruit every alternate year. At this moment, May 30th, there are some 200 Oranges just on the point of ripening. The tree flowers during the month of June, and the perfume is spread at some considerable distance from the house.

The present proprietor, J. A. N. Lainé, Esq., informs us that only a slight covering is used during



ORANGE TREE IN GUERNSEY.

frosty weather, otherwise it is left quite exposed. It is liberally manured with road sweepings and decomposed cow dung during the early spring. We may mention that in most seasons the fruit is very juicy and sweet. — *W. Mauger & Son, Bulb Growers, Guernsey.*

GARDENERS' CHARITIES.

I WAS sorry to read Mr. Fletcher's letter in the GARDENING WORLD of last week with regard to "Gardeners' Charities" as I think them all excellent institutions and managed as economically as they possibly can be. I think we ought to feel pleased if in contributing to them we render assistance to others, even if we get no direct benefit ourselves. I should think from the tone of Mr. Fletcher's letter he is not aware of the existence of the United Horticultural Benefit and Provident Society, which is really a benefit society and savings bank (some of our oldest members having over £30 standing to their credit). I have been a member over twelve years and I can assure our friend that not a penny of our money is wasted, although I am aware that some so-called societies (not gardeners') are grossly mismanaged. I am afraid it would take up too much space here to give full particulars, especially as the Editor kindly gives full reports of our meetings from time to time, but I think if Mr. Fletcher will send to our secretary at the address given in the GARDENING WORLD for a copy of our Rules, he will see that our society covers all the requirements he has suggested. — *H. Peerless.*

Spain has more Sunshine than any other country of Europe, the yearly average being 3,000 hours.

CARNATION URIAH PIKE.

FOR some time past the existence of this variety, which suddenly became so popular a few years ago, has been held in the background. Gardeners are quietly cultivating it, however, and using it to good purpose in their houses and as cut flowers. A fine bunch of flowers reached us the other day from Mr. A. Pentney, The Gardens, Worton Hall, Isleworth. The rich velvety-crimson flowers make a fine contrast with the sea-green hue of the foliage. They are also of great substance and very durable, lasting for several days in excellent condition in the dry state, so that they ought to remain fresh for a longer period in water. Many varieties are relatively short-lived, but particularly in summer. The well-formed, stout calyx does not split; while the clove-like fragrance of the flowers keeps up its power apparently as long as the flowers last.

RHODODENDRON ANTHOPOGON.

YELLOW-FLOWERED Rhododendrons, apart from those generally spoken of as Azaleas, are comparatively rare in the outdoor garden. That under notice is a native of Northern Asia, and has been flowering for some time in the neighbourhood of King William's Temple, Kew. The oblong or lanceolate evergreen leaves are only about 1 in. long, and rusty beneath, as in the European *R. ferrugineum*, though otherwise very different. The flowers are small, pale, clear yellow, and produced in dense clusters at the apex of the numerous shoots and branches.

MESSRS. VEITCH'S ORCHIDS.

SOMETHING interesting may be found at all seasons of the year in the nurseries of Messrs. J. Veitch & Sons, Ltd., Chelsea. Every season has its special kinds, and in spring these are more abundant than at any other period; but the numerous hybrids for which this establishment has long been famed enable the firm to set up a group consisting entirely of garden creations at many of the R.H.S. meetings and elsewhere. Some or other of them are in bloom all the year round. As we passed through the houses the other week, however, there was a great wealth of flowers of a very varied nature.

The glory of the cool houses was undoubtedly the *Odontoglossums*, amongst which *O. crispum* and its endless varieties take the premier position. Of this there were numerous arching spikes of round and otherwise well shaped flowers, of white, pale rose, dark rose tinted and handsomely blotched flowers, with broad, imbricated segments. As beautiful as puzzling was a natural hybrid suggesting *O. crispum*, and *O. wilckeanum* as the parents. The flowers were richly blotched with brown on a light yellow ground. *O. luteo-purpureum* also exhibited great variety, including fine dark blotched forms. The vigour of *O. Hallii* was particularly noticeable, the flowering stems being 3½ ft. to 4 ft. long. All of the above occupied stages which placed the flowers in a convenient position for inspection.

The *Oncidiums* contributed their quota to the general display. One of the prettiest and most attractive was *O. spilopterum* with its rich purple, cushion-like crest on the lip, suggesting the specific name. This as well as the uniformly yellow *O. concolor* were suspended in Orchid pans. Many well grown plants of *O. macranthum* are now making their presence felt by their long racemes of bloom.

Passing into the warmer houses an even greater variety of species and hybrids invited inspection. There appears to be a considerable amount of blue in the showy flowers of *Dendrobium lituiflorum marmoratum*. Very pretty are the light yellow flowers of *D. cheltenhamense* (*aureum* × *luteolum*) with an orange blotch in the throat. The greenish-golden disc of *D. Boxallii* marks out this as a beautiful and most interesting type. Interesting and uncommon sorts are *D. Parishii* and *D. japonicum*, there being a fine importation of the latter sweetly scented species.

The large panicles of *Oncidium sarcodes*, *O. divaricatum*, and *O. phymatochilum* are both conspicuous and effective, owing to the graceful poise of their myriads of flowers. The pale salmon sepals and petals of *Coelogyne tomentosa* are pretty, but what shall we say of *C. dayana*, with fifteen of its long, pendent and graceful racemes of flowers? The racemes of fragrant white flowers of *Angraecum modestum* reach a length of 18 in. The sepals and petals of *Vanda striata* are pale yellow, and the white lip is heavily striated with reddish-brown. A vigorous and healthy piece of *Phalaenopsis luddeloviae* was flowering finely. The long and massive panicles of *Oncidium carthaginense* and *O. ampliatum majus* are always conspicuous by reason of the quantity of flowers they bear. Of *Cypripediums* in the same range of houses we singled out *C. Annie Measures*, *C. ciliolare*, and *C. mastersianum*, all widely distinct.

The rock house is always a centre of interest, because it forms a sort of conservatory in which the species that like an intermediate temperature may be kept while in bloom. The huge flowers of *Oncidium marshallianum* are strikingly gorgeous. A piece of *O. divaricatum* carries about 500 flowers on a spike 4 ft. to 5 ft. long. *Sobralia macrantha* has been flowering for more than two months past. Well

STAUNTONIA LATIFOLIA.

IN Devon this is a perfectly hardy evergreen climber and thrives well with us on an east wall, flowering each year fairly well early in May; but I think if it had been given a southern aspect better results would have followed. The individual flowers are rather small, but delightfully fragrant. It is a native of the Himalayas, and was introduced in 1840. It is sometimes found under the name of *Holboellia latifolia*. Any pruning necessary should be done early in the autumn; the long, trailing shoots should be cut back each year or it very soon becomes a perfect mass, which proves detrimental to its flowering.

It is usually propagated by cuttings of half-ripened shoots; but in January of this year a lady living at Paignton, near Torquay, forwarded me a ripe, purple, oblong fruit, about the size of a duck's egg, which I quite thought was a fruit of one of the *Passifloras*. I sowed the seed on January 29th, and when fit, potted off half a dozen young plants which are doing well. Last month the lady kindly sent me flowers and foliage of this climber, which I at once identified as *Stauntonia latifolia*. The plant from which the fruit was taken (it carried several) is trained on a verandah in front of the house; otherwise it is quite unprotected. Is it not unusual for this plant to fruit out in the open in this country? Perhaps Mr. Editor or some kind reader can enlighten us on the subject.

—*James Mayne, the Gardens, Bicton, B. Salterton.*

[We have never seen this climber in fruit, and do not recollect such an occurrence having been brought to our notice. It is usually looked upon as a cool greenhouse climber, and though it grows against walls in the latitude of London, it would naturally succeed better in Devon, where the winter is usually much milder.—ED.]

known and useful sorts are *Cymbidium lowianum*, *Maxillaria sanderiana*, and *Epidendrum elegantulum*, the latter being a secondary hybrid replete with numerous colour varieties. A fine variety of *E. Wallisii*, with golden-yellow sepals and petals, carried twenty-seven large flowers. Beautiful also is *Trichopilia marginata Champlatreux var.*, having a rosy-purple lip, and paler sepals and petals, outlined with a broad white margin. *Calanthe Masuca* is a rare old and pretty species, having purple-blue flowers. The sepals and petals of *Bifrenaria tyrianthina* are delicate lilac, overlying white; the orange-brown and purple-lined lip is heavily bearded all over. Many fine varieties of *Vanda tricolor* are noticeable. *Epidendrum radicans* grows with so remarkable vigour that it reaches the roof of the house every year in September, after which the upper portions of the plants are taken off and lowered into the pots. Numerous plants have been flowering all the winter, and still continue to develop their fiery scarlet flowers.

The *Cattleya* house has been particularly gay for weeks past, there being a great variety of rich colours in *Cattleya Mossiæ* and *C. Mendelii*, which are grown in great quantity. Other showy species are *C. lawrenceana*, *C. schilleriana*, *C. Skinneri*, *C. Schroderae caerulescens*, and *C. Roezlii*, the latter being yellow with a prominent purple blotch on the lip. Altogether there are something like 300 spikes of *Cattleyas*.

No less numerous are the species and hybrids of *Laelia*, of which the dark crimson-purple lipped *L. purpurata*, and the varieties with white sepals and petals are numerous and very ornamental at this period of the year. Other species are *L. cinnabarina* and *L. elegans*. The orange flowers and crimson lip of *Laelia Latona* are particularly handsome for this hybrid. The large, intense purple lip of the bigeneric hybrid *Laeliocattleya wellsiana* is very gorgeous. Of *Laeliocattleya Ascania* we noted four different colour varieties. It comes from *Cattleya Trianaei* × *Laelia xanthina*. The flowers are yellow, intensifying in the throat of the lip which is margined with soft lilac. In size the flowers is intermediate between those of the parents and charmingly pretty. A choice named variety is *Laeliocattleya Ascania superba*, having an intense purple lip, the dark colour running much further down the throat than in the type. A singular combination of colours is presented by *Dendrobium glomeratum*, having rich rosy sepals and petals contrasting with the rich orange-scarlet lip. The plants at Chelsea are always profusely flowered.

THE VIOLA.

THESE flowers are, in spite of the backward season, making a fine show in some of the Scotch nurseries. To see them at their best one should see them growing. An examination of the flowers at flower shows may give one some idea as to the value of a variety for competition, but you cannot tell whether it may be a good bedder or not. Although many of the best competition sorts are good hedders, some of them grow too tall.

One of the best varieties noticed is *Accushla*, a very pure white ground, heavily edged with purple. A bold and telling rayless yellow is *A. J. Rowberry*. An immense showy flower is *Butterfly*, the ground being pure white, edged with rose. *Blue Gown* is a gem for bedding, very light blue, and about 4 inches high. *Dorothy Stokes* is a massive fancy flower, purple ground, striped crimson. A white variety which takes one's fancy is *Duchess of York*, which has a dwarf tufted habit and throws its pure white flowers well up. Very pretty is *Iona*, which is one of the *Magpie* type. A very unique flower is *Jessie Pretswell*, the ground colour being white, striped with crimson and purple. *Lizzie Barron* is a large and fine rosy-purple self. A large showy white is *Lady Salisbury*, which is rayed. A very fine rayed lemon-yellow is *Lord Salisbury*. Another very bright rayed yellow is *Lizzie Paul*. *Magic* is a very pretty shade of light rosy-crimson, a very pleasing colour. An immense pure white is *Nellie*. *Princess Louise* is a very fine yellow bedder. A very sweet shade of rose is *Princess Ida*. The same may be said of *Sissy Mellows*, which is violet shading to lavender at the sides. *Sheelah* is a charming flower with a clear pale rose on the top petals; lower petals deep pink with darker centre. A very fine dark blue

is *Wm. Haig*. The above are a few of the best at the time of my visit.—J. J.

FRUIT UNDER GLASS.

THE dull, damp, and rather cold weather has been rather a trying time amongst under-glass fruits. At such a time the Vines particularly are apt to show their dislike of the experience by very flaccid foliage, of poor substance, and very light green in colour. Where this is the case the outbursts of hot sunshine that will come presently must be carefully watched, otherwise there will be a good deal of scorching to deplore.

NIGHT VENTILATION.—If the practice of leaving a little top, as well as bottom, air on all night has not been commenced up to the present, it should be started now. A couple of inches of air upon the top lights will be quite enough for a start, but it will help greatly in the making of stout and healthy foliage, and will, moreover, help to diminish the risk of scalding in Vines. Peaches and Nectarines, as well as orchard house fruit generally also benefit largely by night airing.

LATE VINES.—As the fruit here has now set, the thinning will require to be pushed on with all possible despatch. In the case of backward bunches only the small and inside berries should be removed at first, the work of thinning the rest being left to a later time, when the process of swelling is further advanced. All these late houses should have a temperature of about 70° Fahr. by night, although if it should occasionally drop down to 68° no great harm will be done. By day the temperature will much depend upon the weather; if bright it may rise to 85° without any danger, provided there is a good circulation of air. In dull weather the glass will probably not touch 80°, and may possibly not rise above 75°.

GRAPES RIPENING.—Houses in which the fruit is colouring will need to have a brisker and rather drier atmosphere maintained than hitherto, in order to expedite the ripening process. To this end the dampings down and syringings that have been regularly and frequently given should be discontinued at once. Any plants that may be in the house should likewise be removed. Vineries have often to accommodate a variety of plants in pots, more especially Ferns, which do really well up to this stage; now, however, the air will be rather too dry for their liking, and they must be given shelter elsewhere. The lights should be opened wider than they have been up to the present, and every effort should be made to maintain a continual current of dry air through the house. Manurial stimulants of all kinds may be dispensed with after the first stages of ripening are past, but clear water must be given, especially where the roots of the Vines are wholly inside the house, and therefore soon liable to feel the effects of drought. It is quite a fallacy to make total abstinences of the Vines from the time that the fruit commences to colour, under the idea of helping the fruit to colour. Under such treatment both colour and flavour are apt to be second rate.

PEACHES, NECTARINES, AND CHERRIES in pots that are now ripening their fruit should be given all the benefit of what sunlight there may be in order to put a good colour on the fruit. The whim of sending the fruit to table as it grows upon the trees seems to be growing in some quarters, and it is only by keeping a stock of medium-sized pot plants that the gardener is able to gratify it. As the condition of perfect ripeness is reached each Peach, and also each Nectarine if they be large and heavy, should be enclosed in small bags, so as to insure their being kept in place while they are being moved. After the trees have safely reached their destination the bags may be removed in order to allow guests more ready access to the fruit.

LATE POT STRAWBERRIES.—The season for forced strawberries in drawing very near its close. Only the very late pot plants are left, which will join hands with the earlier outdoor crops. Some of the finer flavoured but rather intractable varieties come in admirably at this juncture. Take for instance, *British Queen*, which is very often with many a failure out of doors, and but a qualified success when forced in pots early in the year. The best method of treating it seems to be to put some pots of it into a very gentle heat about the beginning of March, and to allow them to come along very

gradually, not much faster indeed than they would in the open ground, Nature only being anticipated for a space of about three weeks. Such plants are now bearing plenty of good fruit. With so many fine varieties it may seem superfluous to take so much trouble over one, but there is no finer flavoured Strawberry than *British Queen*, and it is often asked for in private establishments where the cost of production is not so closely watched.—*A. S. G.*

Kitchen Garden Calendar.

GENERAL WORK.

As the ground becomes cleared of the early Potatos and Peas, it should again be sown or planted with some other crop—the kind must entirely depend on the position and requirements of the establishment. Where early Potatos are grown on south borders the position is a good one for sowing Carrots to give a supply during winter, as they will be somewhat protected from the severity of the weather should there be hard frost. Such positions are also good ones for early Broccoli that turn in about Christmas, as the borders can again be cleared in time for forward crops another season.

Where Peas and Potatos are grown in the open quarters the crops will not be lifted or gathered for another few weeks, but to make the most of the land, plants should be had in readiness for putting out as soon as the other crops are cleared off. In many gardens Broccoli and Savoys are much in demand during the winter, and as sufficient space cannot be found for them to be planted out early in the season, recourse is often had to planting them between the rows of Potatos. When this has to be done, it is far better to put them between the early or second early kinds that do not produce much haulm, for when the tops of the Potatos overgrow the plants they become drawn and seldom prove satisfactory. In many places, too, there is not sufficient space to get out the Celery unless between some other crop, and gardeners are often put to their wit's ends to provide room. If the ground be set out in early spring for the various crops and those that are to succeed them much trouble and annoyance may be saved when the time arrives to sow or plant. Celery can occupy the spaces between the rows of early Peas, provided they are planted sufficiently far apart to admit of room for earthing; the plants will have taken good hold of the ground before the crop of the latter is gathered.

THINNING.—At this time of the year this is an important item in the growth of all crops. On no account should the plants of any kind be allowed to get overcrowded, as they soon spoil each other. Carrots, Parsnips, Onions, Beet, and such like root crops ought to be thinned in the first instance as soon as the foliage touches each other; and before they show the least signs of becoming drawn, the full space should be allotted to them. It is not necessary to thin Onions to any considerable extent unless extra large roots are wanted; for all ordinary purposes four inches will be ample, but where extra large bulbs are required a distance of from eight to nine inches should be allowed between the plants.

WATERING at this time of the year is also an important item, as no plants can make satisfactory progress unless provided with sufficient moisture; at the same time much harm is often done by giving dribbles. Never water until the plants actually need it, and then give sufficient to thoroughly moisten the soil to the depth of the roots. Peas, to grow them well, need much nourishment, because the space for them to grow in is usually limited, that is, many plants are growing close together side by side forming the rows. Much water is needed for all the roots to obtain the requisite amount. If the rows be thoroughly soaked and afterwards a mulching put along the sides, this will prevent a too rapid evaporation. The mulching should also be thoroughly soaked, as this will keep the soil underneath moist for a much longer period.

Often at this time of the year weeds grow apace, but these must be kept under at all points, for they soon seed, and as this will germinate after the first genial shower, the ground becomes filled with all kinds of rubbish. The hoe should be kept constantly at work when the weather is fine, as more execution can be done in one day when the sun is bright than in a week in dull, showery weather. Be careful in hoeing not to get too near the plants, as much harm is often done to root crops by scars with the hoe.—*Kitchen Gardener.*

HINTS FOR AMATEURS.

A NEW BREAK OF CLEMATISES.

AMONGST the many interesting and handsome plants which were forthcoming at the late Temple Show none were more worthy of note than the new type of Clematises shown by Messrs. Jackman & Sons, of Woking. In the genus Clematis we have a number of exceedingly beautiful plants, which cover a considerable range of variation, both in size of the flower, the period of flowering, and the habit of growth. With the exception of *C. indivisa lobata*, which needs the protection of a greenhouse, they are all hardy in our climate. The whole of this wealth of material is, therefore, at the disposal of the gardener for covering bare walls, ornamenting fences of all descriptions, or clothing all sorts of arbours and fancy arches. Quick to grow, and free to bloom, both large and small-flowered forms are, indeed, ideal climbing plants.

Not satisfied with all the beautiful forms hitherto in cultivation, the Messrs. Jackman & Sons have set to work to produce an entirely new break, and, judging from the plants exhibited by them at the Temple, they have abundantly succeeded. By crossing such varieties of the "patens" type as *Rubella*, *Fair Rosamond*, and *Mrs. George Jackman*, with the pollen of *C. coccinea*, really a variety of *C. Viorna*, and a native of Texas, an intermediate form has been obtained that bids fair to become of great service ultimately. Curiously enough the reverse cross, that is, when a variety of the "patens" type was employed as the pollen or male parent, yielded no results. Perhaps this difficulty may be surmounted in the near future, and if it is we may look for a considerable widening of the range of character exhibited by the break.

For the sake of distinction and easy reference the progeny has been labelled "hybrids from *C. coccinea*." Already there are several very fine and distinct varieties, and these will doubtless be added to in the near future. These we will speak of in detail presently.

The general characteristics of habit are the same throughout, and do not show much variation. The members of the "patens" section of Clematis are spring bloomers, the flowers being borne upon the ripened wood of the previous year, that is to say, upon year-old wood. In the new hybrids we have plants that flower upon the young growing wood of the same year as in the "Jackmanni" and "Viticella" type. The period of flowering, too, is late, as this difference in habit will prepare my readers to believe, for under ordinary conditions the flowers are produced in great profusion throughout the months of July, August, and September. The flowers themselves are quite distinct in appearance from any other of the Clematises. They are small, and bell-shaped, the narrow and acutely pointed segments being folded back (revolute) at the tips for about half their length. They are produced from the axil of each leaf all along the stem, as in *C. coccinea*, and are not borne in masses as in *C. Flammula*, but are solitary on rather long and fairly stiff stalks. This renders them eminently suitable for the filling of vases for dinner table, and other decorations. Moreover, they last well in water, so that for cut flower supplies alone they are worth the attention of the amateur.

Reverting once more to the matter of growth, they will frequently make shoots exceeding 12 ft. in length, and thus, if a flower is reckoned to the axil of every leaf on such a shoot some idea may be gained of the great floriferousness. After flowering the plants may be cut hard back in the usual way in which Clematises flowering on the young wood are treated. There is no fear of spoiling next year's crop by a free use of the knife. The plants throw up strongly from the bottom, and thus there is little danger of their suffering even in very severe winters.

Propagation, too, is remarkably easy, for cuttings inserted early in spring root quickly, and soon grow into plants that will bloom the same year, so that it will be seen that this new race of plants has much to recommend it to the favourable notice of the amateur. When shown by Messrs. Jackman & Sons at the Temple they were all in pots, and trained in the shape of balloons, but this was only done for

purposes of exhibition, since it is obviously impossible to show flowering plants of Clematis in anything like a natural way. The balloons, however, though stiff and ugly in themselves, showed off to advantage the free-flowering character of the race, and this in itself was no unimportant achievement.

The following are some of the best varieties. They are all well worth growing:—

Grace Darling.—The female parent of this was the handsome variety *Fair Rosamond*. The flowers are rather small, but the delicacy of the rosy-pink hue they manifest fully atones for this.

Duchess of York exhibits rather a paler shade, which may best be described as a flesh-pink. The female parent in this case was the large, satiny-white *Mrs. George Jackman*, with its delicate creamy bar.

Countess of Onslow is remarkable for the fact that its flowers usually have six petals, four and five being common numbers in the other forms, although even here examples of the smaller numbers are occasionally to be observed. The colour is a rich rosy-carmine, which looks exceedingly bright beneath any light, whether natural or artificial.

Sir Trevor Lawrence has deep carmine flowers, and is one of the richest hued varieties of the whole race. The flower stems are of exceptional length and strength.

Duchess of Albany is noteworthy by reason of the fact that it is the strongest grower amongst any or all of the allied forms. The leaves are not only larger and the stems stouter, but growth is more rapid, and the whole plant more vigorous than the rest. The flowers, too, are rather more open than those of the others, that is to say, the tube is shorter, and the segments turn back for a greater part of their length. In this case it is a distinct advantage, for the bright rose stripe which runs down the middle of each segment to the base is thereby rendered more apparent. The remainder of the flower is shell-pink.

Admiration, which is the darkest flowered form of any, yet owns the creamy-white and splendidly formed *C. Hearyi* as its mother. The influence of this variety is to be seen in the whiteness of the exterior of the flower. The interior is of a rich magenta purple, the contrast between the exterior and the interior being both striking and effective. It is difficult, indeed, to see this variety and withhold from bestowing upon it the admiration which it deserves, and which has been foreshadowed, as it were, in its varietal name.—*Rex*.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Mildew in Vinery.—*Anglo-Saxon*: The mildew has probably been caused by the exceedingly cold and dreary weather that it has fallen to our lot to experience of late. Even healthy Vines will become affected at such times, and we do not think you need trouble yourself to worry about the state of the roots of yours, unless, of course, you are certain that they are in a bad condition. You may dust the spots with flowers of sulphur, and a little of the sulphur may be sprinkled on the hot water pipes. The house may be kept rather closer and warmer than usual, and you should be particularly cautious in avoiding draughts. If these precautions are taken, the mildew ought soon to disappear, and will not injure the crop to any appreciable extent.

Mulching with Coconut Fibre.—*E. A. T.*: You may, if you choose, give the tuberous *Begonias* a mulching with the fibre, if the weather after planting out proves warm and dry, otherwise the mulching will do very little if any good, and we should prefer not to put it on yet. The value of such applications is that during dry weather they tend to check rapid evaporation of water from the soil.

Gymnogramme schizophylla gloriosa.—*Neb.*: You will never succeed with this beautiful but rather delicate Fern in a cool house. You must give it plenty of heat, and look after it carefully for water, or it is no use attempting to grow it. To show it off

properly, the pot should be suspended above the stage, and the drooping habit of the finely cut fronds will then be more evident than if the plant were stood on the shelf or staged amongst others.

Arenaria balearica is the name of the little white flowered plant that is creeping over the stones in your friend's garden, *T. G.*, and of which you sent a small specimen. It is perfectly hardy, and there is nothing prettier for covering the stones than this.

Azaleas after Blooming.—*P. T. O.*: After the bloom has dropped from the plants go over the latter and pick off all the seed vessels, which, if allowed to remain, will weaken them to no purpose. A removal to a close house or pit will be advantageous to the plants, for a gentle heat and copious and regular syringings will do much to foster the new growth, which should just be making its appearance. By the middle or end of July the buds will be formed and the growths sufficiently firm to admit of a further shift to the open air. The plants will then be able to mature their wood properly. This proper ripening of the wood is an important matter, more especially where early forcing is to be carried on.

Azalea Deutsche Perle.—*C. Godden*: For a white variety you cannot beat *Deutsche Perle*. It forces very easily, and is of good habit and constitution.

Astilbe (Spiraea) japonica.—*C. James*: After the flowers have all gone off you should seek an early opportunity of putting the plants out in the open. The old stems that have flowered will gradually die away, and new growths will be thrown up from the bottom, if the plants are properly looked after. Unfortunately they are often treated rather badly at this stage of their existence. They are very free rooting things, and when potting them up in the autumn they are pushed into as small pots as possible, for the obvious reason that big pots would take up too much room. When in full growth therefore they naturally take a great deal of water in hot weather, two or three applications a day being oftentimes scarcely sufficient to keep them from flagging. When planted out of doors all this labour of watering is avoided and the plants have a better chance. They should be left out of doors until next autumn twelvemonths, as *Spiraeas* will not force successfully for two years in succession.

Greenhouse Stage.—*Amateur*: If you want to do the thing well you cannot do better than make the floor of the stage of rough slates laid upon an iron or wooden framework and cemented together, a few holes being left for drainage. Cover the whole with at least an inch of screened shingle, crushed shells, or finely broken coke or cinders, either of which will make capital stuff for standing the plants upon.

Morello Cherries.—*T. Renshaw*: It is a pity that all the bloom should have dropped from your Morellos without any fruit setting, but are you not somewhat previous in assuming that such is the case? We have been having such cold weather lately that the young fruits have been quite at a standstill, but warmer weather will soon settle the question whether you are to have any fruit or not. At any rate, the cause of the loss, if loss there be, will not be because of the aspect of the wall, for a northern or eastern wall suits Morellos admirably, and they are usually grown on one of these aspects. If the fruit turns out to be a loss, send us particulars of what the trees are like, when planted, soil, weather at the time of blooming, etc., and we will try to help you to a reason for the calamity.

Erythina Crista-galli.—*A. Erle*: If you look after the plant for water there is nothing that need prevent you from plunging it in the centre of the bed as you suggest. The twelve-inch pot will be large enough for it, for the plants do not seem to flower freely unless they are somewhat pot-bound. Liquid manure may be given twice or thrice a week in warm weather.

Rain Washing the Paths.—*Querist*: The recent rains have certainly been heavy, but not sufficiently as to cause so much washing of the gravel as you complain of. Perhaps you have neglected to cut channels in the grass, say about four feet in length, and running from the path. If you have not done

this you will do well to see to it at once, as this will, without doubt, remedy the evil.

Applying Manure to Vines.—*Rob*: After you have sprinkled the powder on the surface, fork it in gently with a small fork, keeping a bright look-out for any weeds that may be near the surface. Follow up with a good soaking of clear water.

GESNERACEOUS PLANTS AT READING.

THE plants of this family are typified by *Gesnera*, several of which are handsome subjects, more or less cultivated in this country. *Gloxinias* are even more popular and widely cultivated. The collection in the Portland Road Nursery of Messrs. Sutton & Sons, Reading, is later this year than usual, not merely on account of the long continued cold and sunless weather, but because they were started later than usual, so that they should flower in June instead of May. There are three generations of them in the houses all coming along in succession, and thus keeping up a lengthened display. The larger ones are in 32, large 32, and 24-sized pots. The foliage is vigorous and healthy, covering the soil and hanging down over the pots. Even amongst the leaves is a considerable amount of variation, as if the plants were of hybrid origin. The leaves of *Prince of Wales* are quite hoary, and may be singled out readily. Other sorts are characterised by dark green leaves, while another set has a silvery venation.

The flowers, however, always attract the greatest amount of attention, owing to their extremely varied and bright colours. The glowing and vivid scarlet of *Sutton's Reading Scarlet* is in marked contrast to the pure white and massive flowers of *Her Majesty*. The sky-blue colour of *Azure Blue* is a charming hue in this class, beautifully set off with the white throat. Amongst bordered *Gloxinias*, *Duke of York* is a bold and telling flower of a rich crimson, surrounded with a broad and regular white margin. Its companion, *Duchess of York*, is rich purple, bordered with white, and perfectly distinct. The flowers of *Sutton's Purple* are dark and very rich in tone, while characterised by great substance, as, indeed, are any and all of them to which special names are given. No attempt, however, is made at naming the varieties generally. None but good varieties are used as seed parents, so that the standard of the strain is very high.

Spotted varieties are accorded the attention they merit and afford endless combinations of colour, replete with beauty and interest to all who have the opportunity of watching the gradual expansion and development of the flowers. A giant strain is also being developed, with flowers 4 in. to 4½ in. in diameter, or more. They bear the same relation to the type as the giganteum strain does to *Cyclamen latifolium*.

From *Gloxinia* to *Saintpaulia ionantha* is a far cry as far as size of flowers is concerned; but the charms of the latter lie in another direction. From amongst the heart-shaped leaves flowers continually arise all through the summer, strongly recalling *Violets* both in shape and colour. Several shades already exist, varying from an intense to a light blue.

The collection of *Achimenes* at Reading is very comprehensive, exhausting the cream of the varieties in cultivation, and numbering some twenty-five. They constitute the glory of one of the houses for many weeks together, but only a few of them are yet in bloom. One of the most remarkable and handsome is that named *Rosy Queen* (see illustration), which has large, rich rose flowers and a white throat. The width of the latter and, indeed, the size and general aspect of the flower are distinct from every other kind. Some gardeners have even conceived it to be a hybrid with *Gloxinia*. In any case, it is of the easiest cultivation, flowers abundantly, and constitutes an excellent subject for the conservatory when in bloom. We are indebted to Messrs. Sutton for the accompanying illustration of it.

Nor can we overlook a fine batch of *Gloxinia maculata* with its dark and metallic looking foliage and spotted stems. The latter attain a height of 12 in. to 18 in., so that the species is entirely different from the better known and universally cultivated *G. speciosa*, the fine strain of which is noted above. The flowers of *G. maculata* are blue-purple, and short.

The *Gesneras*, that have found a home here, flower later on, and include a fine race of hybrids that produce pyramids of white, yellow, orange, and handsomely spotted flowers. A beautiful companion to the hybrids is *G. zebrina discolor*, with its velvety, claret and green bands and markings on the leaves. The bright scarlet flowers of *G. cardinalis* are also very effective.

The same family is further represented by *Streptocarpus*, in a fine batch of hybrids in which a great range of colour may be noted. The large flowers vary from white to rose, purple, and violet, generally marked with dark violet bands in the throat. The huge leaf of *S. Wendlandii* is always full of interest independently of the flowers, which are blue, with a white throat and produced in branching cymes. The under surface of the foliage is dark reddish-purple. This species was crossed with the pollen of a white variety of *S. Rexii*, having the usual violet markings in the throat. One of the progeny of this cross is remarkable, inasmuch as it has pure white flowers unmarked even by yellow in the throat. Other seedlings have light blue flowers, with a white throat.

While passing through the houses we noted representatives of other families, including fine batches of

December and February. The cuttings should be inserted in sandy soil covered with bell glasses or cases kept at a temperature of 53° to 55°. Ventilation must be attended to in order to avoid damping as in the case of other New Holland plants. Roots will be emitted in the course of six to eight weeks, under favourable conditions. A coloured plate of it given in the *Revue de l'Horticulture Belge* for January last, shows it to be a showy subject of considerable decorative value. Some of the Belgian cultivators consider that it will make an excellent commercial plant.

STOKE BRUERNE PARK.

A VISIT to Stoke Bruerne Park, the residence of B. Wentworth Vernon, Esq., is always interesting; but it is especially so during April and May when the spring bedding is in its beauty. During the season just closed there has been a great success in every respect. It was my privilege to see these gardens during the Easter holidays, and after being used to the great masses of colour in the London Parks it was a welcome change to see each bed carpeted



ACHIMENES ROSY QUEEN.

the fibrous rooted *Begonia semperflorens*, which has been greatly improved by the Messrs. Sutton within the last few years. Many superb named varieties are now cultivated, and some twenty-five types and selections will bloom in the course of this month. A new rosy-red variety is very promising. This type is equally suitable for pot culture and for bedding out.

GREVILLEA FORSTERII.

AMONGST New Holland plants this should take high rank, yet it is quite an uncommon subject in this country. The leaves are cut into long, linear pinnae; and the shoots and branches terminate in ovate spikes or heads of bright rosy-carmine flowers, beyond which their long styles of the same colour project. The individual flowers are large for the genus, and they are said to be produced in abundance. It has been noticed and described in this country as long ago as 1874, yet beyond the statement that it is reckoned to be an Australian plant its origin is unknown. The only method of propagation therefore, that can be recommended at present is by cuttings, which should be made some time between

with some dwarf plant as a groundwork, in addition to the usual flowering bulbs, etc. In the flower garden there the beds are necessarily close together, and it requires no little amount of forethought to get all the colours to harmonise with each other, but this has been accomplished in such a manner that the most severe critic could have little at which to cavil.

At each end of the flower garden is a colonnade or semi-winter garden, constructed with a glass roof and open at one side, but a difficulty is found in finding suitable flowering plants for winter. The value of *Sutton's* new dwarf annual *Wallflower* cannot be overestimated for such a position, as it had been in full flower the whole winter. A number of narrow borders backed by a low wall looked charming with clumps of the best-named *Daffodils* and *Wallflowers*, with a groundwork of *Myosotis dissitiflora* edged with *Crocus* of various colours, *Scilla sibirica*, etc., to form a succession of blooming. Nowhere have I seen this *Forget-me-not* to such an advantage. It blooms very freely, and with its dwarf habit is much to be preferred to any of the other species that I am acquainted with, where it

does well. It has the additional advantage of being about a fortnight earlier. I noticed on this border a white sport on that beautiful Daffodil, *Barrii* conspicuous. Mr. Dymock, the head gardener, had noticed this the year before, and I have no doubt he will take care of it.

One of the most beautiful combinations on another bed was Proserpine Tulip and Polyanthus *Narcissus Grand Monarque* in about equal numbers, and a ground work of the above-mentioned *Myosotis*. The purple Van der Neer and the yellow *Chrysolora Tulips* were splendid, together with a blue ground-work, and had a distinct effect from any other. Nowhere have I seen such wonderful hoods of Keizer Kroon and Duchesse de Parma Tulips; and the remarkable fact about them was that the same bulbs had been retained from the year before to grow a second time with better results than the first. I have noticed the same point with Keizer Kroon Tulip before, and where there is room to grow and ripen them well there is no need to buy fresh bulbs every year.

Mr. Dymock has a great liking for *Cynosure Daffodil* for massing, and, indeed, it was very light and effective in several of the beds, and carried its heads erect. The Wallflower was very fine, the variety being Sutton's Dark Red, and a noticeable feature was the uniformity in colour and habit. Mr. Dymock selects the small plants to grow on, considering them the most alike in shade of colour. There were many features in the flower garden, but having no notes to guide me I mention only those that appeal to me. Everything seemed in perfect order, and, indeed, a great credit to both owner and gardener. I may say that Mr. and Mrs. Vernon, with their usual generosity to the local villagers and residents, opened their gardens on several Sunday afternoons, and by this means hundreds of people enjoyed the privilege of a look at the spring-bedding—a kindness much appreciated.

The various departments in the garden were all in excellent order, and in the kitchen garden one could see that the vegetables were being well cared for. Mr. Dymock has already achieved some notable performances on the exhibition table, and at the Northampton show, in August of last year, practically carried all before him, winning four first and one second prizes out of five collections of vegetables, a feat for which many a man would retire on his laurels, especially as his opponents were of a doughty character. A fine batch of Onions was ready for transplanting from boxes, and Celery, Leeks, &c., were well on. Spring Cabbages were in splendid form, Ellam's Early Dwarf being especially so, without any holting. The last remnants of Brussels Sprouts were being gathered, and considering the season (Easter) were first rate, Sutton's Dwarf Gem being the variety. The young fruit plantation, made within the last three years, promised well, and to commemorate the Queen's reign, sixty Blenheim Orange Apples were planted last autumn.—*A London Visitor.*

STREPTOCARPUS HYBRIDS.

THIS genus, having yielded itself most readily to the charms of the hybridist, has brought forth some almost magical results in the eyes of those who can look back to the old days when the most commonly seen representatives of this class of plants were *S. Rexii* and *S. Saundersii*, both of which, although interesting and pretty, had not much about them to attract the notice of casual observers. How far different the present aspect of affairs in connection with them is was brought forcibly to my mind by a recent inspection of the strain grown by Messrs. J. Laing & Sons, of Forest Hill. In looking through them the idea of some startling developments in the near future was vividly impressed upon me. Although it can scarcely be expected that they will eventually oust the *Gloxinias*, they are even now formidable rivals, not only because of the great strides they have taken in the size and diversity of colour of the flowers, but also because of their floriferousness and the lower temperature in which they can be grown, and their adaptability for use as cut flowers. One thing to be aimed at is the production of varieties with somewhat shorter leaves. There will be within a year or two a strain with circular flowers; at least that is my own opinion, judging from recent developments among them, and what took place among

Gloxinias in bygone times. These new hidders for popular favour are evidently on similar errands hent. *S. gigantea*, about 3 in. across, is bright blue with purple blotches. Her Majesty is white with purple streaks. Princess of Wales is rosy-pink, and two unnamed seedlings struck me as being very distinct and good, the first being bluish-lilac with a purple throat, the other, light purple with a dark throat.—*W. B. G.*

BELGIAN NURSERIES.

V.—M. L. DE SMET-DUVIVIER.

IN a northern suburb of Ghent is situated the compact and well kept nursery of M. L. De Smet-Duvivier, 319, Chaussée d'Anvers, Mont-St.-Amand, Ghent, Belgium. It is within easy reach of the principal railway station (Gand Sud), and well worth a visit from those who like to see a tidy and well kept glass nursery, which was established thirty years ago. Like most others around the old-fashioned horticultural city, M. L. De Smet sends his plants abroad to Italy, Germany, France, Britain, &c. The nursery consists of twenty-five houses, besides pits and frames, and being compact every part of it is kept in trim order.

The first house we entered contained a beautiful and varied lot of hybrid and cross-bred *Anthuriums*, belonging chiefly to *A. scherzerianum*. This work was commenced many years ago, and the whole of the plants, including the few that we shall mention, were raised by the untiring industry of M. L. De Smet. The seedlings now range from white to scarlet and the deepest crimson, and on the other hand to yellow, white, and spotted and blotched varieties, intermediate between the scarlet and white and the scarlet and yellow. *Anthurium Mme. De Smet-Duvivier* (raised between *A. s. sanguineum* and *A. s. Adriani*) has very large, oval sepals of a deep reddish-amaranth, and beautifully distinct. Another of his triumphs is *A. s. duvivierianum*, with the ancestors of which he commenced ten or twelve years ago. The commencement was a small white-spined variety, which was crossed with a large red one. This he did in order to obtain size; then he crossed it three times back again with the white sort, and in the time above mentioned all the seedlings gave flowers of a beautiful creamy-white. Amongst a large hatch of seedlings we noticed some traces of soft salmon-red or pink, but the majority are of a beautiful creamy-white.

Equally distinct and grand in its way is *A. s. formosum*, having orbicular or nearly orbicular spathes of a rich crimson, and measuring 4 in. wide and 5 in. long. *A. s. roseum* is rightly named, for the spathes are of a beautiful clear rose, and therefore remarkably distinct. The seedlings from *A. s. duvivierianum* crossed with *A. s. sanguineum* are remarkably varied, being spotted and blotched with scarlet or crimson on a white ground and in a great variety of ways. One of the most distinct and striking of the most recent successes is *A. s. flaveolum*, which is thickly mottled with scarlet all over a clear yellow ground. Only two plants turned up amongst 1,000 seedlings. Very singular in their way are those having two or more spathes. *A. s. pomponatum album* has a large white spathe and numerous small ones higher up the spadix. In the same category comes *A. s. Prince Albert*, with two or three large, blood-red spathes, two of which are opposite. The flower stalk of this striking variety has the peculiarity that it always comes from the centre of the plant. One side of two houses is entirely occupied with this interesting garden race of *Anthuriums*, amongst which many other fine things may be noted.

The Orchid house consists of several compartments and wings, and many species were flowering on the occasion of our visit. There were fine spotted and blotched varieties of *Odontoglossum crispum*, *O. Pescatorei*, *O. cirrhosum*, *O. ruckerianum*, and *O. luteo-purpureum*, the latter having flower stems 3 ft. to 4 ft. long. Other beautiful species, flowering in the same house, were *O. roseum*, *O. Oerstedii*, *O. ramosissimum*, and others. *Dendrobiums* were doing grandly in *Polypodium fibre* and sphagnum. *Masdevallias* were represented by *M. Chelsoni*, *M. triangularis*, *M. ignea aurantiaca*, *M. houtteana*, and various others. *Mesospinidium sanguineum*, *Maxillaria sanderiana*, and *Cymbidium lowianum* were also in bloom, a grand piece of the

latter carrying nine spikes, each bearing about twenty-eight flowers. A pretty Iridaceous plant in this house was *Libertia bicolor*, having white flowers and reddish edges to the leaves. Leaf stalks of tobacco are placed under the stages to keep green-fly and other insects at bay.

Most of the other houses run parallel to one another, forming an immense block, connected at the ends by a continuous, glass-covered corridor, 130 metres long, and filled with such things as *Dracaenas*, *Aspidistras*, Palms, *Anthuriums*, Ferns, Bamboos, and *Dracaenas*, the latter 3 ft. to 4 ft. high.

The first house of this block is filled with flowering and foliage stove plants, including at the time we speak a large and remarkably healthy piece of *Medinilla magnifica*, grown in a tub and just commencing to open its flowers. Here also is *M. Curtisii*, with its pearly-white flowers. Much of the space is occupied with Palms such as *Cocos weddelliana*, *Latania horhonica*, also *Aspidistras*, Ferns, &c. The next two houses contain a larger complement of Palms such as *Areca Baueri*, *Kentia helmcoreana*, *Anthuriums* and Ferns.

A large block of many houses joined together and continuous inside were occupied at the time we speak with *Azaleas* planted out in large beds of leaf mould. Flowering plants were stood at intervals, amongst the *Azaleas*, or occupied shelves overhead and other coigns of vantage. Amongst them were *Boronia elatior*, *B. heterophylla*, *B. megastigma*, *Bauera ruhioides*, standard *Acacia armata*, with 3 ft. of stem, and pyramids of *A. longifolia*, 8 ft. high. Stiffly grown Palms delighting in an intermediate temperature were *Areca Baueri*, and *Phoenix reclinata*. *Araucaria excelsa* was stood in rows amongst the *Acacias*.

The contents of a stove were next inspected. Trained specimens of *Clerodendron halfourianum*, 3½ ft. high, and grown in pots, were flowering profusely. Other flowering subjects were *Caraguata Zahni*, *Gloneria jasminiflora*, *Impatiens Hawkeri*, with rich carmine flowers, *Saintpaulia ionantha*, *Anthurium andreanum album*, and others. Foliage plants were represented by *Alocasias* in variety, *Licuala grandis*, *Livistona rotundifolia*, &c., the two last named being choice Palms.

Two more Palm houses came under notice and were occupied with a variety of subjects, all very clean and healthy. Besides species already mentioned we noted fine hatches of *Raphis flabelliformis*, species of *Phoenix*, *Areca lutescens* in quantity, and others. In fine form also were *Nephrolepis davalloides furcans*, *Pandanus utilis*, *Crotons* in great variety, and *Anthurium andreanum* in rose, pink, scarlet and other colours. Then came a houseful of *Araucaria excelsa*, followed by a stove, filled with *Anthuriums*, *Begonia metallica foliis variegatis*, fine foliated sorts of the Arthur Mallet type, *Abutilon insigne foliis aureo-marmoratis*, *Ixora coccinea*, and *Gardenias*. Close by was another stove filled with *Crotons* in variety, and other fine foliage plants. A new thing is *Alocasia gandavensis*, having broader leaves than *A. Sanderi*, of a dark green edged with silvery-white, and traversed by strong nerves of the same hue. The edges of the young leaves are overlaid with purple.

In a house of *Azaleas*, *Boronias*, and other hard-wooded plants were miniature standards of the narrow leaved *Myrtle*, and charming globular headed bushes of *Acacia cordata*, 18 in. in diameter and profusely flowered. The Otaheite Orange (*Citrus sinensis*) is admirably grown and fruited in Belgium. A houseful of plants in this nursery were 12 in. to 18 in. high, well furnished with branches and loaded with small Oranges. The pots were plunged in a bed of the cut stems of flax. *Eurya latifolia variegata*, *Hydrangeas*, and *Metrosideros floribunda* are also well grown.

The soil in this neighbourhood consists of a very fine gray sand, yet we were surprised to see how well Conifers grow in it. Flowering subjects included *Prunus sinensis flore pleno*, *P. s. fl. pl. rosea*, *Kalmias*, *Spiraea astilboides florihunda*, *Hydrangea paniculata grandiflora*, and *Azalea mollis*. The latter is, of course, helped with leaf soil. The frames were being filled with Indian *Azaleas* for the summer, all being planted in leaves according to the universal plan in Belgium. Two-year-old standard Sweet Bays in pots were in vigorous and healthy condition.

Potatoes to the extent of 4,000,000 tons are annually utilised by France in making starch and alcohol.

HARDY HERBACEOUS PLANTS.

Trillium recurvatum.—The Trinity flowers have all been flowering with exceptional freedom this year, and *T. recurvatum* has not been forgotten. The flowers are rich deep crimson, very much of the same colour as those of the allied species *T. erectum*, but the difference between the two is apparent upon even casual comparison, for in *T. recurvatum* the calyx lobes are long, and reflex sharply, whilst in *T. erectum* they are erect, and press closely against the inner segments. The foliage of *T. recurvatum*, too, is distinct, on account of the mottlings of white upon the dark green ground which it exhibits. The height of the two is as nearly as possible the same, viz., a foot or thereabouts.

Phlox subulata Nelsoni.—The dwarf Phloxes, varieties of *P. subulata* are many of the freest flowering things we have, and this variety *Nelsoni* is one of the best of all of them. The flowers are pure white, with five violet spots, and make their appearance in such numbers as to hide the foliage, leaving only a dazzling sheen of white. It should be planted in an open spot where it will get the full benefit of the light and air. It is rather curious that it is not employed to a larger extent for spring-bedding, for which purpose it is admirably fitted, since it blooms all through May, with surpassing freedom; indeed, it is often difficult to get a sufficiency of good cuttings from it for this reason. Cuttings strike pretty readily if taken about the beginning of July, pricked off into a cold frame, kept fairly close, and shaded until they root. They will then make good plants by the following spring.

Viola pedata.—The rock garden has no prettier gem than the pedate-leaved *Viola*, or Bird's Foot Violet, as it has been called. Given a cool, sheltered position it grows, and flowers freely enough, and is perhaps the most beautiful of American Violets. The plant is only a few inches in height, whilst the flowers are about an inch in diameter, and bright blue. It does well in pots if not watered too heavily during the dull months of the year. The variety *V. p. bicolor* has the lower segments of the flower purple instead of blue, and is a pleasing variation from the type.—*Plant Lover*.

MEDICINAL FRUIT.

MR. G. VIAND, a young veterinary surgeon in the French Army, devotes his spare moments to the study of plants. Basing his experiments on the spontaneous absorption of medicinal principles by plants he has succeeded in storing the tissues of alimentary plants with iron, lime, &c. Under this form it will be easy to take medicine, and assimilation will be more safe on account of the quasi natural state of the medicinal principles in the plant cells. Thus he has produced ferruginous Cress, Lettuce, and Endive.

These plants preserve their good natural flavour, and are tonic in a high degree; they can be prescribed in cases of anaemia, constitutional diseases which are not cured by prolonged vegetable diet. This result is deserving of attention from gardeners, and we think that those who could supply ferruginous Lettuces and Endive would find sales remunerative. An experiment costs little, as sulphate of iron can be bought retail very cheaply. In the same class of ideas fruit is recommended as a remedy for certain diseases. The Cherry, refreshing and acid, cures diseases of the bladder and kidneys. It is said that a cure of asthma was effected by a regimen consisting of five or six Oranges eaten daily during some weeks. A youth who made a similar experiment with Cherries, on which he lived for eight consecutive days, was cured of chills, fevers, and bilious attacks. In the four following months he gained 18 lbs. in weight, his food being exclusively bread and Cherries.

Another example of the therapeutic value of fruit: a young man was attacked by influenza, and as at the time he was a long way from home sickness would be unusually severe, through there being no one to attend to him. Being aware of this fact, he went to bed and remained there two days eating nothing but a couple of dozen of Oranges. At the end of this time he was quite fit for work. In another case a lady was cured by living for two days on Lemons, remaining in her room during this time.

Abundant fruit diet, particularly seasonable fruit, aids digestion. Ripe Currants, sweet Apples, Pears, Peaches, &c., do no harm to a healthy stomach, and in sickness are of great therapeutic value. If the organism wants acidity, acid fruit is the best of remedies. Sluggish liver and kidneys, as also predisposition to fevers and cutaneous eruptions, are greatly attenuated by eating fruit, if a nutrient and not stimulating regimen is followed. There are some persons who are frightened because fruit causes diarrhoea in children, but they never reflect how many intestinal diseases are due to absence of a fruit diet. If persons of a bilious temperament would put aside their medicine and study the gifts of Nature they would certainly, like Adam, be tempted to eat.—*Gazzetta delle Campagne, December 20th, 1897.*

LEGUMINOUS TREES AND SHRUBS AT KEW.

NOT only is the natural order Leguminosae one of the largest but it is also one of the most important natural orders. The value of many of its members from a food point of view is unquestionable, and the same may be said of many others of the plants grouped under it which take high rank as decorative subjects. Kew, with all its wealth of special features both to the botanist and the horticulturist has no more instructive feature than the collection of Leguminous plants which is located on the eastern side of that fashionable promenade, the Pagoda Vista. In this place there is congregated a great number of the most handsome plants of the order, and it may at least be claimed for them that they have done their best to please and to exhibit their beauties for the delectation of Whitsuntide visitors to the far-famed gardens, for on Whit-Sunday very many of the plants were absolutely at their best.

At the northern end of the series of beds there is a round hed full of interest, or rather of interesting plants. There are three gnarled, twisted, and umbrella headed specimens of the handsome *Caragana arborescens* var. *pendula*, the feathery, pinnate leaves of which are touching a showy carpet of *Genista pilosa*. Next we find an oblong bed in which are more samples of the genus *Caragana*. In addition to *C. arborescens*, with its erect growing habit, and its fond tendency to develop short spurs along the whole length of its branches is the dwarf *C. a. nana*, also two fine specimens of *C. a. Redowskii*, a spreading, loose-habited Siberian tree, rather later in flowering than the type, but apparently a very free bloomer.

In close contiguity is *C. aurantiaca*, hailing from Central Asia. The flowers here are yellow, with spots of brown, and a large, much reflexed standard. The habit is quite distinct, for the flower, stalks, and leaves being short the branches look like immense spikes of leaf and bloom. The drooping *C. gracilis*, with its long whip-like branches, was not in flower when we saw it, and the pretty *C. microphylla* was only commencing to expand its blooms.

Cytisus purpureus incarnatus, a low growing and somewhat straggling shrub, was in a very luxuriance of bloom, and the rich rose flowers shading to carmine at the base of the petals were showy.

Genista hispanica, on the eastern side of the group of *Caraganas*, has been a mass of bright yellow.

Passing on southwards, the magnificent clumps of the Brooms catch our eye. The common Broom, *Cytisus scoparius*, if it were only less common would be held up to the public by every nurseryman as the perfection of a flowering shrub. Under cultivation its large yellow flowers tend to become larger and yet more yellow, and as its freedom of flowering has never yet been gainsaid, the effect produced by large masses of it can well be imagined. Its handsome variety *C. s. andreanus* is planted in a similarly imposing mass hard by, and is apparently attempting to out-rival its ancestor in prodigality of bloom. The bright crimson hue which characterises the wings or side petals is present upon one side of the petal only, the outer; but as the wings are folded upon themselves inwards, this is the side that is shown to a visitor. Another bed of handsome proportions is filled with the earth-hugging *C. s. pendula*, which, as growing here, is scarcely pendulous, since it never grows far enough from its mother earth to be strictly pendulous, but prefers to cover the ground as with a carpet of green and gold.

The last clump of the Brooms is perhaps the showiest of all, one of *C. albus*, one of the distinguished parents of the not less distinguished *C. praecox*. At the time of writing these plants are simply a dazzling sheen of white, and constitute a picture that no lover of plants in general, and hardy shrubs in particular, should miss seeing.

MESSRS. WM. WOOD & SON, LTD.

As the years roll on, the range of the gardeners' operations is ever widening, and with this increase comes a corresponding increase in the number of things that are to him necessities, if he is to fulfil the demands made upon his time and skill. Labour saving appliances of all kinds have been called into existence, in addition to numerous specifics which enable the cultivator of the soil to hold his own against his enemies, both insect and fungoid, which come to plague him and rob him of the due result of his labours.

How many and how varied the wants of the gardener are none but those who have been behind the scenes can tell. Even the ordinary gardener can, unaided, have but a faint perception of the quantity and variety of material that must, perforce, be included in the stock-in-trade of a first-class horticultural sundriesman.

We recently paid a visit to the establishment of one of the most reputed firms of this description in the country, viz., Messrs. Wm. Wood & Son, Ltd., of Wood Green, and must confess to a sense of surprise when the thousand and one gardener's needs, crystallised as it were, upon the shelves of the store-rooms and warehouses brought home to us the far-reaching and important character of this branch of the horticultural trade. Not one country alone, but many are taxed to meet the demand, and it would be difficult to mention a part of the habitable globe that does not contribute in some way to the everyday needs of the British gardener.

The premises of the firm are almost adjoining Wood Green Station, and indeed are connected with it by a private siding by which goods may be despatched and delivered, and which must be vastly convenient in these days when promptitude and despatch count for so much in business transactions. This siding is all the more necessary when we consider the big trade done by the firm in horticultural Anthracite, and other coals and coke. The frontage of the building or rather series of buildings is towards an open space or public garden prettily laid out and well kept up, and the large central show store-house is both a roomy and a commodious building. Truly it had need so to be, for even small samples of each of the goods in stock take up a lot of room. In the background other large store-houses supplement the show room. Here we found ample supplies of the various specialities of the firm. Amongst these mention may be made of shadings, now so important an appendage to glasshouses. The "A. White" variety, specially recommended by the firm, is a capital material at a reasonable price, and eminently suitable for all ordinary purposes. Many orders are annually taken for it, and these not infrequently include the making and fixing of the blinds in position, a branch of the business to which special attention is given. Green shadings are kept in stock, but they cast too heavy a shade for ordinary purposes, although they have a tendency to bleach with age. A special line is the ticks used for blinds which can be had in a variety of patterns which are stocked, or customer's own patterns can be worked up to order, since the Messrs. Wood are manufacturers as well as vendors.

Archangel mats are represented by huge bales filling several rooms, and of labels of all sizes there is goodly store. The quality of raffia supplied to customers is exceptionally good, for some of it measured fully 6 ft. in the twist, and moreover, was of that soft and easily twisted character for which the gardener is always on the watch.

Bamboos in all sizes, from thin tips suitable to staking such subjects as Freesias, Achimenes and other plants where light and neat staking is indispensable, to stout poles of 20 ft. in length, fit to support a sapling Oak, are stocked in thousands. These canes are the best productions of China and Japan and are shipped from thence to this country in thousands of bundles annually. They are sorted and cut up into special sizes to suit special plants. Thus

a 7-ft. cane, neat, and yet very strong is recommended for Tomatos, a 6-ft. cane of similar quality for tall growing Carnations, and a very stout cane of similar size and mahogany colour for supporting young trees. Smaller and neater canes are selected for Carnations and other dwarfing growing plants, and as these can be obtained in either yellow or brown, according to taste, the wishes of the customer are consulted in every possible direction. We were informed by our guide that in addition to the great stock of Bamboos on hand there were over half a million waiting at the docks for them.

Huge bales of wood wool, so useful for packing purposes, were shown us, and we were most favourably impressed with the appearance of a special sample that was exceedingly soft, white, and light.

Manures have long been a specialty with the firm, and Le Fruitier, with which the name of Wood is so closely associated, has been, and is, in greater favour for certain purposes than many others. Even now, we were informed, more of it is sold than of all the others kept in stock. Of these, by the way, there are numbers, for the manure business has been prolific of new fertilisers of late years. Wood's Special Soluble Manure is another manure of great repute, and we noticed that the stock of it was large. The crude materials of which the home-made fertilisers are made are ground at the docks, but the mixing is done at Wood Green. Bone meal, crushed bones of various sizes, and crushed oyster shells represent other goods for which there is a consistently brisk demand.

The soils department is an extensive one, and the firm is particularly famous for its brand of Orchid peat, which is becoming increasingly difficult year by year to obtain. The best quality is carefully pulled to pieces by hand, the dust shaken out, any rough sticks that may be present removed, and the peat packed in barrels. When sent out it is really a mass of fibre with practically no waste. Second and third qualities are supplied, and even the third is good. A special dark, rather sandy peat is supplied for Rhododendrons, and other hardy plants needing peaty soil. Banstead loam is annually sold in tons, of the best quality obtainable. The leaf soil supplied is likewise excellent. It is composed of Oak and Beech leaves only, and is singularly free from fungoid growths and foreign matter of all descriptions. Bedfordshire sand, both yellow and white, is kept in several qualities, from the best coarse to very fine. Shingle, carefully sifted and very clean is supplied in quantities for covering stages, also crushed shells. Derbyshire spar and tufa are kept for those requiring material for building rockeries. Hard-burnt masses of brick, the remnants of old brick kilns, make a cheaper but equally as suitable material, and are not quite so glaring as the white spar.

The weed killer sent out by the firm has so abundantly proved its efficacy that improved plant is being laid down in order to keep pace with the demand. It is estimated that when this extension is effected three times the quantity of the destructor can be turned out than has hitherto been possible.

The enterprising spirit of the firm is continually seeking out, and working up some new thing for the benefit of the gardener. One of the most promising of this year's novelties is a specific, called Carvita, for combating the rust affecting Carnations. This has proved effective in the tests given it, and is stated not to injure in any way the health of the plants operated on. If so there is no doubt but that Carnation growers the world over will hail its appearance with joy.

A syringe named the "Invicta," fitted with a patent automatic spray, is a contrivance that is bound to be well received. The device is so simple and withal so easily worked that a child might use it. The secret is a small flange or flap which works on a hinge. When the syringe is held so that the flap falls into position its edge catches the jet as it issues from the barrel and divides it into a fine spray. By simply turning the barrel of the syringe upon its centre, the flange falls clear of the stream and an ordinary jet is obtained. The need for all fixings is thus done away with, since a jet or a spray is obtained by a mere twist of the wrist on behalf of the operator. It may be added that while in use the syringe may be turned over on its centre without the spray flap falling clear, since it is kept in place by the force of the water.

The "balance plant carrier" is another ingenious

labour saving device. It is in the form of a light yet simple rack with holes to receive the pots of the plants, and fitted in the centre with a handle for carrying. Three plants may be placed on either side of this handle, six in all, and they can then be carried by a boy with perfect safety and ease. As a boy can manage two of these carriers he can account for a dozen plants each journey which is more than twice as many as a man could carry in the old way. In many establishments where many thousands of plants have to be shifted in the course of the year this "carrier" will be of the utmost value.

The above constitute a few of the more noteworthy articles of the huge stock in trade kept by Messrs. Wood & Son, Ltd. It would obviously be impossible to enumerate all since, as we have previously intimated, everything that a gardener can want is stocked and supplied by them.

SLUGS AND WOODLICE IN CONVERSATION.

"I SAY Cheesey, I have got such good news for you," said a large black slug, addressing a woodlouse one damp morning in May.

"Fire away with it then, I hope it is good for you too"

"Yes, very, thanks!" replied the slug. "Well, the lady gardener and the boy are busy planting the Cucumbers and Tomatos in the houses this morning."

"Hurrah!" shouted the woodlouse, "what a rare old time we shall have for the next few weeks. My mouth waters when I think of tasting Tomato again, and I daresay your's does at the thought of Cucumber."

"Oh! it won't be the first time this year, I have had a go at them in the pots, but it is a long crawl right up to the shelves; it will be much more convenient now they are in the borders. But I say, my friend, you are not looking very well, what is the matter with you?"

"Oh, nothing, I think I only want a change of diet, I am rather tired of Mushrooms. The beds have done very well this year, under the lady gardener's care, so I and my comrades have been almost satiated."

"Well! you will get the desired change to night. Shall we meet here to-morrow at the same time, and then we can tell each other our experiences?"

"Agreed. Farewell for the present."

* * * * *

"You are a bit late," said the woodlouse as the slug appeared next morning.

"Sorry, but after my night's dehauch, I over slept myself. But tell me, how did you get on?"

"Oh! capitally, I had a splendid night. Would you believe it, by the side of all the nice young Tomato plants, someone had kindly placed Potatos all scooped out. Now you know I have a great weakness for Potatos, in fact I was quite spoiled with choice."

"Oh! you innocent creature, you don't mean to say you really thought the Potatos were put for your delectation. Why! my dear fellow, they were merely there as a trap. Knowing your partiality for them, they thought you and your friends would probably try them before the Tomatos, and then you were to be caught and killed. I think it is wonderful you have escaped with your life. How did it happen, were not the Potatos examined?"

"Yes, quite early this morning the boy came in and lifted them all up."

"And where were you?"

"Oh, I had had my fill of Potato, and had moved on to a Tomato plant. I wondered what the boy was doing, when I heard him stamping his feet on the floor, but it never struck me that my poor brothers and sisters were being murdered."

"Well, we have all to live and learn. I am glad you escaped, for you are such a simple innocent little chap."

"I must be on my guard to-night. But now tell me how you got on?"

"Well, my wife and I started about nine o'clock to the greenhouse; these long evenings are a nuisance by the way, for we have to wait so long before it is dark enough to come out. The house felt warm and moist, and the Cucumber plants looked delicious. Round the roots of each of them, two or three fresh Cabbage leaves had been placed. Now if I had been

as guileless as you, I should have thought what kindness this was, but I knew that they, like the Potatos, were only a trap. 'Come,' I said to my wife, 'we won't waste time on the Cabbages, we can get them *ad lib.* out of doors, we will begin at once on the Cucumbers. So we crawled to the very end of the house, and started on the first one. We had only been there about half-an-hour, when the door opened and we heard talking. A match was struck and a candle lighted, and then a voice said, 'oh William, there are heaps already on the Cabbages.' I knew at once it was the lady gardener and the boy slug hunting. Gently touching my wife we crawled as quickly as we could behind some flower-pots that were near.

"Oh the poor, poor things," the lady gardener exclaimed, "are you quite sure William the water is boiling, and they die at once?"

"Quite sure, Miss," was the reply.

"You can imagine our feelings, Cheesey, as we crouched there, thinking every moment might be our last. But they never looked behind the pots fortunately, and after doing both sides of the house, and catching (I heard them say) over one hundred of my brothers and sisters, they took their departure.

"Then my wife and I returned to the Cucumbers, and had a good feast till about three this morning."

"Well, we both seem to have had a very narrow escape. I wonder how we shall get on to-night. Shall we meet here again to-morrow morning at the same time?"

"Yes, and I will try, and be in good time. Good-bye."

* * * * *

They never met again, for that night they took their departure to slug and wood-louse land.—*Solanaceae.*

WORK IN THE SUBURBAN GARDEN.

June! glorious June! the leafy month! the month of Roses! according to those who pretend to know all about it, is with us again, at least, the month is, the rest is somewhere else. A fair exchange is no robbery, however, and variety is charming; hence, let us proceed to enjoy in theory, if not in fact, the rain, hail, snow, wind, cold, and watery sunshine that the gods have sent us.

The garden is looking gay just now, says the gardening books, and everything is growing apace. By-the-way, I should just for once like to see the garden that these books talk about. One thing, I know, and that is, that it isn't mine.

There is plenty to do in it just now, further say the books, and with this I am perfectly in accord. Everybody is talking about bedding out, and I cannot forget it if I would, for the coster fraternity, with a persistence that in another cause would be praiseworthy, have well nigh worn out the knocker on my front door, and quite exhausted my patience. I presume that the one who called last understood this, for he invited me very sympathetically to "keep my 'air on."

Sweet Peas have been boomed a good deal of late, and last year I tried to grow a good many. I say "tried" advisedly, for the blessed things struck and wouldn't grow. They were advertised to grow 5 ft., and they didn't do as many inches, and never flowered at all. Not to be beaten, I sowed some more in February this year. I am not quite sure of them, however, for they have not grown an inch for the last month. I put sticks to them, more for the sake of ornament than anything else, for they don't like climbing, apparently.

I have a few melancholy Chrysanthemums in pots, but they seem too listless to do much. They'll want potting directly, and I expect they'll have to want. I can't get everything I want, and why should they?

Of all amusements the cutting of the grass has most to commend it. For a right down, hard, back-aching, commandment breaking, cussed sort of a job it is difficult to beat. It leaves a man wondering whether he is a man or only a donkey. One feels inclined to fall on the machine, and pull its inside out, and throw it in the corner and jump on it. My mower proved more than usually intractable yesterday, and I found upon enquiry that my boy and the boy next door, and the boy from the next door after that had been having a conversazione and had played "engines" with the mower afterwards.

Talk of the land of pure delights, why it isn't in it with a well managed garden. Think of the.

exhilarating pleasure of going down on one's marrow bones and gnawing away at the grass edge with a pair of antiquated scissors. This should be done frequently in order to mortify the flesh and improve the look of the grass.

But another attention must be paid to the verdant lawn. The showery weather is just the time to give it a dressing of some stimulant, say the gardening books, and they recommend soot sprinkled over the surface by hand. Of all the fiendish ideas that ever entered the brain of the adviser this is the one that has caused me the most bother. I dressed up in various and sundry garments in a more or less disreputable condition and bravely set to work. The soot was all right, and so was I before very long; in fact a bosom friend of mine, with the cruel candour often displayed by bosom friends, averred that I looked like a first-class devil in a cheap pantomime. If any of my readers covet such an appearance they can easily cultivate it by attending to their lawn as I did to mine.—*Nouveau Calendrier.*

GARDENING MISCELLANY.

MAKING UP PLANTS FOR SPECIMENS.

THE plan of placing a number of plants into one pot to form a huge specimen is an old and well known practice, not confined to common classes only, for pots with five or six Orchids placed together is not uncommon on exhibition tables. It is often objected to by competitors; but I have seen no schedules in which any rules appear against the practice, and so have (along with other judges) allowed to let the matter pass unnoticed. Some of the grandest specimens of Chrysanthemums which I have seen have been made up with a number of plants; and it would require sharp practice to unearth them. When size of pots is stated, as used to be the case at most exhibitions, "making up" is difficult.—*M. T., Carron, N.B.*

CYTISUS SCOPARIUS ANDREANUS.

I ENCLOSE sprays of this beautiful Broom, cut from plants raised from seed three years ago. The plants in question are now nice bushes some 6 ft. high, which shows how easy of culture they are. From a scrubby plant in a pot I was able to save about two pods of seed, which I sowed and obtained about a dozen plants, a few of which produced yellow flowers, without the crimson markings which characterise the parent plant. Both my employer and myself are proud of our Brooms, just now very gorgeous and beautiful, deserving a place with the choicest flowering shrubs.—*A. P.*

CRYPTOMERIA JAPONICA AS A POT PLANT.

THIS elegant Conifer is a well-known and valued occupant of the out-door garden, but in this country it is very rarely utilised as a pot subject. In this direction, however, it closely rivals the popular *Araucaria excelsa*, thousands of which find their way upon the market each year. The *Cryptomeria* can be propagated readily from seeds or cuttings, but as in the case of the *Araucarias*, cuttings make the dwarfest, closest jointed, and best furnished plants. Still seedlings are not unsatisfactory, and as they make nice little saleable specimens in 5-in. pots within a year from the date of sowing the seed they are not to be despised. We think more use might be made of the *Cryptomeria* as a pot plant.

GUNNERA SCABRA.

I OCCASIONALLY find plants in unlooked for places, and such was my lot recently in connection with this plant, whose native place is among the ravines of the Andes, where it most likely gets a plentiful supply of moisture. However that may be, it would appear to have a somewhat accommodating disposition, judging from the way it was flourishing in the position I found it, being under the shade of large trees on a dry soil. Those having a stock of it, if they have some bare places among their shrubberies, will do well to try it in these positions, for truly it is a most noble and telling plant when developed to its finest proportions. If, as it seems to me, it will do fairly well where many things utterly fail, it is well worth a trial. If those who are ignorant of the plant can

imagine a gigantic Rhubarb with leaves five feet in width and spiny footstalks five feet or so in height, they can form a pretty fair idea of the aspect of the plant when at its best. I do not think it possible for it to attain anything near these proportions in the positions above indicated. At the same time it would help materially to enliven many a bare, naked piece of ground.—*W. B. G.*

VEITCH'S EARLY FORCING CAULIFLOWER.

I HAVE begun cutting to-day, May 19th, this variety of Cauliflower from autumn-sown plants. Having grown this same variety four years, I find it (although not so large as many others), very useful, forming close white heads, much esteemed at table. The plants in question were sown in September, wintered in a cold frame, and planted out the last week in March in handlights. The peculiarity of this variety is that its foliage is small and erect, thus allowing four or five plants to one handlight, which, when filled, was removed to shelter the spring-sown plants.—*A. P.*

ADENANDRA FRAGRANS.

VERY frequently the flowers of New Holland plants belonging to the same group as *Adenandra* are very small. Those of *A. fragrans*, however, are about the size of a shilling, and white, tinted with red beneath. Others again have red midribs running along the basal half of the petioles, and presenting a beautiful starry appearance, the star consisting of five rays. A distinct variety with red flowers has been named *A. f. amoena*. The species grows in the interior of South Africa, but though it was introduced many years ago it is a rare plant in this country. The form with the five-rayed star turned up in several of the exhibits at the recent Ghent show.

AMERICAN WONDER PEA.

I HAVE just been reading in a contemporary an account of sickening and turning yellow of this garden Pea in an autumn sown crop. An expert, so the report states, expressed an opinion that owing to the thinness and delicacy of the skin of wrinkled Peas, they were not so suitable for autumn sowing as round varieties. I am of opinion that little or nothing is gained by autumn sowing of wrinkled Peas. My practice is to sow in pots (I use the above named variety) in February, putting five seeds in a 60-sized pot, and harden off and plant out at the foot of the Peach wall. I expect to gather next week, although I picked off a full pod yesterday, May 18th, to tantalise a friend, whose crop is still moving, but shows no bloom, notwithstanding announcement by label that he sowed "Early Sunrise."—*A. P.*

SPERGULA PILIFERA AUREA.

THOSE who are carrying out designs in carpet bedding would do well to introduce this into their designs, where a very dwarf-growing subject is desirable. A single plant of it is both bright and elegant. Those who do not follow this particular craze, but have a love of hardy plants should add it to their collections on account of its simple beauty.—*W. B. G.*

BARBAREA VULGARIS VARIEGATA.

THERE is quite a respectable number of British plants of which variegated or otherwise modified forms are in cultivation in our gardens. To the ranks of these plants must be added the golden variegated form of *Barbarea vulgaris*. It is not commonly met with, it is true, and is usually only to be seen in botanic gardens, but it is nevertheless possessed of a somewhat distinct and decidedly handsome presence. The lyrate shaped lower leaves are prettily barred or striped longitudinally with white, gold, and green, and this variegation is possessed in an equal degree by the smaller upper leaves. The yellow flowers are not greatly different to that of the wilding, but they serve to add a finish to the plant, although in themselves not very showy.

TULIP PARISIAN YELLOW.

THIS is one of the finest of the later Tulips and one of the most suitable for bedding purposes. It is rather tall in habit, for the flower scapes often reach a height of 18 in. and occasionally exceed that height. The flowers are full, deep, and of great size, the colour being a rich golden-yellow, very brilliant and showy, as indeed we expect everything

"Parisian" to be. The individual segments are of great width and substance, and are acutely pointed. There has been a fine bed of this Tulip in the grass at the back of the rockery at Kew, and near the eastern end of the Orchid houses.

CARNATION URIAH PIKE.

A HOUSE here containing several hundred plants of this variety in bloom (sample of which I send) is frequently visited just now, and a source of delight to many visitors. The fragrance of the flowers, in addition to their rich colour, adds to the charm of these favourites. This variety, which created a sensation three or four years ago when brought out, is deservedly popular, possessing as it does all the qualities of a good Carnation, robust in constitution, amenable to almost any treatment, flowering as freely at mid-winter as mid-summer. The foliage has a healthy vigorous appearance and is remarkably free from the many blights, rusts, and rots that plague the Carnation growers in other choice varieties.—*A. P.*

TULIP PICOTEE.

AMONGST the midseason bedding Tulips *Picotée* has very few varieties to equal it. Even as late as Whit-Sunday a round bed close to the director's office at the northern end of Kew Gardens was making an exceptionally fine display. The flowers had rather more pink in them than is usually the case, and the margins had spread considerably, but this added to rather than detracted from the general effect. The conspicuous feature, however, was the size of the blooms, which really surpassed anything we had previously seen. The foliage, too, was good, and the bulbs must have been exceptionally strong to produce such excellent results.

IRIS CRISTATA.

THIS is a gem amongst a family of gems, for although there are many beautiful Irises this dwarf plant with its pretty crested flowers is fully as beautiful as any. At Kew it is given a nook in the rockery, and judging from appearances it is just such a place as this that it requires. The flower scapes with the flowers are only about 4 in. in height, and the leaves are from 4 to 6 in. in length, so that the plant is a pigmy all through. The flowers, however, are relatively large. They are bright purple-blue in colour with a conspicuous white blotch and crest in the centre of each of the falls, next to this, passing towards the apex, being a zone of purple-maroon. The plant, which is a native of the south-eastern United States has a somewhat tufted habit, and flowers with great freedom, so that it is well worthy of a place in the rock garden amongst the choicer subjects.

CURIOSITIES OF THE ORCHID.

THE Orchid is in fashion, and we must admit that it deserves this honour, if honour it be, or at least this distinction, both for its strange colours and curious, varied forms and a thousand peculiarities of its existence.

Most of these plants do not bear fruit or come to seed unless some insect or bird transports the pollen to the stigma. Consequently, there is, as a rule, no fertilisation and only some few amongst the thousands of flowers fructify. It is true that ever provident nature has anticipated this in a very simple manner. If a fruit happens to die an enormous number of seeds escape; they are small, light, tenuous as sand, and are easily wafted on the wind in all directions. If a single capsule attains maturity in a forest the seeds are scattered everywhere; yet, by another strange peculiarity, only a very few of these seeds will germinate and grow into a new plant. The seed is not destitute of the necessary germinative power: in fact, the horticulturist, however little experience he may have, can easily succeed in growing this seed by placing it in certain necessary conditions not difficult to realise. But then, as our American contemporary, *The Independent*, lately remarked, how is it that nature rarely procures for these seeds the requisite conditions for success? Why does she take so much trouble and give the fruit the faculty of emitting so many seeds to end in such poor results? Let us observe that at least the seeds have extraordinary vitality, and that they can remain, so to speak, indefinitely exposed to the greatest heat and drought without losing any

of their germinative properties which will reappear in favourable conditions.

Let us add, too, that the Orchid is wonderfully inconstant in even the most essential characteristics. A certain variety, for example, in Australia, after bearing flowers of a particular kind for many years, suddenly produces leaves and flowers hitherto regarded as belonging to quite a different genus. It is for this reason, besides, that the boldest fancy hybridisation can be practised with the Orchid, the hybrids obtained being just as fertile as the parent plants. With such peculiarity we can understand the Orchid being in fashion nowadays when novelty is more prized than beauty. — *Vie Scientifique*, May 14th, 1898.

QUESTIONS AND ANSWERS.

Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Fritillaria macrophylla Culture.—*M. M'Laren*: Dr. Wallace, in his book on *Lilies and their Culture*, says that he planted several full-sized bulbs in good earth, but nearly the whole rotted away, leaving plenty of small bulbs, and the flowers produced were poor. Others planted in poor stony soil, and sheltered gave good flowers, and the bulbs remained sound. After that he planted all of his plants in limestone sand, and they were to remain so for the future. That was in the Himalayas. In this country the plant succeeds best in pots in a frame or greenhouse. The light and porous soil above-mentioned should be enriched with leaf mould. Any potting that is attempted should be done immediately after the stems and leaves have completely died down, and are perfectly at rest. At this time the bulbs should be kept dry. When repotting it would be well to remove all the small bulbs and bulblets which generally cluster round the base of the mother bulb, impoverishing it, particularly when grown in pots. This is one of the secrets with the successful culture of *Richardia Little Gem* (see p. 629). The plant must also be kept near the glass to get as much substance in the foliage as possible.

Thinning the Fruits of Apples.—*Sigma*: What amount of thinning is actually advisable is best determined on the spot. Healthy, vigorous trees will bring more fruits to perfection than weakly ones. The clusters of fruit should be reduced to one, two, or three at the most, but if you desire the largest size and the best finished fruits the trees are capable of producing, you must reduce the number to one, and that should always be the biggest, most forward and best situated fruit for all the advantages of light, and space to develop without squeezing by neighbouring branches or shoots. If the trees are crowded with clusters of fruit, it may be necessary to remove a number of them entirely, without injuring the leafy spurs by or below them. Take a glance at the tree as a whole, and calculate what number of fruits it is able to bear; then you can regulate the number of clusters as equally as you can all over the tree. Then proceed to thin out the bunches, leaving one or two of the very best fruits. This operation might be delayed till towards the end of this month, or in fact till you can be certain what fruits are likely to fall naturally. You could remove the smallest fruits now and give the final thinning later on. That would be the safer plan.

Strawberry for Travelling.—*Omega*: For many years past there has been nothing to beat Sir Joseph Paxton, as a firm Strawberry that will travel successfully by rail. More recently, however, several other kinds, including Royal Sovereign, have been sent to market in the same way. For short distances, at least, Strawberries are sent in baskets, but the fruits get more or less crushed by their own weight. For select or picked fruits, boxes should be used, about 3 in. deep, inside measurement. When filled with fruit, a number of these boxes could be tied together, thus saving time in loading and unloading them.

Outdoor Chrysanthemums.—*Veld*: Early flowering or border Chrysanthemums cannot be relied upon as perfectly hardy; but we think that some of the crowns die away as much from the result of damp as from frost. At the time of cutting down the stems, it might be worth while digging up a few of the best crowns and putting them in pots or boxes to be preserved in a cool greenhouse or in frames. Most of the plants will live in frames when they get killed by severe frost outside, and that even if the pots in the frames get frozen hard. This refers to the old plants; but if house room is a leading consideration with you, it would be a better plan to take cuttings in November, fill some 60-size pots with them and stand the pots on shelves anywhere

near the glass in a greenhouse, pit, or frame, the latter being protected only in the severest weather. With regard to protection in the open, we consider it a mistake to place fine coal ashes round the young shoots and over the crowns, because it buries so much of them from heat and light, causing these soft-wooded subjects to damp off. Poor and sandy soil in perfectly exposed positions in the garden would keep Chrysanthemums better than any protection you can give them there, except hand-lights.

Gall Mites (Phytoptus) on Pears.—*M. M'Laren*: The plan you have adopted of making experiments with the trees ought to throw some light on the matter; and if you succeed in destroying or checking the spread of the mite, it will be doing gardeners good service. The spring is the only time, say the entomologists, that you can attack this pest with any hope of success; then the sooner you commence after the expansion of the leaves the better. The parent mites are believed to take up their quarters in the buds during winter. They pierce the young leaves and lay their eggs inside. These hatch out and the young mites make their exit by a minute hole on the underside of the leaf. In syringing with any insecticide, you must, therefore, thoroughly wet the lower surface of the leaves in the hope of getting at the mites in that way. Neither Gishurst Compound nor hellebore powder can do the foliage of the trees any harm. A little flowers of sulphur might even be added to the first named, so as to strengthen it. We shall be highly pleased to hear what success you meet with in the operations as well as with the tree which you have denuded of its foliage.

Gathering Garden Produce.—*Omega*: For such things as Carrots, Parsnips, Beet, and Potatoes it would matter very little at what time of the day they are collected. In the case of all green vegetables, such as Peas, Beans, Cabbages, Lettuces, and others of that type, there is no doubt but that the morning hours would be the best time to collect them during the summer months, especially during droughty weather. They would be in a more succulent condition than if gathered after the sun has made them limp. In wet weather, and after the end of September, they might be gathered during the day, choosing a time when they are fairly dry, if possible, as they would keep better when brought together or packed in quantity. All fruits should be gathered when perfectly dry, if possible; and the early morning would be the best time for picking the same. If gathered during the heat of the day they would suffer greatly in flavour, particularly such things as Strawberries and other soft fruits.

Drinks and Beverages from Plants.—*IV. H. Patterson*: You will find short accounts of a great many foreign plants yielding drinks of one sort or another in the "Official Guide to the Museums of Economic Botany, No. 1," relating to Dicotyledons and Gymnosperms, and in the "Official Guide to the Museums of Economic Botany, No. 2," both on sale at the Royal Gardens, Kew, price 4d. each, and by post 5d. The new edition of one or both of the above might be a little dearer, but of that we are not certain. More lengthy particulars concerning some of the economic plants under notice are given in the "Treasury of Botany," published by Longmans, Green & Co., Paternoster Row, London, price 15s. for the two volumes.

Names of Plants.—*Gardener*: The plant from the conservatory is *Bossiaea linophylla*; the other is *Saxifraga granulata flore pleno*, which must have originally been planted in the garden of the old ruin. The single form of it is a British plant; both the single and double forms are often planted.—*Omega*: The garden plant is the double Red Campion *Lychnis diurna*; the other is Beaked Parsley (*Anthriscus sylvestris*).—*T. B.*: 1, *Pyrus pinnatifida*; 2, *Pyrus Aria*; 3, *Acer platanoides*; 4, *Cupressus nutkaensis*; 5, *Libocedrus decurrens*.—*W. P.*: 1, *Oncidium sphacelatum*; 2, *Masdevallia harryana*; 3, *Odontoglossum odoratum*; 4, *Dendrobium densiflorum*.—*A. L.*: 1, *Sidalcea oregana malvaeflora*; 2, *Saxifraga lingulata lantoscana*; 3, *Saxifraga aizoon* var.; 5, *Saxifraga Cotyledon pyramidalis*; 6, *Aquilegia chrysantha* var.; 7, *Lamium maculatum*.—*L. M.*: 1, *Erinus alpinus*; 2, *Daphne Mezereum*; 3, *Lonicera involucrata*; 4, *Spiraea japonica*, often, but incorrectly, named *S. callosa*.

Communications Received.—*Wm. Carmichael*.—*W. Swan*.—*A. P.* (many thanks).—*J. O'S.*—*A. D. Webster*.—*C. B. G.*—*J. Cheal & Sons*.—*G. J. I.*—*Sutton & Sons*.—*R. S.*—*A. K.*—*R. Read*.—*T. B. H.*—*E. A.*—*Crispa*.—*Rhubarb*.—*L. James*.—*Patrick*.—*M. N.*—*Cobnut*.—*Benj. T.*

COVENT GARDEN MARKET.

June 8th, 1898.

FRUIT.—AVERAGE WHOLESALE PRICES.

| s. d. s. d. | | s. d. s. d. | |
|----------------------|---------|----------------------|---------|
| Apples ...per bushel | 0 0 0 0 | Pine-apples | |
| Cobbs | 0 0 0 0 | —St. Michael's each | 2 6 7 6 |
| per 100 lbs. | | Strawberries per lb. | 1 6 4 6 |
| Grapes, per lb. | 1 6 3 6 | | |

VEGETABLES.—AVERAGE WHOLESALE PRICES.

| s. d. s. d. | | s. d. s. d. | |
|-----------------------|---------|-----------------------|---------|
| Articbokes Globe doz. | 2 0 4 0 | Herbsper bunch | 0 2 |
| Asparagus, per bundle | 3 0 8 0 | Horse Radish, bundle | 1 0 2 0 |
| Beans, French, per | | Lettuces ...per dozen | 1 3 1 6 |
| per lb. | 0 9 1 6 | Musbrooms, p. basket | 1 0 1 6 |
| Beet..... per dozen | 1 0 | Onions.....per bunch | 0 4 0 6 |
| Brussels Sprouts | | Parsley ... per bunch | 0 3 |
| per half sieve | 1 0 1 6 | Radishes... per dozen | 1 0 1 3 |
| Cabbages ... per doz. | 1 0 1 3 | Seakale...per basket | 1 6 2 0 |
| Carrots ... per bunch | 0 3 | Small salad, pnnnet | 0 4 |
| Caullflowers.....doz. | 2 0 3 0 | Spinach per bushel | 2 0 3 0 |
| Csley.....per bundle | 1 0 1 6 | Tomatoes..... per lb. | 0 6 1 0 |
| Cncumbers per doz. | 2 6 3 6 | Turnips per bun. | 0 3 |
| Eadive, French, doz. | 1 6 2 0 | | |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| s. d. s. d. | | s. d. s. d. | |
|-------------------------|---------|------------------------|---------|
| Ann Lilies, 12 blms. | 3 0 4 0 | Orobids, doz. blooms | 1 0 8 0 |
| Asparagus Fern, bun. | 2 0 3 0 | Pelargoniums, 12 bun. | 4 0 6 0 |
| Azaleas, doz. sprays | 0 6 0 9 | Red Roses, per doz. | 1 0 3 0 |
| Bouvardias, per bun. | 0 6 0 8 | Roses (Indoor), doz. | 0 6 1 0 |
| Carnations doz. blms. | 1 6 3 0 | Tea, white, doz. | 1 0 2 0 |
| Eucharis ...per doz | 3 0 4 0 | " Perte | 1 6 2 0 |
| Gardenias ...per doz. | 1 6 3 0 | " Safrano | 1 0 2 0 |
| Geranium, scarlet, | | (Englsh), | |
| doz. bunches | 3 0 6 0 | Pink Roses, doz. | 2 6 4 0 |
| Lillium longiflorum | | Smilax, per bunch ... | 2 0 2 6 |
| per doz. | 3 0 4 0 | Tuberose, doz. | |
| Lily of the Valley doz. | | blooms | 1 0 1 6 |
| sprays | 0 6 1 0 | Tulips, various, doz. | 2 0 4 0 |
| Lilac(French)per bun. | 3 6 4 0 | Violets (Farma), per | |
| Marguerites, 12 bun. | 2 0 4 0 | bunch | 2 6 3 6 |
| Marigold Fern, 12bs. | 4 0 6 0 | " doz. bun. | 0 6 1 0 |
| Narcissus, various, | | Wallflowers, doz. bun. | 2 0 4 0 |
| doz. buns. | 1 6 3 0 | | |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES.

| s. d. s. d. | | s. d. s. d. | |
|--------------------------|-----------|-------------------------|-----------|
| Arborvitae, per doz. | 12 0 36 0 | Fuchsia, per doz..... | 6 0 9 0 |
| Aspidistra, doz..... | 18 0 36 0 | Heliotrope, per dozen | 4 0 8 0 |
| " speolmen | 5 0 10 0 | Hydrangeas, per doz. | 8 0 10 0 |
| Azalea, per doz. | 24 0 36 0 | Ivy Geraniums, | |
| Coleus, per doz. | 4 0 6 0 | per doz. | 5 0 8 0 |
| Dracaena, various, | | Lillum Harrissii, | |
| per doz. | 12 0 30 0 | per pot | 2 0 4 0 |
| Dracaena viridis, doz. | 9 0 18 0 | Lycopodiums, doz. | 3 0 4 0 |
| Eucalyptus, var. doz. | 6 0 18 0 | Lobellias, per doz. ... | 3 0 5 0 |
| Evergreens, Invar. doz | 6 0 24 0 | Marguerite Daisy doz. | 4 0 9 0 |
| Erica, various, per doz. | 12 0 30 0 | Mignonette, per doz. | 6 0 8 0 |
| Ferns, Invar., per doz. | 4 0 12 0 | Myrtles, doz. | 6 0 9 0 |
| Ferns, small, per 100 | 4 0 6 0 | Palms in variety, each | 1 0 15 0 |
| Ficus elastica, each | 1 0 5 0 | Palms, Specimen ... | 21 0 63 0 |
| Foliage Plants, var., | | Pelargoniums ... | 9 0 18 0 |
| each | 1 0 5 0 | Scarletsper doz | 2 6 6 0 |
| Fuchsia, per doz..... | 5 0 9 0 | Spiraea, per doz.... | 6 0 9 0 |

INDEX TO ADVERTISEMENTS.

| | |
|---------------------------------|------------------------------|
| Catalogues. | Insecticides. |
| Barr & Sons641 | Brinkworth & Sons.....643 |
| Bunyard & Co.641 | Corry & Co.641 |
| J. Forbes.....643 | Gisburst Compound 641 |
| Kelway & Son641 | XL All.....642 |
| J. Peed & Sons.....643 | Lawn Mowers. |
| Simpson & Son.....641 | Lloyd, Lawrence & Co.....656 |
| Sutton & Sons641 | Ransomes, Slms & |
| Chrysanthemums. | Jefferies, Ltd.612 |
| Devon Nursery.....641 | A. Sbanks & Son, Ltd...642 |
| Florists' Flowers. | Manures. |
| J. Douglas641 | C. Beeson641 |
| R. W. Hockey641 | Cbchemical Union641 |
| Hood Gardens643 | Clay & Son.....655 |
| T. Jannoch.....643 | W. Colchester641 |
| H. J. Jones.....643 | Homco.....641 |
| Kelway & Son641 | Lawes'.....654 |
| Keynes, Williams, & Co. 643 | Meggitt's.....641 |
| J. Laiog & Sons643 | Native Guano Co.642 |
| R. Owen641 | Standeos'643 |
| J. Peed & Sons.....643 | W. Thomson & Sons.....642 |
| J. Stevens641 | Miscellaneous. |
| Flower Pots. | Carpet Weaving Co.656 |
| Sankey & Sons, Ltd.642 | Cooper's Cycles655 |
| Fruit Trees. | Corry & Co., Ltd.....641 |
| G. Bunyard & Co.641 | Epps's Cocoa655 |
| Garden Sundries, &c. | Gisburstlne641 |
| J. Arnold641 | Juno Cycles656 |
| Corry & Co.642 | Smyth's Baskets641 |
| Eveson Coal & Coke Co. 641 | Netting. |
| Hirst, Brooke & Hlstr. ...641 | H. J. Gasson642 |
| J. & H. R. Hounam643 | A. Potter.....641 |
| Leeds Orchld Co.656 | H. Robinson641 |
| A. Outram655 | Orchids. |
| Porter's Stakes.....641 | J. Cypber643 |
| G. H. Richards.....642 | W. L. Lewis & Co.....641 |
| H. G. Smyth641 | P. McArthur643 |
| Summer Cloud642 | F. Sander & Co641 |
| Heating Apparatus. | Publications. |
| W. Cooper, Limited ...655 | GARDENING WORLD.....655 |
| Messenger & Co., Ltd. ...642 | Gilvie.....650 |
| Tbames Bank Iron Co .. 641 | J. S. Virtue & Co.....656 |
| Horticultural Builders. | Seeds. |
| J. Boyd & Sons.....641 | Simpson & Son.....641 |
| W. Cooper, Ltd.655 | Sutton & Sons641 |
| J. Gray.....641 | Situations, &c. |
| W. Richardson & Co.655 | 642 |
| J. Weeks & Co., Ltd. 641 | Tents. |
| Hose. | A. Potter.....642 |
| F. Reddaway & Co., Ltd. 642 | |

TRADE CATALOGUES RECEIVED.

H. HENKEL, 15, Ernst-Ludwigsstrasse, Darmstadt, Germany.—Aquatic Plants, Trees, Shrubs, and other subjects.

KELWAY & SON, Langport, Somerset.—Wholesale Catalogue of Plants, Trees, Shrubs, &c.



Just Published, Globe 8vo, 5s. net.

THE PRUNING BOOK

A Monograph of the Pruning and Training of Plants as applied to American conditions. By L. H. BAILEY. *Speaker*:—"This explicit and really able manual for gardeners."

MACMILLAN & CO., LTD., LONDON.

30,000 Pteris tremula

In thumb pots, at 15/- per doz. boxes of fifteen in each.

20,000 Pteris cristata

In thumb pots, at 15/- per doz. boxes of fifteen in each.

Peas, Sweet.

Pink, white, blue, in thumb pots, at 15/- per doz. boxes of fifteen in each.

Nasturtiums, Dwarf.

Tom Thumb, Dark Red, in thumb pots at 15/- per doz. boxes of fifteen in each.

Free on Rail for Cash with Order.

H. PESTER, ENFIELD HIGHWAY.

MIDLAND COUNTIES HERALD supplied free for six weeks on stating the purpose for which the paper is required, forwarding name and address, and six halfpenny stamps for postage, addressed "Midland Counties Herald Office, Birmingham." The *Midland Counties Herald* always contains large numbers of advertisements relating to Farms, Estates, and Residences for Sale and to be Let.

1898. FORBES' CATALOGUE 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants

is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and price of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other Valuable Information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,

Nurseryman, Hawick, Scotland. ESTABLISHED 1870.

KEYNES' CACTUS DAHLIAS.

Best Plants. Best Varieties. Moderate prices.

Send Post Card for Catalogue.

About half the good varieties in commerce were raised here.

KEYNES, WILLIAMS & COMPANY,
Dahlia Growers, SALISBURY.

POCKET KNIVES FROM MAKER.

Stag Handle Pruning Knives, a real good article, 1s. 1d. each; Ivory Handle Budding Knives, no better made, 1s. 3d. each; Ivory Handle, 2 blade waistcoat pocket Knife, 1s. 1d. each; Corn Knives, 1s.; Workman's Stag Handle Sheepsfoot and Pen Blade, 1s. 1d. The blades of all the above are made from the very best English crucible cast steel. Post free.

J. & H. R. HOUNAM,

Sheaf Island Works, SHEFFIELD.

RETARDED LILY OF THE VALLEY CROWNS.

Headquarters at Dersingham.

For prices &c., apply to—

T. JANNOCH,

Lily Nursery, Dersingham, King's Lynn, Norfolk.

GLOXINIAS

FINEST MEDAL COLLECTION IN THE WORLD.

Send for CATALOGUE to JOHN PEED & SONS, West Norwood, London

Caladiums

FINEST COLLECTION in the World. We make a speciality of CALADIUMS. Gold Medals Manchester & Leicester. Silver Cup, R.H.S., &c.

Satisfaction guaranteed. JOHN PEED AND SONS, West Norwood, London.

ORCHIDS.

Clean Healthy Plants at Low Prices. Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

FOWLER'S LAWN SAND.



(INTRODUCED IN 1877).

A Certain and Effectual Destroyer of Daisies, Plantains, and Weeds generally, so troublesome and unsightly on Lawns. A renovator also of old and decayed Lawns.

All Lawns should be dressed at least once a year with this article, its fertilizing properties being equal, if not superior, to anything at present offered.

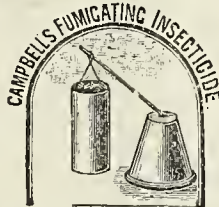
PRICES—In Tins, 1s., 2s. 6d., 5s. each; in Casks, 1/4 cwt., 8s. 6d.; 1/2-cwt., 16s.; 1-cwt., 30s. each.

Manufacturers, **CORRY & Co., Ltd.**
Finsbury St., LONDON, E.C.

To be had of the Seed and Nursery Trade generally.

CAMPBELL'S Fumigating Rolls.

No Lamp, Fumigator, Oil, or Spirit required.



Prices: No. 2 Roll for 500 cubic ft., 5d. No. 3 Roll for 1,000 cubic ft., 8d. No. 4 Roll for 2,000 cubic ft., 1s. 2d.

LEMON OIL INSECTICIDE.

The best liquid insecticide for sponging, dipping, or syringing with.

Prices:—Pints, 1s. 6d.; quarts, 2s. 9d.; 1/2-gallons, 5s.; gallons, 9s. each.

SOLD BY ALL SEEDSMEN.

Wholesale by—

Exors. **ROBERT CAMPBELL,**
117, CHAPEL STREET, SALFORD.

THE "READING" PROPAGATING GLASS.

(PATENT.)

Extra strong glass, with internal rim or trough to receive the moisture from evaporation, with hole in knob to discharge the water, thus preventing the soil becoming sour.

Prices to fit pots in diameter,
Per doz. 3in. 4 1/2in. 6in.
12s. 16s. 20s.

CORRY & CO.,

16, Finsbury St., London, E.C. AND ALL SEEDSMEN.



GARDEN SUNDRIES.

SPECIALY SELECTED ORCHID PEAT

| | |
|---|---------------------------------|
| Black and Brown Peat | Pot Washing Brushes |
| Silver Sand and Loam | Virgin Cork and Raffia [Twine |
| Cocoa Nut Fibre Refuse | Tanned Netting & Tarred |
| Leaf and Peat Mould | Trug Garden Baskets |
| Specially prepared Mould | Flower Sticks, from 1 to 5 feet |
| Sphagnum Moss | Wooden Labels, from 4 to 12in |
| Guano and Dissolved Bones | Thin Bamboo Canes |
| Bones, 1/2 inch and 3/4 inch | Rose and Dahlia Stakes, about |
| Bone Dust, guaranteed pure | 5 feet |
| Blood and Bone Manure, highly recommended | Orchid Baskets and Teak Rods |
| Horticultural Charcoal [Paper | Greenhouse Blinds made to |
| Tobacco Cloth, far superior to | order |
| Mushroom Spawn | Patent Bass Brooms |
| Russia and Archangel Mats | Smyth's Orchid and Hothouse |
| | Shading |

Write for Price List, free by post.

H. G. SMYTH,

Horticultural Sundriesman,
(By Special Appointment to Her Majesty),
Clark's Mews, High Street, BLOOMSBURY, S.W.

JOHN LAING & SONS

Beg to Invite their

PATRONS AND FRIENDS TO VISIT THEIR NURSERIES,

JUST NOW IN FINE ORDER.

ALL REQUIREMENTS FOR THE GARDEN AT MODERATE RATES.

Catalogues Post Free.

Catford Railway Station.

Telephonic Communication, "SYDENHAM, 60."

FOREST HILL, LONDON, S.E.

And CATFORD, KENT.

Also the Floral Depot, International Universal Exhibition, Earl's Court, S.W.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Malda Vale, London W.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JUNE 18th, 1898.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, June 20th.—Royal Agricultural Show, Birmingham.

WEDNESDAY, June 22nd.—Jersey Rose Show.

THURSDAY, June 23rd.—National Rose Society's Show at Bath.

FRIDAY, June 24th.—Sale of Imported and Established Orchids by Messrs. Protheroe & Morris.

EXAMINATION IN HORTICULTURE.—The results of the examination held under the auspices of the Royal Horticultural Society on April 6th last are now before us, and show in what districts of the British Isles the rising generation of gardeners reside, who are taking advantage of the opportunity of getting a knowledge of their profession otherwise than by the ordinary routine of practice. We take it that the places which head the list with the greater number of students owe that distinction to their being centres of horticultural teaching rather than that the students belong there by right of birth. Altogether 190 candidates turned up for examination, of whom 155 were from various parts of England, 11 from Scotland, and 19 who gave no address. Five failed to get a place in the tabulated lists, but this is less than half the number of failures last year. The highest possible number of marks obtainable was 300, but none of the candidates reached this proud position. The list is headed by Miss Olive M. Harrison, Horticultural College, Swanley, with 285 marks. All who got 200 marks and upwards were placed in the first class, and the number reached 87 or 45.7 per cent., being slightly under last year's figure.

An examination of the list shows that established schools, giving systematic instruction to their pupils, take prominence on the examination day. The Horticultural College, Swanley, heads the list with 24 pupils who have passed first-class. Two-thirds of them were women. The County Technical School, Stafford, follows with 12 first class papers; the Technical Laboratories, Chelmsford, Essex, with 8; the Horticultural School, Holmes Chapel, Cheshire, with 6; and the Municipal Technical School, Leicester, with 2. The three students from Kew Gardens passed first-class, but no special instruction is

afforded them for this particular examination. It is certainly a tribute to the instruction afforded there in various phases of horticulture, as well as to the laudable desire for improvement, evidenced by the students themselves. The other first-class papers come from districts or places widely scattered all over the country, and are no doubt the results of teaching in isolated districts and towns by the county councils. Though Surrey is not represented by a school, numerous students from different places gave a good account of themselves, when committing to paper their answers to the questions set.

Sixty-one candidates passed second class, being an increase upon last year, when fifty-five passed. They all had 150 marks and upwards, but less than 200. The County Technical School, Stafford, heads the list in this instance with 7 students; Swanley, Chelmsford, and Holmes Chapel being represented by four students each. Aughton, Lancashire, furnished five second class papers, Leicester furnished three. In the third class Chelmsford leads with seven students; while Holmes Chapel has two in this category; and Swanley College and Leicester, one each. Surrey sends a considerable number, including four from Caterham Valley. Altogether thirty-six passed in the third class as against twenty-eight last year.

Of the 11 candidates from Scotland, 3 passed first class, 6 second, and 2 third-class. The principal centres here are Edinburgh, Glasgow and Longniddry, Haddington. One student who passed in the first class hails from Cullen Gardens, Banffshire, this being the most northern student recorded. A great many of the isolated cases throughout the United Kingdom must represent an exhibition of individual industry, perseverance, and talent that cannot be ignored in taking an account of the spread of education amongst young gardeners. It is satisfactory to know that the answers gave the examiners greater satisfaction than last year. Plant physiology is of considerable importance to gardeners, and though they have hitherto shown some antipathy to this branch of instruction, they are now waking up to the needs of the times. A list of the successful candidates is given in another column.

R. H. S. Rose Show: Change of Date.—May I ask you to be so kind as to announce in as prominent a manner as possible that the Council have changed the date of the R. H. S. Rose Show advertised on p. 59 of the arrangements for 1898, from June 28th to July 12th. This alteration is necessitated by the abnormally backward state of the Roses this year.—*W. Wilkes, Sec.*

Lectures at Chiswick.—The first of a series of four lectures for the benefit of the members of the Chiswick Gardeners' Mutual Improvement Association was delivered by Prof. the Rev. Geo. Henslow on Wednesday, the 22nd inst. The subject of this lecture was on "The Importance of a General Knowledge of Vegetable Physiology to Cultivators." Succeeding lectures will be delivered on the 22nd and 29th June, and on the 6th July.

Children and Fruit.—In the last issue of the GARDENING WORLD it is stated that "fruit causes diarrhoea in children." This is a mistake. It is possible that a boy, after devouring a large quantity of green Gooseberries or half grown Apples, may feel a pain behind his pinafore, but this is not the exclusive right of childhood. A strong man may feel the same, or more, under the same circumstances. If fruit is ripe and sound, experience shows that it can be eaten in any reasonable quantity by any one with pleasure and benefit to both the grower and the eater, be the latter ever so small.—*T. F.*

A Second Kew Gardens.—'Arry (eyeing a lady's hat): "I say, 'Arriet, 'as she got a second Kew Gardings in her 'at?"—'Arriet: "Yus 'Arry. W'en are you going to give me one like it?" Conversation flagged.

Staging Vegetables at Edinburgh.—Two Edinburgh correspondents have written to say that Mr. James Gibson is perfectly correct in his contention (p. 644) that trays of the size specified are too small for the proper display of sixteen varieties of vegetables, and that the matter will be placed before the council of the Royal Caledonian Horticultural Society, for the consideration of that body. This is so far satisfactory, and the society would do well to rectify the matter both in the interests of the public and exhibitors.

Orchid Display at Highfield, Woolton.—There is at the present time a grand display of Orchids in flower, beautifully arranged in one of the Orchid houses at this place, there being over 100 grand spikes of all the best varieties of *Laelia purpurata*. Many fine *Cattleya Mendellii* and *C. Mossiae*, *Oncidium* in variety, and *Odontoglossum citrosimum* in many well-flowered specimens hang gracefully from the roof. At the end of the house is a group of *Odontoglossum vexillarium* in many plants of beautiful varieties, well flowered. One specimen nearly 3-ft. through is producing dozens of spikes of charming flowers. These are beautifully grown. W. H. Tate, Esq., the owner, enjoys his plants and he may well be proud of his collection, which is skilfully handled by Mr. Haigb, his gardener, who has had charge here for many years.—*A.O.*

Cycle Race for Carwardine Cup.—The annual race, promoted by the Anerley Bicycle Club, for the historic Carwardine Cup, takes place on the Crystal Palace track on Saturday, June 18th, at 3 p.m. The race was originally run as a twenty-four hours competition for unlicensed riders and won by C. Fontaine, but owing to the action of the N.C.U. in stopping races for this class of men, the distance has been altered to 100 miles for amateurs, the winners being D. Frost in 1896 and A. H. Harris in 1897. Probably of all the Century races, there has been more competition for this Cup than any other, owing perhaps to its enormous value, 300 guineas; which is, we believe, the highest valued prize ever offered for a cycle competition. The amount of interest shown by riders in this year's race can best be proved by the number of entries (including the two previous winners Frost and Harris) being so great that it is quite impossible to start them all in one race, so only twenty picked riders will start, and as each rider is now allowed by the N.C.U. to have six tandems for pace-making, the race should be to the spectators very exciting and interesting, and a great crowd is expected to be present.

Mr. Gladstone's Favourite Flower.—Since the funeral at Westminster Abbey of Mr. Gladstone, Mr. Ellis Lever has made a suggestion that on every 19th of May, the anniversary of Mr. Gladstone's death, the English Rose should be worn. The late statesman had an intense love of flowers, especially of the Rose, and during the summer months was accustomed to wear one in his coat. The talented poetess, Mrs. Felicia Dorothea Hemans, who, like Mr. Gladstone, was born at Liverpool, wrote some lines on this floral emblem of England, which Mr. Lever quotes:—

How much of memory dwells amidst thy bloom,
Rose! ever wearing beauty for thy dower!
The bridal day—the festival—the tomb—
Thou hast thy part in each—thou stateliest flower!
Therefore with thy soft breath come floating by
A thousand images of love and grief,
Dreams, filled with tokens of mortality,
Deep thoughts of all things beautiful and brief.
Rose! for the bouquet gathered, and the bier;
Rose! coloured now by human hope or pain;
Surely where death is not nor change nor fear,
Yet may we meet thee, Joy's own flower, again!

On seeing Mr. Lever's suggestion, the Dean of Rochester, Dr. Reynolds Hole, the well-known author of "A Book about Roses" and other popular works, wrote to Mr. Lever as follows:—"You will be pleased to read the following extract from a letter dated 79, Harley Street, March 28th, 1877, addressed to the Rev. Canon Hole:—"The Rose is, in addition to other merits, an English flower, almost an English institution, and I am glad you have made it a subject of special study and commemoration.—I remain, dear sir, yours faithfully, W. E. Gladstone."—*The Southport Visiter.*

The Daffodil was Lord Tennyson's favourite flower.

Good and Bad Seeds.—Waggs was troubled about his Parsnips not coming up and asked if they had gone down the other way. Quoth I, "The good die young, and that accounts for the remainder."—*Snaggs, K.B.A.*

M: Scalarandis, head gardener to the King of Italy, the well-known Chrysanthemum specialist, has lately been named a *Chevalier du Mérite Agricole*. He has been honoured with this decoration by France on account of the numerous services he has rendered to horticulture.

Paris Exhibition of 1900.—The Royal Commission are now prepared to circulate information respecting the exhibition. The classification and rules for exhibitors, together with forms of application for space, can be obtained by applying to the Secretary of the Royal Commission, Paris Exhibition, 1900, St. Stephen's House, Westminster, S.W.

The Newcastle-upon-Tyne Flower Show.—As already announced this show will be held in conjunction with the Northumberland Agricultural Show in the Recreation Ground, on Wednesday, Thursday, and Friday, July 13th, 14th, and 15th. This will be the largest show ever held in the North of England. A large deputation from the Council of the Royal Horticultural Society will travel from London to visit the show and make awards. Several prominent nurserymen from different parts of England have made application for space. The whole show promises to be a great success.

The Fossil Forest of Atanakerdluk, as a fossiliferous exhibit, is unique. Many of the leaves of the trees are so perfectly preserved that fragments of insects are plainly to be detected on their surfaces. Amongst these trees are early representatives of *Sequoia gigantea* of the Yosemite valley, and also of the curious and interesting *Salisburia adiantifolia*, or *Ginkgo biloba*. Atanakerdluk is situated in northern Greenland, about 70° N. latitude. An early report places the date of its origin in the Miocene period, for out of the sixty-six species of plants which have been recognised in it no less than eighteen belong to that period. A party of Swedish scientists are even now preparing for a visit to this wonderful spot, and we shall, probably, thus in the near future, know something more definite as to the wonders which this forest, with the unpronounceable name, contains for the palaeontologist.

Messrs. Sutton & Sons' Annual Excursion.—For a number of years past Messrs. Sutton & Sons, of Reading, have organised a yearly trip for their employés. The excursion for the present year took place on Monday, the 6th inst., to Southampton. A special train was chartered from the Great Western Railway Co., and the journey was accomplished very comfortably from Reading in two hours, the route being via Newbury and Winchester. In a saloon carriage attached to the train were Mr. and Mrs. M. J. Sutton, Mr. A. W. Sutton, Mr. Leonard Sutton, Mr. M. H. F. Sutton, Miss Jessie Sutton, Miss Kathleen Sutton, and a party of friends. It is almost needless to say that the various members of the firm who thus identified themselves with the men's enjoyment did their utmost to render the day as pleasant as possible. Arriving at Southampton the trippers, who numbered nearly 700, embarked on two steamers, one of which, the "Solent Queen," left for Ryde, and proceeded round the island, touching at Sandown, Shanklin and Ventnor. The other vessel, "Her Majesty," went to Cowes and Totland Bay. Most of the passengers by this boat landed at Cowes and visited Osborne, Her Majesty the Queen having graciously given permission to view the grounds. The party was shown round by Mr. Sclater, the agent, and Mr. Nobbs, the gardener. The weather was gloriously fine throughout, and thus the lovely Isle of Wight was seen at its best. In addition to meeting the travelling expenses both by sea and land, the Messrs. Sutton generously made an allowance to each employé for incidental expenses, and each married man was invited to bring his wife. The return train left Southampton at 8 p.m., and Reading was reached at 10 p.m., another red letter day in the experience of the employés of the Reading firm thus being brought to a successful close. The organisation was perfect throughout.

A Rare Tree.—*Botanist*: "That seems a rare tree, Pat; what kind is it?"—*Pat*: "Begorra! I think it is a wooden one, but will have it cut down to see."—*Snaggs, K.B.A.*

The Royal Domain of Laeken.—For some time past important works have been carried on upon this estate by the command of the King of the Belgians, who has recently added some new lands to the domain of Laeken. He is building no less than fifteen vineries, each 30 metres long by 8 metres wide, and 21 plant houses for flowers, 30 metres long by 6 wide. Amongst these plant houses will be a block of three, destined to house all the plants of the Congo. The whole of these glass buildings will be surrounded by a large gallery intended as a new orangery.

The Language of Fruit and Vegetables.—We have all heard of the language of flowers, although we may not all be initiated into its mysteries. Here is a sample of the way fruit and vegetables talk which lately appeared in the *New York Herald*. Out of consideration for our readers, we only give the first verse:—

I will "Beetroot" to thee, my dear,
My love will never change;
A happy "Pear" we'll be, my dear,
To wed, "Lettuce" "Orange."
Do not "Turnip" that pretty nose,
Excuse, I pray, the hint;
But kindly list while I propose,
My offer is well "Mint."

Fruit in Queensland.—The colony of Queensland is well adapted for the culture of tropical and sub-tropical fruit. In the warmer northern districts the Mango, Banana, and Custard Apple come to perfection, as well as various other more or less luscious and valuable fruits of tropical countries. Queensland supplies Victoria and New South Wales with Bananas. About 17,059,124 dozen bunches of this useful fruit were grown in 1896, and mostly disposed of to these latter colonies. The children of the white settlers live to a great extent upon Bananas, which make excellent meals and an appetising dish when stewed. Even the skins constitute nutritious food for pigs, and, where the latter are kept, can be turned to profitable account. The Orange and other fruits of temperate countries grow luxuriantly in the southern districts of Queensland, from whence an experimental consignment of Oranges is about to be despatched for London, where it will arrive when the ordinary supply is exhausted. It may be remembered that this is practically the reason for the success of Apples in the London markets from Victoria, Tasmania, &c. This cannot affect the home grower in any way, as the British grown fruits were exhausted long ago.

Tree labels in the Brussels Botanic Garden.—Some years ago the authorities in the Botanic Garden of the Belgian capital must have been impressed with the idea of doing the thing thoroughly in the matter of labelling the trees. The labels consist of iron plates about 6 in. square or thereby, and though they are still suspended on many of the trees, there seems to be no recent work of the kind. The botanical name is first given, then follows the name in French, and Flemish. Below this is a small map of the world showing the localities or countries of which the particular species of tree is a native. The sea is painted green, the land white, and the parts inhabited by the tree picked out in red. Sometimes the labels mention the uses to which the wood, fruit, &c., of the tree are put. The White Beam tree (*Pyrus Aria*) is named *Sorhus Aria*, Grantz. Then follow the synonyms, such as *Pyrus*, *Sorhier Alouchier*, and *Meelhesselaar*. The native countries are Europe, Asia Mineure, Altai and China, these being in French. In like manner the Horse Chestnut is furnished with such names as *Aesculus Hippocastanum*, *Marronnier d'Inde*, and *Wilde Paardekastanjeaar*, the latter being the Flemish name. The map of the world shows that it is a native of Greece and the Caucasus. The name *Sorhus Aria* is now rather antiquated a name for the White Beam tree, but otherwise the information furnished is very good, and well calculated for the instruction of the visitors. Something similar would not be wasted labour in this country, but we do not seem to be progressing very fast in this respect.

The Plants of the Arctic Regions, numbering some 762 species, have mostly white or yellow flowers.

Apples, according to an eminent doctor, have the power of curing confirmed drunkards of their craving for drink. They should be eaten at every meal, and if eaten in quantity, the drink craving gradually subsides.

A Bouquet that Miscarried.—In connection with the visit of the Prince and Princess of Wales to the gardens of the Royal Botanic Society at Regent's Park on the occasion of the Floral Fête of Friday, 10th inst., it was arranged between Messrs. Russell of Richmond and Mr. J. B. Sowerby for the Botanic Society that a bouquet should be made by the Messrs. Russell and presented to the Princess of Wales. The bouquet, which was composed of *Cattleyas*, *Odontoglossums*, and *Asparagus*, was accordingly made, but owing to some unfortunate hitch was never presented to the royal visitor, although it was promptly delivered to time.

Fruit and Vegetables in South Devon.—In a communication to us, Mr. A. McDonald, The Gardens, Stowe Park, Newton Abbot, South Devon, says he has been digging Potatoes in the open since the end of the third week in May, and commenced pulling Peas last week. The Apple is a very fair crop, as is the Plum. Pears and Cherries are even a better crop, being very good. Peaches and small fruits are all bearing good crops; and Strawberries never looked better. Raspberries are not at all promising, and do not seem to succeed well in that part of the country. Mr. McDonald, when he has had time to look round and study the subject under the conditions, which are new to him, may succeed in raising fine plantations of this useful fruit in the course of a year or two.

The buried Romano-British City at Silchester.—This celebrated ancient city has for many years been identified with the *Calleva* or *Calleva Atrebatum* that occurs in the *Antonina Itineraries*. Casual excavations during last century revealed the presence of antiquarian and archaeological treasures. Excavations were inaugurated by the Duke of Wellington in 1864 and continued more or less intermittently till 1890, when the Silchester Excavation Fund was established to carry out the work systematically. The finds for this year have been on view to the British public for some time up to the 15th inst. in the rooms of the Society of Antiquaries, Burlington House, Piccadilly, London. Some pseudo-Samian ware shows that even in the time of the Romans considerable advance had been made in the art of pottery. Clay of various degrees of fineness was the material used, and the potter had even then discovered the value of putting his stamp on the pottery, his name being as legible now as it was 1,400 years ago. Some of the red and glazed vessels were finely decorated in the Grecian style with leaves and scroll work. We noted what was evidently copied from the leaf of the Vine; but some other leaves were evidently conventional. Hunting scenes were also clearly represented. Wine casks after being drained of their contents were utilised for lining wells in the city, those on view being in a wonderfully sound and firm condition, more so in fact than some of the iron utensils and tools that were very much rusted. The iron shoe of a wooden spade suggested that the Adam of those days had to dig his garden or plot with a wooden spade, merely bound round the edges with iron. His modern representative, we fear, would grumble very much, particularly the lady gardener, if sent to trench the kitchen garden with a wooden spade. The site of the walled city occupies about 100 acres. The city seems to have died a peaceful and natural death by decay, as there was no store of anything in the houses.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Odontoglossum crispum rubellum, *Nov. var.*—The sepals of this extremely pretty variety are purple, shaded with brown in places, and white at the edges. The petals are jagged at the edges, with broader white margin than the petals, but otherwise similarly coloured. The lip is beautifully spotted

with rich brown. This pretty variety was exhibited at the Temple Show by Messrs. Linden, Brussels. *Cattleya Mossiae magnifica*. *Nov. var.*—A flower of this grand variety reached us the other day from Mr. P. McArthur, 4, Maida Vale, W. It measured 9 in. across the petals without being spread out flat, and the latter were 2½ in. wide, crisped at the edges and rosy. The lip was 3½ in. long, deep orange in the throat, and rich violet lower down the tube, with white, forking veins forming a handsome contrast. The side lobes and the lamina of the lip are all beautifully crisped and marbled with a rich violet-rose. A narrow white edging is continued from the lamina round the side lobes, making a pleasing finish to the flower. At this season of the year the houses would appear bare if the numerous fine forms of *C. Mossiae* and *C. Mendelii* were removed.

PRIMULA TRAILLI.

HAVING had another year's experience, I can now speak with a certainty as to *Primula Trailli*. I heard from my Indian botanical friend that he had met the collector of the seed sent me as that of *P. Trailli*, and had shown him the gardening papers which I had sent to India, with figures of the plants bloomed here. These, he said, were quite different from *P. Trailli*; that he had collected other *Primula* seed at the same time as *P. Trailli*, that the seed was mixed, and that *P. Trailli* had not come up. I think the best name for the *Primula* which I exhibited would be *P. Monroi* or *P. involucreta major*. It is utterly unlike the form of *P. Monroi* or *P. involucreta*, which I have grown for years. It has, when grown close to the glass and so free from any tendency to be drawn up, stems above 18 in. high, with long leaves. Probably several of the Indian *Primroses* have different forms. Some years ago I exhibited before the floral committee of the R.H.S. a giant form of *P. capitata*, which I suggested should be named *P. capitata major*. This received a First-class Certificate on 9th October, 1886, and some time afterwards a nurseryman exhibited a giant form of this *Primrose*, which, I suppose, the committee considered different from mine, as this also secured a certificate or award. The committee only followed the usual precedents in rewarding a fine, distinct new form of *Primula* in the case of *P. Trailli*, but I think that the name should be changed and that the fact be recognised that *P. Trailli* has still to be introduced.—*George F. Wilson, Heatherbank, Weybridge Heath.*

ROUND DONCASTER.

I WAS charmed with the compact and horticulturally resplendent grounds of Mr. John Athron, in Avenue Road, Doncaster, the other day. The whole covers but barely an acre, but every available spot is utilised with plants or glass structures—everything well grown, vigorous, and free flowering in the heds—a plenitude of bloom in great variety in the houses, the latter being well constructed and adapted for plant culture without a doubt. The wonder to me was, however, Mr. Powell the gardener there could possibly, singlehanded, do such infinite credit to himself, for he told me he has but an occasional help. Certain it is that his heart must be in his work, and that he has an abundance of good taste at his command, not to touch on the good experience Mr. Powell has had, which fact generally shows itself in one's handiwork.

There is nothing here to lend itself to the gardener's art, no natural background or breaks of trees or shrubs, but the whole effect has been produced in a very short time in a very skilful manner. The quaintly shaped iron receptacles on the little lawn in the front of the house, which is gained through an iron gate of orthodox style, rather add than detract from (as is so often the case) to the effect of the bedding plants and ornamental shrubs that are planted therein. Art and nature is well diversified on the front of the house, represented in the former by statuary work in good taste, and in the latter by happily blended heds comprising *Aubrietia Leichtlinii*, *Arahis*, *Pelargonium Flower of Spring*, *Marshal McMahon*, *Mrs. Douglas*, and other good zonals, &c. Inside the iron palisades I observed some grandly furnished specimens of *Ilex Silver Queen*. Passing through a portion of the conservatory, which is so arranged as to be the only ingress

except the house proper into the garden at the rear, I noticed the neatness displayed in the arranging of the flower border which forms the groundwork in this portion of the conservatory, and in which Fuchsia Sunray, and other varieties, Lobelias, &c. were all aglow.

The grounds at the immediate rear were a veritable picture, so early (June 1st) and well bedded out, with French Marigolds, and a few other annuals already in partial bloom. I have thought what a treat a look at Mr. Athron's grounds would afford the amateur enthusiast; for here is a model garden *pur et simple*, which reflects much credit on the painstaking gardener as well as his worthy employer. Mr. Powell was at one time in the gardens at Burghley Hall, and is looked upon as a very efficient gardener in the neighbourhood of Doncaster.—*Albert Upstone.*

STREPTOCARPUS HYBRIDS.

THE Streptocarpus, or, as it is sometimes called, the Cape Primrose, has been so thoroughly manipulated by the florist that hybrids of a very useful and decorative order have become quite common. Everybody seems to grow them; and when their merits, freedom of flowering, beautiful colouring, ease of culture, etc., are considered, it is no wonder they are found in nearly every stove or greenhouse. But, even plants that are not particular in their requirements must have attention, and it is that attention, given at the proper time, which so largely contributes to the success of plant culture.

Messrs. Veitch & Sons possess a good strain; at least, I thought so, when I called the other day on Mr. C. Edwards, The Gardens, Oakhurst, Ealing, W., who had a very respectable lot varying in colour from pure white, without markings, to bright, purple-blue, with streaks, or "guide lines," running down the tube towards the nectaries. Present day gardening is all on the side of economy, that is, no time is lost in producing a plant fit for inspection over the shortest possible period. These very floriferous plants in 6-in. pots, which averaged twelve to twenty flower-stalks, with panicles of six to eight corollas—some of these latter measuring 1½ in. to 2 in. in diameter—were only in the germ condition twelve months ago. A packet of seed, then, well-selected and properly grown on, will produce a charming floral display of many colours from May to September.—*C. B. G., Acton, W.*

CRICKET.

SUTTON'S, OF READING, v HURST & SON C.C.

THIS match was played at Streatham on Wednesday, June 8th, and resulted in an easy victory for the Reading team, as the following score will show. The principal features of the match were the batting of Mr. M. H. F. Sutton, who scored fifty-four in very free style, and the bowling of Mr. T. J. Bennett, who secured five wickets at a cost of only thirteen runs.

| SUTTON'S. | |
|--|-----|
| Hawes, A. J., c Sampson, b Main | 12 |
| Dane, W. G., c Squires, b Main | 5 |
| Sutton, M. H. F., c Thake, b Main | 54 |
| Allum, J., b Main | 4 |
| Barrett, H. J., c Delacourt, b Sampson | 1 |
| Bennett, T. J., b Swinfen | 9 |
| Bowery, F. M., b Swinfen | 0 |
| Bartlett, John, not out | 27 |
| May, T., b Swinfen | 5 |
| Austin, A. T., c Jerry, b Main | 13 |
| Waight, B. C. C., b Swinfen | 0 |
| Extras | 11 |
| Total | 141 |
| HURST & SON. | |
| Squire, b Bennett | 18 |
| Porich, c Bartlett, b Bennett | 12 |
| Sampson, b Bennett | 0 |
| Swinfen, b Bennett | 5 |
| Heuman, b Bennett | 2 |
| Blyth, b Deane | 2 |
| Main, c Austin, b Deane | 4 |
| Delacourt, not out | 9 |
| Cox, c and b Deane | 3 |
| Jerry, c Bowery, b Deane | 0 |
| Thake, run out | 5 |
| Extras | 12 |
| Total | 72 |

In the follow-on Hurst's scored forty-seven runs for six wickets.

PLANTS RECENTLY CERTIFICATED.

FLORICULTURAL Certificates of Merit were granted to the undermentioned subjects by the Royal Botanic Society at the flower show held in conjunction with the floral parade at Regent's Park, on Friday, 10th inst. :—

PAEONY DOROTHY WELSH.—A medium sized, full double Chinese Paeony, exhibiting a bright rose-pink hue. Messrs. Kelway & Son, Langport, Somerset.

PAEONY LADY LONG.—This is another Chinese Paeony with globular, medium sized flowers. The colour is rich satiny pink. Messrs. Kelway & Son.

PAEONY CARDINAL VAUGHAN.—Here we have a huge flower of most imposing presence. The colour is rose-pink, deepening to carmine in the centre, and shading paler towards the circumference, there being a distinct silvery margin. Messrs. Kelway & Son.

PAEONY PRINCESS OF WALES.—This is a very handsome variety of the Tree or Moutan Paeony. The blooms, which are single, are of immense size, and run from 10 in. to 1 ft. in diameter. The colour is a shining white with a flush of pink in the centre. The petals are prettily notched at their blunt apices. Messrs. Kelway & Son.

PAEONY DUCHESS OF MARLBOROUGH.—Another Tree Paeony with very large, but in this case semi-double, flowers, which are not so flat as those of other forms. The colour is a bright satiny rose, the notched petals having, moreover, a silvery margin. Messrs. Kelway & Son.

PAEONY MARCHIONESS OF LONDONDERRY.—This is also a handsome tree form. The flowers are of great size and semi-double. Their pure white is occasionally relieved by a radial splash or bar of carmine, but the degree of this marking does not appear to be constant. Messrs. Kelway & Son.

PAEONY PRINCE OF WALES.—Also of the 'tree' section, but a smaller flower than the foregoing. The colour is bright scarlet-rose, shading to crimson in the centre, and striped obscurely with white, except at the edges of the petals where the white situation is very pronounced. Messrs. Kelway & Son.

PAEONY ALTON LOCK.—This is a rather small-flowered tree Paeony, but the rich deep crimson of its semi-double flowers makes up for the lack of size. Messrs. Kelway & Son.

PAEONY JAMES KELWAY.—A rather curious but distinct shade of dull rose-scarlet is to be observed here. The flowers are of medium size, whilst the margins of the petals are much notched and waved. Messrs. Kelway & Son.

PYRETHRUM CASSIOPE.—The single varieties of Pyrethrum roseum are of great value for cut flower purposes, and in Cassiope we have one of the finest of these varieties from the florist's point of view. The blooms are very large and regular, the ray florets being both wide and long. The colour is deep crimson-carmine, a rich and showy hue. Messrs. Kelway & Son.

STOCK SNOWFLAKE.—This is a pure white Brompton Stock with large full double flowers which are deliciously scented. The spikes, which run from 1 ft. to 18 in. in length, are branching, and carry vast numbers of flowers. Messrs. A. W. Young & Co., Stevenage, Herts.

PAPAVER PRINCESS OF WALES.—Varieties of Papaver bracteatum, which itself is probably a form of P. orientale, comprise some very showy things. Of these Princess of Wales is a fine example. The flowers are of extra large size, delicate pink in colour, and have the large black spot at the base of the six petals that is usually to be seen in varieties of P. bracteatum. Messrs. Barr & Sons, Covent Garden, W.C.

PAPAVER SILVER QUEEN.—Here we have another form of P. bracteatum, but the basal spots are absent. The colour is light flesh-pink, and the single flowers are below the average size. The colour is the important point. Messrs. Barr & Sons.

THALICTRUM AQUILEGIFOLIUM ATROPURPUREUM is a pretty and useful plant badly afflicted with a lengthy and cumbersome name. It is a strong growing form of the type, running to 3 ft. or 4 ft. in height, but the varietal name "atropurpureum" is misleading, since the feathery flowers are not dark but light purple in hue. For cut flower purposes this is a most useful plant. Messrs. Barr & Sons.

CARNATION PRIMROSE QUEEN.—This is a new yellow tree or perpetual flowering Carnation of great promise. In colour the flowers much resemble those of Germania, but they are larger and the petals are of greater substance. The form is good, although not of the highest type, and the plant is a wonderfully free and persistent bloomer. Added to this it possesses a strong constitution, and as it produces plenty of grass there is no lack of material for cuttings. Mr. Fred Perkins, Regent Street, Leamington Spa.

BEGONIA COUNTESS OF ABERDEEN.—A tuberous variety with large, full double, rich salmon-scarlet blooms, the individual segments being prettily gophered and frilled. Messrs. John Laing & Sons, Forest Hill, S.E.

BEGONIA COUNTESS OF DARTMOR.—The double white flowered tuberous Begonias are none too strong in really first-class forms, hence this variety must prove an acquisition. It is a good exemplification of the true Camellia type. Messrs. John Laing & Sons.

BEGONIA GENERAL SIR WM. LOCKHART.—The name of this great soldier finds commemoration in this fine tuberous variety, which, fitly enough, is of glowing, fiery scarlet hue. The blooms are of great depth, the outer or guard segments reflexing considerably. The inner segments, in addition to crisped and notched edges, are pleated and folded in radial lines, and the whole flower has a pleasing and distinct individuality. The habit of all three of the above varieties appears to be dwarf and sturdy. Messrs. John Laing & Sons.

CLEMATIS DUCHESS OF YORK.—This is one of the varieties belonging to that distinct break of Clematises obtained by Messrs. Jackman & Son, of Woking, by crossing varieties of the "patens" type with the pollen of C. coccinea. In Duchess of York the sub-tubular, stellate pointed flowers are smaller than in the other varieties of this section, but they are vastly pretty, the colour being a delicate flesh-pink.

Botanical Certificates were awarded to the following :—

ONONIS ROTUNDIFOLIA.—This pretty and perfectly hardy Ononis was introduced to this country from southern Europe as far back as the year 1570, so that it seems decidedly curious to give it a Botanical Certificate now as a new plant. It is of dwarf and compact habit, and inclined to be shrubby. The leaves are trifoliate, and the leaflets usually obovate in shape, although occasionally elliptic, with much toothed margins. The flowers are relatively large and showy, bright rosy-pink in colour, the large elliptic standard being by far the most prominent part. The peduncles are axillary, and three-flowered. Messrs. Kelway & Son.

VERBASCUM PANNOSUM.—In general appearance this plant is not unlike the Great Mullein, V. Thapsus, but the spike is not quite so woolly. The flowers are large, bright canary-yellow in colour, and nearly regular in form, the lower petals being only a very little larger than the others. Messrs. Kelway & Son.

KNIPHOFIA TUCKER.—This "Poker Plant" throws a spike of medium size, in which the opened flowers at the base are bright yellow, the later unopened ones higher up being brick-red. The contrast is very conspicuous. Messrs. Kelway & Son.

THE FLOWER GARDEN.

THE showery weather which we had through nearly all of June as far as it has gone has given the various plants recently put out a chance of getting a hold of the new soil, but the low temperature that we are experiencing at the time of writing will not suit plants of tender constitution, which almost up to the time of planting out were luxuriating in warm houses.

Where the flower garden is not separated from the shrubberies and outlying grounds, where the rabbits hold possession, there is apt to be considerable outcry against the rabbits and the mischief they do. They will nibble almost anything, and occasionally beds for which they display a marked preference have to be enclosed by wire netting. In view of their depredations, causing gaps in the beds, it will

be advisable to pot up a quantity of such things as Heliotropes and Lobelias, which will then be ready to hand for filling in. Should they not be required, so much the better, but it is well to take the precaution.

The employment of the Dutch Hoe amongst beds and borders of all descriptions is at this season of the year of the utmost importance. A day's hot sun after rain will bake and harden the surface of the soil to a serious degree, more particularly where it is inclined to be heavy. In order to assist aeration, therefore, as well as to keep down weeds, the hoe should be kept going whenever there is opportunity.

CARNATIONS.—The staking of border Carnations should be completed at an early date. A supply of light Bamboos, say about 3 ft. in length is really a good investment, for not only do they look much better than the sticks cut from plantations and copses, but with care they will last for a number of years. In tying do not bunch the flower stems too much together, although there is a great temptation to do this when "work is plenty" and labour is scarce. Keep a sharp look-out for fly, and tackle it with dustings of tobacco powder, which may be washed off by the syringe an hour or two afterwards. We notice that some of our plants are infested with fly, and this in spite of heavy rains, so that those who know how quickly the pest multiplies will hold the warning seasonable. As soon as the present unsettled weather improves a good mulching should be given the Carnation beds, and for the purpose there is nothing better than old Mushroom-bed manure.

FLOWERS FOR CUTTING.—In most establishments there is a great demand for cut flowers, and while the herbaceous borders will stand a good deal of the strain, something should be done to relieve them by planting auxiliary breaks of such subjects as are likely to be useful. Chinese Asters, particularly white varieties, are wonderfully useful at the latter end of the summer, whilst Sweet Sultan, both white and yellow, Coriopses, double Scabiouses, annual Chrysanthemums, Marguerite Carnations, Mignonette, etc., are all of the greatest service in this direction. Of Sweet Peas it would be difficult to have too many, for not only do they admit of cutting and coming again to an almost unlimited extent, but they are great adornments to the flower garden as they stand, and may be employed to mask objects that it is desired to keep out of sight. There are no more beautiful flowers than the Aquilegias, and their value for the filling of vases and epergnes is well-nigh phenomenal. It will be advisable to supplement those grown in the herbaceous borders by a quantity of plants grown specially for cutting. For the purpose there is nothing better than the mixed or selected hybrids amongst which there is, a wonderful range and variety of colour. A packet of seed will furnish all that is required.

DAHLIAS.—As earwigs are now beginning to be plentiful again it will be necessary to set to work to trap them, and thus keep down their numbers, otherwise, by the time the flower buds are formed there will be a plague of the little creatures to deal with. Attend to the staking of the plants where this was not done when they were put out, and the further tying of others already staked. Where it is possible to do so a good mulching of short well-decayed stable manure should be given, particularly where the Dahlias are growing in borders bounding shrubberies, for in such places the soil is poor in proportion to the age of the shrubbery, and naturally, where the latter has been planted some time there is very little goodness left in it.—A. S. G.

into the wall opposite, and in a line with the hot water pipes, and at the top of the house, but not too freely, as a through current dries them up too quickly.

POTTING.—With imported plants we use as small pots as it is possible to get them into, plenty of drainage, and good peat and sphagnum moss in about equal parts. The watering is done during the summer months wholly and solely with the syringe, giving them a good shower bath morning and night. Under such conditions the moss grows like mad and the plants too. In twelve months you will have some good stuff, some of which will require a shift into 5-in. pots. The compost will not be sour, so that they can be potted on without disturbing the ball, setting the plant back so that the young growth coming up and the roots from it may have the full benefit of the new compost. It is from these second growths that you will get good spikes, although plenty will show the first season if good plants are procured—I am, of course, thinking now of *Odontoglossum crispum*—but they do not show themselves properly; and what would be a good variety when grown is as often as not discarded. It requires a bit of nerve, I know, to pull the spikes out, especially the first time of flowering, but it pays in the end.

COOL ORCHIDS.—I am very pleased to find that a great number of amateurs are taking up the culture of cool house Orchids as a recreation after the bustle and go of a busy day in the City; and what is there more beautiful or more healthful than the study of Nature? To such amateurs that have but little room the cool kinds have a decided charm, as they do not require a great amount of fire-heat even in winter, and, besides, take up but very little room, being for the most part dwarf and small growing, which is a consideration. Anyone possessing a greenhouse sufficiently heated so that the night temperature in winter can be kept up to 45° in severe weather without having to drive very hard could grow such varieties or species as are found under the heading of cool Orchids. There is one thing, however, I would mention: that to attempt to grow *Odontoglossums*, &c., in the same house with *Pelargoniums*, *Begonias*, and the like, would most likely end in failure with all, because cool house Orchids must have shade and moisture to do them well.

Assuming then that you have decided to turn your greenhouse into an Orchid house, I would suggest that the open lattice stages be covered over with ordinary roofing tiles. These we have used for years with marked success. Each tile will absorb a good quantity of water, which is given off by degrees as the temperature rises, thus making the conditions of the house as nearly as possible perfect.

In the next calendar I will give a list and cultural directions of some of the most suitable kinds for amateurs to grow.—C.

Gleanings from the World of Science.

Symblypharis, a genus of Mosses.—At the meeting of the Linnean Society of London, on June 2nd, Mr. E. S. Salmon read a paper entitled "A Revision of the Genus *Symblypharis*." This genus of Mosses, he said, as founded by Montagne in 1839, had proved too narrow, through the limits imposed by certain peristome characters, and he was of opinion that Mitten's later emended description should be accepted. Montagne had founded the genus for the Mexican *S. helicophylla*, and to this species Mr. Salmon would refer the Indian moss *S. himalayana*, Mitten (*Didymodon vaginatum*, Hook.), as well as *S. Chrismari*, C. Müll., and *S. asiatica*, Besch., which were found not to possess the characters by which they had been separated from *S. helicophylla*, Mont. *S. microcarpa*, C. Müll., he considered to be a variety of *S. helicophylla*, Mont., and two new varieties of that species were described—*vars. tenuis* and *macrospora*—the latter remarkable for its large spores, 35-45 μ .

In the course of his remarks on other species of the genus, Mr. Salmon observed that *S. fragilis*, Mitt., is peculiar in the bistratose structure of the leaf, and *S. socotrana*, Mitt. (doubtfully included in the genus in the absence of fruit), in the papillose cells. *S. circinata*, Besch., and *S. usambarica*,

Broth., he would exclude from the genus, and pointed out that the former species, from Grande Comore and La Réunion, comprises two distinct mosses. Mr. Charles Henry Wright, A.L.S., offered some critical remarks.

The food of the Springtails.—Surgeon-Capt. Cummins, F.L.S., read a paper "On the Food of the Uropoda." The nature of the food of these mites, which belong to a highly specialised genus of the Gamasinae, had long been a puzzle even to those who have paid particular attention to their organisation. From careful experiments and observation, the author of the paper had come to the conclusion that amongst the organisms on which the Uropoda live were many species of bacilli, including the Potato bacillus and the earth bacillus. Wild yeast-cells were rapidly devoured, as also were Micrococci. He had little doubt that they consumed the gonidia of Fungi, for species of *Penicillium* and *Mucor* never appeared in the boxes which contained mites in large numbers; otherwise, they were commonly present.

Mr. A. D. Michael, in criticising the paper, pointed out the distinguishing characters of the Uropoda as compared with others of the Gamasinae, and especially the peculiar form of the mandibles, which suggested a different mode of feeding to that adopted by other mites. He considered Surgeon Capt. Cummins's observations on the subject a useful contribution to knowledge.

[This account of original observations on the food of the Springtails (Uropoda) should interest those of our readers who have blamed these mites for eating their newly germinated seedling Orchids. It is now made plain that their food consists of vegetable matter, but whether they could eat young seedling Orchids does not yet seem to have been investigated either to blame or exculpate the Springtails.—ED.]

Fasciated *Primula japonica*.—A specimen of this well-known Japanese *Primula* reached us last week, showing remarkable vigour and fasciation. The cut base of the flower scape gave indication of the union of four stems, but above the middle the mass had separated into five, bearing the usual tiers of crimson-red flowers. Instances of this kind may not be uncommon, but a more unusual phenomenon presented itself in the imprisonment of one of the radical leaves by the united stems. One longitudinal half of the leaf was grasped by the stems, while the other half up to the midrib was free, and of the normal colour. It must have got imprisoned when both stems and leaves were in a rudimentary stage in the bud. It was sent by Mr. C. B. Green, Acton.

Twin Vine Leaves.—A curious instance of the union of two Vine leaves was supplied us by Mr. James Gibson, Devonhurst, Chiswick. The petioles of the leaves were united by their upper faces almost to the top, and one would have expected that the leaves would have been brought in contact by their faces. They spontaneously objected to this, and when fully developed had their upper and green faces turned outwards. The phenomenon that presented itself was that two leaves had grown together back to back. The short portion of free petiole at the apex had enabled the leaves to turn round as a response to the influence of light on their green surfaces.

Vagaries of Tulips.—In our small collection of the English florists' Tulip there has been evidence that the sunless winter and spring has not been at all unfavourable even to Tulips of this race. The flowers of most of the varieties were larger than they were last year and more durable, lasting about five weeks. The rectified form of Annie Macgregor threw up two flowers of large size on one scape. The bybloemen Princess Royal threw up two flower stems from one bulb, one carrying the usual complement, and the other bearing four flowers all of which opened in due course. The terminal one was of average size, the other three being smaller, as might be supposed seeing that all were axillary buds on one stem. Each of the three leaves had thus a flower stalk from its axil, but all three were united with the primary stem, so that they were carried three or more inches above the leaves to which they belonged, above which all had free stalks, one about 1 ft. in length. Another variety named Aglaia has produced a bulb about 1 in. in length in the axil of the lowest leaf, but perfectly exposed to light and air. A fourth variety produced a bract towards the top of the stem, partly green and partly coloured in stripes, like a rectified Tulip.

The Orchid Grower's Calendar.

SHADING.—This is of the utmost importance. We use the cotton shading as recommended by Messrs. B. S. Williams. But when new it is scarcely enough should the house be fully exposed, so that an additional shade should be supplied by lightly whitening the glass. Where convenient the blinds should be elevated above the glass some six inches. This allows the air to play between the blind and the glass, which has the desired effect of keeping down the temperature in very bright weather.

The air should be given through ventilators let

HINTS FOR AMATEURS.

PYRETHRUMS.

DURING the months of May and June there are no flowers that are more conspicuously in evidence than the numerous varieties of that versatile species *Pyrethrum roseum*. These varieties are almost innumerable, every nurseryman having a number of pet ones in addition to some that are of such a high order of merit that everybody keeps them in stock. The range of colour covered is, moreover, considerable, since it passes from show-white to the richest crimson in one direction and to subtle shades of yellow in another, although the yellows are as yet the weak section. The type and ancestor of all these double and single forms is in itself a handsome plant, throwing a large Ox-eye Daisy-like flower with a single row of rosy-hued ray florets, with a large bright yellow disc or centre, in which the male or staminate florets are congregated. Its height is from 1 ft. to 2 ft., according to the locality in which it is placed and the soil in which it is grown.

Pyrethrums are so exceedingly easy of cultivation, and withal so beautiful and useful that they constitute almost ideal amateurs' plants, whether in town or country. Scarcely is there a cottage garden in the country, indeed, but that a few of them may be seen at this season of the year, blooming as if they were thoroughly at home, as they are. The double flowered forms seem to be the favourites amongst cottagers, however, for the simple, honest-hearted country folk love the large showy Chrysanthemum-like flowers. It would not be much out of the way to call them the poor man's Chrysanthemum, for although the Queen of Autumn is much beloved of the masses, it blooms at a time of the year when it needs, generally speaking, shelter of some sort to develop and preserve its beauty, and this shelter is often, and in fact usually, out of the power of the cottager to give. Not so with the Pyrethrums, however, for they are ushered in with the gentle zephyrs of May, and the golden sunshine of June, and catching Dame Nature in her mildest mood, flood our gardens with a very flux of colour. Not only are the plants beautiful *in situ* with their dark green feathery foliage, surmounted by the bright flowers on their long, stout stalks, but they are of inestimable value for cutting. In cut flower decorations the single blooms are perhaps to be preferred to the doubles, inasmuch as they are lighter and more graceful than the big doubles, but each section has its uses, and the honours are pretty evenly divided between them. The great quantities of Pyrethrums that make their appearance in all exhibits of cut hardy flowers at this time of the year, furnish incontestable proof of their status amongst the hardy flowers of May and June.

It is a fact that does not seem to be very generally known that Pyrethrums may be induced to take up the burden of flowering for a second time in each year, in autumn, if proper measures are taken. After the first flowering the plants should be cut back, when, if looked after for water during dry weather, they will break into vigorous growth and flower again freely in the autumn, although the individual flowers will probably not be so large and fine as those produced at the ordinary season of blooming.

As we have already intimated, there are great numbers of varieties, but the flowering will be found to be a good selection of the best, and any good collection should at least contain these, even if no more.

SINGLES.

Agnes M. Kelway.—A rich rose flower of the largest size, and ray florets of great width, length, and substance.

Ruth.—Another rose hued flower, but of very much looser build than Agnes M. Kelway. The ray florets are of great length, but rather narrow in proportion to their length.

Princess Irene.—Although this has been placed among the singles, it is in reality a semi-double, for there are always two and occasionally three rows of ray florets. It is a pure white flower, of great size and beauty.

Ascot is a new variety that is, perhaps, the best of all the true singles. The flowers are only of medium

size, but they are produced with exceptional freedom.

Sir Hugo.—A large rosy-scarlet flower, with florets of great width and substance.

Geo Wallace is, in our opinion, the finest of the dark varieties. The blooms are only of medium size, and they are somewhat stiff in appearance, the flower not being so flat as the others mentioned, but the deep crimson colour shows up well by contrast with the extra large and high full yellow disc.

Francis.—In build and shape of bloom this closely approaches to Geo. Wallace, but the colour of the ray florets is bright rosy-crimson, and the disc is not quite so high and full in proportion to the length of the strap-shaped petals.

Those amateurs who do not wish to go in for a collection of named varieties cannot do better than purchase an assortment, which can be obtained at a lower figure, and which will answer for cutting from fully as well as the finer forms for all ordinary purposes.

DOUBLES.

The undermentioned are some of the best of the double flowered sorts:—

Aphrodite.—This new variety, which has obtained a First-class Certificate from the Royal Horticultural Society, is to our way of thinking the best white form in cultivation. The blooms are of large size, high and full in the centre, and the tips of the petals are much notched and lobed.

Sambanburgh rejoices in a rather outlandish name, but it is a capital, pure white form notwithstanding. The notching of the petals so prominent a feature in Aphrodite is not present here.

Wega is a handsome flower, as much like a Chrysanthemum in appearance as it is possible for a flower to be. The outer florets are pink, but the inner ones are flushed with a delicate shade of yellow and pass almost to apricot in the centre.

Cleopatra is something after the same style and with nearly the same colours, but is rather a smaller flower.

Virgo.—This is the best of all the pure yellow forms. It may best be described as primrose-yellow.

Transcendant.—A huge pink flower with the apices of the florets deeply cleft and notched. This deep notching imparts a particular charm to the bloom, as it relieves it from any appearance of stiffness.

Perle.—Here we have a very close and compact flower, the resemblance to a Japanese Chrysanthemum not being so great as in the others. The colour is pink.

Shotover is one of the largest of all. The outer or guard florets are very long and drooping, the inner ones being shorter, and compacted together to form a high close centre. The colour is bright pink.

Beauty of Laeken.—This is another new variety that is remarkable for the rich deep velvety crimson hue it displays. It is not a full double flower, but is nearer to a double than to a single.

Lord Rosebery is a deep, dark crimson that gives an exceptionally rich effect when the sun is shining full upon it. It is a medium sized flower, and rather close in build.—*Rex*.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Strawberry Laxton's Noble.—*Benj. T.*: If we had to choose between Royal Sovereign and Laxton's Noble we should most decidedly take Royal Sovereign. Noble is an early Strawberry it is true, and the fruit is possessed of a fine appearance, but it lacks the weight and flavour of Sovereign, and it is not a day earlier than it; indeed, it is the other way about, for we have picked fruit in the open air from Royal Sovereign several days before there was any fit to gather upon Noble. With regard to cropping both are exceptionally good bearers, and there is little or nothing to choose between them for forcing, except that question of flavour and weight, for both force easily and well.

Mulching for Strawberries.—*Benj. T.*: The grass cuttings from the lawn will make a clean enough bed

for the Strawberries to rest on, and indeed, in that respect will be quite equal to straw, but there are the after effects to be considered, and this most probably will be a fine crop of Daisies that will give you a little employment in weeding out. We should not advise you to use the grass, unless you can get nothing else.

Bees.—I noticed last week that in two of the hives the drones were being turned out in considerable numbers. Is not this an unusual thing to take place early in the season?—*M. N.*

It is somewhat unusual certainly, but the cold weather is without doubt accountable for it. A protracted spell of cold weather will be almost sure to cause the workers to turn the drones out of the hives, more particularly if the stocks are not very strong. We remember that this occurred very extensively amongst our stocks in the summer of 1892, in the month of July, which was with us a very cold and inclement month.

Croton Queen Victoria.—*Patrick*: It is not at all a common practice to use Crotons in the outdoor flower garden, not, however, because they would not do in the summer months, but because they are often considered too valuable for such purposes. You may plunge the plant as it is, pot and all, if you so desire, but keep a sharp look out upon it for water.

Rose Crimson Rambler.—*Cobnut*: There is no rule without an exception, says the old saw, and we have an instance of this in the behaviour of Crimson Rambler Rose. As a rule it is the most rampant of growers and the freest of flowerers, but it will not do in every situation. What it loves is to be planted out in the open where the wind can blow all round and through it, and where its branches may trail over an arbour or trellis. You have committed the mistake made by not a few people in planting it against a south wall. Such a position is much too hot and dry for the likings of this Rose, and it becomes smothered with green fly, which suck the very life out of it, and ultimately leave it a woebegone starved, and stunted cripple. Try it in an open position such as we have indicated, and the results will undoubtedly be more satisfactory.

Celery.—*Rob*: If room is precious you may plant a double row of Celery in each trench by making the latter a few inches wider. The double row takes a little more trouble to earth up, but this is of no great consequence.

Supporting Melons.—*F. Betts*: Yes, it is usual to support Melons as they hang, because the footstalk would be unable to bear the whole of the weight of the fruit. If you closely observe a ripe Melon you will find that there is a crack all round the stalk, and that the latter can be easily pulled out. Were no support given this crack would occur some time before the fruit was fit for table, and the Melon would fall and be spoilt. As soon, therefore, as the fruits get the size of cricket balls or a little larger, they are given something to rest upon and take part of their weight. Both pieces of net and boards suspended at the corners are commonly employed.

Vandalism.—Once again our neighbourhood is besieged with those vandals who desecrate nature by ruthlessly digging up the lovely British Ferns wholesale, and hawking them round the streets for a penny or so a root. Only yesterday three barrows full of the poor plants torn so rudely from their native homes passed through our street. Each barrow must have contained at the lowest computation between two and three hundred plants, so that if other parts of the metropolis are canvassed in the same way one is appalled to think how wholesale is this annual destruction of British plants. It may be argued that this is all done for the embellishment of our gardens, but this is scarcely true, for speaking from my own observations not one in twenty of these poor plants do anything else than die miserably. Can nothing be done to stop this scandal, for it is nothing more? Surely it is time that the authorities in the districts in which these depredators ply their nefarious trade should institute restrictive measures, and enforce them rigorously. I am sure that all amateur gardeners who really care for plants would be pleased to see a movement of this kind as would—*A Lover of Nature.*

Plant to Name.—*A. E. J.*—The plant is a *Bigonia*, probably *B. tweediava*, but the specimen sent is not sufficient to determine. Send a piece when in flower and we shall then be able to say definitely.

A THREE-LIPPED CATTLEYA.

FLOWERS with a reduction of the number of parts are fairly common amongst *Cattleyas*, and occasionally we meet with two lips in a flower, though that is more common in the Genus *Cypripedium*. A short time ago we received a flower of *Cattleya Mossiae* having three distinct and well formed lips from Mr. P. McArthur, London Nursery, 4, Maida Vale, W. The accompanying illustration shows what the flower was like before removal from the plant, which was of moderate size and carried two spikes of three blooms each. Five of them were normal, and the sixth differed only in having a triple lip, the rest of the segments and column being perfect. The three lips were nearly of equal size, well formed and coloured alike. There was only one claw, adnate to the base of the column, but immediately the lip got free from the latter it divided into three, of equal length and all so perfect as if it was the normal and proper thing to do. The origin of the two supernumerary lips might well be set down as a nut for the philosophers to crack.

CULTIVATION OF THE STRAWBERRY.

THE Strawberry is one of our most useful and nutritious fruits. A very eminent doctor, Davis, of Bath, once told me that one could hardly eat too many of them, as they were a change to the system.

Select a piece of ground not shaded by large trees. Trench the ground 3 ft. deep. Pick up the subsoil, and place a good layer of manure over it, then a good spit over that, and another layer of manure more rotten. Should the former crop have been Strawberries, pare them off, and place them in the bottom of the trench. Depth of soil is a great thing, as the roots go down deeply. After the ground settles down give the plants 30 in. between the rows, and 18 in. in the rows. The month of August or September is the best time to plant them. I never dig between the rows, merely keep the hoe going to keep down the weeds.

Instead of laying the runners in small pots, I much prefer to use a small stone or flint, where these are to be got. Break up the soil with a trowel, and then place the stone on the runners to keep the plant steady. They will root in a fortnight, and then you can lift the plants with balls. They must be bedded out till the ground or pots are ready. After I laid out the new gardens at Sandringham I used to force about 10,000 every season, all in 6-in. pots.

When the plants have done bearing cut away all the runners and allow each plant to stand separate, and hoe the ground all over. Put no manure on in the autumn, but in March hoe the ground over and give a good sprinkling of soot, which prevents slugs from increasing. Then cover all the ground over with a good coat of stable litter, which keeps the ground moist and forms a clean bed for the fruit to lay on.

Strawberries, like most fruits, want weeding out, there being too many useless kinds. The best late one I had is Waterloo. In 1892 I crossed it with British Queen, my object being to get the flavour of the latter into the former, and I got just what I wanted in the kind I have named Prince of Wales. In 1893 I crossed Waterloo with Laxton's Latest of All, which gave me the kind I have named Princess of Wales. In 1894 I crossed Waterloo with Frogmore Late Pine, from which I got two splendid kinds, Queen of Denmark, new in colour and a prolific bearer, and Richard Gilbert. The former took after its male parent, and the latter, Richard Gilbert, after the mother. This kind will be a rival for Royal Sovereign when it becomes known. The fruit is as large but firmer in the flesh and better flavoured.

In 1896 I crossed my seedlings; many of them will fruit this season, which will be very interesting. I only take a single flower and remove all the stamens before the pollen is ripe. When I sow the seed I merely pare off all the outer pulp and place it on the seed pan and then sprinkle it over with silver sand. Water the seed pan before placing on the pulp. The seed comes up very quickly; merely

place it in a frame or greenhouse. At the end of April plant out the seedlings and invert a flower pot over the plant till it gets rooted. Take advantage of a shower to remove the flower pot. The plants will fruit the next season. Those I planted out last April made strong plants, and are now in full flower. I took three or four runners off each plant; they are also in flower. I will make a point not to send out anything that is not an acquisition, as it would hurt my reputation.—*William Carmichael, 14, Pitt Street, Edinburgh.*

SUCCESSFUL CULTURE AT EXETER.

CALLING a few days ago at the nursery of Mr. B. Brown, St. Thomas's, Exeter, I was much pleased and in a measure surprised at splendid plants now in flower of that most useful *Dendrobium Dearei*. Unless I am much mistaken I called attention to this plant in the first number of the *GARDENING WORLD*, and all I then said has been amply verified, and even greater praise can now be given, as it has proved to be a most useful plant to those who grow in a large measure for cut flower purposes.



A THREE-LIPPED CATTLEYA MOSSIAE.

The singular thing about Mr. Brown's plants is that without any attempt at special culture or even to convey an idea that he has an Orchid house, he nevertheless has this *Dendrobe* in many houses, where small stove plants are chiefly grown; and the treatment given the latter—sharp heat, plenty of light and moisture—admirably suits the *Dendrobe*. As the greater part are grown in pots and suspended from the roof, they just revel in a temperature that would seem to be just that which suits them. These plants, too, are not of recent importation, and so living on the strength of the native vigour acquired in the native habitat, but are of many years' culture. The growths stout and strong, the pots full of roots, so much so that it would be easy to move the plants by lifting them by the bulbs instead of by the pots. Growth, leaves, bulbs, and roots plentiful and strong, lead one to ask "Well, what of the flowers?" Well, I never saw finer flowers nor plants so uniformly well bloomed. 'Tis not one or two, but scores of plants full of their lovely, white flowers useful for bouquets, wreaths, or sprays; and, judging from a remark made by Mr. Brown, I should say he finds this one of his choicest and most profitable gems.

Another plant grown in a similar manner and with equally good results is *Odontoglossum Roezlii*; usually considered a bad one to do, and certainly one that many fail with for any length of time. Though I know Clapton has turned out perhaps many finer plants than all other places put together, yet here the specimens are perfect gems. Hung from the roof like the *Dendrobe*, the bulbs and leaves are clean and numerous, whilst the flowers of both species are large, stout, and wonderfully attractive, besides being very numerous and good stayers. A lesson certainly may be learned here how to manage these two rather difficult subjects—cleanliness first, then heat, light, and moisture, and death to any thrip, yellow or black, as soon as it puts in an appearance; and I venture to say greater success will follow its culture, than in many cases has hitherto been the case. For myself, I may say, I never saw a better lot; nor more freely bloomed. I hope, for a long time to come, the success of past years may continue, and if a few plants, say of *Epidendrum bicornutum*, were added, I think the same result would follow, and this also would prove to be equally useful, though, perhaps, not productive of quite so many blooms as the two mentioned.

Of the Ferns, such as *Adiantums* in varieties, *Pteris* of sorts, grown by the thousands, I would only say they are just splendid stuff. Each plant is a perfect one in its way; the same remark applies to the *Fuchsias*, zonal and show *Pelargoniums*, *Erica ventricosa*, and the numerous other plants grown here; whilst a word must be given to the yellow *Carnation*, *Pride of Penshurst*, of which so far the proprietor informs me he cannot obtain a sufficiency. The demand for this is so great, that the stock cannot be increased quickly enough to keep up with it. Of Mr. Brown's *Grapes*, *Black Hamburgh*, *Muscats*, and *Alicantes*, I hope to be able to allude to at an early date, sufficient to say at the time of my visit, the two former were in a splendid and forward condition, the latter just setting and promising equally well. The bunches of all, when finished, will be simply superb.—*W. Swan, Exmouth.*

A Hive Bee collects about a teaspoonful of honey during the season. That amount should therefore sustain her till she can again go out in spring, provided she is still alive.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.

THE fifty-ninth anniversary festival dinner of this well-known charity was held at the Whitehall Rooms, Hotel Metropole, on Wednesday evening, June 8th. His Grace the Duke of Portland had promised to take the chair, but was prevented by illness from so doing. His place was taken by Sir Oswald Mosley, Bart., of Rolleston Hall, Burton-on-Trent. See accompanying portrait, for which we are indebted to Mr. Geo. J. Ingram, the secretary. Upwards of 140 sat down to a well-served dinner, the table being profusely and prettily decorated with flowers and plants, amongst which the now celebrated *Acalypha Sanderi* was very conspicuous. Amongst the gentlemen present were the Very Rev. the Dean of Rochester, and Messrs. A. W. Sutton, H. J. Veitch, James H. Veitch, John H. Laing, H. Cutbush, P. Kay, G. Munro, H. B. May, A. Turner, P. Crowley, N. N. Sherwood, W. Goldring, J. Assbee, J. Douglas, Owen Thomas, G. Reynolds, Geo. Wythes, J. Hudson, T. W. Sanders, and R. Dean.

A lengthy toast list was provided, commencing, as in duty bound, by the healths of the Queen, who has been patroness of the institution since 1851, the Prince of Wales, its patron, with the Princess of Wales and the rest of the Royal Family. After these had been honoured, at the invitation of the chairman, Sir Oswald then proceeded to give the toast of the evening—"Continued success to the Gardeners' Royal Benevolent Institution." This he did in a few well-chosen words. At his request, Mr. Ingram, the secretary, read a letter from His Grace the Duke of Portland, stating his regret at being unable to attend, his physician having forbidden the exertion, and expressing a willingness to preside on some future occasion. This, Sir Oswald thought, was a matter upon which they might congratulate themselves, that one of the finest noblemen in England was interested in the society. In his subsequent remarks, the chairman mentioned the fact that this was the 60th year of the society's existence. In his younger days he had not been much interested in horticulture; indeed, his first introduction to it was in the shape of the Birch, but as he had grown older he had grown wiser. He had found horses expensive, and hence he had practically given them up, and had taken to gardening, thus following the example of some of his ancestors. He was very emphatic in stating his opinion that employers should give their gardeners full pay during sickness, no matter how much they might receive from clubs, as that was the way to encourage self-help. He advised all gardeners to subscribe to this very necessary society, and coupled with the toast the name of Mr. H. J. Veitch, their treasurer.

Mr. Veitch, on rising to respond, was received with great applause, thanked Sir Oswald for coupling his name with the toast, and also returned thanks for the society, as he had done for a number of years. Mr. Veitch then proceeded to give some succinctly stated facts connected with the work and progress of the "Benevolent." They had now the largest number of pensioners they had ever had, 168, of whom 93 were men, and 75 women. Their oldest pensioner, Eleanor Brown, died recently. Her husband had subscribed a guinea a year for sixteen years, had been put upon the list in 1866 at the age of 76, and drew his pension until the year 1875, when he died, having received £144 from the society. His wife was put on in his place, and she, too, has now died, after receiving £314 in pension since 1875. This worthy old couple, therefore, drew £458 for 16 guineas subscription. Mr. Veitch then spoke of the need for making the institution more widely known. The wages of gardeners had not risen of late years in proportion to those in other occupations, and he read three very amusing advertisements for gardeners, in which, while experienced men were wanted to look after cows, pigs, horses, etc., as well as gardens, the pay was even below that of a labourer. If the men filling these positions had a family they would, like the prodigal of old, have "to live on the husks that the swine did eat." In speaking of the Victorian Era Fund, he said they had collected £4,000 of the £5,000 asked for, and £200 more had been promised, and he then dealt with the distribution of this money, showing how the interest was distributed *pro rata* to the number of years that the applicants had been subscribers. He commended the action of Mr. J. W. Thomson in leaving legacies to the charities,

both to his audience and to himself. They had auxiliary societies at Bath, Wolverhampton, and Worcester, all of them doing great things, and they hoped to have one at Reading, for Mr. A. W. Sutton had taken the matter up. In conclusion, he made a strong appeal to the hearts and purses of his audience, and reminded them that the institution was carried on for those "who, through unavoidable circumstances, were led to seek its benefits in their old days, and who in their young days had done so



SIR OSWALD MOSLEY, BART.

much to minister to the pleasure and gratification of others."

The toast of "Gardening" was proposed by Dean Hole, who spoke at some length, and highly delighted and amused his audience by his fund of ready wit and anecdote. Said the Very Rev. gentleman, Horace had averred that "he was a bold man who first went to sea in a boat," and someone else had declared that he was a bold man who first ate an oyster, but in his estimation the boldest man he had ever met was he who had asked the Dean of Rochester to speak on gardening, for how could he know when the Dean would stop. He had possessed a love of gardening from his early infancy, for it had been stated that one of his nurses had given warning because he would grab the flowers out of her Sunday bonnet. He was not sure that this was true, but he was sure that a love of flowers was innate in every human being, that it was a memory of Paradise lost, and a hope of Paradise regained. He remembered how he had purchased his first *Salvia* for sixpence, and cared, and tended it, and fought for it. Then, in succeeding years, came a period of apathy and indifference when his "Mary" was neither *Marigold* nor *Polyanthus*; when his "Annie" was not *Anagallis*, when his "Carrie" was not *Caryota*, and when the "Miss" he loved best was not *Mesembryanthemum*. In those days he loved "Marguerite," but regarded her with a lackadaisical expression. Since those days his love for flowers had returned, never more to leave him. He remembered the "scarlet and yellow" fever of *Tom Thumb Pelargonium*, and yellow *Calceolaria*, how it had swept over the land, but since we had recovered from it all branches of gardening had shown progression. He pleaded, however, for more gardens, and for more beauty of arrangement in our gardens. We had too many straight lines, and we saw too much of the garden from the windows of the house. Speaking particularly of his favourite flower, the Rose, he believed there was a splendid future for it, and that the Hybrid Tea would eclipse all others. For upwards of half a century he had enjoyed a sympathetic friendship with fellow gardeners that he had been unable to obtain in any other walk of life. From coronet and billycock alike, in ducal castles and humble cottages he had received the same brotherly sympathy. Even when he crossed the Atlantic there was not a hotel in which a box of Roses or Carnations was not there to greet him. In conclusion, he said that to the work of their institu-

tion might well be applied the blessing from the "Old Book"—"The blessing of him that was ready to perish came upon me, and I caused the widow's heart to sing for joy."

The toast was coupled with the name of Mr. Arthur W. Sutton, who, in replying, said that their gardens depended upon their gardeners. He referred to the Hon. Alicia Amherst's work on the "History of Gardening" in appreciative terms, and spoke of what the clergy had done for the art. In addition to Dean Hole there were such gentlemen as the Rev. D'Ombrain, Rev. G. Engleheart, and the Rev. W. Wilks, all of whom had worked well for the cause. He hoped that the Berkshire Auxiliary Society would be a huge success, and he had almost obtained a definite promise from Mr. C. E. Keyser, of Aldermaston, that he would be its president.

Mr. Geo. Munro proposed "Our Country Friends," and commented upon the value of the auxiliaries to the central society. Mr. Geo. A. Dickson briefly acknowledged.

The amount of money promised during the evening was then announced as being £2,300, including donations to the Victorian Era Fund. The chief subscribers were as follows:—His Grace the Duke of Portland, 50 guineas; Sir Oswald Mosley, £62 10s.; Messrs. Rothschild, 100 guineas; Mr. Coleman, 50 guineas; Messrs. Hurst & Son, £20; Mr. N. N. Sherwood, £20; Mr. W. Sherwood, 5 guineas; Mr. E. Sherwood, 5 guineas; Miss Sherwood 5 guineas; Messrs. Dickson and Robinson, £35; Mr. A. W. Sutton, £50; Mr. M. H. F. Sutton, £25; Messrs. Jas. Veitch & Sons, Ltd., £20; Mr. H. J. Veitch, £50; Mr. Leonard Sutton, £50; Mr. Geo. Munro (list), £131; Baron Schroder, £20; Mr. A. Wilson, £90; Lord Wantage, 10 guineas; Mr. T. W. Bond, 14 guineas; Mr. W. Thomson, 20 guineas; Mr. G. Maycock, £10; Mr. N. C. Cohen, 5 guineas; Mr. P. Blair, 5 guineas; Mr. W. Crump, £20; Dean Hole, £5; Mr. W. Jinks, £18 10s.; Mr. W. Y. Baker, 13 guineas; Mr. Chas. Turner, 5 guineas; Mr. B. F. Smith, 2 guineas; Mr. P. Crowley, 6 guineas; Messrs. Wrench & Son, 5 guineas; Mr. G. H. Richards, 10 guineas; Messrs. Fisher, Son & Sibray, 10 guineas; Mr. W. J. Corrie, 5 guineas; Mr. J. F. McLeod, 2 guineas; and the Worcester Auxiliary, £70. Mr. Geo. Dickson's list is not yet completed, but will run from £50 to £100.

The musical arrangements were in the capable hands of Mr. Herbert Schartau, and the songs given by him, and Mesdames Lucia Johnstone, and Edith Serpell, and Mr. Chas. Chilley, also the humorous sketches by Mr. Walter Churcher were much enjoyed.

A vote of thanks to the Chairman for presiding was proposed by Mr. N. N. Sherwood, and the meeting then came to a close at an advanced hour.

JUSTICIA CARNEA.

THIS old fashioned plant is too frequently met with, presenting appearances which are a long way from creditable either to the plant itself or those in whose collections it finds a place. Well handled, it is capable of becoming one of the most useful and beautiful among what may be fairly classed soft-wooded stove subjects. Plants well done in 4-in. and 6-in. pots are occasionally met with; but it is capable of greater things than these, and with a very moderate amount of care may be grown into a fairly large specimen. Take small plants and keep them moderately dry and at rest after flowering. Early in March shift them into No. 16 pots, using a mixture of fibre, loam, and peat, with some sharp sand. Place them near the glass in a temperature ranging from 50° to 60°; water sparingly till the plants get fresh hold of the soil, and syringe both morning and evening. Avoid getting the plants into a sodden condition, as they are rather impatient of excess of water at the root. The species is a rapid grower, and if left to its own resources will become leggy. To prevent this peg the shoots down, as this causes the back buds to swell, and when the points of these shoots turn up pinch them out with the thumb and finger, till enough breaks are secured to form a plant with a head commensurate to the size of the pot in which the plants are growing. They should be in flower during May; remove into cooler quarters during flowering time. As they go out of bloom dry them off partly, then prune back moderately, and in a month or so place in heat again; water more

freely, and during July they will be once more in full beauty, when the same routine may be repeated. After this flowering, and when growing freely again, moderate waterings with manure water will be required, and during September these should flower a third time.—*W. B. G.*

ALPINE AND ROCK PLANTS.

GYPSOPHYLLA CERASTIOIDES.—The short, elliptic leaves of this plant closely resemble those of a Mouse-ear Chickweed (*Cerastium*) and clothe the short trailing stems, above which the flower scapes rise only to a height of 1 in. to 2 in. The flowers are relatively large for the size of the plant, and white, beautifully lined with pink veins. The species is an ideal rock plant, a gem as it were for those who like to grow dwarf subjects corresponding to an alpine vegetation. It is easily propagated from cuttings of barren shoots during the summer months, in pots of sandy soil under a handlight or frame.

CHEIRANTHUS MARSHALLI.—The flowering season of this hybrid garden plant is now about over, but cultivators should set about securing a stock of cuttings for the raising of young plants. The flowers vary from golden-yellow to orange according to their stage of growth, and are perfectly barren, so that the plant must be perpetuated from cuttings, which are often difficult to get owing to the tendency the plant has of flowering itself to death. The great beauty of the large orange flowers is sufficient to make its perpetuation desirable, even in quantity.

CHEIRANTHUS ALPINUS.—While this is similar to the last-named in many respects, it differs in having pale yellow flowers, and by the production of barren shoots in considerable quantity by which the plant may be increased, or which may be left to flower the following season. This they never fail to do as soon as they acquire sufficient strength. The plant is naturally a rock-loving subject.

ALYSSUM SAXATILE.—The ordinary form of this plant is largely used for bedding purposes in spring. There are two varieties, as yet but little known, and well worthy of cultivating on the rockery, not merely because they are easy to cultivate, but because they are pretty and interesting on account of their great profusion of flowers, and conspicuous and showy character at a time when flowering plants in the garden are most admired. I refer to *A. s. citrinum*, with soft lemon flowers; and *A. s. flore pleno*, a pretty double variety. A pot of cuttings of each will furnish the rockery in spring with all that is required of these colours.

WAHLENBERGIA SERPYLLIFOLIA—This may be increased by seeds or cuttings of the barren shoots in July or August. It belongs to the Bellflower family, but is very distinct from *Campanulas* generally. The lanceolate, dark green leaves are small and arranged in a circular tuft upon the ground. Many flower stems bearing a few small leaves spread around the crown upon the ground, and then rise up for 2 in. or 3 in., carrying a single, deep blue flower each. The plant is a native of Dalmatia.

CERASTIUM ALPINUM.—The flowers of this alpine species are white, and almost as large as those of *C. arvense*, which is of much more straggling or spreading habit. It forms, in fact, compact tufts about 3 in. or 4 in. high. There is a woolly variety of this, namely, *C. a. villosum*, which has a gray appearance, and bears the same relation to the species as *Thymus Serpyllum lanuginosus* bears to its original. It is essentially a rock plant.

DAPHNE CNEORUM.—Amongst dwarf plants of a shrubby nature few appear to better advantage on the rockery than this. Its terminal clusters of rich rosy flowers are produced in great profusion, and are no more showy and effective than they are delightfully fragrant, especially on calm, dewy evenings. The small deep green leaves set off the flowers well. The plant often flowers a second time in September. It likes to be fully exposed to sun and air, but should have a considerable quantity of peat or leaf mould incorporated with the soil in which it is planted in order to keep the roots moist and cool during periods of drought.

LYCHNIS LAGASCAE.—Of Alpine Campions, few are prettier or flower more freely than this. The deep rose and large flowers are produced on stems only a few inches high. After flowering is over, the careful cultivator would do well to take cuttings of the flowerless shoots, which are not too numerous as

a rule, owing to the freedom with which the plant blooms during June.

SILENE ALPESTRIS.—The small but dainty white flowers of this Catchfly have their petals cut in a way that reminds one of Ragged Robin in miniature. The leaves are small and neat. Propagation may be effected by division or cuttings.—*J. Effe.*

BELGIAN NURSERIES.

VI.—**M. ARTHUR DE MEYER, GHENT.**

SEEING that so many nurseries are situated in the suburbs around Ghent it is but natural that many of them would have certain specialities to which particular attention is given. While such is the case here, M. Arthur de Meyer caters for foreign business alone, that is, he sends his plants to various countries outside of Belgium, such as France, Germany, Britain and America. He does a large business with the latter country, and we had the pleasure of witnessing a large consignment of *Ficus elastica*, *Araucarias*, and other plants packed in large wooden cases ready for shipment. Already on the occasion of our visit he had despatched 5,000 *Araucarias*, so that only a few of the plants of suitable size then remained. The plants of *Ficus* we noted were knocked out of their pots and the ball of soil and roots tightly wrapped up in wood wool. These were then laid all round the sides of the cases with the roots against the latter and the leaves projecting into the middle of the case, which was left open as air space. The solid layer of plants was then pressed down tightly so that no shifting could take place, and the lid was then placed in position and nailed down. In such position they cross the Atlantic and come out as fresh as if placed there only the day before.

Mr. Arthur de Meyer's nursery consists entirely of glass, and is situated at *Chausée d'Anvers, Mont-St.-Amand, Ghent, Belgium*. The establishment consists of some thirty-five houses, but many of them are 13 metres wide (a metre being 3 ft. 3 1/4 in.). One is 20 metres wide and 27 metres long, being a gigantic structure all under one roof, supported by slender iron pillars. This house contains seven huge beds, running the whole length of the building, and was occupied with Indian *Azaleas*, all planted out in leaves. Shelves or little elevated benches in this house are filled with young *Boronias*, planted out in decaying leaves, that is, leaf soil. Of *Azaleas* we noted 25,000 cuttings being rooted. They are fit for market in the course of two or three years. *Boronias* constitute one of the principal specialities of the establishment. The species grown are *B. heterophylla*, *B. elatior*, and *B. megastigma*. Of these we noted 30,000 saleable plants, bushy specimens about 1 ft. high, and all clean, healthy, and faultless. They would be a credit to any greenhouse or conservatory. In the propagating pits we inspected the frames containing 25,000 cuttings in the process of being rooted. The frames were simply covered with large, movable sheets of glass that could be removed for the inspection of the cuttings at any and every particular point in the houses. The cuttings are first of all put in thickly in small pots, and the latter plunged in the finely chopped stems of Flax, a plunging material we have never seen utilised in this country. The great point with these cuttings is to keep the foliage dry until they are rooted, the process taking three or four weeks. The young plants are then put singly into thumb pots, and take two years to develop into bushy specimens 1 ft. high.

A third great speciality of this establishment consists of the more useful Palms, which are grown in thousands. *Kentia fosteriana* and *K. belmoreana* are universally grown, many houses being filled with them here. A very sturdy growing Palm is *Phoenix tenuis*, with short leaves and leathery dark green pinnae, forming compact, well-grown specimens well fitted for decorative purposes. In addition to the above, another block of two large houses contained *Phoenix canariensis* and *Latania borbonica* in the pink of condition and plunged in Flax. The Canary Island *Phoenix* is also a sturdy growing species that will stand a lower temperature than most of the other species in cultivation. *Cocos weddeliana* is another favourite grown in considerable quantity, the seedlings or young specimens being grown in pots.

Other fine foliage plants include *Dracaenas*, of which *D. indivisa* is reared in quantity from seeds,

the younger specimens having only one or two leaves at the time of our visit. A batch of *D. Lindeni* was handsomely coloured, the pure air of Belgium being well suited to their welfare. *Aspidistras*, both green and variegated, are grown in quantity; and such is the demand for them that they are plunged in Flax to bring them on more quickly to meet the requirements. The graceful and useful *Carex brunnea variegata*, better, but incorrectly, known as *C. japonica variegata* also receives due attention. The beautiful *Asparagus Sprengeri* is being reared from seeds in quantity; the plants already occupied 60-size pots. Amongst *Araucaria excelsa* we noted two fine plants of a new variety named *A. e. glauca* Joseph Napoleon Baumann having strong branches, thickly clothed with stout rigid leaves. They were six years old, and two companions to them went to America at 100 francs, which will give an idea of the value placed upon them.

R. H. S. EXAMINATION IN HORTICULTURE.

THE undermentioned are the results of the examination held on April 6th last. The highest possible number of marks obtainable by the candidates was 300.

| FIRST CLASS. | | No. of Marks gained. |
|--------------|--|----------------------|
| 1. | Miss Olive M. Harrison, Horticultural College, Swanley | 285 |
| 2. | Miss Mary Banks, County Technical School, Stafford | 280 |
| 2. | Mr. O. H. Faulkner, County Technical School, Stafford | 280 |
| 2. | Mr. C. Lawrence, County Technical School, Stafford | 280 |
| 2. | Miss Ethel S. Lutley, Horticultural College, Swanley | 280 |
| 2. | Mr. C. Mann, County Technical School, Stafford | 280 |
| 2. | Mr. M. Wilson, Horticultural College, Swanley | 280 |
| 8. | Mr. F. A. Gwilliam, A.R.H.S., Palace Gardens, Gloucester | 275 |
| 8. | Mr. A. Tanner, School House, Cobham, Surrey | 275 |
| 8. | Mr. F. Ovenden, County Technical School, Stafford | 275 |
| 11. | Miss Mary H. Graves, Horticultural College, Swanley | 270 |
| 11. | Miss Ethel E. Rands, Horticultural College, Swanley | 270 |
| 13. | Mr. Henry Mitchell, County Technical School, Stafford | 265 |
| 13. | Miss Jessie H. Price, Horticultural College, Swanley | 265 |
| 15. | Miss Lilian Deane, Horticultural College, Swanley | 260 |
| 15. | Mr. Herman Spooner, Technical Laboratories, Chelmsford | 260 |
| 15. | Mr. Harry H. Thomas, 346, Kew Road, Kew | 260 |
| 15. | Mr. Geo. Underwood, Municipal Technical School, Leicester | 260 |
| 15. | Miss Eunice Watts, Horticultural College, Swanley | 260 |
| 20. | Mr. W. H. Brownridge, County Technical School, Stafford | 255 |
| 20. | Miss Ada C. Bryson, Horticultural College, Swanley | 255 |
| 20. | Mr. G. Mills, Bayham Gardens, Lamberhurst, Kent | 255 |
| 23. | Mr. F. Botterill, County Technical School, Stafford | 250 |
| 23. | Miss Ethel Edmunds, Horticultural College, Swanley | 250 |
| 23. | Mr. Robert Gaut, 3, Gloucester Terrace, Kew, Surrey | 250 |
| 23. | Mr. Jos. Gillibrand, Horticultural School, Holmes Chapel | 250 |
| 23. | Mr. Jos. Hope, The New Gardens, Elveden, Thetford, Norfolk | 250 |
| 23. | Mr. Arthur Jones, Horticultural School, Holmes Chapel | 250 |
| 23. | Mr. Harry Miller, Technical Laboratories, Chelmsford | 250 |
| 30. | Mr. F. E. Boyes, 19, Woodland Grove, Whitegate Lane, Blackpool | 245 |
| 30. | Mr. E. T. Cole, Technica! Laboratories, Chelmsford | 245 |

| | | | |
|---|---|---|--|
| 30. Mr. J. K. Cureton, County Technical School, Stafford 245 | 78. Mr. F. B. Davis, 4, Adon Terrace, Hendford Hill, Yeovil 205 | 33. Mr. H. P. Appleton, Municipal Technical School, Leicester 170 | |
| 30. Mr. Geo. Leadbeater, Junr., Horticultural School, Holmes Chapel 245 | 78. Mr. E. Walker, Dairy Cottage, Wales, near Sheffield 205 | 33. Mr. J. P. Quinton, 3, Ferry Road, Long Ditton 170 | |
| 30. Mr. A. J. Morland, Syon Gardens, Brentford 245 | 78. Mr. John T. Walker, The Gardens, Fairfield, Cobham, Surrey 205 | 33. Mr. A. Shaw, Staincross, near Barnsley, Yorkshire 170 | |
| 30. Mr. R. Newman, Horticultural College, Swanley 245 | 78. Mr. Edward Semper, The Gardens, Scawhy Hall, Lincolnshire 205 | 33. Mr. W. Smith, Bredon's Norton, Tewkesbury 170 | |
| 30. Mr. W. B. Pinder, County Technical School, Stafford 245 | 83. Miss E. M. Brace, 62, Lower Sloane Street, S.W. 200 | 33. Mr. W. C. Smith, Botanic Gardens, Glasgow 170 | |
| 30. Mr. Wm. Woodford, The Croft, Wallingford 245 | 83. Mr. Geo. W. Brookhank, 62, Queen's Road, Wimbledon 200 | 43. Mr. L. R. Baker, Blagdon House, Merton Road, Merton 165 | |
| 38. Miss Annie Ault, Horticultural College, Swanley 240 | 83. Mr. E. J. Pitts, Horticultural College, Swanley 200 | 43. Miss Gertrude Bridger, Primrose Bank, Aughton, Ormskirk 165 | |
| 38. Mr. Hy. Broadbent, Park Hall, Evesham 240 | 83. Mr. F. Weiste, Horticultural College, Swanley 200 | 43. Mr. G. J. Goodall, The Gardens, Streatley House, Reading 165 | |
| 38. Mr. Geo. Butcher, 188, Wellfield Road, Streatham, S.W. 240 | 83. Mr. W. H. White, Municipal Technical School, Leicester 200 | 43. Mr. W. Ness, Aberlady, Longniddry, N.B. 165 | |
| 38. Mr. John P. Holt, Horticultural School, Holmes Chapel 240 | SECOND CLASS. | | |
| 38. Mr. F. Lazenby, Botanic Gardens, Cambridge 240 | I. Mr. Hy. Brotherston, Gosford Gardens, Longniddry, N.B. 195 | 43. Mr. R. Sumner, Liverpool Road, Aughton 165 | |
| 38. Mr. C. E. Malins, Horticultural College, Swanley 240 | I. Mr. J. Burden, Crowmarsh Gardens, Gifford, Wallingford 195 | 43. Mr. R. Y. White, 67, Queen's Street, Cheapside, E.C. 165 | |
| 38. Mr. Geo. Ord, Causey Wood, Marley Hill, Newcastle-on-Tyne 240 | I. Mr. J. Child, County Technical School, Stafford 195 | 50. Mr. L. Davenport, Horticultural School, Holmes Chapel 160 | |
| 45. Mr. Isaac Godher, The Vineyards, Bracon Ash, Norwich 235 | I. Mr. A. H. Davis, F.R.H.S., Alhert House, Sutton, Surrey 195 | 50. Mr. Maurice Field, Newnham House, Wallingford 160 | |
| 45. Mr. W. J. Hurford, 3, Pound Street, Carshalton, Surrey 235 | I. Mr. W. Grantham, West Tower, Aughton 195 | 50. Mr. E. Russell, Municipal Technical School, Leicester 160 | |
| 47. Miss Marion Hawkes, Horticultural College, Swanley 230 | I. Mr. W. Hammett, 11, Granville Place, Stone, Staffordshire 195 | 53. Mr. W. Galloway, Gosford Gardens, Longniddry, N.B. 155 | |
| 47. Mr. William H. Neild, Horticultural School, Holmes Chapel 230 | I. Mr. R. Hudson, The Paddocks, Swaffham, Norfolk 195 | 53. Mr. J. Humphreys, Hillside, Winchmore Hill, N. 155 | |
| 47. Miss E. Morland, 7, Gloucester Road, Kew 230 | I. Mr. E. Miller, 55, Holly Road, Chiswick, W. 195 | 53. Mr. R. Jones, Aughton Springs, Aughton 155 | |
| 47. Mr. G. W. Pyman, Technical Laboratories, Chelmsford 230 | I. Mr. Basil G. Stanley, Bredon's Norton, Tewkesbury 195 | 53. Mr. W. T. Smith, County Technical School, Stafford 155 | |
| 51. Mr. John Benson, Liverpool Road, Aughton 225 | I. Mr. Thos. H. Usher, Hoe Place, Woking, Surrey 195 | 53. Mr. H. Weddell, Haycroft Cottage, Surhinton 155 | |
| 51. Mr. H. F. Easton, Puller Road, West Barnet 225 | II. Mr. A. J. Brabner, Ivelhurst, Yeovil, Somerset 190 | 59. Mr. H. Holmes, The Gardens, Garvald House, Dolphinton, N.B. 150 | |
| 51. Miss Katherine M. Gervais, Horticultural College, Swanley 225 | II. Mr. Thomas Carr, Undermount Gardens, Bonchurch, Isle of Wight 190 | 59. Mr. B. Ling, Technical Laboratories, Chelmsford 150 | |
| 51. Mr. E. Jeffrey, Horticultural College, Swanley 225 | II. Mr. Louis Hales, Horticultural College, Swanley 190 | 59. Mr. S. J. Sayer, Technical Laboratories, Chelmsford 150 | |
| 51. Mr. A. Manson, Moreton Hall Gardens, Whalley, Blackburn 225 | II. Mr. C. T. Illsley, Amhlecote, Cobham, Surrey 190 | THIRD CLASS. | |
| 56. Mr. Arthur Cooper, St. Peter's Street, Wallingford 220 | II. Mr. J. Jeffery, Moor Court Gardens, Oakmoor, Stoke-upon-Trent 190 | I. Mr. F. E. Belcher, 26, First Avenue, Bush Hill Park, Enfield, N. 145 | |
| 56. Mr. W. Cranfield, Botanic Gardens, Cambridge 220 | II. Mr. J. Jordan, County Technical School, Stafford 190 | I. Mr. A. W. Browning, Gosford Gardens, Longniddry, N.B. 145 | |
| 56. Mr. F. J. Crook, 14, St. John's Park Terrace, Winchester 220 | II. Mr. J. Lee, Gosford Gardens, Longniddry, N.B. 190 | I. Mr. Henry Kingham, Technical Laboratories, Chelmsford 145 | |
| 56. Mr. F. H. Harris, Technical Laboratories, Chelmsford 220 | II. Mr. J. F. Mitchell, Horticultural College, Swanley 190 | I. Mr. E. Powell, Heveningham Hall Gardens, Yoxford, Suffolk 145 | |
| 56. Miss Hilda Leese, A.R.H.S., 31, Richborough Road, Cricklewood, N.W. 220 | II. Mr. A. J. Pye, Technical Laboratories, Chelmsford 190 | 5. Mr. W. Hind, Town Green, Aughton, Ormskirk 140 | |
| 56. Mr. A. D. Morris, Barrowmore Hall Gardens, near Chester 220 | II. Mr. W. Sproston, Great Haywood, Stafford 190 | 5. Mr. Henry Hope, Municipal Technical School, Leicester 140 | |
| 56. Mr. Arthur Valentine, Technical Laboratories, Chelmsford 220 | 21. Mr. Chas. Fogden, Poplar Villa, South Hayling, Hampshire 185 | 5. Mr. P. M. Marshall, Technical Laboratories, Chelmsford 140 | |
| 63. Mr. E. Banks, County Technical School, Stafford 215 | 21. Mr. H. R. Judson, The Gardens, Ahhotts Worthy House, Winchester 185 | 8. Mr. F. South, Horticultural School, Holmes Chapel 135 | |
| 63. Mr. Thos. Bell, 1, Alexandria Place, Paisley 215 | 21. Mr. J. Prescott, Brookfield Lane, Aughton 185 | 8. Mr. H. L. Symes, The Gardens, Milburn, Esher 135 | |
| 63. Mr. W. Brown, Cullen Gardens, Cullen, Banffshire, N.B. 215 | 24. Mr. Hy. Child, County Technical School, Stafford 180 | 10. Mrs. J. Chapman, 1, Leopold Road, Wimbledon Park, Surrey 130 | |
| 63. Mr. A. E. Burgess, Technical Laboratories, Chelmsford 215 | 24. Mr. C. Sellars, 5, Leaman Terrace, Lintorpe Road, Middlesboro' 180 | 10. Mr. C. New, 11, Blendworth Terrace, Clarence Road, Ventnor, Isle of Wight 130 | |
| 63. Mr. Hy. Davis, County Technical School, Stafford 215 | 26. Mr. E. Dolman, Wychnor Park Gardens, Burton-on-Trent 175 | 10. Mr. E. H. Niblett, The Gardens, Los Altos, Sandown, Isle of Wight 130 | |
| 63. Mr. J. Richards, Horticultural School, Holmes Chapel 215 | 26. Mr. Wm. Laurence, Technical Laboratories, Chelmsford 175 | 10. Mr. A. McQuaker, 8, Victoria Place, Trinity, Edinburgh 130 | |
| 63. Mr. J. C. Tate, The Villa, Bulmer, Welburn, Yorkshire 215 | 26. Mr. S. Lyversage, County Technical School, Stafford 175 | 10. Mr. J. F. Sargeant, Horticultural College, Swanley 130 | |
| 63. Mr. John S. Thompson, Horticultural College, Swanley 215 | 26. Mr. Wm. Morris, Horticultural School, Holmes Chapel 175 | 10. Mr. D. A. Simes, Technical Laboratories, Chelmsford 130 | |
| 63. Miss Annie E. Young, Horticultural College, Swanley 215 | 26. Mr. T. Ottewell, County Technical School, Stafford 175 | 10. Mr. S. W. Whalley, Streatley, Reading 130 | |
| 72. Mr. Thomas Benians, Horticultural College, Swanley 210 | 26. Mr. Edward Rustige, Horticultural School, Holmes Chapel 175 | 17. Mr. H. R. Davey, 14, Albion Road, St. Albans 125 | |
| 72. Miss Ada M. Cassidy, Horticultural College, Swanley 210 | 26. Mr. Geo. H. Wicking, Municipal Technical School, Leicester 175 | | |
| 72. Miss Elsie G. Callender, Horticultural College, Swanley 210 | 33. Mr. W. Burgess, Bredon's Norton, Tewkesbury 170 | | |
| 72. Miss Frances E. H. Gervais, Horticultural College, Swanley 210 | 33. Mr. J. Clark, Bank Cottage, Waterhouses, Ashbourne 170 | | |
| 72. Mr. A. Stirrat, Botanic Gardens, Glasgow 210 | 33. Miss C. F. Fellows, Horticultural College, Swanley 170 | | |
| 72. Mr. F. W. Pallett, Technical Laboratories, Chelmsford 210 | 33. Mr. A. Morton, Horticultural School, Holmes Chapel 170 | | |
| 78. Mr. C. Buckland, 3, Datchet Place, Datchet 205 | 33. Mr. Wm. E. O'Hara, Horticultural College, Swanley 170 | | |

(To be continued.)

SOCIETIES.**ROYAL BOTANIC.**—June 10th.

THE floral fête and exhibition of this society at Regent's Park was originally fixed for June 8th and 9th, but owing to the inability of the Prince and Princess of Wales to attend and give away the prizes on those dates the function was postponed

until Friday, the 10th. The morning was wet and stormy (real "Botanic" weather), but cleared up at noon, and remained fine throughout the day.

The floral exhibits, which were all "miscellaneous," were accommodated in the large tent, which presented a gay and varied scene, being better filled than we have seen it for some time.

In the centre of the large tent, on the site occupied by the fountain, Messrs. Jas. Carter & Co., of High Holborn, had reared a huge and imposing floral trophy. The group was square in shape, and overhead, at a height of about 12 ft. from the ground, four arms, prettily decorated with dyed green seaweed, and various flowers, radiated to the corners. In the centre, where these arms met, a neat specimen of *Kentia belmoreana* surmounted all. This was supported by a central pyramid running up from the stage on which the various plants were staged. These latter included herbaceous *Calceolarias*, *Petunias*, single and double, *Gloxinias*, *Streptocarpus* and tuberous *Begonias*, in addition to Ferns, Palms and other foliage plants. A Gold Medal was awarded for this fine display.

The Roses sent by Messrs. Wm. Paul & Son, Waltham Cross, Herts, occupied a large semi-circular area. Amongst the pot plants shown were some magnificently flowered standards and bush plants of *Crimson Rambler*, and such varieties as *Alfred Colomb*, *Spenser* and *Enchantress* were well shown, whilst the front rank comprised a quantity of capital cut blooms. (Gold Medal.) The same firm also showed a collection of cut flowers of *Rhododendrons* and a batch of grand plants of *Bougainvillea sandieriana*.

Messrs. John Laing & Sons, Forest Hill, S.E., set up a magnificent group of miscellaneous flowering and foliage plants. Against a background of Palms were ranged some large, well-grown and coloured *Crotons*, *Dracaenas* and *Caladiums*. In the foreground the central figure was a bank of first-class tuberous *Begonias*, both single and double, prettily bedded in Ferns. *Streptocarpus*, *Gloxinias*, *Odontoglossums* and *Carnations* all added their quota of beauty. A handsome and varied edging was furnished by *Isolepis gracilis*, and the dwarf and chaste *Caladiums*, *Argyrites* and *Minus erubescens*. The group abundantly deserved the Gold Medal that was voted it.

Messrs. Geo. Jackman & Sons, Woking, showed a number of fine plants of their new hybrid *Clematises*. Countess of Onslow, Duchess of Albany, Sir Trevor Lawrence, Duchess of York and Grace Darling were all pretty forms of great merit. The group was tastefully lightened by *Acer Negundo variegata* and *Spiraeas*, and edged with *Maidenhair Ferns*. (Gold Medal.) Cut hardy flowers in grand condition likewise came from this firm but, our space is too limited to enumerate them all.

A showy group of hardy *Azaleas* and *Rhododendrons* came from Mr. John Russell, Richmond. From the same source came a number of American *Aloes*, in which were some shapely and handsome specimens. In another part of the tent Mr. Russell staged a comprehensive array of hardy ornamental trees and shrubs, chief among which were variegated *Maples*, *Ivies* and *Euonymuses*, all of them in first-rate trim. (Gold Medal.)

The cut hardy flowers sent by Messrs. Barr & Sons, of Long Ditton, contained a wealth of material. There were some fine varieties of *I. pallida*, *I. amoena*, *I. aphylla*, *I. variegata*, and *I. squalens*; also showy forms of *Papaver bracteatum* in addition to *Pyrethrums*, *Heuchera sanguinea* and other things too numerous to mention. (Silver Medal.)

The only group of Orchids present was sent by Mr. J. O. Clarke, gardener to Ludwig Mond, Esq., The Poplars, Clarence Road. (Large Silver Medal.) A group of the yellow *Carnation Primrose Queen* was shown by Mr. Fred. Perkins, Regent Street, Leamington Spa.

Messrs. A. W. Young & Co., Stevenage, Herts, had two large groups of the grand bedding zonal *Pelargonium King of Denmark*; also an exhibit of hardy flowers, together with a group of shrubby *Calceolarias* and *Coleuses*. (Large Silver Medal.)

The Jadoo Company, Ltd., sent a variety of plants grown in Jadoo fibre to illustrate the value of the fibre as a rooting medium for all classes of plants. (Small Silver Medal.)

A truly magnificent array of cut hardy flowers from

Messrs. Kelway & Son, Langport, Somerset, was arranged in long sinuous lines upon a grassy slope. Here there were large hunches of named varieties of single and double *Pyrethrums* in exquisite variety, also *Paeonies*, *Delphiniums*, *Lupines*, and *Hippeastrums* in quantity, and of the high grade quality for which the Langport firm is famed. (Gold Medal.)

Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E. staged a neat group of *Gloxinias* and *Streptocarpuses* with *Adiantums*. (Small Silver Medal.)

Mr. Brewin, 5, Winchendere Road, Fulham Road S.W., had a unique exhibit of dried flowers arranged to form a fire screen and a centre for a dinner table. The flowers had preserved their colour remarkably well. They were protected by a covering of fine muslin. (Small Silver Medal.)

Amongst the floral devices was a capital table of tastefully executed baskets, bouquets and other devices, sent by Messrs. John Laing & Sons. They were staged on brown velvet, which gave a rich, although slightly sombre effect, and the table was nicely draped with sprays of *Smilax*. (Small Silver Medal.)

Messrs. B. S. Williams & Son, Victoria and Paradise Nurseries, Upper Holloway, N., had a table of very handsome bouquets and flower baskets. The most imposing piece was a large basket of *Cattleyas* and *Odontoglossums*, set up with *Asparagus*.

A bouquet of yellow Spanish *Irises* was also well constructed and very pretty. The handsome feather-weight bouquet of Orchids, presented by the society to H.R.H. the Princess of Wales, was in this exhibit, having been made by the Holloway firm. It weighed only a few ounces. (Large Silver Medal.)

Messrs. T. Rivers and Son, of Sawbridgeworth, had a superb lot of fruit trees in pots, all of them being heavily laden with fruit. *Nectarines Cardinal*, *Rivers' Orange*, *Stanwick Elruge* and *Dryden*, and *Peaches Grosse Mignonne* and *Dymond* were all in excellent condition. (Gold Medal.)

THE FLORAL PARADE.

This took place at 3.30 P.M. A great improvement in the arrangements over those of former years was observable, for a specially covered way had been constructed to shelter the procession. Crowds of people attended, and only those favoured ones having reserved seats could possibly see the procession to advantage. The number of entries for the parade was well up to the standard of former years, and some of the representations showed a good deal of artistic skill in their elaboration.

ROYAL HORTICULTURAL.—June 14th.

THE Drill Hall was well filled with plants and flowers on Tuesday last, there being a great influx of hardy herbaceous plants; also of such specialities as *Malmaison* and other *Carnations*, *Cannas*, *Chinese Paeonies*, *Begonias*, &c.

Messrs. J. Veitch & Sons, Ltd., Chelsea, exhibited a group of Orchids well interspersed with such greenery as Palms and Ferns. Prominent amongst the hybrids were fine specimens of *Laeliocattleya Eudora alba*, *L. canhamiana*, *L. Hippolyta* in several varieties, *Odontoglossum elegantius* *Baroness Schröder* and *Disa kewensis*. They received a Cultural Commendation for *Dendrobium Bensoniae* with a huge spike. A plant of *Odontoglossum crispum* was also well grown. Showy also were *Disa langleyensis*, *D. Veitchi*, *Epiphronitis Veitchi* and *Trichopilia suavis alba*. Amongst new Orchids *Laeliocattleya Eudora splendens* was magnificent and *Epicattleya radiato-bowringiana* of peculiar interest. (Silver Flora Medal.)

A magnificent piece of *Odontoglossum crispum* *Prince of Wales*, exhibited by Messrs. Hugh Low & Co., Clapton, had immense pseudo-bulbs and flowers, receiving a Silver Banksian Medal.

Messrs. L. Linden, Brussels, exhibited three handsome forms of *O. crispum*, named *O. c. Le Czar*, with a striking crimson-red blotch on each of the sepals; *O. c. Morning Star* and *O. c. Dallemagnea*, both blotched and mottled.

G. H. Bird, Esq. (gardener, Mr. Reddan), Manor House, West Wickham, exhibited *O. crispum bonnyanum* having a very bold blotch on each of the sepals. De B. Crawshay, Esq. (gardener, Mr. S. Cooke), Rosefield, Sevenoaks, exhibited *Cattleya Mendelii Sprite*, *Laelia purpurata*, De B. Crawshay,

and *L. purpurata* Mrs. De B. Crawshay. A. H. Milton, Esq., Castleton House, Clifton, showed a well-flowered piece of *Cattleya Mossiae*. R. I. Measures, Esq. (gardener, Mr. H. J. Chapman), Flodden Road, Camberwell, showed flowers of the beautiful *Laelia purpurata Ernestii*, having white sepals and petals. *Vanda pumila* was shown by Mr. J. W. Moore, Eldon Place Nursery, Bedford. H. Druce, Esq. (gardener, Mr. Walker), 43, Circus Road, Regent's Park, exhibited four remarkable forms of *Cypripedium*, named *C. bellatulum drucianum*, *C. walkerianum*, *C. Mrs. H. Druce*, and another.

Messrs. Stanley-Mobbs, & Ashton, Southgate, N., staged a splendid group of *Cattleyas*, *Laelias*, and other Orchids. Very fine were *Laelia tenebrosa*, *L. t. Sunset*, *L. purpurata* Southgate var., *L. p. millisiana*, *Oncidium crispum*, and *O. hastatum*. A fine new hybrid is that named *Cypripedium Sir Thomas Lipton*. *C. Gertrude Hollington* Southgate var. is a flower of splendid proportions and rich colour. *Cattleya Mossiae* *Sir Thomas Lipton* is a very distinct light-coloured variety of considerable merit. (Silver Flora Medal.)

Sir Frederick Wigan, Bart. (grower, Mr. W. H. Young), Clare Lawn, East Sheen, staged a showy group of Orchids, including *Laeliocattleya arnoldiana*, *L. superba-elegans*, *L. Lady Wigan*, *Cymbidium tigrinum*, and *Scuticaria Hadweni*. Messrs. F. Sander & Co., St. Albans, staged some beautiful varieties of *Sobralia* and *Thunia Bensoniae*.

J. Bradshaw, Esq. (gardener, Mr. W. Whiffin), The Grange, Southgate, N., staged an interesting group of Orchids, amongst which were *Cattleya Mossiae* *Admiral Bradshaw*, *Laelia grandis tenebrosa*, and some fine *Odontoglossum crispum*.

Messrs. Jas. McBean & Sons, Cooksbridge Sussex, exhibited a group of *Odontoglossum crispum* in great variety, many of the varieties being of great excellence, the blotched and tinted varieties more particularly. None of them were named.

Messrs. F. Miller & Co., 267, Fulham Road staged a capital batch of *Mignonette Miller's Civic* in pots. The variety is remarkable for dwarfness and size of the flower spikes, which render it very suitable for pot work. Samples of a fine strain of single *Primulas* were also shown. *Lilium Harrisii* in the background, and *Mimulus moschatns Harrisoni*, and blue *Lobelias* in the foreground were used as embellishments.

The flowering shrubs sent by Messrs. Jas. Veitch & Sons, Ltd., Chelsea, included some grand baskets of *Hydrangea hortensis mandschurica* in both blue and pink, *H. h. japonica variegata*, the showy *H. japonica Mariesii*, the bright blue *Hibiscus coelestis*, and the showy *H. grandiflora superba*, a double-flowered form. (Silver Flora Medal.)

Messrs. J. Cheal & Sons, the Lowfield Nurseries, Crawley, Sussex, submitted sprays of hardy ornamental trees and shrubs, amongst which were some handsome *Maples*, *Syringa*, *Josikaea*, *Cheal's New Golden Laburnum*, and *Rhododendrons* in variety.

Messrs. H. Cannell & Sons, Swanley, Kent, had a representative collection of double flowered tuberous *Begonias*, all of them named varieties, *Lord Sherborne*, *Lady Naylor Leyland*, *Conquête*, *Miss M. Griffith*, and *Freda* were some of the best forms. Side by side with the *Begonias* was a capital display of cut *Aquilegias*, ranging through a variety of hues from pure yellow to blue. The value of these handsome flowers for cutting was well shown on this occasion. From the Messrs. Cannell also came a grand lot of *Cannas* in large forty-eight sized pots, a system of culture of which the Swanley firm is one of the ablest exponents. Of the numerous varieties shown, *Aurea*, *Aurore*, *Ami Chretien*, *Paul Bruant*, *Incendie*, *Duchess of York*, *Paul Weylan*, and *Madame la Baronne P. Thenard* were remarkably good. (Silver-Gilt Flora Medal.)

Mr. Fred Perkins, 37, Regent Street, Leamington Spa, showed the new yellow tree *Carnation Primrose Queen*. From Mr. Geo. Norman, gardener to the Marquis of Salisbury, Hatfield, came a basket of blooms on long stems of the grand border *Carnations* *Miss Audrey Campbell* and *King Arthur*.

The Ferns sent by Mr. H. B. May, of Dyson's Lane Nurseries, Upper Edmonton, were, as usual, models of what Ferns should be, both in point of health and symmetry. *Pteris Summerii*, *P. Reginae*, *P. serrulata corymbosa*, *P. s. multiceps*, *Gymnogramme Mayi*, the new *Polypodium Mayi* and

Asplenium Mayi were some of the most notable members of a fine group. The new American Tropaeolum Sunlight made a very successful first appearance in this country, having been raised at the Dyson's Lane Nurseries from seed. Mr. May also showed a basket of the splendid pink zonal Pelargonium Millfield Rival and another of Marguerite nivalis compacta. (Silver Flora Medal)

The cut Chinese Paeonies sent by Messrs. Kelway & Son, Langport, Somerset, were fully up to the high standard we expect from this source. Saturnalia Agnes May Kelway, Stentor and Delia were some of the finest of the varieties shown, but the majority of the varieties were either unnamed or the labels were out of sight. Single and double Pyrethrums and Delphiniums were also on view. (Silver Flora Medal.)

Martin R. Smith, Esq. (gardener, Mr. W. Blick), The Warren, Hayes, Kent, sent a few new Malmaison and border Carnations. Messrs. Jas. Veitch & Sons had some grand samples of Gloxinias Empress of India, Virginalis, Seraph and Galatea, also the dwarf and handsome Philadelphus coronarius Mont Blanc. Mr. James Stredwick, St. Leonards, Silverhill, showed a bunch of the precocious Cactus Dahlia Magnificent.

The great feature of the show was the magnificent show of Malmaison Carnations made by Mr. J. F. McLeod, gardener to J. P. Morgan, Esq., Dover House, Roehampton. Some of the plants were real giants in size, and all of them in marvellously good health. The flowers, too, for size and colour were of the best. Both rose and blush varieties were shown, and these were well set off with a groundwork of Maidenhair Fern, whilst light was given to the group by a central row of Palms. The group was set up on the floor, and ran the whole length of the hall, the widest and highest part being in the centre where the largest plants were grouped. Mr. McLeod received a Silver Gilt Medal in recognition of this unmistakeable display of cultural skill.

In the group of new plants submitted by Messrs. F. Sander & Co. were some splendid young plants of the now renowned Acalypha Sanderi, also A. godseffiana, and the new type of Caladiums represented by the variety Lord Annesley, and Mikania Sanderi.

Messrs. Paul & Son, The Old Nurseries, Cheshunt, sent Cannas in pots as well as a small collection of cut hardy flowers. The same firm also showed a basketful of Rose Liliput.

Messrs. Barr & Sons, King Street, Covent Garden, staged a splendidly representative group of cut Irises. These included Spanish and German Irises in great variety. In addition to these there was a collection of miscellaneous hardy plants, including a capital lot of Ixias. (Silver Gilt Banksian Medal.)

On the left-hand side of the doorway on entering Messrs. James Veitch & Sons, Ltd., put up a huge semi-circular group, chiefly of Irises, the plants being in large clumps in baskets and exceptionally well flowered. The lovely varieties Mdme. Chereau, Albert Victor and Darius were very conspicuous, as also were spikes of Eremurus himalaicus and E. robustus.

Messrs. Wm. Paul & Son, Waltham Cross, had a long table filled with cut trusses of the choicer varieties of Rhododendrons, also sprays of the old-fashioned Provence and single Roses. The double white Scotch Rose was very noticeable by reason of its dwarfness and floriferousness. (Silver Banksian Medal.)

Mr. John Russell, Richmond, had a choice and beautiful collection of cut hardy flowers, all of them being remarkably fresh and good.

Messrs. R. Wallace & Co., Kilsfield Gardens, Colchester, were voted a Silver Banksian Medal for a showy array of Liliun, Calochortus, and Irises.

Messrs. Collins Bros., Waterloo Road, Hampton, also had cut hardy flowers in variety, Single Pyrethrums being especially to the fore.

The work of the fruit and vegetable committee was light. A Cultural Commendation was given to Mr. Jas. Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton, Middlesex, for sixteen grand fruits of Nectarine Lord Napier. Mr. Hudson also had trays of Cherry Guigne Anroy gathered from the open air. A Cultural Commendation was obtained by Mr. E. Beckett, gardener to Lord Aldenham, Aldenham House, Elstree, Heris, for 'The Carter' Spinach.

Mr. S. Mortimer, Rowledge, Farnham, Hants, showed a box each of fine fruits of the new Cucumbers Sensation and The Keeper.

QUESTIONS AND ANSWERS.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Conifers.—A. McD.: We should be pleased to name the Conifers for you, if you send specimens, which should be as characteristic of the tree as possible, in order that the varieties may be determined. Some of the varieties of Cupressus and Thuya owe their distinction to habit, so that a piece showing some evidence of their respective traits should be sent. Cones would also be serviceable if you can get them, in case you send Pines. Characteristic twigs and foliage would, as a rule, be sufficient for all the more common kinds. "Hardy Coniferous Trees," by A. D. Webster, would furnish you with a considerable amount of information, botanical and otherwise, relating to Conifers for garden and park decoration; and after getting the names you would be able to study them quickly, as well as confirm the names. A little study like this will greatly help you to remember the names when associated with the actual specimens. The book is published by Hutchinson & Co., 34, Paternoster Row, London, E.C., at 3s. 6d.

Hyacinths after Forcing.—A. C.: If you refer to bulbs which were hard forced and, perhaps, indifferently treated or neglected after flowering, the chances are that their value the second year would not be great. Bulbs allowed to come on slowly in a cool house, carefully watered after passing out of bloom, and till the foliage begins to die down naturally, ought to be serviceable for planting in beds, borders or the wild garden for flowering next spring. They would even do better if you plant the bulbs next autumn in well prepared, sandy and fertile soil, in order to regain their strength next spring. Their flower spikes would not be equal to imported bulbs, but they would make a very creditable display in beds during the following spring, say about two years hence. While making their growth next spring keep the ground well hoed and perfectly free from weeds. This will encourage vigorous growth, and enable the bulbs to become plump and full.

Use of Stenotaphrum glabrum.—R. B.: The plant you had originally was probably the variegated one (S. g. variegatum) which is grown in pots or pans as a decorative subject, and is rather pretty, for some time at least, after the young foliage is developed. The stems have a creeping or trailing habit, so that the plant is handsome for furnishing the stages in the conservatory or greenhouse, when at its best. See whether any of the stems still have variegated leaves and, if so, take cuttings, which will root with the greatest freedom and soon make nice stocky plants.

Cutting Asparagus.—A. J. L.: Some prefer to leave the worthless stems to assist the roots while the best of them are being cut for use. As good, if not better results are obtained by cutting them all till you complete gathering for the season. All the shoots should then be allowed to come away together, and that being so, a more even growth will be the result. As to the precise time when you should leave off that will depend much upon the vigour of the plants. If the crowns are weak it would be best to leave off cutting at once; but if strong you may defer finishing till the end of the present month.

Book on Judging.—J. McFadzean: A pamphlet on the judging of fruits, flowers and vegetables is issued by the Royal Horticultural Society, 117, Victoria Street, London, S.W. As far as we remember it is priced at 6d., and certainly not more than 1s. It is reliable and authoritative where it has been adopted by other societies; but in other cases it might be objected to on the score that it had not been adopted by the society for which judging was being conducted. It is well worthy of adoption, however, by societies and judges generally.

Names of Plants.—Daniel Campbell: Asphodelus ramosus (it arrived a day late last week).—John W. Lang: Dendrobium suavisimum.—W. S.: 1, Ulmus montana pendula; 2, Liliun pyrenaicum; 3, Pulmonaria saccharata; 4, Veronica spicata; 5, Funkia ovata; 6, Rosa lutea.—A. C.: 1, Geranium pratense; 2, Euphorbia Cyparissias; 3, Saxifraga ceratophylla; 4, Tiarella cordifolia; 5, Heuchera glabra; 6, Heuchera Richardsoni.—I. B. D.: 1, Escallonia philippinensis; 2, Pyrus Maulei; 3, Philadelphus coronarius flore pleno; 4, Rhododendron ferrugineum; 5, Choisya ternata; 6, Kerria japonica variegata; 7, Daphne Cneorum.—A. J. H.: 1, Cattleya Mossiae var.; 2, Oncidium sphacelatum; 3, Laelia grandis tenebrosa - Veld; 4, Asphodelus ramosus; 5, Limnanthes Douglasii; 3, Iris sibirica; 4, Deutzia gracilis; 5, Rosa rugosa alba; 6, Polygonum cuspidatum.—L. M.: 1, Linaria Cymbalaria; 2, Pyrus japonica; 3, Coronilla Emerus; 4, Amelanchier canadensis.

Communications Received.—W. B. G.—M. M'L. (the matter is having our attention).—A. Simpson.—G. Gaskell.—H. Roach (next week).—X. Y. Z.—A. W.—M. D.—P. H.—A. M.—T. B.—C. E.—Ard.—Q.—C. Mason.—E. R. L.—K.—Geo. Need.—Forester.

COVENT GARDEN MARKET.

June 15th, 1898.

| FRUIT.—AVERAGE WHOLESALE PRICES. | | VEGETABLES.—AVERAGE WHOLESALE PRICES. | |
|--|--------------------|---|----------------------|
| s. d. | s. d. | s. d. | s. d. |
| Apples ... per bushel | 0 0 0 | Artichokes Globe doz. | 2 0 4 |
| Cobbs | 0 0 0 | Asparagus, per bundle | 3 0 8 |
| Grapes, per lb. | 1 6 3 | Beans, French, per | 0 9 1 |
| | | per lb. | 0 9 1 |
| | | Beet..... per dozen | 1 0 0 |
| | | Brussels Sprouts | per half sieve 1 0 1 |
| | | Cabbages ... per doz. | 1 0 1 |
| | | Carrots ... per bunch | 0 3 0 |
| | | Cauliflowers.....doz. | 2 0 3 |
| | | Celery.....per bundle | 1 0 1 |
| | | Cucumbers per doz. | 2 6 3 |
| | | Endive, French, doz. | 1 6 2 |
| | | Herbsper bunch | 0 2 0 |
| | | Horse Radish, bundle | 1 0 2 |
| | | Lettuces ...per dozen | 1 3 1 |
| | | Mushrooms, p. basket | 1 0 1 |
| | | Onions.....per bunch | 0 4 0 |
| | | Parsley ... per bunch | 0 3 0 |
| | | Radishes... per dozen | 1 0 1 |
| | | Seakale...per basket | 1 6 2 |
| | | Small salad, punnet | 0 4 0 |
| | | Spinach per bushel | 2 0 3 |
| | | Tomatos..... per lb. | 0 6 1 |
| | | Turnipsper bun. | 0 3 0 |
| CUT FLOWERS.—AVERAGE WHOLESALE PRICES. | | PLANTS IN POTS.—AVERAGE WHOLESALE PRICES. | |
| s. d. | s. d. | s. d. | s. d. |
| Aium Lilies, 12 blms. | 3 0 4 | Arbor Vitae, per doz. | 12 0 3 |
| Asparagus Fern, bun. | 2 0 3 | Aspidistra, doz..... | 18 0 3 |
| Azaleas, doz. sprays | 0 6 0 | " specimen | 5 0 10 |
| Bouvardias, per bun. | 0 6 0 | Coleus, per doz. | 3 0 4 |
| Carnations doz. blms. | 1 6 3 | Dracaena, various, | per doz. 12 0 3 |
| Ecobaris ...per doz | 3 0 4 | Dracaena viridis, doz. | 9 0 18 |
| Gardenias ...per doz. | 1 6 3 | Euonymus, var. doz. | 6 0 18 |
| Geranium, scarlet, | doz. bunches 4 0 6 | Evergreens, invar. doz. | 6 0 24 |
| Lilium longiflorum | per doz. 3 0 4 | Erica, various, per doz. | 12 0 30 |
| Lily of the Valley doz. | sprays 0 9 1 | Ferns, invar., per doz. | 4 0 12 |
| Lilac (French) per bun. | 3 6 4 | Ferax, small, per 100 | 4 0 6 |
| Marguerites, 12 bun. | 2 0 4 | Ficus elastica, each | 1 0 5 |
| Maidenhair Fern, 12bs. | 4 0 6 | Foliage Plants, var., | each 1 0 5 |
| | | Fuchsia, per doz..... | 6 0 9 |
| | | Heliotrope, per dozen | 4 0 8 |
| | | Hydrangeas, per doz. | 8 0 10 |
| | | Ivy Geraniums, | per doz. 5 0 8 |
| | | Lilium Harrissii, | per pot 2 0 4 |
| | | Lycopodiums, doz. | 3 0 4 |
| | | Lobellias, per doz. ... | 3 0 5 |
| | | Marguerite Daisy doz. | 4 0 9 |
| | | Mignonette, per doz. | 4 0 6 |
| | | Myrtles, doz. | 6 0 9 |
| | | Palms in variety, each | 1 0 15 |
| | | Palms, Specimen ... | 21 0 63 |
| | | Pelargoniums ... | 9 0 12 |
| | | Rhodanthe...per doz. | 5 0 6 |
| | | Scarletsper doz | 2 6 6 |
| | | Spiraea, per doz.... | 6 0 9 |
| | | Wallflowers, doz. bun. | 2 0 4 |

INDEX TO ADVERTISEMENTS.

| | |
|---------------------------------|------------------------------|
| Catalogues. | Insecticides. |
| Barr & Sons657 | Corry & Co.659 |
| Bunyard & Co.657 | Exors., Robt. Campbell...659 |
| J. Forbes.....659 | Gishurst Compound657 |
| Kelway & Son657 | XL All.....653 |
| J. Peed & Sons.....659 | Lawn Mowers. |
| Simpson & Son.....657 | Ransomes, Sims & |
| Chrysanthemums. | Jefferies, Ltd.672 |
| Devon Nursery.....657 | A. Shanks & Son, Ltd...658 |
| Florists' Flowers. | Manures. |
| J. Douglas657 | C. Beeson657 |
| R. W. Hockey657 | Chemical Union657 |
| T. Jannoch.....659 | Clay & Son.....657 |
| Kelway & Son657 | W. Colchester657 |
| Keynes, Williams, & Co. 659 | Homco.....657 |
| J. Laing & Sons659 | Lawes'.....670 |
| R. Owen657 | Meggitt's657 |
| J. Peed & Sons.....659 | Native Guano Co.658 |
| J. Stevens657 | H. G. Smyth659 |
| Flower Pots. | W. Thomson & Sons...658 |
| Sankey & Sons, Ltd.672 | Miscellaneous. |
| Fruit Trees. | Cooper's Cycles671 |
| G. Bunyard & Co.657 | Corry & Co., Ltd.659 |
| Garden Sundries, &c. | Epps's Cocaine672 |
| J. Arnold657 | Gishurstine657 |
| Corry & Co.657 | Juno Cycles672 |
| Eveson Coal & Coke Co. 657 | Smyth's Baskets657 |
| Fowler's Lawn Sand659 | Netting. |
| Hirst, Brooke & Hirst. ...657 | H. J. Gasson657 |
| J. & H. R. Hounam659 | A. Potter.....657 |
| Leeds Orchid Co.672 | Orchids. |
| A. Outram671 | J. Cypher659 |
| Porter's Stakes.....657 | W. L. Lewis & Co.....659 |
| G. H. Richards.....658 | P. McArthur659 |
| H. G. Smyth659 | F. Sander & Co657 |
| W. Wood & Son, Ltd.672 | Publications. |
| Heating Apparatus. | GARDENING WORLD.....671 |
| W. Cooper, Limited671 | Macmillan & Co.659 |
| Thames Bank Iron Co. ..657 | Ogilvie.....671 |
| Horticultural Builders. | I. S. Virtue & Co.....671 |
| I. Boyd & Sons.....657 | Seeds. |
| W. Cooper, Ltd.671 | Simpson & Son.....657 |
| J. Gray.....657 | Sutton & Sons657 |
| W. Richardson & Co.657 | Situations, &c. |
| J. Weeks & Co., Ltd.657 | Tents. |
| Hose. | A. Potter.....658 |
| F. Reddaway & Co. Ltd. 658 | |



ORCHIDS.

Clean Healthy Plants at Low Prices.
Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

GLOXINIAS FINEST MEDAL COLLECTION
* IN THE WORLD. *
Send for CATALOGUE to
JOHN PEED & SONS, West Norwood, London

KEYNES' CACTUS DAHLIAS.

Best Plants. Best Varieties. Moderate prices.
Send Post Card for Catalogue.
About half the good varieties in commerce were raised here.

KEYNES, WILLIAMS & COMPANY,
Dahlia Growers, SALISBURY.

POCKET KNIVES FROM MAKER.

Stag Handle Pruning Knives, a real good article, 1s. 1d. each; Ivory Handle Budding Knives, no better made, 1s. 3d. each; Ivory Handle, 2 blade waistcoat pocket Knife, 1s. 1d. each; Corn Knives, 1s.; Workman's Stag Handle Sheepfoot and Pen Blade, 1s. 1d. The blades of all the above are made from the very best English crucible cast steel. Post free.

J. & H. R. HOUNAM,
Sheaf Island Works, SHEFFIELD.

1898. FORBES' CATALOGUE 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants

Is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most rollable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and price of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other Valuable Information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,
Nurseryman, Hawick, Scotland.
ESTABLISHED 1870.

PARISIAN BLINDS.

Awarded over 50 Prize Medals.



GLASS HOUSES

Of all kinds.

HEATING APPARATUS

for Horticultural Buildings, Dwelling Houses, and Public Buildings.

NEW CATALOGUE FREE.

W. RICHARDSON & CO.,
DARLINGTON.

RETARDED LILY OF THE VALLEY CROWNS.

Headquarters at Dersingham.

For prices &c., apply to—

T. JANNOCH,

Lily Nursery, Dersingham, King's Lynn, Norfolk.



It combines efficiency with appearance, convenience with economy, and its effects are lasting. It is easily removed when necessary with hot water. It can be supplied either pale, green or grey.

Beware of spurious imitations which are offered through the success obtained for many years by Elliott's "Summer Cloud" Shading and see that in ordering you get the "Summer Cloud," which is the only original and bona fide article, with the Trade Mark on each

packet.

Sold in pkts., 1s. each, and in bags, 7 lb., 10s. 6d.; 14 lbs., 20s. To be had of the SEED and NURSERY TRADE generally. Manufacturers:

CORRY & CO., Ltd., Finsbury Street, LONDON.

STANDEN'S MANURE.



ESTABLISHED OVER 30 YEARS.

Exceeds all others in General Fertilising Properties and Staying Powers.

Promoting a rapid, healthy, and robust growth to plants generally.

It is a clean and dry powder, with very little smell.

Its highly-fertilising properties render its money value, in comparison with other Manures, at least double; very small quantities will produce favourable and lasting results.

ANALYSIS ON APPLICATION.

Sold in Tins, 1s., 2s. 6d., 5s. 6d., and 8s. each; and in Kegs, well secured, to prevent loss through exposure, 28 lb., 10s. 6d.; 56 lb., 18s.; 112 lb., 32s.

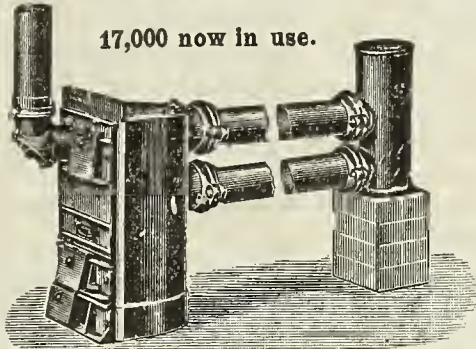
To be had from all Seedsman and Florists.

MANUFACTURERS—

CORRY & Co., Ltd., London.

THE "LOUGHBOROUGH" PATENT GREENHOUSE BOILER.

17,000 now in use.



The most economical, cheapest, and easiest to manage
No. 1, £2 17s. 0d.; No. 2, £4 2s. 6d.;
No. 3, £5. 10s. 0d.

Also made in larger sizes.

Complete Apparatus from £4 16s. 0d.

MESSENGER & CO., LTD.,

Horticultural Builders and Heating Engineers,

LOUGHBOROUGH, LEICESTERSHIRE.

LONDON OFFICE: 96a, Victoria St., Westminster, S.W.

Agricultural Economist.

AN ILLUSTRATED MONTHLY MAGAZINE of 52 pages and cover Exponent of scientific and high-farming; advocate of co-operation in agriculture, in the supply of farm requisites and the sale of produce; organ of the Agricultural and Horticultural Association, the pioneer society for mutual supply of pure oilcakes, complete manures, reliable seeds and implements on wholesale terms. Specimen copy free. Subscription per annum, 5s. inclusive of postage. Single Copies 6d. each, through all Newsagents.—3, AGAR STREET, STRAND, LONDON, W.C.

LAXTON'S STRAWBERRIES.

If you wish for the best, write for our new Illustrated Catalogue with descriptions of Laxton's new Fillbasket, Mentmore, Monarch, Leader and Royal Sovereign. The largest cultures specially for runner plants.

LAXTON BROTHERS, BEDFORD.

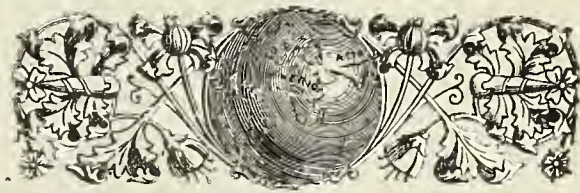
Caladiums

FINEST COLLECTION in the World. We make a speciality of CALADIUMS. Gold Medals Manchester & Leicester. Silver Cup, R.H.S., &c.

Satisfaction guaranteed. **JOHN PEED AND SONS,** West Norwood, London.

BARR & SONS have on their Register several competent HEAD-GARDENERS. They will be pleased to furnish full particulars on application.—11 and 13 King Street, Covent Garden, London, W.C.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Malda Vale, London W.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JUNE 25th, 1898.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, June 28th.—Royal Horticultural Society: Meeting of Committees at 12, noon.

Royal Horticultural Society of Southampton's Show (two days).

Leeds Gala (three days).

WEDNESDAY, June 29th.—Richmond Horticultural Society's Show.

SATURDAY July 2nd.—National Rose Society's Show at the Crystal Palace.

THE SAN JOSE SCALE.—Entomologists still continue to discuss the question of the introduction of this member of the Coccidae into Britain. Mr. Fred. V. Theobald, M.A., F.E.S., Zoologist to the S.E. Agricultural College, Wye, describes the insect in its different stages, mentions the trees it attacks, and explains the effectual method of destroying it, in a small pamphlet of some twelve pages. Concerning its importation to this country he has no doubt whatever, but with regard to its being able to withstand the rigours of this country he is like the Scotchman who is credited with saying "I hae ma doots." The scale has appeared in this country adhering to the fruit of Pears; but unless the skins of these happen to get thrown about in the neighbourhood of fruit trees the danger of infection would not be great. A greater source of danger lies in the introduction of fruit trees, stocks or ornamental trees and shrubs from the United States or Canada. In such cases the plants must be disinfected before they are planted out. Even if our climate is too severe for the insect to live out of doors, there is the chance that it might get established in hothouses like the scales of Orange trees, Camellias, &c.

Gardeners being well acquainted with the sales infesting those subjects as well as of Peach trees and Ferns, have a pretty good idea of the appearance of the threatening intruder, for all scales have a family likeness. The eggs are laid below the body of the mother in autumn as a rule, and these hatch out in spring liberating small, six-legged, active larvae, which ramble about over the trees in quest of a position on which to settle down. Their beak or proboscis is inserted in the bark of the tree, on the midribs of the leaves and on the developing fruits; then the females lose their legs, antennae, &c., and become



CLAY'S MANURES.

CLAY'S SUCCESSFUL GARDENING.
1s., post free.

CLAY & SON, Stratford, London, E.



TRADE MARK.

stationary, progressing to the mature condition after passing through two distinct larval stages, under the protecting scale. The males pass through similar stages, and have a scale of a different form, but ultimately acquire a pair of wings after passing through a pupa stage. They are seldom met with, however, being rare as in other allied insects. The scale of the female is round, flat, closely adpressed to the bark, which it resembles in colour; it also sometimes presents the appearance of concentric rings, and has a small nipple or umbo arising from the centre of a flat area. In size the full grown scale varies from the $\frac{1}{25}$ in. to $\frac{1}{3}$ in., and is mottled with gray, except over the centre which varies from pale reddish-yellow to dark brown. This scale is believed to be a native of Japan from whence it has been introduced to America by way of California, and to Sydney from the latter place on Apple and Pear Stocks. It attacks all fruit trees and bushes belonging to the natural order Rosaceae, as well as Red and Black Currants, Gooseberries and a host of ornamental trees and shrubs.

The scales, under favourable conditions increase at an enormous rate, as has been proved by the experiments made at the Department of Entomology at Washington. A mature female produces nine to ten young ones every twenty-four hours for the space of six weeks, giving a total of 400 in that time. One winter female, it is calculated, will give rise to 3,216,080,400 of a progeny during the year under favourable circumstances. The methods of distribution may even be more interesting to gardeners. The larvae can only wander about for short distances around the spot where they are born; but it is believed they are borne about by the wind from tree to tree. Birds and insects also serve to carry them about involuntarily, attached to their bodies, legs and wings. By this means alone the larvae of the scale could be carried to every tree in an orchard, and from plantation to plantation, it might be, miles apart. Artificial distribution, however, is most to be dreaded; for there is no more potent nor far reaching means of dispersing the scale than on nursery stock, whether fruit or ornamental trees. Its introduction to the different States in America has been traced either to nursery stock or cuttings. At the same time to be "forewarned is to be forearmed," and it would be well for people in this country to guard against casting the skins of imported fruit near trees or bushes of any kind. Examination of imported Pears has already revealed the presence of the scale in this country.

Several imported scales have given a greater or less amount of trouble to British gardeners, and it is just possible that the rapid propagation of the San Jose Scale might enable it to get acclimatised in this country by adaptation to changes of climate. The Peach Scale has accustomed itself to thrive in temperate as well as tropical countries. Scales often behave in an erratic manner in new territories under climatic conditions different from that to which they were previously accustomed, so that entomologists cannot even predict what would happen in the case of the species (*Aspidiotus perniciosus*) under notice. If it merely conformed to the habits of the Apple Mussel Scale (*Mytilaspis pomorum*) in this country, it would become single brooded, and, consequently, could not multiply with anything like the rapidity it does in America. Even then, however, it might become productive of much mischief.

The only successful remedy hitherto discovered for the pest is what is known as Gas Treatment, which unfortunately hardly appears to be practicable in the open orchard. In the case of infestation in hot-

houses, the plan is to ascertain the cubic contents of the interior, and for every 100 cub. ft. to use $\frac{1}{3}$ oz. cyanide of potassium, $\frac{1}{3}$ oz. sulphuric acid and $\frac{1}{3}$ oz. water. The requisite quantity of the cyanide is to be put in a box fixed at some little distance above the ground and quite clear of all foliage, say 3 ft. away. Each box employed should be furnished with a tin, movable bottom, attached to a wire passed through the wall of the house so that it can be got at by the operator from the outside. Beneath the box a soup plate or other open vessel is to be placed, containing the requisite amount of sulphuric acid and water in mixture. All these preparations should be made towards evening when the house can be closed and locked up for the night. The preparations completed, close and lock the door. Then the operator is to pull the wire so as to open the bottom of the box and let the cyanide fall into the sulphuric acid beneath. The fumes given off will quickly permeate the house, which need not be made more air-tight than usual. As the cyanide and the fumes given off from it are deadly poisonous, care should be taken not to inhale the same. The house should be kept closed till morning, by which time the poison will have done its work and become dissipated. The house should be freely ventilated early on the following morning. All infested trees, shrubs and other plants should be treated in this way before being planted, or placed with clean stock. Plants with delicate foliage cannot withstand this remedy, but Peaches and other hardy subjects could be treated with advantage.

National Italian Chrysanthemum Society.—A Chrysanthemum society has been founded in Italy. A provisional committee has been formed, having for its president M. Scalarandis, the King's gardener at the royal gardens of Monza.

Mr. Thomas Henderson, formerly head gardener to the late A. O. Shalders, Elmleigh, Ilkley, has been appointed head gardener to J. H. Rand, Esq., Woodside, Baildon, near Leeds. Orchids are great favourites with Mr. Henderson, who has sent us *Odontoglossum coronarium* and other species for our inspection, while he was at Elmleigh. He gave great satisfaction to his late master, and we hope he will be equally successful in his new situation, where there are valuable collections of Orchids and other plants.

Rotherham and Horticulture.—"I was through your district the other day, and thought of you at once, and wondered in my mind however you can manage to grow anything in your smoke-begrimed neighbourhood." These were the words addressed to the writer by a celebrated nurseryman who luxuriates in wealthy and charming suburban London, on the first day of the Temple Show. Well, it is an undisputed fact, perhaps, that a great deal more judgment than luck is required to grow things to perfection hereabouts, but many subjects grown would certainly not disgrace any show-board in London. It may be true, it no doubt is, that nothing has attracted the horticultural world in Rotherham district since the celebrated Selwood collection of Orchids disappeared, but what is supposed locally is undoubtedly considered universally, so far as horticulture is concerned, that Rotherham is all very well for steam whistles, pistons, and brass work generally, stove grates, and wrought iron, but horticulture is, and must be quite off, to speak in up-to-date style. If this were a fact, why is Sheffield not considered equally unfortunate for matters horticultural? Why, forsooth! No, depend upon it, Rotherham is, perforce, dwarfed by the importance of busy Sheffield, but I hope, Mr. Editor, that with your permission I may be able to prove in successive articles that Rotherham possesses natural charms and able men to make the best of them.—*Albert Upstone.*

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, June 28th, in the Drill Hall, James Street, Westminster, 1 to 5 p.m. The Rose show which was to have been held on this date is now postponed until July 12th. Will all intending exhibitors please note this. At 3 o'clock a lecture on "Some of the Plants Exhibited" will be given by the Rev. Prof. Henslow, V.M.H.

Lectures at Chiswick.—The meeting on the 15th inst., in the gardens of the Royal Horticultural Society, Chiswick, was a very successful one, being attended by sixty to seventy of the members of the Mutual Improvement Associations of Kew and Chiswick to hear a lecture by the Rev. Prof. George Henslow, on "The Importance of a General Knowledge of Vegetable Physiology to Cultivators." The chair was occupied by Mr. Wm. Marshall, the chairman of the floral committee of the R.H.S. The lecturer dwelt on the functions of the roots, stems and leaves of plants. The second lecture of the series was delivered on Wednesday evening last after we had gone to press. The members of the Ealing Gardeners' Society were invited to attend, and having arrived some time before the commencement of the lecture, they inspected the various trials being conducted in the gardens this year.

Hybrids of *Anthurium andreanum*.—An article, historical and descriptive of the hybrids of this *Anthurium*, now so plentiful in cultivation, appears in the current number of *Tijdschrift voor Tuinbouw*, and is illustrated by a double page coloured plate of some of the more recent acquisitions as well as by beautifully executed photographic reproductions of some of the older forms. The coloured plate includes a variety having a very large smooth spathe of a delicate creamy-salmon colour, and an orange-salmon spadix. This has been named H. C. Zwart, in compliment to the secretary of the Dutch Horticultural Society. A very much smaller form, having a creamy-salmon, nearly orbicular spathe, tinted with apricot, has been named J. H. Krelage. The spathe is also smooth, as in the previous form. That named Columbus has an orange-scarlet, and elongated spathe, corrugated in the same way as *A. andreanum*.

New Public Park at Tipton.—The first prize of £25 in the public competition for the best plan for laying out the new Victoria Park at Tipton, has been unanimously awarded to Messrs. William Barron & Son, Elvaston Nurseries, Borrowash, Derbyshire. Their plan shows a lake about 3 acres in extent, cricket and recreation grounds, lawn tennis grounds, bowling green, bandstand, shelters, etc., etc. They also furnish plans for lodges, entrance gates, ornamental fencing, etc. The park is 33 acres in extent. The second prize was awarded to Mr. John Perry, Architect, Tipton. There were ten competitors. The site of the park is a very difficult one to deal with, on account of the undulating and unlevel nature of the ground. A great quantity of material will have to be removed in order to obtain the spaces for cricket and other forms of recreation, as well as in excavating the lake. Material for construction is obtainable almost on the site. Provisions have been made for a lodge on a southern aspect, and a site for a reading-room in the future suggested. These sites are situated at the main entrance in the Victoria Road, which gives its name to the park. It is proposed to be partly surrounded by ornamental fencing 6 ft. high, and in less conspicuous places by plain unclimbable fencing. The cricket ground is to be oval, a little over $5\frac{1}{2}$ acres in extent, and surrounded by a drive 12 ft. wide, the latter being continued round the park. The greater portion of the walks are to be 8 ft. wide, to be winding, and traverse all the more important parts of the park. According to the plan, the cricket ground will be surrounded by a line of trees, of which there will be groups and short lines in suitable places elsewhere. A belt of shrubbery will surround the park, with clumps and masses in various places, including the banks of the lake and the islands. The lake is to be narrow in the middle, widened towards either end like a dumb-bell, and is to be nearly 3 acres in extent. A mound would be formed of the excavations from the lake and would be a feature of the park. Plantations would occupy nearly 8 acres of the surface.

An experiment in the cultivation of Potatoes in Africa is proposed by the German Government.

Shirley and Districts Gardeners' Mutual Improvement Association.—The monthly meeting of the above society was held at the Parish Room, Shirley, Southampton, on the 20th inst., there being a fair attendance of the members, presided over by the president, W. F. G. Spranger, Esq. The lecture was entitled some "Asiatic Plants noticed in the course of travels in Japan, China and Ceylon," given by W. Frank Perkins, Esq., and being profusely illustrated with limelight views of tropical vegetation; it was a most interesting subject. Tea and Coffee plantations in Ceylon came in for a large share of the descriptive remarks, as also did the family of Palms and Musas. A very hearty vote of thanks was accorded to Mr. Perkins at the close of his lecture. There was a good display of Roses, some contributed by Mr. W. H. Rogers, Red Lodge Nursery, being awarded a Certificate. In the competition for three prizes for the best six Roses Mr. W. Knapp was first; Mr. J. Hallet, second; and Mr. Vernon, third. Mr. Ladhams, F.R.H.S., sent a display of hardy herbaceous cut blooms, and was awarded a Certificate for twelve Gloxinias. Mr. E. J. Wilcox sent a large number of prints of tropical plants in horticultural journals.

Messrs. Webb & Sons at Birmingham.—Messrs. Webb & Sons, Wordsley, Stourbridge, have an imposing stand full of material, grown from the seeds they supply, at the Royal Show now in progress at Birmingham. In the section devoted to flowers some magnificent Begonias, Calceolarias, Sweet Peas, Stocks, Lilliums, Gladioli, &c., make a brave show. Vegetables form another meritorious collection; Beans, Parsnips, Cucumbers, Tomatos, Cauliflowers, Carrots, Leeks and Onions are represented, and all are of the best that skill can produce. The new Peas, Pioneer and Senator, growing in pots show a profusion of long, well filled pods, whilst among the Potatos, Webb's New Motor is conspicuous for its large size and splendid quality. Cereals form an important part of the exhibit, and here the Hardy Winter Black Oat instances a wonderfully heavy cropper that stands the most severe winter with impunity. New Standard Red and New White Queen Wheat are two grand sorts for autumn sowing. Some remarkably fine Mangolds and Swedes of last year's growth are eloquent witnesses of the quality of seed supplied by the firm. All these together with various mixtures of grass seed for lawn and meadow sowing, and manures for all sorts of crops, constitute a comprehensive exhibit, interesting to both agriculturist and horticulturist alike.

A Classic Legacy of Agriculture.—Under this heading Mr. John Mills writes, in *Knowledge*, about the world renowned establishment for agricultural research at Rothamsted, as it has been carried on for more than fifty years by Sir John Lawes and Sir Henry Gilbert. He says, that "The time is past when practice can go on in the blind and vain confidence of a shallow empiricism, severed from science like a tree from its roots. Rothamsted is described as a model establishment, where the collaborators have elicited information that will ever after serve as a foundation on which to build up all future scientific knowledge on agricultural chemistry and its relation to plant life. The exact data placed at the disposal of chemists is without parallel in the annals of science. Chemistry and botany have never before been brought into more profitable correlation than in the Rothamsted experiments. Sir John Lawes first commenced operations in 1834, and has continued them uninterruptedly even since. He has carried on the experiments at his own cost; and, furthermore, has endowed the establishment with the munificent sum of £100,000 to ensure the experiments being continued after his death. Germany followed in the wake of Rothamsted, and now she maintains twenty-five experimental stations at the public expense, though they were founded by associations of agriculturists. The British farmer takes more produce out of the soil than is done in any other country of the world. The college at Glasnevin, near Dublin, receives a Government grant, but the colleges at Cirencester, Downton, and the Colonial Training College in Suffolk are self-supporting.

The lost Orchids.—Distinguished foreigner: "O John, I have been keeping my eye on the Orchids all the evening, but now they are gone."—*John Bull*: "My dear Mosoo, I'm weally very sorry; but if you 'ad been a 'oss instead of a hass you would 'ave kep' both heyes on 'em!"—*Waggs*.

Royal Horticultural Society.—The members of the various committees of this society have been invited by the council to visit and inspect the gardens at Chiswick at 12 noon on the 5th July, and to lunch with them at 1.30 p.m. The meeting will be continued till 4.30 o'clock. Last year the meeting was well attended, and proved a very pleasant one to all participating in the same.

Preparing for the Prince of Wales at Birmingham.—By the special permission of the Council of the Royal Agricultural Society, Messrs. Webb & Sons, the Queen's Seedsmen, have decorated the exterior of the hall in Four Oaks Park with ornamental lawns, flowering plants, Palms, &c. The effect is very pleasing, and Messrs. Webb are to be congratulated upon having added so materially to the attractiveness of the show yard. The hall was to be used for the reception of the Prince of Wales on Wednesday.

Reading and District Gardeners' Mutual Improvement Association.—The second meeting of the summer session of the above was held in the Club Room on Monday evening last, when Mr. Turton, the chairman of the association, presided over a good attendance of members. The subject chosen for the evening was "Vegetables in Season," introduced by Mr. H. Wilson, gardener to Mrs. Bland-Carlud, Lower Redlands, Reading. The varieties principally touched upon were Asparagus, Cabbage, Carrots, Mushrooms, Tomatos, Turnips, French Beans, Vegetable Marrow, Peas, Lettuce, Broad Beans, Cucumbers and Potatos. A most profitable discussion took place, some fifteen to twenty members giving their experience with regard to the various kinds referred to. The exhibits were exceedingly interesting, Mr. Townsend, gardener to Sir William Farrer, Sandhurst Lodge, showing a splendid collection of tropical and hardy Nymphaeas, amongst which were the following:—*N. stellata*, *N. amazonica*, *N. Lotus*, *N. zanzibarensis*, *N. z. rosea*, *N. elegans*, *N. pygmaea helvola*, *N. Laydeckeri rosea*, *N. tuberosa*, *N. alba*, *N. candida*, *N. marliacea carnea*, *N. cromatella*, *N. odorata gigantea*, &c.; Mr. Wilson, considering the backwardness of the season, had some excellent specimens of Sutton's First Crop Cauliflower, Snowball Turnip, Champion Horn Carrot, Commodore Nutt and Tom Thumb Cabbage Lettuce and Black Seeded Bath Cos Lettuce. Mr. Turton, Maiden Erleigh Gardens, had a splendid sample of Sutton's Ringleader Potato. Mr. Smith, gardener to Miss Nield, Greenbank, showed nine bunches of Pansies, distinct varieties. Mr. Osborne, Junr., brought a plant of *Streptocarpus*, a cross between *Wendlandii* and the hybrid strain. A vote of thanks to Mr. Turton and to those who had staged the flowers and vegetables brought an enjoyable evening to a close.

HARDY HERBACEOUS PLANTS.

Papaver nudicaule.—The genus *Papaver* is noted for bright and showy flowers, and some of them as is *P. bracteatum* and its numerous varieties attain colossal proportions. The ingenuity of the genus, if I may so phrase it, has not been exhausted in producing these huge, and it must be admitted, stately flowers. In the opposite direction it has run into a race of dwarf, tufted plants that flower with surpassing freedom, and over a very long period. In this section the Iceland Poppies, varieties of the species *P. nudicaule* are exceedingly useful subjects for the rockery or herbaceous border. The plants vary from 8 in. to 15 in. in height, according to the soil in which they are growing, and the special character of the season. This year growth has been pretty vigorous owing to the rainy May and early part of June. The flowers, which are large, relative to the height of the plant, and the numbers in which they are produced, exhibit a variety of shades of white, yellow and orange, and they last well when cut and placed in water, but when intended for that purpose should be gathered early in the morning while the dew is yet on them. Like other perennial Poppies,

propagation may be effected by division of the roots in spring, and this is, of course, followed when it is desired to increase the stock of any particular variety that has taken the fancy of the grower, but for general purposes a packet of seed will do all that is required. Once get a healthy clump of plants, and the area they occupy will extend year by year, for the self-sown seed germinates freely enough. I recently observed a grand lot of plants, most of which originated from self-sown seed in Messrs. Barr & Sons' Nurseries at Long Ditton.

Thalictrum adiantifolium.—Most of the *Thalictrums* are possessed of ornamental foliage, and some of them have in addition very bright and showy flowers. In the case of *T. adiantifolium*, however, we have a plant whose small, green-yellow flowers in themselves are inconspicuous when taken severally, although in the mass they harmonise well with the *tout ensemble* of the plant, since they are borne in tall, elegant panicles that form a finish to the finely-cut deep green foliage beneath. The popular specific name "*adiantifolium*" is not at all inappropriate, since the small segments or pinnules of the leaves are in shape very much like those of the common Maidenhair Fern, *Adiantum cuneatum*. The name *T. adiantifolium* is the one under which the plant is usually to be found in gardens and nurseries, but it is synonymous with the *T. minus* of the botanist, and a British plant to boot. This is sufficient evidence of its hardiness in even the severest winters, whilst to this we may add that it is very easily cultivated in any ordinary garden soil. It may be increased from divisions, but this is rather too slow where quantities of plants are wanted for cutting from, so a packet of seed, which germinates easily enough, and which may be obtained very cheaply, is a good investment. For dinner table decoration the foliage will be found invaluable.

Thalictrum aquilegifolium atropurpureum.—A fearfully long name is this to bestow upon a poor, long-suffering plant. In this case we have an instance where both flowers and foliage are ornamental, for although the leaves are not so finely cut, nor the ultimate segments so small as in *T. adiantifolium*, they are yet handsome and imposing. The flowers are produced in huge corymbose panicles, the filaments of the stamens really constituting what is popularly known as the "flower," for the sepals which are the only series of floral envelopes left to the genus are rather short-lived and soon drop. The flowers are not, as the varietal name would seem to indicate, dark, but light purple, and the name *atropurpureum* would be better applied to the stems, which are very dark in hue. Propagation is usually conducted by division.—*Plant Lover*.

DOUBLE AND SINGLE PYRETHRUMS.

The popularity of these is abundantly evidenced by the gay displays of their flowers in the hawkers' baskets at the present time. Some of the very best varieties in each section are constantly being offered from door to door. Many acres of ground must be covered by them to produce the abundant supplies we see on every hand. They certainly are one of the most valuable groups of hardy perennials we have, and ought to have a place assigned to them in every garden. They will thrive in almost any soils with the exception of such as are very cold and retentive. Where these conditions prevail special preparations must be made as respects drainage and the addition of some lighter material, such as sand and well decayed manure or leaf soil. Slugs are their worst enemies and must be kept in check, especially during the early period of growth. The month of May is the best time to form fresh plantations. Those commencing their culture should procure plants established in pots. When planting loosen the balls of soil so that the fresh roots may obtain a hold of the soil more rapidly than they otherwise would do. Give them plenty of room; 2 ft.—provided good strong healthy plants are used—will not be too much. Keep them clear of weeds by frequently stirring the ground with the hoe. A most excellent plan after a stock is secured is to make a fresh plantation every year by taking off pieces from established plants. This somewhat prolongs the flowering season, those already established flowering somewhat earlier than freshly planted ones. Although they will last for years in the same position, better results are obtained by frequent renewals of

plantations. All our leading nurserymen have good stocks of them, and those ignorant of the varieties may safely leave the selection in their hands.—*W. B. G.*

HERBACEOUS CALCEOLARIAS.

THE herbaceous Calceolaria when well grown is an excellent decorative plant for a cool greenhouse or conservatory. Moreover, nine months is not a long time from the sowing of the seed to the full blown plant in an 8 in. or 10 in. pot, smothered with flowers. The herbaceous Calceolaria, however, unless well grown is a sorry sight, and had better be left alone. Cleanliness is its first consideration, and some special, though simple, details are requisite to its culture if it is to be presented in a floriferous and creditable condition, such as I saw it the other day in the gardens of Oakhurst, St. Stephen's Road, Ealing, W.

A small collection of about fifty plants exhibited a great variety of colour, running from pure yellow through infinite shades of red to darkest claret. The foliage also possessed a healthy hue, and bespoke a vigour born of cleanliness, suitable soil, and attention to other details. Mr. C. Edwards informed me that the seed was sown the first week in August last, and came from the well-known firm of Veitch & Sons. Mr. Edwards was rather proud of his plants, but, alas! they will soon have to go the way of all "flesh;" their place will soon know them no more; a fresh start will have to be made; the cycle will be complete; for who would grow such plants as these from cuttings or divisions, when they may be satisfactorily raised from good strains of seed, and treated as annuals or biennials.—*C. B. G., Acton, W.*

A FINE FERN FACTORY.

FERNS have long been prized and cared for, and cultivated in and for the hothouses and mansions of the opulent, but of late years a change has come over 'the spirit of the dream,' and they are not alone the peculiar property of the classes nor solely the setting to wealth and luxury, but are to be seen represented by one or other of their myriad forms in the humble cottage, as well as the more pretentious villa, where the children of the masses, both indigent and comparatively well-to-do, live and move, and have their being. A great change truly is this, and one that has not been worked in a day, for as with dead so with living things, before a popular demand for either can be met the problem of wholesale supply has to be considered and solved. With the solution of this particular phase of the industrial problem the name of Mr. H. B. May has been indissolubly connected, for with true business enterprise he has grasped the real inwardness of the situation, and—the British public has but to ask and to have, in fact, has asked, and has had, Ferns galore.

Mr. May now owns three large and thriving establishments in the neighbourhood of Edmonton, each of which is a business complete in itself, and independent of the others, and each of which is supplying day by day, and year by year, plants of all sorts and sizes that popular fancy may call for. The Dyson's Lane Nurseries, the oldest of these three, are the headquarters, as it were, of the industry, and here it is that the complex workings of the scheme are most readily apparent to the visitor, who sees house after house, block after block of houses, every nook and corner of them filled with plants of all sizes, from the tiny sporeling to the matured plant—Ferns here, Ferns there, Ferns everywhere, hanging from the roof, clinging against the wall, filling high shelves, and covering the lower stages, and yet the remarkable thing is that there seems to be never a weakling amongst them. They all grow vigorously, for they seem to have nothing else to do.

A word as to the arrangement of the houses. They are of the usual span-roofed type that experience has found to be the best for market work, but at Edmonton they are associated in blocks of five or six or seven, a heated corridor used as a potting shed being built on the end. Potting can thus be conducted at any season without the trouble and risk of exposing the plants to the outer air. In one case a very long corridor is placed in the middle, and forms a junction to two large blocks of houses (one on either side) which constitute in them-

selves a huge glass area. The corridor itself is set off with *Neprolepises* and other Ferns, either growing in pendant baskets, or standing on high side shelves.

The contents of the houses it would be well-nigh impossible to describe in detail, for of the numerous species of the order Filices many are very versatile, and run into all sorts of variations, and it is almost needless to say their natural tendency to sport, to become plumed, feathered, tasselled, or variegated, as the case may be, is encouraged. Thus many of the finest Ferns in cultivation have first seen the light at Dyson's Lane.

The newest comer is *Polypodium Mayi*, a sporeling raised from *P. glaucum*, which was exhibited by Mr. May at the late Temple Show, and which we fully described then. *P. glaucum* is itself a vastly pretty thing, and is grown in great numbers, whilst *P. aureum* still holds its own with the public.

The genus *Pteris* is probably the most important from a market point of view. The numbers of crested and tasselled *Pterises* are legion. *P. serrulata* and *P. cretica* alone have given rise to a quantity of handsome plants, showing all gradations of tasselling. Thus *P. s. gracilis multiceps* has medium sized, very finely cut, tassels to the ends of the narrow pinnae, whilst *P. s. corymbosa*, certificated in 1894, has heavy, bunchy tassels, and the fronds have assumed in consequence a pendant habit. Both of these are grand basket Ferns. *P. s. compacta*, on the other hand, is true to its varietal name, the stipes of the fronds are shorter and stiffer, and the plant has a bushy and compact habit. *P. cretica Wimsetti* is probably the finest market Fern in existence, whilst *P. c. nobilis* and *P. c. Summersii* are other splendid forms. *P. tremula* has evidently no desire to be outdone in versatility. The heavily crested form, *P. t. smithiana* shows what it can do in this direction, whilst *P. t. elegans*, although it has a true "tremula" rootstock, appears at first sight to have got clean away from the type, with its long, tasselled fronds. *P. t. flaccida* is equally distinct with its looser habit and graceful, feathery presence. The broad fronds of *P. Drinkwateri* are most distinct, and the plant is of noble appearance; indeed, it bids high for second place to *P. Wimsetti* as a market Fern, and is a distinct advance on the common *P. umbrosa*.

Variegated Ferns find favour in some quarters, and one is astonished at the wealth of material available. The genus *Pteris* is again the heaviest contributor. *P. Mayi*, *P. c. Reginae*, *P. c. R. cristata*, *P. Victoriae* and *P. t. variegata* are all chaste and handsome plants that ought to be in every collection. The rather rare but highly beautiful *P. goringianum pictum* may be placed in this section. We cannot leave the genus without allusion to the noble *P. ludens*, and the equally distinct *P. sagittifolia*, with its arrow-head shaped fronds.

Of *Adiantums* Mr. May has a magnificent stock, the numerical strength of which may be gauged from the fact that *A. Farleyense* is turned out at the rate of 12,000 plants a year—an army in itself. The new *A. hemsleyanum* is a distinct acquisition to the genus. *Gymnogrammes*, again, are in superb condition, every variety in cultivation that is worth anything being grown, *G. Mayi*, *G. chrysophylla grandiceps*, *G. c. g. superba*, *G. Alstoni*, *G. flavescens*, *G. wettenhalliana*, *G. Parsoni* and *G. schizophylla elegantissima* being just a few of the gems. It would be easy to give the names of the plants, but it would not be so easy to convey to our readers a correct idea of the wonderful beauty of the varied forms of the gold and silver Ferns to be seen here. The curious *Platycteriums* are much in evidence, *P. grande*, *P. aethiopicum*, and *P. Willinckii* being three of the best, although we must not forget the commoner *P. alcorni*. All of these appear to great advantage when grown in pockets against a wall, or planted on rustic tree stems.

Among *Aspleniums* the elegant *A. caudatum* is a capital basket Fern, whilst for stateliness and distinctness there is nothing like *A. Nidus*, with its huge shining green fronds and black stipes. *Davallia fijiensis robusta* is a strong growing variety of the pretty Fijian *Davallia*. *D. Mariesii* and its crested variety are other notable plants. *Lygodium japonicum* is the best of the so-called climbing Ferns, and we were greatly struck by the fine batches of it in 6-inch pots that were to be seen in some of the houses. Small wonder is it

that these plants sell well when we consider how elegant and effective they are.

For basket plants the *Neprolepises* have few compeers. Some twenty species and varieties are grown by Mr. May, and these include all that are worth growing. *N. davallioides plumosa* and *N. d. multiceps* are two of the finest forms of this species, and seeing that they originated from the same batch of spores it goes to show how subtle is the tendency to variation possessed by our cultivated Ferns. *N. pluma*, *N. recurvata*, *N. philippinense* and *N. Duffi* are other well-known forms that were represented in great quantity.

The above mentioned Ferns constitute only a few of the gems of a collection that is a marvel of completeness and comprehensiveness. Many good things have been passed over, perforce, from lack of space, for our notes are already lengthy enough.

PLANTS RECENTLY CERTIFICATED.

THE undermentioned awards were made by the Royal Horticultural Society on the 14th inst.

Orchid Committee.

LAELIOCATTLEYA EUDORA SPLENDENS. Nov. var.—The parents of this grand variety were *Laelia purpurata* and *Cattleya Mendelii*, the latter being the pollen bearer. The progeny has the vigour of the former. The sepals and elliptic petals are rich rose-purple. The lip is of huge size and has a crimson-purple crisped lamina; the throat is white, tinted with pale yellow; and the base is crimson lined with white. The lip is the great feature, being darker and richer than the type. First-class Certificate. Messrs. J. Veitch & Sons, Ltd., Chelsea.

EPICATTLEYA RADIATO-BOWRINGIANA. Nov. hyb. bigen.—Strange results continue to be obtained by the hybridisation of Orchids. That under notice was derived from *Cattleya bowringiana* and *Epidendrum radiatum*, the latter having a cochleate, striate lip. The flowers in size recall those of the *Cattleya*, and have the sepals and elliptic petals of a dark slate-purple hue. The lip has a short tube striated with crimson purple on a white ground, and a short lamina, also veined. The plant bore three flowers, one of them having three lips, the lateral ones being petals. It is an interesting case of *peloria*. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

LAELIOCATTLEYA HIPPOLYTA AURANTIACA. Nov. hyb. var.—In this we have one of the prettiest varieties of this bigeneric hybrid in cultivation. The sepals and petals are rich orange-scarlet, the lip being orange and striated with crimson forking veins. The contrast is beautiful. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

ODONTOGLOSSUM ELEGANTIUS BARONESS SCHRODER. Nov. var.—To the light and graceful form of *O. elegans*, this beautiful variety adds the colours of *O. excellens*. The sepals and petals are clear yellow with a few rich brown blotches. The lip is white, with a large chestnut blotch in front of the crest. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

BULBOPHYLLUM SALTATORIUM.—The subulate sepals of this species are yellow with black spots at the base. The lip is black at the edges and furnished with a beard of long, purple hairs. It is a rival for *B. barbatum*. Botanical Certificate. Messrs. J. Veitch & Sons, Ltd.

BULBOPHYLLUM LOBBII BURFORD VAR. Nov. var.—The upper sepal is yellow, richly spotted with brownish-purple, the lateral ones being falcate and paler. The petals are beautifully lined with purple on a yellow ground. Botanical Certificate. Messrs. J. Veitch & Sons, Ltd.

CATTLEYA MOSSIAE MADONNA. Nov. var.—The sepals and large petals of this chaste and handsome variety are pure white. The tube of the lip is bluish externally and purple, lined with white internally; the throat is orange, and there is a pale purple blotch on the centre of the lamina, the rest being white. The variety belongs to the *C. M. reineckiana* section. Award of Merit. Messrs. Stanley-Mobbs & Ashton, Southgate, N.

LAELIA PURPURATA ERNESTII. Nov. var.—Here we have a chaste and beautiful variety of delicate colours. The sepals and petals are pure white. Both the outside and inside of the tube are yellow, lined in the latter case with fine purple striae. The lamina has a broad, distinct zone of purple running

across its base. Award of Merit. R. I. Measures, Esq. (gardener, Mr. H. J. Chapman), Cambridge Lodge, Camberwell.

SCUTICARIA HADWENI.—The terete leaves of this species are erect, not pendulous like those of *S. Steellii*. The solitary flowers have rich brown sepals and petals barred and marked with yellow. The concave lip is pubescent all over and white, striped and blotched with purple and brown. It is an uncommon and beautiful species. Award of Merit. Sir F. Wigan, Bart. (grower, Mr. W. H. Young), Clare Lawn, East Sheen.

LAELIOCATTLEYA DUKE OF YORK. *Nov. hyb. bigen.*—This was derived from *Laelia elegans* crossed with *Cattleya brymeriana*. The sepals and ovate, clawed petals are deep purple. The lamina of the lip is transverse, and rich crimson-purple, while the side lobes are paler purple. The bigeneric hybrid is bold and distinct. First-class Certificate. Messrs. F. Sander & Co., St. Albans.

Floral Committee.

MIKANIA SANDERI.—In this Composite we have a handsome climber that is a great improvement upon the few species already in cultivation. The leaves are about 6 in. long, ovate, and of a rich green above, and conspicuously blotched with dark olive. The under surface is mostly coloured with dark purple. First-class Certificate. Messrs. F. Sander & Co.

CALADIUM LORD ANNESLEY.—The long, narrow leaves of this pretty decorative variety are ovate-lanceolate, and of a glossy carmine along the centre, the rest being metallic red, narrowly bordered with green. Award of Merit. Messrs. F. Sander & Co.

BEGONIA REX MRS. F. SANDER.—The large and showy leaves of this variety have a broad, light green border, then a broad zone of rose surrounding a velvety brown or olive centre. It is an acquisition to this section. Award of Merit. Messrs. F. Sander & Co.

CALOCHORTUS PURDYI.—In this, we have a remarkably distinct and striking Mariposa Lily, with flowers of medium size. The inner petals are obovate, white, and heavily bearded all over with hairs of the same colour except at the base, where there is a pale purple and glossy spot. It is as hardy as other species in cultivation, and grows about 12 in. to 15 in. high. First-class Certificate. Messrs. R. Wallace & Co., Colchester.

GLOXINIA GALATEA.—The white ground of this very pretty and interesting variety is ornamented with a marbled, blue-purple, wavy zone, about half-way between the centre and the margin. Award of Merit. A pan of plants was exhibited by Messrs. J. Veitch & Sons, Ltd.

PHILADELPHUS CORONARIUS MONT BLANC.—The leaves of this variety are much smaller than those of the type, while the white flowers are produced in great profusion, and delightfully fragrant. Little bushes a foot in height or less are very handsome. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

PAEONY ELLA CHRISTINE KELWAY.—The large, double flowers of this Chinese variety are blush-pink and chastely pretty. Myriads of narrow petals are surrounded by broad guards of the same hue. Award of Merit. Messrs. Kelway & Son, Langport, Somerset.

PYRETHRUM LADY KILDARE.—The flowers are double, many of the florets being quilled, and of a pale peach with an apricot centre. The shade of colour is distinct and pretty. Award of Merit. Messrs. Kelway & Son.

MECONOPSIS CAMBRICA FLORE PLENO.—The flowers of this variety of the Welsh Poppy have very numerous petals quite filling the cup-shaped cavity of the bloom. They are of the ordinary colour, but the exterior of the petals in the bud state are tinted with orange. Award of Merit. Messrs. Paul & Son, Cheshunt.

BEGONIA COMMODORE DEWEY.—The glowing scarlet flowers of this tuberous variety are of large size and of beautiful Camellia form, the broad petals being neatly imbricated. Award of Merit. Messrs. H. Cannell & Sons, Swanley, Kent.

PYRETHRUM MONARCH.—The flowers are of large size, and single, with broad rosy-pink rays. It is very suitable for cut flower decorative work. Award of Merit. Messrs. Collins Bros., 39, Waterloo Road, S.E.

CANNA MRS. W. MARSHALL.—The broad outer petals of this handsome *Canna* are golden-yellow with occasionally a red streak along the centre. The

small inner petals are much spotted with scarlet. Award of Merit. Messrs. Paul & Son.

CANNA MOSAIC.—The large flowers in this case are scarlet, richly netted with golden-yellow, after the fashion of mosaic work. Award of Merit. Messrs. Paul & Son.

HARDY FRUIT GARDEN.

STRAWBERRIES.—The netting of these should be seen to without delay, otherwise the finest fruits, for the first fruits are generally the finest, will fall a prey to the birds. The old plan of simply spreading the nets over and upon the plants necessitates the pulling to and fro of the nets every time a punnet of fruit is to be picked. It will be really a saving of labour, therefore, to rig up a temporary framework by driving in a few stout posts and connecting these by light iron rods or wooden spars, over which the nets may be spread, thus keeping them clear of the plants, and at the same time giving more efficient protection to the fruit. The later crops should be mulched at once if this has been put off for any reason, but previous to this a good soaking should be given the beds if they are at all inclined to be dry. The Strawberry is almost unique amongst hardy fruits for the great quantity of food which it has to draw from the ground during a very limited period: At this season, therefore, when the strain is practically at the highest it will be well to supplement the food stored in the ground by a little manurial stimulant. If access can be had to a farmyard there is nothing better than the liquid farmyard manure. The only difficulty is that it is apt to vary considerably in strength, but if care is taken not to use it too strong there is nothing that will yield better results upon the Strawberry crop. Of course, it should not be given after the fruit has commenced to colour.

RASPBERRIES.—The rains of a few weeks ago were pretty general the country over, but at this season of the year the effects of a heavy rain are soon gone, and some soils could do with a heavy downpour three or four times a week, so quickly do they dry. Raspberries love rich soil and heavy feeding, and, in fact, unless they have these the fruits will be small and poor in flavour. This season they have done remarkably well up to the present, although the cold weather seems to have retarded them a good deal. If the soil on which the plants are growing is comparatively light and poor, manure water will be found of service. Failing this clear water will have to be given if the weather continues dry. The secret of good Raspberries is to manure heavily each autumn, when alone it is permissible to disturb the roots. We have found a good annual dressing of cow manure worked into the soil as deeply as could be without causing serious disturbance to the roots to suit the Raspberries finely. Such a practice minimises considerably the effects of drought, and fine fruit has been gathered even in dry seasons. A mulching of short stable manure is also good practice, for after the goodness has been washed into the soil either by the rains or by the water from the hose, it affords a clean and dry foothold, and prevents the soil from becoming trodden hard during the period that the crop is being gathered.

CHERRIES, PLUMS, APRICOTS, AND PEACHES ON WALLS will now be all the better for regular washings with the garden engine. Green fly, black fly, and red spider are all too plentiful, more particularly upon the Cherries and Peaches, and clear water forcibly applied is the best method of keeping them down. It becomes a serious matter to treat a few hundred yards' run of wall trees with insecticides, and yet these will have to be used if the insect pests are allowed to get the upper hand. The washings with clear water, therefore, if given in time, will effect a considerable saving; besides, they are better for the trees.

PEACH BLISTER.—This has been even more prevalent than during previous years, which unpleasant fact is doubtless to be accounted for by the long visits of the cold east winds, of which we had a recurrence only last week. With the advent of warmer and more typical summer weather it is to be hoped that the trees will get the better of the malady. Where only a few leaves are affected they may be picked off, in order that they may not afford

a refuge for insects, but where the trees are badly attacked such extensive defoliation would neither be wise nor prudent.

Peaches are calling for constant attention in the stopping of laterals before they get inconveniently long; also in the timely removal of badly situated or unnecessary shoots that only take up valuable room, and spoil the chances of development of other needful shoots. The timely pinching of all wall and bush trees, in fact, is to be recommended, for not only are the finger and thumb more expeditious than the knife, but they are also more economical where the interests of the trees are concerned.—*A. S. G.*

Kitchen Garden Calendar.

DURING the last few days there has been an improvement in the night temperature, so that vegetation has made better progress. In many places, however, rain is sadly needed to help the growth of all newly-planted things, as the ground has become very dry. It is at this time of the year that the foundation is laid for a plentiful supply of green vegetables through the winter, and unless every precaution is taken to establish the plants as they are put out it is next to useless to plant. We have found that by placing an inverted pot over each plant during the greater part of the day when the weather is hot and dry much labour is saved in watering, which is a great consideration where water is scarce. If the pots are put over as the planting is done there will be but very little flagging take place, particularly if the soil is thoroughly moistened as the work proceeds. The pots may remain on the first day, but should be removed on the evening of the second, or the plants will suffer for want of light. By this time new roots will have commenced to form. If, however, the weather is very hot, it is advisable to cover the plants during bright sunny days for at least a week or ten days, by which time the plants will have thoroughly established themselves.

The main crop of Celery, if not already planted out, should now be got into the trenches. It is far better to transplant while the plants are small, and get them established by frequent waterings, than to wait with the hope of rain until they become overcrowded, as a much longer period elapses before the plants recover themselves. Celery is by no means difficult to grow well, provided due care be taken in establishing the plants and supplying them with plenty of nourishment afterwards. In some districts the Celery fly (*Tephritis onopordinis*) is very destructive. The larva of this little creature burrows between the two skins of the leaves and eats the pulp. It can easily be seen where they are at work, as brown patches appear in the leaves which somewhat resemble blisters. The plants should be carefully looked over, and where any of these are observable the leaves should be pressed between the finger and thumb to destroy the pest. The plants should also be frequently dusted with soot to prevent the fly from laying its eggs.

CUCUMBERS in frames will now be making good progress. To prevent the growths from becoming overcrowded pinch them at the first joint beyond the fruit, and repeat this on every new growth. It may be necessary to reduce the number of growths, but this should be done with care. Should there be any signs of red spider, sponge the foliage with clean water. To maintain a brisk heat close the lights early in the afternoon. It is a great mistake with some to put air on both at the top and bottom of the lights; by doing this a cold current is set up, which passes amongst the leaves, and retards growth. When air is admitted let this be at the top of the frame only.

CAPSICUMS, TOMATOS, and other tender vegetables must be encouraged while the weather is warm, that their fruit may be matured before autumn is too far advanced. Make another sowing of Peas and French Beans, choosing a sheltered situation for them. Plant out Lettuce and Endive as the plants become large enough to handle, and keep up a supply of small salads by frequent sowings, as these will now be much in request. When the weather is fine keep the hoe at work amongst all growing crops to destroy the small weeds, and give the whole a neat and tidy appearance.—*Kitchen Gardener.*

HINTS FOR AMATEURS.

CHRYSANTHEMUMS.

THE time has at last arrived when the final potting into the flowering pots can no longer be delayed. Professional cultivators have by this time given all their plants, with perhaps the exception of the late ones, their final shift. Those who have to show in strong competitions have thus to be bright and early with the work, for experience has proved that a good long season of growth in the final stage is necessary to procure sound, well ripened wood, which in turn will produce fine, well coloured flowers. There is a distinct danger to be run by too late potting. The plants (unless they are late right from the cutting, when a deal of difference results) are starved and stunted in their pots, usually 32's, and the roots become an interlacing fibrous mass, which it is impossible to disentangle or to avoid injuring in a very considerable degree. The check of potting is thus, in itself, considerable. It is some time before the poor plants recover from it, and when they do it is not infrequently at the expense of all their lower leaves. The consequence is that during the months of July and August, when the plants should be in full vigour of growth, they are struggling for a bare and miserable existence. Then they commence to grow, just as the summer shows signs that its course is merging to a close. The rich soil causes undue rankness, and corresponding sappiness of growth, as if an attempt were being made to make up for lost time, and the plants finish the season in anything but that condition which the gardener would like to see them.

These are some of the dangers involved by neglecting to shift the plants at the proper time, and we would urge all who may be growers in a small way to avoid these dangers by getting their 'Mums into flowering pots at least by the end of the present month.

Up to this time the plants have had a somewhat chequered experience. They were placed out-of-doors during the third week in May, but since that time they have been subjected to a variety of climatical conditions that has sorely tried their patience. During the late cold weather they have been almost, if not quite, at a standstill.

Soil.—This is naturally of the first importance, and the amateur will do well to go to a little extra trouble to procure the right kind of stuff. Large cultivators are very particular with their soil. The loam, which is the staple of the compost, is cut from good old pastures and stacked under cover, with or without manure, for months previous to the time at which it will be required. When it is cut out for use it will then be in a capital condition as far as moisture goes, the grass will have rotted, but all the fibrous roots will be there, and the whole will be sweet and friable. This loam is then chopped up with a spade—not sifted in any way be it noticed—and mixed with the other ingredients. Loam that has been employed for Cucumbers or Melons is usually in capital fettle for Chrysanthemums, and, should no fresh material offer, may be used with the greatest confidence. The proportions of the various ingredients may be as follows:—To a cubic yard of the loam add a barrowful of leaf soil, that obtained from Oak or Beech leaves being the best, a similar quantity of old mortar rubbish broken up to the size of Hazel Nuts, half the quantity of old Mushroom bed manure, from ten to twelve pounds of Clay's Fertiliser or Thomson's Vine and Plant Manure, and enough rough river sand to keep the whole open, say a little over half a bushel to the above quantity of compost if the loam be heavy, and a little less if it be light. The whole must be mixed thoroughly together by turning it three or four times. In doing this the outside of the heap should be turned into the centre each time, and the centre to the outside. The chemical manure added will thus get well spread throughout the whole, which is of vital importance. Some growers advocate the addition of more of these artificial manures to the soil than we have recommended, but this is a practice that can very easily be overdone, and, to our way of thinking, one that is overdone by more than one professional grower. If the loam be good it would be far better to add no chemical fertiliser at all than to put a thimbleful too much. The evil effects of an over-

dose in conjunction with careless watering will soon be seen by even a tyro. Besides, any stimulants that may be necessary may easily be applied afterwards, as the plants call for them.

Pots.—The size of pots most suitable for general purposes is the "large sixteen," which has a top, inside diameter of about 9 inches. A larger pot, the "twelve," which has a top inside diameter of 10 inches, is occasionally employed, but only in the case of especially tall growing and heavy rooting varieties, that is when one plant only is put into a pot. The alternative plan of growing more than one plant in a pot has not much to recommend it. It may be a saving of space, but at the expense of the quality and quantity of the bloom. All pots should be clean, and if new they should be soaked for a few hours to take the "fire" out of them. New, unsoaked pots are exceedingly harsh and unkindly, and their dry and thirsty nature would take too much moisture out of the soil.

Drainage.—Seeing the vast quantities of water that will pass through the soil in the pots during the next three or four months, it is obvious that the drainage must be of the best if things are to be kept sweet and wholesome. After crocking the pots carefully with clean crocks, a sprinkling of half-inch bones may be put in, say a small handful to each pot. Over this place a layer of the roughest part of the compost, to keep the finer particles from being washed down amongst the crocks, and the drainage is complete. The addition of the crushed bones has been criticised by some growers, and declared to make the soil sour and evil smelling when wet weather has supervened immediately after the potting, but we have followed the practice for a number of years, and only in one case have we known bad results to follow, and that was in the case of a very weakly plant of Golden Wedding. The bones give out their goodness slowly, and in that respect do not give the immediate surfeit of good things that is produced by too much chemical manure powders which are stronger and speedier in their action from obvious mechanical reasons. The most valid objection to bones is one that might be made on the score of economy, for their value as a manurial agent is not nearly exhausted by the end of the year, but then the Chrysanthemum soil of this year will come in for something else next year so that their virtue is not wasted after all, and the Chrysanthemums only have the first share.

Ramming.—In order to obtain short-jointed and sturdy growth the rammer has to play a prominent part in the final potting of the Chrysanthemum, but just as one can have "Too Much Johnson," so there can be, and very frequently is, too much rammer. Directions to pot firmly are generally construed pretty literally, and the result is that the soil, when it chances to be heavy, is made so hard that the roots cannot penetrate, nor the water percolate, the results being simply disastrous. As in other written directions as to the way to perform gardening operations, the operator's own sense of discretion must be called actively into play in this instance, judgment must direct the rammer and the "rammist," if we may be allowed the word to distinguish between the instrument and the operator who works it.

Don't fill the pots too full of soil, but allow room for enough water to be given at one application to soak the ball right through. Also never attempt to pot a plant that is dry at the time. This would be folly, for the probability is that the dry kernel in the centre of the pot would remain dry, and then goodbye to the roots and the plant's chance of success. All plants, therefore, that it is intended to pot, should be looked over on the evening previous, and well-watered if they are at all inclined to be dry.

After Potting.—A very usual but a mistaken plan of action is to deluge the plants with water immediately after potting. Instead of doing this, the plants should be stood in a shady corner, and, if the weather be fine, sprinkled overhead twice or thrice a day by means of the syringe. Two or three days of such treatment and the plants will have recovered themselves of the check, and will then be ready for drafting to the quarters wherein they are to remain for the summer months.—*Rev.*

Oranges and Salt.—The Mexicans when eating Oranges season them with salt, the fruit being considered more wholesome when so seasoned.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Hyacinths.—*Forester*: You will see an answer to part of your question about Hyacinths on p. 671 of last week's GARDENING WORLD. The bulbs that have been grown in water in glasses are of no further value, and may as well be thrown away at once.

Ridge Cucumbers.—*Geo. Need*: Ridge Cucumbers are not grown to any great extent, partly because they are often a very qualified success. They may be grown out-of-doors on heaps of fermenting matter, it is true, but they only do well in warm seasons, whilst the fruit is apt to be rather bitter. To do them properly they want the shelter of a frame, more particularly in the earlier stages. Now we have so many really good Cucumbers of far better quality than the ridge varieties that can be grown in a frame that it is no wonder that they are chosen in preference to the latter. The best of the ridge Cucumbers is King of the Ridge, which is nearly as good in quality as the frame or tenderer sorts. Stockwood Ridge is a good old variety that is to be depended on. It is a good bearer, but the fruit is shorter, fatter and more prickly than that of King of the Ridge.

Watering Vines.—*K.*: Now that the fruit is ripening you must stop giving manure water, and clear water must be very judiciously administered. Water will be occasionally required, it is true, but only very seldom, otherwise the fruit will be apt to split or crack, and this will spoil its appearance. You might cover the border with straw, if you like. It will certainly tend to prevent evaporation of moisture, and cannot do any harm.

Apple Tree Backward.—*E. R. L.*: If your tree had been going to fruit this season it would certainly have made some show of flower-buds before this, as well as of ordinary foliage. It must be in a bad way. Was it in good condition when you purchased it? The variety, Melon, is not one that we should recommend for a cold soil and a bleak situation.

Kentias Dying.—I recently bought several Palms (Kentias) which looked exceedingly healthy and vigorous at the time, but which have since all died off. In pulling one of them out of the pot I discovered that there were no roots, and this proved to be the case with all of them. Can you tell me what is the reason? The soil in which the plants were growing was not at all sour or wet; indeed, it looked as if the plants had been newly potted.—*Palms.*

You are probably correct in your latter surmise. It seems to us most likely that the plants had been hastily potted up and sent out to sell, not to grow. Taken from a warm house, subjected to the potting process, perhaps half of their roots destroyed, and sent out straight away into a low temperature, then into the comparatively arid atmosphere of a dwelling, it is no wonder that the plants succumbed. Palms are really tropical or sub-tropical subjects, and need a certain amount of training, so to speak, before they can be expected to stand a lower temperature.

Crushed Bones for Chrysanthemums.—*P. E. A.*: You may sprinkle a small handful of the ½-in. bones over the crocks at the bottom of a No. 12 pot. Some nutriment will, of course, be afforded to the Chrysanthemums from these bones, but their employment is not really economical, for they are not nearly exhausted by the end of the season.

Melons in Frames.—*L. James*: You are in time, but have no time to waste if your Melons are to do any good in the frames, unless, of course, these frames are well supplied with hotwater pipes, when a longer season can be counted upon. You will find that two plants will be enough for each light. Plant at once on mounds of soil which should be raised up close to the glass. Do not stop (pinch) the plants until they have got a hold of their new surroundings. After the stopping two or three main shoots may be taken along from each plant, according to the space there is at command. Soil may be added at a later date when the white roots have made their appearance at the sides of the mound.

Cucumbers.—*L. James*: From the description you give of your Cucumbers they have evidently got a bad dose of red spider. The best thing to do would, therefore, be to root them out, cleanse the frame, put in new soil, and plant afresh. If you do not wish to sacrifice the plants you can only pinch off the leaves that are badly affected with the pest, and keep the syringe vigorously at work for about ten minutes morning and afternoon. In this way you may succeed in getting rid of the spider, for it cannot stand regular and forcible applications of clear water. You see in a frame it is impossible to apply any insecticides with advantage to the plants.

THE BAMBOO GARDEN AT KEW.

For many years past Bamboos, taking the term in its widest sense, have been grown in the Royal Gardens, Kew, but the most of them were grown under glass till 1892, when a Bamboo garden was laid out for the reception of such species as prove hardy in the latitude of London. Previous to that year Bamboos were chiefly represented in the open air collections by *Arundinaria japonica*, *Bambusa For-*

Arundinaria gigantea in the open air here, for it requires a stove temperature, and at Kew and Syon House throws up main stems 50 ft. to 60 ft. high in the course of four months. The Bamboo garden, having been planted in 1892, is now well established. It passed through the severe winter of 1894-95, and, therefore, furnishes evidence of the relative hardiness of the species collected within its confines. There are over forty species and varieties in the collection at the present time, which will be passed in review separately in these pages. Several others have been tried and found too tender to give satisfaction in the open; they have practically taken French leave, so that there is no necessity for discarding them. *Arundinaria Laydekeri* flowered in 1895, here and in other parts of the country, after which it died, and so proved useless for general culture. *A. falcata*, *A. spathiflora* and *A. hookeriana* have also been tried, but were too tender, and may only now be seen in the Temperate House. To these may be added *Phyllostachys heterocycla*, so that no further mention of them need be made here.

The Bamboo garden is situated near the banks of the Thames and towards the western end of the Rhododendron Dell, from which it is entered by a walk. It is roughly triangular, this being the form of

clined to clay, but being retentive of moisture serves to supply the plants with the quantity necessary to support their vigorous growth, particularly when throwing up the main stems as suckers from the root. These stems are covered with sheaths, at least in their early stages, but the leaf surface they support is reduced to a minimum. The material for these main stems must be stored in the roots and stems of previous years, but an abundance of moisture is necessary to make rapid growth possible. The beauty of the plants depends chiefly upon the branches, twigs and foliage developed the second and succeeding years upon the upright young stems. The latter do, indeed, supplement the general effect of the plants, but particularly in the case of the species of *Phyllostachys*, whose stems and twigs become naked and polished when fully developed.

Some start into growth early, and have stems nearly of their full length by the beginning of June; while others are later and just commencing to development their young stems. While some are in full leaf, others are only commencing to move, being still furnished with last year's foliage, which, with rare exceptions, passed through the winter safely. Indeed, the garden has never appeared in better condition after having passed through the winter than it



VIEW IN THE BAMBOO GARDEN AT KEW.

tunei and *Phyllostachys viridi-glaucescens*. The hardy species of Bamboo range themselves under those three genera, but the tribe Bambusae includes some twenty-two genera, most of the species of which, being natives of tropical countries, cannot be grown in Britain except in heated glasshouses.

In the more favoured and warmer districts of this country several amateurs began to ascertain their hardiness and their great beauty for garden decoration, and in the course of a few years became enthusiastic cultivators. In 1890 we inspected a fine collection in Guernsey, but had no idea even then that the bulk of them would have proved so hardy in the southern parts of this country. A. B. Mitford, Esq., Batsford Park, Moreton-in-the-Marsh, Gloucestershire, has since proved the pioneer in popularising Bamboos for outdoor culture in this country, and has written a book on the subject. The idea of establishing a Bamboo garden at Kew was a happy conception on the part of the authorities there, as it gives the public an idea of the subtropical appearance and decorative effect of these shrubby grasses at the command of the owners of a garden. It also shows what species may be relied upon to withstand the inclemency of our climate.

We can never hope to see arboreal species like

the large central bed or area, which is outlined by as many walks, from which others pass off in different directions into the surrounding woods. The Bamboos occupy the central area, as well as the borders and banks surrounding the whole. Shelter is afforded by tall, mostly deciduous, trees, of which Oaks, Beeches, Sycamore, and Spanish Chestnuts are the principal. On the high banks are masses of single rambling Roses, Smilax, Philadelphus, and other shrubs, forming a background. Various interesting flowering plants have been planted at intervals, including *Lilium giganteum*, *Kniphofias* (Red Hot Poker), *Eremurus robustus* and *E. elwesianus*, the showy spikes of the two latter often inducing the public to trespass over the ground in order to make a closer inspection of their magnificent racemes of flowers. Several strong growing grasses are also associated with the Bamboos proper, including *Miscanthus* (*Eulalia*) *japonicus*, *M. j. zebrinus*, *M. sinensis*, Pampas Grass (*Gynerium*), and the South European Reed, *Arundo Donax*. The latter, although shrubby, is not a Bamboo, and generally dies down to the root in winter. It throws up strong stems during summer, and is, therefore, a fit associate for the Bamboos of warmer countries.

The soil consists of a heavy substantial loam, in-

did this spring, the foliage of many species being almost perfect, and glittering in the morning sunshine. Some being in full growth carry the leaves of two or more seasons. During July, August and September the Bamboo garden will be in its finest condition; but even now is particularly interesting and draws a great many visitors.

The accompanying illustration will afford a glimpse of this retreat, and give a general idea of the whole, together with the surroundings, but the individual plants must be seen for the full appreciation of their individual beauty. Nothing which exists amongst the ordinary collections of trees and shrubs are at all comparable to these woody grasses, which have a distinct and characteristic beauty of their own. The photograph was taken at the angle where the path enters from the Rhododendron Dell, and gives a view along one side of the central area. On the left is a mass of *Bambusa pygmaea*, one of the best of the very dwarf ones owing to its hardiness and vigour of growth. Beyond it is a Gorse bush, appearing dark in the picture, and behind it are the tall and very upright stems of *Arundinaria Hindsii*. At the corner on the right is a dense mass of the neat habited *Phyllostachys ruscifolia*, which has been compared to the Butcher's Broom. Further on are

several dwarf species, behind which are some magnificent bushes of *P. viridi-glaucenscens*.

(To be continued.)

BELGIAN NURSERIES.

VII.—L'HORTICULTURE INTERNATIONALE,
BRUSSELS.

THIS is one of the three Linden establishments, two of which are in Belgium and the third in France. That under notice is a vast establishment situated at Park Leopold, Brussels, and under the management of M. Lucien Linden. The whole range of glass is so constructed that visitors can inspect every house without going outside. Plants can also be conveyed from the one to the other at all seasons of the year, whatever the weather may be.

On entering the range, the visitor is first ushered into the entrance hall, which is always kept gay with plants in flower, and presents a very inviting appearance. The next move is into the winter garden, a capacious building with plenty of space for parading about on iron gratings under large Palms, Cycads and Tree Ferns. Under the central dome is a huge specimen of *Latania Sieboldi*, and elsewhere are equally fine giants of *Cybotium prln-* and *Cycas dealbata*. A rare and fine specimen of *Theophrasta imperialis* stands 10 ft. high.

A great many of the plant houses lead off from this fine building, on either side. On the occasion of our visit, April 20th last, our chief object was to see the Orchids, of the fame of which we have often heard. As it happened, we passed into houses (most of the plant houses are span-roofed and recently built on the most modern principles) containing fine importations of *Laelia grandis tenebrosa* and *Cattleya labiata*, the latter being semi-established and in grand condition. The compost used is *Poly-podium fibre* and sphagnum.

An *Odontoglossum* house was gay with *O. vexillarium*, *O. luteo-purpureum*, in a great variety of richly blotched varieties, *O. andersonianum*, the heavily fringed *O. Halli*, *O. crispum* and *O. cirrhosum*. All were carrying fine spikes, and the last named existed in many richly blotched and crisped forms; each plant was also displayed to the best advantage.

Two houses were chiefly occupied with *Masdevallias*, abundantly represented by species in flower. The plants were intermixed with *Odontoglossum luteo-purpureum* in bloom. The varieties of *Masdevallia harryana* and *M. Lindeni* were numerous. The blue flush pervading the orange-scarlet flowers of *M. parlatoresana* heightened their beauty. *M. Veitchi*, with its large flowers, might be put in the same category as the last. Varied and different, however, were the beautifully spotted *M. Shuttleworthii*, *M. melanopoda* and *M. polysticta*. The wide open purple flowers of *M. ludibunda* were enhanced by white tips to the segments. The huge brown long-tailed flowers of *M. Ehippium* were remarkable for their peculiar form.

The next five houses were devoted to *Odontoglossums* and their allies. They were characterised by great vigour of growth and cleanliness, strong pseudobulbs and spikes. They included *O. crispum*, *O. polyxanthum*, *O. sceptrum* and *O. triumphans*, all varied and richly coloured in many cases. A striking instance was that of *O. crispum* bearing thirteen spikes, two on a pseudobulb, the scapes being only 12 in. high, but very stout. Others in grand form were *O. Halli*, *O. luteo-purpureum* and *O. cirrhosum*, the latter being grown in great quantity, and having panicked stems 2 ft. to 3 ft. high. *O. luteo-purpureum*, being in season, dominated many of the houses. Some of the varieties were very fine indeed. *O. Pescatorei* and *O. vexillarium* also made their presence felt. *Mesospidium Noetzlium* and *M. vulcanicum* were in fine form, particularly some of the former, which had very broad segments of a rich orange-scarlet. A large house was devoted to a collection of *Cattleyas* and *Laelias* in fine condition, the species represented being *C. Mossiae*, *C. Mendelii*, *Laelia purpurata*, *L. grandis* and *L. g. tenebrosa*. The two last-named were then in sheath.

From the winter garden we passed through two *Cypripedium* houses, containing many well grown species and hybrids. The enormous flowers of *Cypripedium lawrenceanum* measured 6 in. across the petals, and other parts of the plant were in pro-

portion, thus testifying to cultural ability. Other well grown things included *C. ciliolare*, *C. gowerianum superbum*, with enormous leaves; *C. Schroderae splendens*, having larger and darker flowers than the type; *C. Argus*, *C. hirsutissimum*, *C. Parishii* and *C. bellatulum*, there being a fine importation of the latter.

A bright display met the eye in a houseful of *Odontoglossum vexillarium*, with three to four spikes from a pseudobulb, and showing a wide variation in colour. There were panicles of *Oncidium sarcodes*, 5 ft. to 6 ft. long, and profusely flowered. Next came a houseful of *Cattleya labiata*, semi-established, and followed by half a houseful of *Laelia pumila*, and *L. pumila praestans*. The other half of the house was occupied by the rich orange *Epidendrum vitellinum*. The yellow lamina of the lip of *Cymbidium lowianum concolor* made a beautiful contrast with the soft green of the rest of the flower.

Here we noted a fine piece of workmanship in a house built about thirteen years ago, and has had no repairs since with the exception of painting. The walks were all neatly gravelled. The benches consisted of boards, coloured slate, and pitch pine edgings and doors. Everything here was in neat order, and *Tradescantia zebrina* covered the ground under the benches. In another house close by *Laelia crispa*, *Cattleya Mendelii* and the chaste light coloured *C. Mossiae reineckiana*, were the prevailing features. A houseful of semi-established plants of *Cypripedium bellatulum* should now be furnishing a rich variety of colours. The Butterfly *Oncidium*, *O. Papilio*, having scapes 3 ft. to 4 ft. long, was stood about amongst the *Cypripediums*. *Oncidium crispum* and *O. marshallianum* in pans were both semi-established, and throwing up flower spikes 3 ft. in length. The pseudobulbs of the former were fixed to rafts, stood upon end in flower pots, so as to retain a certain amount of moisture about them.

Vandas occupied a considerable portion of one house, including *V. tricolor*, *V. t. planilabris* and other varieties. The last-named was beautifully spotted with brown and edged with purple. *V. suavis* was equally well represented with varieties. Very pretty was *V. s. magnificans*, richly spotted with brown on a white ground and having a dark purple lip. The gray-blue and silvery-tinted flowers of *Vanda amoena* are exceedingly pretty. It is supposed to be a hybrid between *V. Roxburghii* and *V. caerulea*. The wavy, brown flowers of *Dendrobium Roxburghii* are distinct as they are uncommon. *Oncidium lanceanum* and *O. luridum* are handsome species with richly spotted flowers. *Cymbidium eburneum* was also in bloom.

The pathway was next through a Palm house filled with useful stove subjects including *Alsophilas* and other tree Ferns. Very fine were *Verschaffeltia splendida*, with a blade 4 ft. by 2½ ft.; and *Stenersonia grandifolia*, with leaves 7 ft. long by 3½ ft. wide independently of the petiole. The packing sheds and potting benches are conveniently placed to the houses and are admirably fitted up for the purpose in view. The whole place, in fact, is compact and well adapted for the needs of the establishment.

There were still many Orchid houses to examine and we hurried on. *Dendrobiums* were well represented by such as *D. wardianum*, *D. crassinode*, *D. devonianum*, *D. densiflorum* and *D. chrysotoxum*. Some of them were flowering and others recently imported. Importation is a strong feature of the establishment. The central stage of another house was filled with the same class of plants, *D. Farmeri*, *D. suavissimum* and others being grown in quantity. The side benches were occupied with *Cypripediums*.

Two houses were occupied with *Laelias*, including *L. anceps*, *L. majalis*, *L. autumnalis*, *L. albida*, and *L. elegans*, many of the latter being already in flower, showing fine varieties. A recent importation of *Thunia marshalliana* was just commencing to sprout. The stems varied from slender twigs to the thickness of the thumb. *Vanda caerulea* had recently been imported. A quantity of *Cattleya bulbosa* flowering on the young growths showed flowers of fine form and colour. We next came upon *Trichopilia*, *Pilumnas*, *Oncidium heteranthum* with its few perfect flowers and many rudimentary ones; *Maxillaria luteo-alba*, with its large, orange-brown and white flowers; *M. nigrescens*, dark orange-brown; and *Phaius maculatus*. The subjects of this and the previous paragraph occupied seven houses.

Very pretty was the yellow flowered *Laelia flava*

and *Warszewiczella bicolor* with its violet lip. Half a house was filled with *Anguloas* just starting into growth. *A. Ruckeri*, *A. Clowesii* and *A. eburnea* were the principal species. Prettily spotted was *Oncidium Phalaenopsis* and *Odontoglossum Oerstedii* is a gem. We next passed through several houses of *Odontoglossums*, *O. luteo-purpureum*, *O. sceptrum* and others being conspicuous. An importation of *Cypripedium Parishii* and *C. hirsutissimum* filled a house. Suspended from the roof was the pretty *Brassavola cordata*.

Many pits were filled with *Cypripedium bellatulum*, *Vanda caerulea*, and *V. sanderiana*. The cases in the propagating pit were filled with the cuttings of fine foliage plants, inserted in sand. Here also were unflowered seedlings of *Cypripedium* and *Cattleya*. Very handsome were the new *Tradescantias*, *T. superba* and *T. Reginae*. Unflowered plants of *Bulbophyllum* and *Cirrhopetalum* were plentiful. A very handsome Fern is *Adiantum claesianum*, with a silvery-white centre and veins radiating from it.

NOTICES OF BOOKS.

HOME GARDENING: a Manual for the Amateur, containing Instructions for the Laying out, Stocking, Cultivation, and Management of Small Gardens, Flower, Fruit, and Vegetable. By W. D. Drury, F.R.H.S. London: L. Upcott Gill, 170, Strand, W.C., 1898. Price 1s.

As the sub-title of this book indicates, it is intended for the amateur, and the introduction further speaks of its being intended to assist those having small back gardens in urban and suburban districts. It makes no pretensions, however, at helping amateurs in preparing flowers and vegetables for exhibition. There are many amateurs even in the localities mentioned who can show very respectable flowers and win prizes with them at local exhibitions, while others run the professional gardener pretty close or even beat him at times in growing vegetables.

The book runs to 130 pages, including a lengthy index, but many plants are of course merely mentioned in the lists and selections. Some illustrations show simple and also more or less complicated plans of villa gardens, the design being in accordance with the size and surroundings of the garden. Under hardy perennials a considerable number of popular garden plants are included, such as Primroses, Violas, Violets, border Carnations, Gaillardias, perennial Asters, and a host of plants suitable for the herbaceous border proper. The space being limited, there is little opportunity to go into cultural details, but a few lines might have been devoted to the raising of border Carnations from seed. Apart from the intense delight of watching the flowers expand for the first time, especially when seed of a good strain has been procured, the fact remains that no other method of raising Carnations will yield such a profusion of flowers for cutting and yet leave the beds practically as gay as ever. Strains are now obtainable that yield a large percentage of double flowers of really beautiful forms and excellent quality.

The author has little love for summer bedding plants proper and in this we think he is right, for tender things seldom repay the trouble and expense of housing which they entail. The aspect and cramped surroundings of town gardens are often very little favourable to a proper display with sun-loving subjects. Amateurs, moreover, like variety, and there is nothing like herbaceous subjects, including bulbs and annuals for supplying it. The author might have dwelt more upon the value of digging and trenching, the latter especially, as it is not only capital exercise for town dwellers, but improves the conditions of small gardens immensely, and helps the amateur to get rid of a vast amount of vermin, particularly slugs, which find the suburban garden a perfect paradise for them, and in return give the amateur no end of trouble and vexation.

All kinds of herbaceous plants, including annuals, biennials, perennials, bulbs, and tuberous subjects are dealt with in one chapter. The third chapter deals with trees, shrubs, and climbers; the fourth with plants for small greenhouses; the fifth with plants for room decoration; the sixth with fruits for small gardens; and the seventh with vegetables. Plants for small greenhouses include such things as Azaleas, Camellias, Cannas, Chrysanthemums, Ferns,

Hydrangeas, Myrtles, bulbs and tubers, Primulas, Honeysuckles, Auriculas, Cyripediums, &c. Various illustrations are scattered through the book, and the type is clear and easy to read.

TOOGOOD'S CALENDAR of Sowings and Plantings in the Flower and Vegetable Gardens. By E. Kemp Toogood, F.R.H.S. Toogood & Sons, Southampton, and William Holmes, Ulverston, 1898. Price 6d.

The Calendar is in paper covers, and runs to 104 pages. It is in two parts, the first being devoted entirely to the vegetable garden, and the second to the flower garden. Some general information is given at the beginning of each month, below which are tabulated lists of the things to be sown or planted during the respective periods. The months during which each subject should be fit for use, in the case of vegetables, are named in the same lines as the plants to which they refer, and on the right hand side of the page. Sowings and plantings of vegetables are given for every month of the year, but this includes forcing, and everything, or nearly so, for October, November, and December has to be sown or planted in heat or under the protection of frames. A few things, however, are recommended for planting or sowing on warm, sheltered borders, assuming, of course, that the respective periods of winter are open, and the ground is in suitable condition. Seakale seeds sown in April are said to become fit for use in the third or fourth year, but surely this statement ought to be brought up to date, for we hear of gardeners discussing the question of getting the crowns fit for forcing in much shorter time, and roots in the autumn of the first year. The Calendar says the second or third year for plants raised from roots. In the case of flowers they are grouped according as they are to be sown on hotbeds or in flames on the open border, and bulbs, corms, &c. for planting.

THE CULTURE OF VEGETABLES for Prizes, Pleasure, and Profit. By E. Kemp Toogood, F.R.H.S. Printed in 1898 by Toogood & Sons, Southampton, and William Holmes, Ulverston, Price 6d.

This is a second and revised edition of a book of 129 pages, concerning which we made some remarks last year. It deals with the subject in a practical manner, and finishes up by giving a calendar of operations for every month of the year. The soil is the first subject handled, several of the more common kinds being taken up, and dealt with concisely as far as space will permit. Directions are given for the improvement of sandy, limestone, clay and damp soils respectively. A sandy soil is to be ameliorated by the addition of stable manure, vegetable refuse, powdered clay, mud from ponds, manures from pigstyes, cowsheds, &c. The reasons for the application of these things are clearly stated. In like manner the antidotes for the deficiencies of limestone and clay soils are set forth, with the correctives necessary.

The short chapter on soil-working shows that the author realises the value of digging and trenching, laying proper stress on the latter as a means of increasing not only the staple but the depth of the soil, and giving an increased root run, with a correspondingly deeper area for the collection of plant food by the root system. We have seen a comparatively worthless kitchen garden, having a subsoil of pure sand often within a foot or ten inches of the surface, completely renovated and rendered highly fertile by trenching and the removal of some of the sand, while manure and fresh soil were added. Trenching every second year, and gradually incorporating the upper with the subsoil, and liberal manuring from the stables did the rest. The importance of trenching gardens, whether by the amateur or professional gardener, cannot be too much emphasised. A plan for the amelioration of bad subsoils here given, elucidates and simplifies the work.

This is followed by the theory and practice of rotation of crops, a matter which is too frequently disregarded, with bad results, as might be expected. Reasons for the practice include not only the exhaustion of certain constituents of the soil, by particular crops, but also the question of the insect enemies and fungoid diseases that attack plants to such an extent in old garden soils that are too frequently cropped with the same kinds of plants. Observation of the rules of rotation of crops should go hand in hand with trenching, which does much to clear a soil not only of such special enemies as clubbing and Gall-root Weevils, but general pests

like slugs, the chrysalis stage of various moths and wireworms which infest kitchen and flower garden crops. A chapter is given to garden pests, of which the more common are passed under review.

A valuable addition to the second edition of the book is a table showing the comparative value of farmyard and artificial manures in general commerce. The number of pounds of the principal and most valuable elements of plant food in a ton of each kind mentioned lays before the reader what he applies to the soil by using any given sort. Several other kinds are mentioned in the notes that follow the table, but we think sawdust as a manure might have been omitted. Green-manuring is not so often employed by gardeners as it might be. Forcing is briefly dealt with, after which all the more important vegetables receive special treatment, according to their respective requirements. Strawberries and Tomatos are associated with the vegetables.

BUDDLEIA GLOBOSA.

THIS handsome Chilian shrub, or tree, is flowering freely this year owing, no doubt, to the mildness of the past winter. In the southern and western counties it is frequently seen in good condition, but round about the metropolis, it is somewhat of a *rara avis*, inasmuch as it is only half hardy, and therefore liable to be destroyed during severe weather. But for this fact it would, doubtless, be more in evidence, as, under favourable conditions, its rich, orange-yellow, globular flower-heads—which are unique in their way—produce a very fine effect. *Buddleia globosa* is often trained to walls, where it possesses a stiff and ungraceful habit; but planted out and treated as a shrub, in a free and easy manner, with a background of other shrubs and trees, it is, in such a season as the present, an object of great beauty. Mr. D. Cooper, of Hanger Hill House Gardens, Ealing, W., has so disposed it, the aspect being due south. In fact, he has two quite respectable trees—about ten feet high by six feet through—which were in their cutting-pots four or five years ago. The progress they have since made is due, in large measure to the mild character of the winters of 1896-7 and 1897-8. At any rate this subject is worth a trial, if only for the sake of its remarkably distinct and beautiful flowers.—C. B. G., Acton, W.

R. H. S. EXAMINATION IN HORTICULTURE.

(Concluded from p. 668.)

| | No. of Marks gained |
|---|---------------------|
| 17. Mr. Robt. Perry, Milburn Gardens, Esher | 125 |
| 17. Mr. J. Wilson, Castle Street, Wallingford | 125 |
| 20. Mr. J. Hubbard, The Gardens, Mountfield, Hernhill, near Faversham.. | 120 |
| 20. Mr. G. Linter, 3, East Street, Ventnor, Isle of Wight | 120 |
| 20. Mr. J. B. Pratt, Technical Laboratories, Chelmsford.. .. . | 120 |
| 20. Mr. W. G. Taylor, Technical Laboratories, Chelmsford | 120 |
| 20. Mr. W. H. Wield, Burches Lodge, Kingston Hill | 120 |
| 20. Mr. S. Wren, Technical Laboratories, Chelmsford | 120 |
| 26. Mr. John Atkins, Rose Cottage, High Street, Caterham | 115 |
| 26. Mr. Samuel E. Brown, Oak Road, Caterham | 115 |
| 26. Mr. J. Dent, Howberry Park, Crowmarsh Gifford, Wallingford | 115 |
| 29. Mr. J. Wichelo, St. Mary's Street, Wallingford.. .. . | 110 |
| 30. Mr. J. H. Brand, Essendene Cottages, Caterham | 105 |
| 30. Mr. G. Hunter, Gosford Gardens, Longniddry, N.B. | 105 |
| 30. Mr. G. Braddy, Technical Laboratories, Chelmsford.. .. . | 105 |
| 30. Mr. H. G. Chick, Moray Villa, Elm Grove, Caterham | 105 |
| 34. Mr. J. Fudge, Horticultural School, Holmes Chapel | 100 |
| 34. Mr. C. Rymes, 28, Cottage Grove, Surbiton | 100 |
| 34. Mr. A. Wilkins, Martyr Worthy, near Winchester | 100 |

QUESTIONS.

Eight questions only to be answered: four from division A and four from Division B.

DIVISION A.

ELEMENTARY PRINCIPLES.

1. Describe the methods of propagation of different weeds; explain why Groundsel and Chickweed and the large-whiteflowered *Convolvulus* are particularly troublesome. What are the best means of exterminating these plants?
2. Point out the importance to the plants of a good circulation of air in a hot-house, and the consequences of a stagnant condition of the atmosphere within it.
3. Describe the different functions of leaves, and the best way to secure their due performance.
4. What are the component parts of a flower, and of what use are they respectively to the plant?
5. What external conditions are favourable for inducing variations to appear in cultivated plants; and how would you proceed in order to fix any variation?
6. What parts of the flower are retained and altered in forming the fruit of the Peach, Melon, Mulberry, Fir-cone, and Pineapple?
7. To what Natural Orders do the following trees belong:—Tulip tree, Maple, Apricot, Ash, Laburnum, Guelder-rose, Horse-chestnut, Horn-beam, Thuia, and Evergreen Oak? Which are natives of this country?
8. Describe the structure of the bulb of the White Lily, the corm of *Gladiolus*, the creeping-stem of Couch-grass, the rhizome of the Flag, and the tuber of the Potato; and explain their uses to the plants.

DIVISION B.

PRACTICE.

9. Describe landscape gardening as an art.
10. Describe the formation of a garden lawn, and the details of the work necessary to keep it in condition during the year.
11. What are the preliminary operations necessary to the laying-out of a garden for fruit and vegetable culture? Describe the arrangement of the fruit trees, and the method of planting them.
12. A garden having four walls facing north, south, east, and west, what varieties of fruit trees should be planted on each? Describe their first year's pruning and training.
13. Give full details of the propagation and culture of Grape Vines and Fig trees in pots.
14. Describe the culture of Seakale, Asparagus, and French Beans; and the best method of forcing them.
15. What are the best manures for kitchen and fruit gardens? How ought they to be applied, and when?
16. Describe the propagation and culture of Roses and Carnations intended to be cultivated under glass.

NOTES ON PARIS GARDENING.*

STREET TREES.

PARIS is said to be the gayest city in the world. Whether it was designated such from a social or floral point of view I do not know, nor care to ask. Be that as it may, however, on the occasion of my visit, from the wealth of flowers that I saw, both in public and private gardens, it struck me as being a very gay city in that respect, although I was informed it was not then the gayest season, socially speaking.

Having read and heard so much about the French system of tree planting in their boulevards, and this being the first object of interest to meet my view, I was naturally anxious to gratify my curiosity in a somewhat larger sense, and see for myself and compare with street planting that has come under my notice at home, so as to form a humble opinion of my own. Now the opinion I arrived at is, if general appearance is any criterion, that the French authorities pay a great deal more attention to these matters than the English public bodies, or whoever have the management of such work, and that the trees are planted and pruned on a more practical and scientific principle than any I have seen at home, our neighbourhood not excepted. For instance, trees that are planted in the public thoroughfares in Paris are not covered to within a few inches of the stem with

* A paper read by Mr. D. Cooper, Hanger Hill House Gardens, Ealing, W., before the Ealing Gardeners' Society.

flagstones, asphalt, or whatever the paving material consists of, and you need not travel far for demonstration for this assertion; but a space of about 4 ft. radius is left from the stem, and this, covered with iron gratings, so that the roots can get the required air and moisture. This practice, I am aware, is carried out in some parts of England, but, I believe, in rather a half-hearted manner. Then again, I observed in the case of young trees that were planted in gravel walks on sloping ground, soil would be placed round, a little distance from the stem, in basin form, so as to hold the water given them from municipal watercarts, or to catch and retain the rain that might fall. I mention this just to form a comparison, and, I think, you will generally admit that it goes to show how much the French authorities value their public trees. The species of trees used for planting in streets and public gardens about Paris are much about the same as we are accustomed to see at home, namely, Horse Chestnut, London Plane, Limes, and broad-leaved Oak, except the *Catalpa bignonioides*, which, with them, are almost as common as any of the former with us. I noticed, too, that the *Magnolia conspicua* was planted much more freely than we are accustomed to see it here in England.

BEDDING IN PUBLIC GARDENS.

The French, as do the English in the matter of bedding out their public gardens, show great skill and taste, and by the enormous quantity of choice plants used give an abundant proof that the management is dealt with in no mean spirit by the proper authorities, financially and otherwise. Judging from the general pleasing and instructive effects of these plants, I should say that the public gets good value for its money. The *Begonia* and *Canna*, as might be expected, were well to the front, both in quantity and effectiveness. The *Begonias*, however, were infinitely beyond anything that I ever saw, or expected to see, both in size and substance, and planted, as they were, in masses, the effect was truly magnificent. These remarks, in the case of the *Begonia*, not only apply to public gardens, but also to private ones, and for superiority there was very little to choose between them; in fact, I may say wherever I saw the tuberous-rooted *Begonia*, either planted out or in pots, to say the least they were in a general state of excellency, and a credit to the growers. I will here quote the opinion of one of our leading nurserymen, who took a tour through France last autumn. Respecting the *Begonias*, when questioned by one of the leading growers as to what the *Begonias* were like over there, his reply was, "Those that you grow inside, where one expects to see the finest flowers, are simply rubbish to those grown in France outside in every possible way, except in variety." Only in this latter respect are we able to keep pace with the French growers. If it was not for this question of colours and varieties one would be inclined to lose all heart in *Begonia* growing, after seeing those grown in France. With me, as with the authority just alluded to, this was a very noticeable and—I hope I may be pardoned for mentioning this—gratifying feature. One more remark concerning the *Begonia*, that is, it was admitted by all growers I came in contact with that they never saw the *Begonias* looking better than they were last autumn, especially the seedlings; in fact, the seedlings did so well that one of the leading private growers in the suburbs of Paris informed me that in future he should treat his tuberous *Begonias* for bedding purposes as annuals.

The general system of bedding, as a rule, was of a mixed character, and in some cases large pot plants were employed by way of relief; but this was more the exception than the rule. The general idea appeared to be, with some exceptions, to form huge masses of plants of different species and colours, so as to give a very imposing appearance, especially when seen from a distance, and with that object, in my humble opinion, it was a great success. For this purpose very large flower beds were used, much larger than we are accustomed to see them in England, and when filled with such gorgeous subjects, as *Cannas* for instance, in various shades of colour in flower and foliage they would naturally have a bold and telling effect, and when once seen not easily forgotten.

In some of the public gardens I noticed that large plants in tubs were used in addition to tall bedding and other plants, plunged about in the grounds. These plants were more particularly in evidence at the Tuilleries, in Paris, and at the Palace Gardens at

Versailles, and consisted of such plants as Aloes, Citrons, Bays, Myrtles, Palms, Pomegranates, &c. The arrangement of these plants, however, was in a measure somewhat varied to restrict formality. Some were arranged in groups, some in lines to form avenues, whilst some of the larger ones were stood out singly. In all cases they looked very conspicuous, but to my mind too formal and hardy in keeping with the general system of French bedding which, although the flowers are tastefully blended, is somewhat of a promiscuous nature. If the appearance of some of the tubs and plants was any criterion, I think the authorities must be of the same opinion as myself, as some of them appeared to be just dragging out a natural existence, and looked a remnant of former times. These latter remarks apply more to the place just alluded to.

Carpet bedding was not in evidence to any great extent, at least, not carpet bedding in the true sense of the term, although it still lingers there as in England, and I noticed some very clever and, to me, original designs worked out. Whilst speaking of carpet bedding I observed in many private gardens, as also in public gardens, that there was a fancy for bedding on what we might call a semi-carpet style, that is, instead of using dwarf plants the designs would be worked out with plants of a taller habit. I also noticed, too, in this particular kind of bedding in some cases very tender plants were used, such as *Crotons* and *Dracaenas* of sorts; also *Anthurium andreaeanum* and one or two more of that section. It was in villa gardens where I saw these tender plants used, and where this style of bedding appeared to find special favour.

I was very much struck by the absence of the *Dahlia* as a bedding plant; in fact, I do not remember seeing it grown anywhere except in one private garden to any marked degree, for reasons of their own. Perhaps the French do not favour this autumn subject for that purpose. Of climbing plants the *Bignonia sanguinea* seemed to be a general favourite, and by the manner it luxuriated it appeared to be quite at home, the dark red, tubular flowers showing up with very striking effects. With the exception of the above-mentioned plant, which, by the way, is very common, as I noticed it in many cottage gardens, and on old, disused walls, I did not come across anything very striking among the climbing plants; in many places where one would expect to find them they were conspicuous by their absence.

JARDIN D'ACCLIMATISATION.

As the period of my visit to France was very limited, and as I had then no idea of writing this paper, it consequently did not occur to me to take any special notes, so what I have recorded here is principally from memory. That being so I do not think I have anything more to add that I can remember on Paris gardening proper. I will now deal with a few notes I have made on private gardens outside Paris. As we are all more or less interested in private gardens, perhaps these few remarks might be more congenial to your minds than the preceding, but before I proceed I will just say a few words on the Jardin d'Acclimatisation. This garden is situated just outside of Paris, and is similar to our Zoological Gardens, with a dash of the Crystal Palace thrown in, and it is with the latter part of the establishment that my remarks will touch upon.

Whoever is head of the management of the horticultural department, well, to say the least, it is a credit to him and his staff. The bedding, which is somewhat extensive, would compare favourably with any that I saw, either in public or private gardens, for taste, neatness, and in quality. Mostly all the principal bedding plants were represented and labelled, *Begonias* (tuberous) and *Cannas* playing the most important part. The glass department was somewhat extensive, and appeared to be in capital order, fitted up with the latest improvements, including the electric light. The principal and most interesting building in this department is the conservatory. I say interesting advisedly, for I never saw Nature more successfully imitated than it was in this particular house, all formality as regards arrangement being entirely dispensed with. It was simply an arrangement made up of grotto-work, caves, rockwork, fountains, miniature bridges, &c., and shadowed with tree Ferns, Palms, Bamboos, and undulated with other suitable plants; whilst here and there would be hollows, carpeted with *Selaginella kraussiana*, with stately Palms or Bamboos rising out singly, the whole growing most luxuriantly, and with very natural

effects. The adjoining houses, however—as, indeed, all the others—were furnished in the usual way with pot plants and others planted out. Most of the stove and greenhouse plants were represented; so, too, were Orchids, though not in a very marked degree. Still, those that were there gave one the impression that no novice was attending their requirements. I noticed one house filled with choice *Vandas* and *Anthuriums* growing together, showing fine spikes and spathes. Whether there was anything else in this house more prejudicial to the public than the plants just alluded to I am not in a position to say, as I was debarred from going inside by bars being placed across the doorway. Perhaps the usual "Please do not touch" had not had the desired effect.

(To be continued.)

HYBRID ORCHIDS.

DR. MASTERS occupied the chair on the occasion of Mr. Jas. O'Brien's lecture on hybrid Orchids which was delivered before the Royal Horticultural Society on the 14th inst.

In his opening remarks, Mr. O'Brien referred to the able lecture by Mr. H. J. Veitch on the "Hybridisation of Orchids," which appeared in the society's *Journal* for 1895, and also to the interesting remarks made by Mr. C. C. Hurst upon "Some of the curiosities of Orchid Breeding." These gentlemen had covered a good deal of ground, and he wished, therefore, to deal with the matter from a purely cultural point of view. Each year brought with it a number of hybrid Orchids from various sources that upon comparison with the parent plants might not appear to be any improvement, but the fact should not be lost sight of that flowering, as they did at a different season from either of the parents, they helped to lengthen the season of flower in their houses. In the case of *Laelia Perrini* many hybrids raised from it flowered in the dead of winter, and were thus proportionately valuable. Generally speaking, the hybrid progeny tended to approach the female parent in time of blooming.

Many varieties of *Cypripediums* had been brought into existence by unhappy crossing, of which it could only be said that they were weeds, and their kind. The synonyms, too, were very puzzling and exasperating, and he hoped to see this point straight before long.

Passing on to the fertilisation of Orchids, the lecturer said that cross fertilisation effected by insects was the now accepted theory, although self fertilisation did undoubtedly take place in some instances. To this he thought were due the poor strains or forms of certain kinds that were occasionally found. With regard to the seeding of the plants in their native habitats he believed that the production of seed was not nearly so common as it appeared to be. Occasionally certain species were observed to be carrying numbers of seed capsules, but there were no seeds in them. He thought that these seedless capsules were caused by the irritation of the stigmatic surfaces by dust or other foreign bodies. Lehmann had said that the number of seed vessels produced by Orchids was smaller in comparison to the number of the flowers, although in some wind-swept, exposed spots certain species would produce a lot of seed vessels, whilst the same species in more sheltered spots would bear but few. This went to support the lecturer's contention that irritation by grit and dust was the real cause of the appearance of a number of capsules.

Mr. O'Brien then went on to speak of the difficulties with which the Orchid hybridist had to contend in this country. First of all he had to arrange the temperature to suit the young plants. Again, much of the seed sown never possessed the power of germinating, and there were many failures on that account alone. Then there was the lack of sunshine throughout a considerable part of the year, and this had to be seriously considered.

The question of affinity in relation to the government of crosses was next discussed. Crosses had been effected between apparently the most unlikely species and genera, whilst other plants which it was expected might be tractable, had yielded no results. Others again could only be employed in one way. Thus *Laelia digbyana*, although it had been exceedingly useful as a pollen agent, had, as yet, yielded no seed itself.

Passing to the consideration of cultural details, Mr. O'Brien pointed out the necessity for affording

the swelling seed capsule some support. The capsules of cultivated plants took longer to ripen than those of wild ones, and hence the seed should be sown immediately it was ripe, no matter what the season. Mr. Seden had practised with great success the plan of sowing seed on the compost in which established plants of the same species were growing. To do this the sphagnum was clipped back, the seed carefully sprinkled over the surface, the celluloid label with the date and other particulars of the cross attached, and the plant watered as usual. Nothing but rain water was ever used. Of course, in watering, care had to be taken not to wash the seed off, but no matter how carefully watering was done, some of the seed would perish thus. One of the most fruitful causes of failure was the presence of low forms of vegetable life which spread over this compost in which the young plants were. As these pests generally appeared in freshly made-up material this was a great point in favour of Mr. Seden's plan. Where freshly made-up compost was employed for sowing the seed upon, it was necessary to sterilise it. This might be done in two ways, first by watering with or steeping in boiling water, and secondly by baking. He preferred the former method as it was less likely to destroy the fibre of the peat. The pots and crocks should be perfectly clean, and sphagnum moss should be used sparingly or not at all. The seed pots or pans should either be suspended from the roof or placed on a shelf near the glass. A Wardian case was a very suitable place for them, but he preferred a propagating case covered with loose sheets of glass which could be arranged at will. As soon as the young plants were big enough to handle they should be pricked off into pans or Orchid pots. At this stage it was very important to avoid too much ventilation; in fact, with all warm Orchids during spring and summer, this caution was necessary. He had occasionally seen Orchid houses with their top ventilators open during the prevalence of cold east winds.

In conclusion, the lecturer pointed out that home raised Orchids had a great advantage over imported ones, seeing that they were much better able to withstand the vicissitudes of our climate.

In the discussion which followed, Mr. Hurst spoke of the pseudo-fertilisation of *Odontoglossum crispum* which had come under his notice. The capsules, however, contained no seed, but only the remains of a few shrivelled ovules.

Mr. De B. Crawshay spoke of *Cymbidium lowianum* fertilising its own pods.

Mr. Rolf said that there were two or three species of Orchids which had a habit of self-fertilisation, including *Maxillaria rufescens* and *Dendrobium crepidatum*. Speaking of natural hybrids, he said that although they had been severely criticised who had attributed the intermediate forms of certain Orchids to a hybrid origin, yet it had been proved that they had had good grounds for so doing. Thus *Laeliocattleya schilleriana elegans* had been found, as what was then supposed, to be a natural hybrid, and proof of this hybridity was afforded by the fact that it had been obtained artificially by crossing *Laelia purpurata* and *Cattleya intermedia*.

Dr. Masters also made some remarks upon the formation of pseudo capsules. He said it was simply due to irritation of the stigmas, and was not confined to Orchids, being quite common amongst Lilies.

A vote of thanks to Mr. O'Brien brought the meeting to a close.

SOCIETIES.

THE GRAND YORKSHIRE GALA.—June 15th, 16th, and 17th.

OUR readers will remember the catastrophe which overtook the York Gala last year, when the winds of heaven blew upon the tents and they fell; also the losses felt by the society in the deaths during the same year of the chairman, Sir Joseph Terry, and the vice-chairman, Mr. Edward Rooke. In view of this series of misfortunes, it is highly gratifying to be able to record the fact that the gala this year has been a brilliant success in every way. Not only were the entries more numerous than ever, but the quality of the exhibits was of the highest, whilst the weather was ideal, and the arrangements, as usual, perfect. Under such circumstances the 'gate' was an exceedingly heavy one, as, indeed, it

had need to be when we consider that the council offer £750 in prizes. As in previous years, the exhibition was held in the grounds of the Bootham Asylum, in the grand old cathedral city of York, the general plan of the marquees accommodating the exhibits also being the same as on past occasions. Some difference in the disposition of the exhibits was, however, manifest, the great bank of *Pelargoniums*, which formerly occupied a prominent position in the main marquee, having been relegated to one of the smaller side tents, and its place occupied by a superb array of Orchids.

In the competitive classes, the first prize for a group of miscellaneous plants arranged for effect, and occupying a space of 300 sq. ft., was well won by Mr. G. J. Mee, of Nottingham, with a light and tasteful combination, in which Palms, Crotons and Orchids, especially *Odontoglossum crispum*, figured conspicuously. Sir James Reckett, Bart. (gardener, Mr. Geo. Wilson), Swanland Manor, Brough, was second; whilst Mrs. Gurney Pease (gardener, Mr. J. McIntyre), Woodside, Darlington, was third.

The specimen stove and greenhouse plants are always a prominent feature at the Yorkshire Gala, and on this occasion they were fully up to the mark. Mr. J. Cypher, of Cheltenham, repeated his successes of former years in this connection, carrying off the chief prize for ten specimens with superb samples of *Bougainvillea Cypheri*, *Pimelea dionaeolia*, *Clerodendron Balfouri*, *Erica depressa*, *Cycas undulata* and *Latania borbonica* amongst other subjects. Mr. G. Letts, gardener to the Marquis of Zetland, Aske Hall, was second; and Mr. William Vause was third. Mr. J. Cypher was likewise first for six plants, three Cape Heaths, and one greenhouse *Azalea*; whilst Mr. J. McIntyre scored for six and three ornamental fine foliage plants in their respective classes, four Crotons of distinct forms, six and three exotic Ferns.

In the open classes for Orchids Mr. J. Cypher carried all before him. His most notable success was the winning of the Victoria Prize (£20 and a Gold Medal) for the group occupying 150 sq. ft. Palms, Azaleas, Bamboos, and Asparagus were all employed to give height and lightness to the exhibit. Mr. J. Robson, of Altrincham, received the second prize. Mr. Cypher's other firsts were for ten, six and three Orchids in full bloom.

In the classes for cut flowers there was a lot of capital material forthcoming. The premier exhibit of the hardy element occupying 18 ft. x 4 ft. came from Messrs. Harkness & Son, Bedale. Roses, as might have been expected from the inclement weather, were not up to the mark. The premier award for 72, in 36 varieties, went to Messrs. A. & J. May, Bedale, who, despite the untoward climatal conditions had good blooms of Ulrich Brunner, Caroline Testout, La France, and Maréchal Niel. Mr. G. Mount, of Canterbury, was second in this class, but led for 48 blooms, with Captain Hayward, Mrs. John Laing, Cleopatra, and Ulrich Brunner good. Messrs. A. & J. May were second. The same order was preserved in the class for 36 blooms distinct, Mr. Mount securing first, and Messrs. A. & J. May, second.

The fruit classes were well patronised, and a good deal of interest centred about the competition for the decorated table to carry from ten to fourteen dishes. Mr. J. Tullett, gardener to Lord Barnard, Raby Castle, won the chief honour, having a table prettily decorated with *Odontoglossums* and *Schizanthuses*, and carrying grand dishes of Black Hamburg and Muscat of Alexandria Grapes, Brown Turkey Figs, Royal Sovereign and James Veitch Strawberries, besides Peaches, Melons, Pineapples, Bananas, and two Melons. Mr. Goodacre, gardener to the Earl of Harrington, was second, and Mr. J. McIndoe, gardener to Sir J. W. Pease, Bart., M.P., Hutton Hall, Guisborough, was third.

The premier collection of vegetables came from Mr. J. McIndoe, who staged a grand lot of stuff. In the classes for six kinds of vegetables in which special prizes were offered by Messrs. Sutton & Sons, of Reading, and Messrs. Webb & Sons, of Stourbridge, Mr. McIndoe was an easy winner.

The various non-competitive exhibits constituted an attractive feature of the show. Messrs. Hugh Low & Co., of Bush Hill Park, Enfield, staged a grand lot of Orchids in which were many fine *Cattleyas*, *Laelias* and *Odontoglossums*; also the choice *Cypripedium lawrenceanum hyeanum*.

Messrs. Jas. Veitch & Sons, Ltd., Chelsea, also sent a splendid collection of Orchids, amongst which some grand forms of *Laeliocattleya* stood out prominently. Of these *Lc. Hippolyta*, *Lc. Eudora Langleyensis*, and *Lc. canhamiana superba* were specially noticeable. The scarce *Vanda cristata superba* was also well shown. The Chelsea firm had also a huge stand of magnificent *Caladiums*, as well as *Streptocarpus* and miscellaneous flowering and foliage plants.

In the group of Orchids contributed by Messrs. B. S. Williams & Son, Victoria and Paradise Nurseries, Upper Holloway, N., the *Odontoglossums* were much admired, some exceedingly fine spikes being on view. From the same firm came some good *Malmaison Carnations*.

Messrs. W. Cutbush & Son, of Highgate, had one of their tastefully set-up groups of *Malmaisons*, *Azaleas*, *Ericas*, and other flowering subjects, with the requisite complement of greenery.

The *Caladiums* sent by Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood, S.E., were, as usual, first-class, and contained several new varieties of note. The Norwood firm also had tuberous *Begonias*, named *Gloxinias*, and *Streptocarpuses* in variety, all in capital condition.

Messrs. Sutton & Sons, of Reading, had a magnificent lot of Peas and Tomatos in their fine array of vegetables, all of the plants being heavily cropped. Amongst the *Gloxinias* shown from Reading was that splendid white variety, *Her Majesty*. A Gold Medal was deservedly awarded here.

Messrs. Fisher, Son & Sibray, Handsworth Nurseries, Sheffield, had three distinct exhibits that occupied in all some 600 sq. ft. In addition to a representative group of hardy ornamental trees and shrubs, of which the firm has long made a speciality, was a grand bank of *Rhododendrons* of the leading varieties, and a capital group of stove plants.

The group of new plants sent by Messrs. F. Sander & Co., St. Albans, contained *Dracaena sanderiana*, *D. godseffiana*, *D. Van der Biltii*, and that plant of the year, *Acalypha Sanderi*. A choice lot of Orchids was staged in association with these.

Amongst other noteworthy exhibitors were Messrs. R. Smith & Co., of Worcester; Dicksons, Ltd., of Chester; Clithran & Sons, Altrincham; and Jarman & Co., Chard, all of whom showed hardy flowers in great profusion and variety. Messrs. R. Smith & Co. also had some of their fine, trained Clematises in pots, all of them being exceptionally full of flower. Messrs. W. & J. Birkenhead, Sale, Manchester, sent Ferns in great variety, and of the high quality that we expect to see from this source. Plants illustrating the value of Ichthemic Guano as a fertiliser came from the Ichthemic Guano Company, Ipswich. Mr. M. Campbell, High Blantyre, showed show, fancy, and hedding Pansies and Violas in capital style, most of the leading varieties being represented. Mr. S. Mortimer, of Rowledge, Farnham, Hants, showed some excellent new Cucumbers, seedlings from that time-honoured favourite, Telegraph.

COLCHESTER.—June 16th.

THE summer show of the Colchester Rose and Horticultural Society was held on the above date in the charming grounds of Hill House, Colchester, the residence of Mr. C. E. Egerton-Green, and was favoured by bright, sunny weather. So far the Rose season has been anything but a good one, and Colchester, among the rest, has suffered. The entries were fewer, but the quality was well sustained.

Roses were, of course, the backbone of the show. Competition was very keen amongst the growers, and there was a series of tough fights in the open classes. Mr. Geo. Mount, of Canterbury, scored a signal success for the thirty-six single trusses, distinct. He was followed in the second and third places respectively by Messrs. D. Prior & Son and Mr. B. R. Cant, both of Colchester. The best twelve single trusses, either Teas or Noisettes, came from Mr. Geo. Prince, Oxford, the Colchester growers, Messrs. Frank Cant & Co. and Mr. B. R. Cant, following in the order of mention. Messrs. Frank Cant, B. R. Cant, and Paul & Son, Cheshunt, won in order of mention for twelve distinct garden or decorative Roses, so here Colchester had her revenge. Mr. G. Prince received a Gold Medal for a grand single bloom of *Souvenir d'un Ami*.

In the amateurs' classes, Mr. R. E. West,

Reigate, won for eighteen distinct single trusses, and Mr. H. G. Egerton-Green (gardener, Mr. F. Kettle), for six trusses of Teas and Noisettes. The Rev. J. H. Pemberton was placed first for twelve garden Roses.

Messrs. J. Burrell & Co., Howe House Nursery, Cambridge, staged the first prize exhibit of twenty-four bunches of cut, hardy herbaceous flowers, Mr. R. C. Notcutt, of Woodridge, coming in second. In the smaller class for twelve bunches of similar material, Mr. H. G. Egerton-Green scored, and Mrs. A. Cant had the best six bunches. The most tastefully decorated dinner table was adjudged to be that contributed by Mrs. R. W. Wallace.

The exhibits of pot plants were not very numerous. In the group arranged for effect, Mr. H. G. Egerton-Green was first, with Messrs. Bunting & Sons, second, and Mr. W. Draper third. Mr. H. G. Egerton-Green was also first for the table of plants arranged for effect, Mr. James Round, M.P. (gardener, Mr. H. Bishop), Birch Hall, being second in this competition. Amongst the non-competitive exhibits was a nice collection of Palms, Ferns, and other decorative plants, illustrating the use of Ichthemic Guano, shown by the Ichthemic Guano Company, Ipswich.

Both fruit and vegetables were poor, especially in number of exhibits. Mr. W. J. Trott, gardener to Lady North, Little Glemham Hall, had the best black Grapes, and Mr. H. Cook, gardener to Mr. W. Nocton, Langham Hall, was equally successful for three bunches of white Grapes.

In the vegetables, by far the most noteworthy exhibit was that of the collection of eight distinct kinds sent by Mr. H. G. Egerton-Green. Here the quality was really good.

QUESTIONS AND ANSWERS.

Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

Yellow-flowered Shrub.—W. B. G.: The shrub is known as the Himalayan Laburnum (*Piptanthus nepalensis*). Being rather soft in the wood and partly evergreen it is liable to be injured in very severe winters. In the neighbourhood of London, however, it has stood through many winters against a wall without suffering any great injury. North of London, as in the Midlands, a wall is necessary for its protection. In the neighbourhood of the sea, that is, all round the coast, the conditions are more favourable to it. To our knowledge at least it grows as far north as the Firth of Tay. It was introduced from Nepal in 1821. There should be no difficulty with it in your neighbourhood.

White Thorn Mildew.—J. T. Thurston: According to our observation, Thorns, when so badly attacked with mildew as the specimens sent, are liable to be attacked every year, the reason being, probably, that when once the trees get into an unhealthy condition they have a difficulty in shaking themselves clear of the malady. No doubt the light and dry nature of the soil augments and encourages the growth and spread of the mildew, as the tree is unable, under the circumstances, to make fresh and vigorous growth. If the tree is not a valuable one, probably the least expensive method of dealing with it would be to uproot and burn it to prevent the spread of the fungus on healthy Thorns and allied subjects. If, on the other hand, it is worth taking some trouble with, you might take out a shallow basin round the tree and give copious supplies of water at intervals during dry weather. You might also give the tree a good syringing with flowers of sulphur in water. In the autumn it might prove advantageous to transplant the tree into richer soil in a fully exposed position, adding some fresh soil of a retentive nature.

Peas for Market.—X. Y. Z.: Peas sown in the open field for market purposes are never staked, whether dwarf or tall growers. They do not grow so tall when not staked, but fall over and lay upon the ground. Early Sunrise and First Crop are dwarf early varieties, popular with the market growers in Kent. The Essex growers believe strongly in Blue Eclipse, and in a selection from it named Blue Re-selected Express, which proves a week earlier with them than the original. They also grow Gladiator and William I. In some parts of East Anglia American Wonder and English Wonder are grown to some extent. Pride of the Market is a popular maincrop Pea in Kent. In Yorkshire they believe in Telegraph, Yorkshire Hero, Dr. McLean, and Telephone as maincrop varieties, Telegraph being more extensively grown, perhaps, than either of the others. In the Midlands the growers believe in Prince of Wales and Blue Imperial as maincrop sorts for pulling in the green state. You could use some or others of the above, and make experiments with a few others annually to ascertain which give the best return. William I. you may remember, is a round Pea, valued chiefly for an early picking.

Pelargoniums of Different Races.—Omega: All Pelargoniums of whatever race belong to the same family, namely, the Geraniaceae. The spotted Pelargoniums of the greenhouse, as you call them, have been developed from the wild Pelargonium cucullatum. This applies to show, fancy, and regal varieties. The zonal Pelargoniums or hedders have been obtained by hybridising two or more species together. The most frequently used, perhaps, was P. zonale, having a dark band on the leaf. Another was P. inquinans, which had its leaves entirely green. You will find the influence of the latter in green-leaved varieties amongst bedding and pot plants. The Ivy-leaved Pelargonium has been derived from P. peltatum. The scented-leaved varieties and hybrids have been obtained from several species. You will see from this that all the Pelargoniums belong to different species of the of the same family.

Worms in Small Box.—H. Roach: The so-called worms you sent were Centipedes or Scolopendrae, not worms, which have no feet. The specimens you sent are believed to be the Geophilus electricus of Linnaeus, and are certainly the G. longicornis of Leach. You must certainly have a fine breed of them, for several of those that reached us were of large size. Younger ones had escaped from the box, but having been struck by the stamp in passing through the post were glued to the box by the tail. They have from 51 to 55 pairs of short legs by which you may distinguish them from true worms. Entomologists do not seem to think them very injurious because they are carnivorous and prey upon their allies as well as upon members of their own species. They also seem to concede that they live upon decaying Potatos and other vegetable matter. If too numerous and troublesome you might lay pieces of Potatos and Turnips about in their haunts to act as traps which you should examine every morning. We think, however, that deep trenching of the ground every second year would help greatly in destroying these vermin. If the garden consists of old soil with much vegetable matter in it, you might improve the same by working a quantity of lime into the top spit, and this would help to destroy or drive away these and other vermin.

Carnation Disease.—Omega: You do not state what particular disease has attacked your Carnations. There are several maladies to which this class of plants is subject. It would be better to send a specimen of anything suffering from disease, as it would give us a chance of determining the disease and suggesting a remedy. Very possibly, your plants may be suffering from a fungus known as Helminthosporium echinulatum, a most troublesome customer, and difficult to get rid of. Most likely the fungus obtained a footing in winter when the light was had and the atmosphere moist. As it lives inside the tissue of the leaves, no fungicide that will destroy it has yet been found, without killing the plants at the same time. The most that you can do is to cut off diseased leaves and shoots, and burn them. During winter and other dull times you should keep the air of the house in which they are grown dry and cool. Propagate from healthy layers or cuttings only. It might even be worth your while to get a fresh stock of plants or cuttings elsewhere and start afresh, after thoroughly cleaning the house in which they have been grown. This would be the best plan if your plants are very badly attacked. If you decide to get rid of the old stock you should burn it.

Name of Rhododendron.—Wm. McIver: The truss of Rhododendron sent on the 20th ult., and which you had flowered under glass is Rhododendron gowenianum, a garden hybrid now flowering in the open air in the South. It was raised from Azalea nudiflora or A. viscosa crossed with a garden hybrid of Rhododendron ponticum and R. catawbiense.

Names of Plants.—W. B. G.: Iris sibirica.—J. T. Thurston: 1, Sedum acre; 2, Saxifraga umbrosa; 3, Gladiolus byzantinus.—A. Simpson: The Prairie Anemone or May Flower (*Anemone patens nuttalliana*); it is closely allied to the British A. Pulsatilla or Pasque Flower.—A. C.: Aquilegia chrysantha; 2, Geranium sylvaticum; 3, Phlox subulata nivea; 4, Dianthus plumarius var.; 5, Lupinus polyphyllus; 6, Allosorus crispus.—W. J.: 1, Cattleya Mendelii; 2, Deadrochium undulatum; 3, Masdevallia harricana; 4, Odontoglossum nebulosum.—A. L.: 1, Deutzia crenata, 2, Crataegus oxyacantha flore pleno coccineo.—T. Ward: 1, Rubus hiflorus; 2, Ribes alpina pumila aurea; 3, Retinospora plumosa aurea; 4, Retinospora obtusa.—Omega: The Cockspur Thorn (*Crataegus Crus-galli*).—R. M.: 1, Athyrium Filix-foemina var.; 2, Athyrium Filix-foemina; 3, Aspidium angulare var.; 4, Athyrium Filix-foemina var.; it comes into the section Cruciatum, of which 59 at least have received names; it comes near A. F.-f. percruciatum, but would have to be named from a collection.—J. L. Reynolds: The broad-leaved tree is Ilex latifolium or the Broad-leaved Holly; the small-leaved shrub is Escallonia philippiana.

Communications Received.—W. B. Pindar.—W. D. Tucker.—E. Edwards.—A. Paterson.—J. Hudson.—A. F. Upstone.—T. S. Dymond.—L. M.—J. B.—Eap.—S. Menzies.—Aura.—S. L. N.—Why.—R. P.—Geo. Fidlayson.

COVENT GARDEN MARKET.

June 22nd, 1898.

| FRUIT.—AVERAGE WHOLESALE PRICES. | | | | |
|---|----|----|-------------|-------------|
| | s. | d. | s. d. s. d. | |
| Apples ...per bnshel | 0 | 0 | 0 | |
| Cohbs | 0 | 0 | 0 | |
| Grapes, per lb. | 1 | 6 | 3 | 6 |
| Pine-apples | | | | s. d. s. d. |
| —St. Michael's each | 2 | 6 | 7 | 6 |
| Strawberries per lb. | 2 | 0 | 5 | 6 |
| Cherries per box | 2 | 6 | 3 | 0 |
| VEGETABLES.—AVERAGE WHOLESALE PRICES | | | | |
| | s. | d. | s. d. s. d. | |
| ArtichokesGlobe doz. | 2 | 0 | 4 | 0 |
| Asparagus,per bundle | 3 | 0 | 8 | 0 |
| Bsans, French, per | | | | |
| per lb. | 0 | 9 | 1 | 6 |
| Beet..... per dozen | 1 | 0 | | |
| Brussels Sprouts | | | | |
| per half sieve | 1 | 0 | 1 | 6 |
| Cabbages ... per doz. | 1 | 0 | 1 | 3 |
| Carrots ... per bnch | 0 | 3 | | |
| Canllflowers.....doz. | 2 | 0 | 3 | 0 |
| Celery.....per bnadle | 1 | 0 | 1 | 6 |
| Cucumbers per doz. | 2 | 6 | 3 | 6 |
| Endlve, French, doz. | 1 | 6 | 2 | 0 |
| Herbsper bunch | 0 | 2 | | |
| Horse Radish, bnndle | 1 | 0 | 2 | 0 |
| Lettnces ...per dozen | 1 | 3 | 1 | 6 |
| Mnshrooms, p. basket | 1 | 0 | 1 | 6 |
| Onlons.....per bnch | 0 | 4 | 0 | 6 |
| Parsley ... per bnch | 0 | 3 | | |
| Radlshes... per dozen | 1 | 0 | 1 | 3 |
| Seakale...per basket | 1 | 6 | 2 | 0 |
| Small salad, pnnnet | 0 | 4 | | |
| Splnach per bushel | 2 | 0 | 3 | 0 |
| Tomatos..... per lb. | 0 | 6 | 1 | 0 |
| Turnips ... per bnch | 0 | 3 | | |
| CUT FLOWERS.—AVERAGE WHOLESALE PRICES. | | | | |
| | s. | d. | s. d. s. d. | |
| Aium Lillies, 12 blms. | 3 | 0 | 4 | 0 |
| Asparagus Fern, bun. | 2 | 0 | 3 | 0 |
| Azaleas, doz. sprays | 0 | 6 | 0 | 3 |
| Bonvardias, per bun. | 0 | 6 | 0 | 8 |
| Carnations doz. blms. | 1 | 6 | 3 | 0 |
| Euocharis ...per doz | 3 | 0 | 4 | 0 |
| Gardenlas ...per doz. | 1 | 6 | 3 | 0 |
| Geranium, scarlet, | | | | |
| doz. bunches | 4 | 0 | 6 | 0 |
| Lillim longlform | | | | |
| per doz. | 3 | 0 | 4 | 0 |
| Lily of the Valley doz. | | | | |
| sprays | 0 | 9 | 1 | 6 |
| Lilac(French)per bun. | 3 | 6 | 4 | 0 |
| Mrguerites, 12 ban. | 2 | 0 | 4 | 0 |
| Marlenbar Fern, 12bs. | 4 | 0 | 6 | 0 |
| Narcissus, varlous, | | | | |
| doz. huns. | 1 | 6 | 3 | 0 |
| Orohlds, doz. blooms | 1 | 0 | 8 | 0 |
| Pelargonlms, 12 bun. | 4 | 0 | 6 | 0 |
| Red Roses, per doz. | 1 | 0 | 3 | 0 |
| Roses (Indoor), doz. | 0 | 6 | 1 | 0 |
| Tea, white, doz. | 1 | 0 | 2 | 0 |
| Perle | 1 | 6 | 2 | 0 |
| Safrano | 1 | 0 | 2 | 0 |
| (English), | | | | |
| Pink Roses, doz. | 2 | 6 | 4 | 0 |
| Smlax, per bunch ... | 2 | 0 | 2 | 6 |
| Tnberoses, doz. | | | | |
| blooms ... | 1 | 0 | 1 | 6 |
| Violets (Parma), per | | | | |
| bnch | 2 | 6 | 3 | 6 |
| Wallflowers, doz. bun. | 2 | 0 | 4 | 0 |
| PLANTS IN POTS.—AVERAGE WHOLESALE PRICES. | | | | |
| | s. | d. | s. d. s. d. | |
| Arbor Vitae, per doz. | 12 | 0 | 36 | 0 |
| Aspidistra, doz. | 18 | 0 | 36 | 0 |
| specimen | 5 | 0 | 10 | 0 |
| Coleus, per doz. | 3 | 0 | 4 | 0 |
| Dracaena, various, | | | | |
| per doz. | 12 | 0 | 30 | 0 |
| Dracaena vridls, doz. | 9 | 0 | 18 | 0 |
| Euonymus, var. doz. | 6 | 0 | 18 | 0 |
| Evergreens, Invar. doz. | 6 | 0 | 24 | 0 |
| Erica, various, per doz. | 12 | 0 | 30 | 0 |
| Ferns, Invar. per doz. | 4 | 0 | 12 | 0 |
| Ferns, small, per 100 | 4 | 0 | 6 | 0 |
| Ficus elastica, each | 1 | 0 | 5 | 0 |
| Foliage Plants, var., | | | | |
| each | 1 | 0 | 5 | 0 |
| Fuchsia, per doz. | 6 | 0 | 9 | 0 |
| Heliotrope, per dozen | 4 | 0 | 8 | 0 |
| Hydrangeas, per doz. | 8 | 0 | 10 | 0 |
| Ivy Geraniums, | | | | |
| per doz. | 5 | 0 | 8 | 0 |
| Lillium Harrlssii, | | | | |
| per pot | 2 | 0 | 4 | 0 |
| Lycopodlms, doz. | 3 | 0 | 4 | 0 |
| Lobelias, per doz. ... | 3 | 0 | 5 | 0 |
| Marguerite Dalsy doz. | 4 | 0 | 9 | 0 |
| Mignonne, per doz. | 4 | 0 | 6 | 0 |
| Myrtles, doz. | 6 | 0 | 9 | 0 |
| Palms in varlety, each | 1 | 0 | 15 | 0 |
| Palms, Specimen ... | 21 | 0 | 63 | 0 |
| Pelargoniums ... | 9 | 0 | 12 | 0 |
| Rhodanthe...per doz. | 5 | 0 | 6 | 0 |
| Scarletsper doz | 2 | 6 | 6 | 0 |
| Splraea, per doz. | 6 | 0 | 9 | 0 |

INDEX TO ADVERTISEMENTS.

| | | | |
|---|------------------------------|-------------------------------|--|
| Auction Sales. | Franklin & Gale674 | Lawn Mowers. | Ransomes, Slms & Jefferies, Ltd.688 |
| Protheroe & Morris674 | Catalogues. | A. Shanks & Son, Ltd.674 | |
| Barr & Sons673 | Barr & Sons673 | Manures. | C. Beeson673 |
| Bunyard & Co.673 | Bunyard & Co.673 | Chemical Union673 | |
| J. Forbes675 | J. Forbes675 | Clay & Son675 | |
| Kelway & Son673 | Kelway & Son673 | W. Colchester673 | |
| J. Peed & Sons675 | J. Peed & Sons675 | Homco674 | |
| Simpson & Son673 | Simpson & Son673 | Lawes'685 | |
| Chrysanthemums. | Devon Nursery673 | Meggitt's673 | |
| Florists' Flowers. | J. Douglas673 | Native Guano Co.674 | |
| R. W. Hockey673 | R. W. Hockey673 | Standen's675 | |
| T. Jannoch675 | T. Jannoch675 | W. Thomson & Sons674 | |
| Kelway & Son673 | Kelway & Son673 | Miscellaneous. | British Carpets683 |
| Keynes, Williams, & Co. 675 | Keynes, Williams, & Co. 675 | Cooper's Cycles674 | |
| R. Owen673 | R. Owen673 | Corry & Co., Ltd.675 | |
| J. Peed & Sons675 | J. Peed & Sons675 | Epps's Cocoa688 | |
| J. Stevens673 | J. Stevens673 | Gishurstine673 | |
| Flower Pots. | Sankey & Sons, Ltd.688 | Juoo Cycles683 | |
| Fruit Trees. | G. Bunyard & Co.673 | Smyth's Baskets673 | |
| Garden Sundries, &c. | J. Arnold673 | Netting. | H. J. Gasson673 |
| Corry & Co.673 | Corry & Co.673 | A. Potter673 | |
| Eveson Coal & Coke Co. 673 | Eveson Coal & Coke Co. 673 | Orchids. | J. Cypher675 |
| Hirst, Brooke & Hirst ...673 | Hirst, Brooke & Hirst ...673 | W. L. Lewis & Co.673 | |
| J. & H. R. Hounam675 | J. & H. R. Hounam675 | P. McArthur675 | |
| Leeds Orchid Co.688 | Leeds Orchid Co.688 | F. Sander & Co673 | |
| A. Outram687 | A. Outram687 | Publications. | Agricultural Enonomist 675 |
| Porter's Stakes673 | Porter's Stakes673 | American Gardening ...688 | |
| G. H. Richards674 | G. H. Richards674 | Darlington687 | |
| H. G. Smyth673 | H. G. Smyth673 | GARDENING WORLD687 | |
| Heating Apparatus. | W. Cooper, Lmited ...674 | Ogilvie687 | |
| Messenger & Co.675 | Messenger & Co.675 | J. S. Vlrue & Co.697 | |
| Thames Bank Iron Co ..673 | Thames Bank Iron Co ..673 | Seeds. | Simpson & Son673 |
| Horticultural Builders. | J. Boyd & Sons673 | Sutton & Sons673 | |
| W. Cooper, Ltd.674 | W. Cooper, Ltd.674 | Show. | 674 |
| J. Gray673 | J. Gray673 | Situations, &c. | 675 |
| W. Richardson & Co.675 | W. Richardson & Co.675 | Strawberries. | Laxton Bros.675 |
| J. Weeks & Co., Ltd.673 | J. Weeks & Co., Ltd.673 | Sutton & Sons673 | |
| Hose. | F. Reddaway & Co. Ltd. 674 | Tents. | A. Potter674 |
| Insecticides. | Corry & Co.673 | | |
| Gishurst Compound673 | Gishurst Compound673 | | |
| XL All674 | XL All674 | | |



ORCHIDS.

Clean Healthy Plants at Low Prices.
Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

GLOXINIAS FINEST MEDAL COLLECTION
* IN THE WORLD. *
Send for CATALOGUE to
JOHN PEED & SONS, West Norwood, London

The Royal Nurseries, Maidstone, Kent.

GEORGE BUNYARD & CO.,

Are now booking orders for early delivery of the very best
NEW AND OLD STRAWBERRIES.
For crop 1899, or for forcing.
They offer the largest stock and the best plants in the trade.
Change of stock pays.
Catalogue of Strawberries and Summer Fruits now ready.

POCKET KNIVES FROM MAKER



Stag Handle Pruning Knives, a real good article, 1s. 1d. each; Ivory Handle Budding Knives, no better made, 1s. 3d. each; Ivory Handle, 2 blade waistcoat pocket Knife, 1s. 1d. each; Corn Knives, 1s.; Workman's Stag Handle Sheepsfoot and Pen Blade, 1s. 1d. The blades of all the above are made from the very best English crucible cast steel. Post free.



J. & H. R. HOUNAM,
Sheaf Island Works, SHEFFIELD.

1898. FORBES' CATALOGUE 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants
is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and price of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other Valuable Information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,
Nurseryman, Hawick, Scotland.
ESTABLISHED 1870.

IMPORTANT TO GARDENERS.

If you have not received our Illustrated Supplement with particulars of Important Horticultural Improvements and Hints by Specialists upon successful

CARNATION CULTURE

please send post card for same.

MOST VALUABLE INFORMATION!

Wm. WOOD & SON, Ltd., WOOD GREEN, LONDON.



GARDEN SUNDRIES.

SPECIALY SELECTED ORCHID PEAT

- | | |
|---|---------------------------------|
| Black and Brown Peat | Pot Washing Brushes |
| Silver Sand and Loam | Virgin Cork and Raffia [Twine |
| Cocoa Nut Fibre Refuse | Tanned Netting & Tarred |
| Leaf and Peat Mould | Trug Garden Baskets |
| Specially prepared Mould | Flower Sticks, from 1 to 5 feet |
| Sphagnum Moss | Wooden Labels, from 4 to 12 in |
| Guano and Dissolved Bones | Thin Bamboo Canes |
| Bones, 1/2 inch and 1/4 inch | Rose and Dahlia Stakes, about |
| Bone Dust, guaranteed pure | 5 feet |
| Blood and Bone Manure, highly recommended | Orchid Baskets and Teak Rods |
| Horticultural Charcoal [Paper | Greenhouse Bilnds made to |
| Tobacco Cloth, far superior to | order |
| Mushroom Spawn | Patent Bass Brooms |
| Russia and Archangel Mats | Smyth's Orchid and Hothouse |
| | Shading |

Write for Price List, free by post.

H. G. SMYTH,

Horticultural Sundriesman,

(By Special Appointment to Her Majesty),

Clark's Mews, High Street, BLOOMSBURY, S.W.

RETARDED LILY OF THE VALLEY CROWNS.

Headquarters at Dersingham.

For prices &c., apply to—

T. JANNOCH,

Lily Nursery, Dersingham, King's Lynn, Norfolk.

LAXTON'S STRAWBERRIES.

If you wish for the best, write for our new Illustrated Catalogue with descriptions of Laxton's new Fillbasket, Mentmore, Monarch, Leader and Royal Sovereign. The largest cultures specially for runner plants.

LAXTON BROTHERS, BEDFORD.

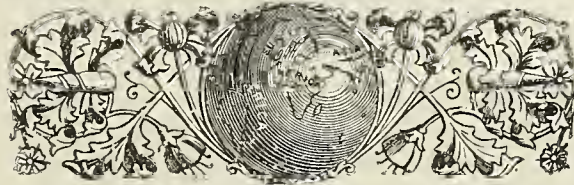
Caladiums

FINEST COLLECTION in the World. We make a speciality of CALADIUMS. Gold Medals Manchester & Leicester. Silver Cup, R.H.S., &c.

Satisfaction guaranteed. JOHN PEED AND SONS, West Norwood, London.

BARR & SONS have on their Register several competent HEAD-GARDENERS. They will be pleased to furnish full particulars on application.—11 and 13 King Street, Covent Garden, London, W.C.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Malda Vale, London W.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JULY 2nd, 1898.

NEXT WEEK'S ENGAGEMENTS.

- TUESDAY, July 5th.—Hereford Rose Show.
WEDNESDAY, July 6th.—Newton-Stewart Show.
County Borough of Hanley Floral Fête (two days).
Tunbridge Wells Rose Show.
THURSDAY, July 7th.—Woodbridge Rose Show.
SATURDAY, July 9th.—Manchester Rose Show.
Wood Green and District Show.
National Amateur Gardener's Association's Garden Party and Exhibition at Regent's Park.

PLAGUE OF GREEN FLY.—The conditions of the past few months as to climatic influence and otherwise would seem to have been very favourable to the propagation and distribution of one of the most universal pests in British gardens, that is, if green fly can be spoken of in the singular. The gardener is generally content to utilise the term in this sense, yet there are over 180 species, natives to these islands. Some of the species may partly or completely confine their energies or depredations to one species, of plant; but more often they extend their ravages to any or all of the species of a genus. Instances of this are the Rose Aphis (*Siphonophora Rosae*) and the Pea Aphis (*S. Pisi*). The latter attacks not merely the garden Pea, but various species of *Lathyrus*, possibly any of them. If the entomologist is right the Rose Aphis is so far adaptable to circumstances as to give rise to varieties differing in colour, but one named *S. Rosae glauca* has a special weakness for Carnations, and on occasion extends its depredations to other species of *Dianthus*, particularly Sweet Williams, while yet the flowers are in the early bud stages. On the other hand some of the aphides can live and thrive on a great variety of plants belonging to different genera and families. Perhaps no green fly is a more universal feeder than *Rhopalosiphon Dianthi*, so named from its being found originally probably on some *Dianthus*; but it is now

known to attack plants so widely separated as Fuchsias, Peaches, Pansies, Verbenas, Potatos, and a host of other garden plants.

The gardener is chiefly concerned as to the easiest method of getting rid of his troublesome enemy. Our observation leads us to believe that the shelter a garden affords is particularly conducive to the welfare of aphides and various other insect and fungoid pests. The more completely a garden is hedged round with walls, trees, and houses the more plentiful the insect enemies of plants become. This even extends to the shelter the plants themselves afford. The Apple, Plum, and some of the Peach aphides have the power of curling up the leaves, thereby sheltering and hiding themselves. Others take advantage of the half-unfolded leaves of the buds, thus doing incalculable damage to the flowers and foliage at a time when they are most vulnerable. Any remedies that can be taken are most effective and result in the greatest advantage to the plants, if taken in the earliest stages when the insect colonies are yet small and have not had time to do damage. What can one do, however, in the case of Lettuce whose leaves are just closing in and covering up myriads of the filthy red Lettuce Fly? At the present time and for weeks past nothing has been giving more trouble, perhaps, in gardens generally than the Rose aphides, but particularly the species above mentioned. The bushes may be syringed weekly, daily, or oftener, with clean water and foul, but all the same the pest is present in force a few hours later. It is a hardy insect and survives a deal of bad usage with applications of quassia water, tobacco water, soap suds, and Gishurst Compound. No doubt many of the insects get destroyed, but others crawl to the sheltered side of the stems and leaves, resuming their nefarious work when the storm is past. Those which get knocked to the ground crawl or fly up again; hence their sudden reappearance. It must not be forgotten, however, that winged specimens may and do come from other quarters, where the increase of their own numbers and the neglect of the owners of Roses, obliges the aphides to seek for fresh pastures. Amongst all the remedies used tobacco powder seems as effectual as any. Where much ground has to be covered, the application of the remedy is a tedious process; but if worth doing it is worth doing well. The object is to reach the insects in their sheltered positions, which alone will start them out. The bushes, if dry, should first be lightly syringed all over so as to make the tobacco powder cling to the leaves. Then the operator may proceed to work, dusting the powder well into the opening buds, the flower trusses, the axils of the younger leaves, and wherever the enemy may be sheltering. In a short time the insects may be seen in hundreds at the tips and edges of the leaves, and all trying to escape to some safer retreat. Some of them ultimately sicken and fall off, particularly if powder is adhering to them. Some that are ready to pupate acquire wings and fly away, but all disappear in one way or another. After this period the leaves get firmer, and the pest is never so potent for mischief in the later half of the season.

THE OLDEST TREE IN EUROPE.—There are many isolated instances of trees that are reckoned to be of great age if not the oldest existing in the country; but when they happen to be hollow as is often the case how is their age to be reckoned with any degree of exactness? In any case the Yew and the Oak, particularly the former, hold a high position in the claim to longevity. *The Dundee Advertiser* gives a lengthy and interesting account of the Fortingall Yew, in Perthshire. With the particulars at his

command De Candolle, in 1831, reckoned the Fortingall Yew to be 2,500 to 2,600 years old in 1770. Even if this is admitted to be true the Brabourne Yew in Kent is reckoned to be some centuries the senior of this patriarch. Nevertheless both trees may enjoy the benefit of the doubt until proof of their age is forthcoming. The writer from whom we quote is satisfied, however, amidst all the local antiquities that the Yew is the oldest object the eye can see at Fortingall, "next to the everlasting hills themselves." He thinks this tree was a sturdy sapling when Solomon was building his temple, and the ancient druids may have worshipped under its shadow. The tree stands in the graveyard at Fortingall, and Pennant mentions having seen it in 1761, when it was 56 ft. in circumference. At one time the village boys used to kindle their Beltane fires at its roots. Curio hunters, until they were deterred from interfering with it, used to cut down branches and make them into cups and boxes &c., for sale. The huge trunk is now a mere hollow shell from which three great trunks appearing like separate trees arise. There is a younger but large tree just outside the graveyard, probably a seedling from the patriarch, and unless the chronicler is careful, the daughter tree may in the future be recorded as the parent. Such things have happened before now, as in the case of King Charles' Oak.

Guttapercha was introduced to Europe from Malaga in 1852. The annual consumption now totals up to 4,000,000 lbs. per annum.

A Sad Accident to Mr. T. Humphreys.—We are exceedingly sorry to learn that a sad accident has befallen Mr. T. Humphreys, Mr. S. T. Wright's able lieutenant at Chiswick. Whilst playing cricket at Turnham Green last week a ball struck him on the head. Hemorrhage of the brain has set in, and he lies in a critical condition.

Tom-tits in a Letter Box.—I saw in your number for the 14th of May last that a pair of tom-tits have built their nest in a letter box, and the hen was sitting on her eggs. Here is something in the same way just opposite my nursery, on the leading way from Ghent to Antwerp (Chaussée d'Anvers 406). A pair of tom-tits have built their nest in a letter box as well, and have young now for the second time. As soon as the gentleman saw that those birds had built their nest there he told the postman to ring the bell, and to give the correspondence into his or his servant's hands.—*E. Coppiters.*

Chiswick Gardeners' Mutual Improvement Association.—There were 100 students present to hear the lecture on "The Origin of Common Garden Vegetables," by the Rev. Prof. George Henslow, at Chiswick, on the 22nd ult. These included young gardeners from Chiswick, Kew and Ealing. The lecture that was to be delivered on the 29th ult. was postponed till July 6th, owing to the coincidence of the Richmond Show on the 29th last. The lecture on the 6th is to be on "The Origin of Common Garden Flowers." The lecture on the 13th will be on "The Origin of Species and how Variations may be induced under Cultivation."

Vegetable Products of the Philippine Islands.—The area of these islands is reckoned at 150,000 square miles, and the population at eight to ten millions. The soil is fertile and productive, requiring only intelligent cultivation. Manilla Hemp is one of the chief sources of wealth. Sugar plantations give less satisfaction owing to the ignorance of the cultivators. Tobacco culture, as most people may imagine, is one of the leading industries. The Coffee has a fine aroma, though not equal to that of Mocha or Bourbon. Indigo produced here is notable for its fine qualities. Cocoa trees (*Theobroma cacao*) grow in abundance. During the ten years ending in 1897, 914,055 tons of Manilla Hemp were exported from the Philippines; and 1,582,904 tons of sugar in the same period.

A Lemon Bath is almost a daily luxury in the West Indies; and a pleasant sense of freshness and cleanliness is imparted to the skin by its use. The method is to slice three or four limes or lemons and let them lie for half an hour in the water, so that the juice may be extracted.

Plants and Snakes.—There is a plant in India, says a native paper, which so closely resembles the cobra that it can only be distinguished from that deadly snake by close inspection. It has a sort of expanded hood similar in size, shape, colour, and other respects to that of the cobra. The juice of the plant is also said to be highly poisonous, thus completing the resemblance to the cobra.

A Patriarchal Chestnut Tree.—At Tortworth, in the county of Gloucester, there is a remarkable tree of the Sweet or Spanish Chestnut (*Castanea vesca*, or *C. sativa*) which was known as far back as 1135. More recently in 1766 the trunk measured about 17 yards in circumference, at a yard and a half above the ground. About a century later it had added another yard to its circumference, and must now be a very venerable patriarch of its kind.

The Pip of a Scottish Peach.—A rather rugged Scotch laird, about 1,800, was dining at Hamilton Palace for the first time, and after dinner he pointed to a dish of Peaches, and said to his hostess, "What kind of Apple is yon?" She told him they were Peaches, and he said he would just take one to taste it. He took one and stuck half of it in his mouth, and bit hard into it, so that the juice ran out of the corners of his mouth. Then spake, or rather sputtered that guileless Gael, "Oh, it's a gran' Apple, but sic a pip as it's got!"—*Scraps.*

Orchids at the Sale Rooms.—The natural hybrid *Odontoglossum crispum-harryanum* made its appearance at the Sale Rooms of Messrs. Protheroe & Morris, Cheapside, on Friday, the 24th ult., when some lively bidding run it up to 38 guineas, but the lucky owner declined to part with it at that sum. There were several very pretty Cattleyas amongst the flowering plants including a charming, light-coloured variety of *C. Mossiae*, with blush sepals and petals, and a large, lively and conspicuous purple blotch on the otherwise pale lip. This went for £5. The present is a grand time to get Orchids at reasonable prices.

The Destruction of Charlock.—For many years, possibly for centuries, there has been a desire to find out some ready method by which Charlock or Field Mustard (*Brassica arvensis*) might be destroyed in fields of corn without at the same time destroying the latter. The French tried the plan of spraying with a solution of sulphate of copper. The Essex County Council made some experiments last year with the same object in view, but it was too late in the season before operations were commenced. Further trials were commenced about the middle of last April, and the results so far have been given in a report signed by Mr. Reginald W. Christy, and Mr. Thos. S. Dymond, of the County Technical Laboratories, Chelmsford. By means of a strawsonizer, several strips of a field of barley infested with Charlock were sprayed with 1, 2, 4, and 6 per cent. solutions of sulphate of copper, applied in quantities varying between 10 and 100 gallons per acre. A 1 per cent. solution was too weak to kill the Charlock; and a 6 per cent. solution was too strong for the barley. Ten gallons per acre did not afford sufficient to wet all the Charlock. The best results were obtained by using a 2 per cent. solution at the rate of 25 to 50 gallons per acre, during dry weather in the earlier stages of growth. The experiment was "completely successful" in the words of the report. The sprayed strips were perfectly free from Charlock when the report was written, while the unsprayed portions were yellow with it. The barley was stronger and of better colour in the sprayed strips. Other crops showed that sulphate of copper might be used to advantage, except in the case of Turnips and Swedes, which belong to the same genus as Charlock, and are burnt in the same way as the latter. The best time to perform the operation is a still, dry day, when the Charlock first appears. Later on it is partly protected by the crop; nevertheless, if sprayed while in flower, the Charlock is prevented from seeding. Surely this will not be allowed to pass into oblivion without a full and decisive trial by those concerned.

Imitation Coffee Berries have recently been manufactured abroad. Examination showed that they were made of ash-gum, dextrine, and other materials.

Put on more air.—*Gardener*: "Come now, Mike, my boy, run into the vinery and see how high the temperature stands." *Mike* (after being in the vinery): "Sure, and it is higher than the three-foot rule."—*Snaggs.*

A Bounty for Tree Planting.—In Minnesota there is, says *Gardening* (American), a law to encourage tree planting. A bounty of \$2.50 (10s.) an acre is offered, and a full acre must be planted. No person can collect the bounty for more than 10 acres in a year, or for more than six years. Any tree but the black Locust may be planted. Last year bounty was paid on 9,524 acres. The law has been in force for sixteen years, during which time upwards of 100,000 acres have been planted.

The Widow of the Late Dr. Woodman.—I am more than glad to inform you that I have just heard from the widow of my old master and dear departed friend, Dr. W. R. Woodman, saying she has been elected a pensioner of the Royal Masonic Benevolent Institution. Mrs. Woodman writes: "I am thankful to say that I am elected to the pension, and thank all who assisted me, especially yourself." The public notice of this deserving case, kindly given recently in your popular and influential journal, arrested considerable attention in all parts, and did much good for the cause. On Mrs. Woodman's behalf, I am grateful and thankful to you.—*William Napier, June 23rd, 1898.*

A Royal Visit to Messrs. Lucien Linden & Cie's Establishment at Moortebek.—On Thursday, June 23rd last, the King of the Belgians paid a visit to this well known Orchid establishment, situated in the neighbourhood of Brussels. Under the guidance of Mr. Lucien Linden, the King inspected for several hours the various houses and their treasures, and expressed his high admiration of the admirable arrangement and perfect condition of everything he saw. At every point he showed the deep interest he takes in horticulture, which plays such an important part in Belgium. On taking leave he very highly complimented Mr. Lucien Linden, on the model establishment he has created, and maintains in such a highly efficient manner.

National Chrysanthemum Society.—The Annual Picnic and Outing will take place on Monday, July 25th next. This will take the form of a trip to Harwich by Great Eastern Rail, a water trip from Harwich along the picturesque Orwell to Ipswich and back, returning from Harwich by rail in the evening. The General Manager of the Great Eastern Railway Hotel, Liverpool Street, has entered into a contract to convey the company throughout the entire journey by rail and water, providing dinner and tea at the Great Eastern Railway Hotel, Harwich. The charge for the day, including rail, boat, dinner and tea will be 10s. 6d. to members, and 11s. to non-members. A special train of saloon carriages, and one of the splendid saloon steamships of the Great Eastern Railway Company will be placed at the service of the party, provided a guarantee can be given for 250 persons. The exclusive use of these modes of conveyance would greatly promote the comfort and convenience of the company. As one or two of our affiliated societies are desirous of taking part in the trip, this preliminary circular is issued in the hope that by the participation in the trip of affiliated societies, and by members exerting themselves to dispose of tickets, the number stated above may be secured. *Bona fide* members of affiliated Societies will be charged for the trip at the same rate as members of the N.C.S. It is certain that the catering will be most satisfactory, and should the weather proved unfavourable, the protection on the steamship will be found ample. Should the required number of 250 not be obtained, the party will have to travel by ordinary trains and steamboats. A complete programme of the day's arrangements, together with menus for dinner and tea, is in course of preparation, and a copy will be furnished to every person taking part in the trip. As it is most important some idea of the probable number forming the party should be known by July 1st, I shall be glad to hear from you by that date. All communications relating to the trip to be addressed to—*Richard Dean, General Secretary, Ealing, London, W.*

Prof. Anton Kerner Ritter von Marilaun, the eminent botanist at Vienna, has just died at the age of 67.

Coming of Age Festivities at Stourbridge.—The coming of age of Mr. E. Stanley Webb—eldest son of Mr. Edward Webb—was celebrated on Saturday afternoon, Mr. and Mrs. Webb having invited the staff of Messrs. Webb & Sons, the Queen's Seedsmen, to their beautiful residence at Studley Court, Stourbridge. There were about 400 present, including the staff from Wordsley and the hands employed at the Kinver Seed Farms, also the managers from the Chemical Works at Chester. Fine weather prevailed and the visitors were enabled to spend a very pleasant time. A variety of games was provided for their amusement, including bowls, tennis, cricket, quoits, &c., whilst many availed themselves of boating on the lake, a fine sheet of water four acres in extent. The house and grounds were both open and in the early part of the proceedings afternoon tea was served, after which the whole party was photographed on the terrace. The band of the 2nd Battalion Bedfordshire Regiment, comprising 37 performers under Bandmaster Willis, gave great pleasure by their performances. Dinner was served in a large marquee, after which Mr. W. W. Wyld, on behalf of the staff, presented Mr. Stanley Webb with an illuminated address, together with several handsome articles, including a travelling bag, dressing case, hunting crop, sandwich case, &c. Mr. Wyld testified to Mr. Stanley Webb's popularity with the staff. Mr. Stanley Webb in responding said he could not sufficiently thank them for the kindly feeling towards him as expressed in the address, and he also acknowledged his indebtedness to them for the assistance they had given him since his connection with the business. "Success to the Firm" was proposed by Mr. J. W. Berrington, who referred to the great abilities and untiring energies of the firm—Col. Webb and Mr. Edward Webb. They always kept the business abreast with the times. Every year saw some new development, either the extension of the warehouses at Wordsley, the acquisition and enlargement of the works at Chester, or, as it had been during the past year, the purchase of an additional estate adjoining their Seed Farms at Kinver, and also the erection of more plant houses at Wordsley for the growth of certain flowers and other special experiments. Col. Webb in replying said, great as the business was, wonderful as the growth had been, he confidently looked forward to even greater progress in the future. Mr. T. R. Marshall proposed the health of Mr. and Mrs. Edward Webb who were so highly esteemed in the district no less for their liberality to public institutions than for their unassuming benefactions in private life. Mr. Edward Webb responded. He said the event was one of the greatest in his life and he hoped his son would uphold the traditions of the firm and maintain the high position it occupied.

IRISES AT LONG DITTON.

As the months come and go, and the wheel of nature revolves through the seasons, bringing with it in its revolutions the bright faces of the flowers as they reach their climax of beauty and, passing away, leave the field to others, we are greeted with a series of ever-changing colour effects amongst our hardy plants, but amongst all the varied and brightly-hued children that nature calls up for our delectation there is none upon which the eye rests with a keener sense of pleasure than upon the rainbow flowers, the Irises, which rival the gayest Orchids of exotic climes in their quaint markings and brilliant colours. The month of June seems to be essentially a month of Irises, for although the versatility of the genus has brought forth flowers that bloom both earlier and later, and practically extend the season well-nigh throughout the entire year, June has a greater share than the other months.

It is at this season of the year that the tall Flag Irises in their several sections produce their flowers, following closely upon the heels of the showy German Irises and taking up the tale where they lay it down.

Messrs. Barr & Sons' nurseries at Long Ditton have, ever since their formation, been a happy hunting ground for lovers of hardy plants, and it is almost needless to say that their collection of Irises is one of the most comprehensive in existence. Not

only are rare species looked after, and by careful cultivation coaxed to do their best, but choice varieties are watched for with equal keenness, and tended with the same care.

This year the plants have done remarkably well, and we were agreeably surprised during a recent visit to see how successfully they had resisted the somewhat trying climatical conditions of our early summer. The growth all round has been most satisfactory, and the flowers large, fine and numerous.

The descendants of *Iris barbata*, or the Bearded Flag Iris, have been divided into sections according to the colour of the standards and falls, and this colour division harmonises well with the several periods of flowering. After the "germanica" section with its self-blue standards and falls, and flowering in May, come in order of mention the varieties grouped under the sections "aphylla," "amoena," "neglecta," "pallida," "squalens," and "variegata."

In the "aphylla" section the prevailing hues are some soft shades of blue and white, the segments being prettily frilled. The choicest of these is Madame Chereau, now of course out of bloom.

"Amoena" varieties have white standards, and falls of blue, purple, or varying shades of these, and white. Here Mrs. G. Darwin is one of the finest, with large white falls, netted with gold and violet, and although when contrasted with the name it may seem somewhat anomalous a fine yellow beard. This is a very free flowering variety. Victorine has large purple-violet falls, curiously mottled with white. It is a noble flower and very showy.

"Neglecta" varieties have standards which range in colour from lavender to rich purple, the falls being usually dark or violet purple with occasionally mottlings of white. Willie Barr, Amabilis, Fairy Queen, and Hannibal are pretty well known varieties, and they represent the general excellence of the group.

In the 'pallida' forms we find paler shades of blue and purple in both standards and falls that are at once delicate and pleasing. Occasionally, as in Garihaldi and Albert Victor, we find a suffusion of rose that is very striking. In *I. rubella* we have rosy-lilac standards and deep claret falls, whilst Queen of May exhibits a soft rosy-pink shade that is almost indescribable.

The 'squalens' group contains all varieties which exhibit dun shades of copper, bronze, and fawn. Here we get some of the most uncommon colours and combinations, which are to be found nowhere else. Numerically also the section is one of the strongest, and it contains many forms of rare beauty. Very striking is *La Prestigieuse* with bronze-yellow standards, and maroon-purple falls netted with yellow-white. Dr. Bernice has bronze-yellow standards and deep lavender falls, an exquisite combination that only needs to be seen to be appreciated.

The 'variegata' section is likewise strong in numbers. The standards are yellow, and the falls of various shades. In this group we have some of the most showy of all Irises, the colours being in all cases brighter and decided. Maori King is a comparatively new form with rich crimson, gold-margined falls. In *Gracchus* the falls are crimson, netted with white, whilst in *Darius* they are lilac, and netted with both brown and white.

Passing from the innumerable forms grouped under the above-mentioned sections, we were much taken with a variety of *I. spuria* named Notha, which runs from 3 ft. to 4 ft. in height, and has rich violet standards with blue, yellow-spotted falls.

The Xiphions, or bulbous Irises, are of equal importance to the rhizomatous division which we have been considering, for to them belong such early-flowering subjects as *I. Histrio*, *I. persica*, and *I. reticulata*. The June flowering representatives are of taller and more imposing presence than these, and the flowers are larger and finer, although we do not wish to make invidious comparisons. We must, confess, however, that a magnificent break of *I. Xiphion* Thunderholt excited in us the liveliest feelings of admiration. This grand variety grows to a height of about 3 ft., and the flowers are large and massive in proportion. The standards are rich crimson-black, the falls are chesnut-brown with a prominent central orange blotch, and both are of great width and substance. The exceedingly rich effect produced by the sun shining on this mass of flowers entirely baffles description. Side by side

with Thunderbolt was another form of *I. Xiphion*, called Blue Beauty. This is much dwarfer, the height being not more than 18 in. The flowers are only a little smaller, however, and the colours, deep blue standards, and azure falls with yellow blotch, are brilliant in the extreme.

The above-mentioned varieties are only a few of those that are to be seen in all their glory at Long Ditton during the season.

RAISING NEW PANSIES.

FEW plants lend themselves so readily to artificial fertilisation as Pansies do; and yet very few growers take the trouble to artificially cross them. In Scotland, at any rate, nearly all the seedlings are chance ones, that is, the seed saved from varieties which have been only fertilised by insects. There are a few exceptions to this rule, however. One grower by systematic crossing turns out many fine varieties yearly. Generally, chance seedlings are no improvement on their parents. They are generally only variations, in colour, size or shape, a shade or two darker or lighter, a broader or narrower margin, a slight difference in the eye. On the other hand, in artificial fertilisation a variety, fine in colour, size and markings, but deficient in the lower petal can be crossed with another, which is good in that respect; or a very fine variety, but with a weak constitution, could be crossed with a robust sort with splendid results.

If raisers of new Pansies would look a little more to the constitution of the plants from which seed was saved, there would not be so much dying off in Pansies. For fertilisation a dry bright day should be chosen. The best plan to adopt is to gently remove the lower petal of the pollen parent. The pollen lies immediately below the pistil, but there is not generally much of it. When the petal is taken out of the pollen parent, take a camel-hair brush and brush some of the pollen on to the pistil of the seed parent. Always choose the best grower for the seed parent.

It makes it the more interesting to label all crosses, and it is also a guide for the following season. It does not always happen that pods swell up. They sometimes just seem to stand still, and when opened only contain one or two fully developed seeds. The seed pods should be allowed to stand until they begin to turn slightly brown; but care must be taken or they will open and the seed get lost. The seed may be sown when ripe or kept in a dry place until spring.

If sown on a hotbed in March, and planted out in May they should flower in June.—*Scotch Grower.*

WHY DO SO MANY STANDARD ROSES DIE?

THAT there is a great disproportion between the number of deaths which occur among standard and dwarf Roses will, I think, be readily admitted by all conversant with Rose growing, the fatality among standards being generally attributed to a variety of causes. At the same time, what I take to be the most prevalent cause of failure seems to escape general attention, owing, I believe, to the hardness of the stock employed, when under natural conditions among our hedge rows and plantations where its stems are to a considerable extent protected by the surrounding growths from frost, especially late spring frosts. When taken from their natural position, and treated in a somewhat barbarous fashion, what do we usually find? Why their naked stems are exposed to the influences of all weathers, and being naturally excitable a few week's mild weather will set the sap in motion, and then early morning frosts setting in will freeze the sap in the stems, which being fully exposed to the rays of the rising sun thaws suddenly. The cells of the bark are ruptured, and the sap can no longer have its free course. The roots below ground may live and continue to throw up strong suckers for a time, and the head of the plant may possibly drag out a feeble existence for a season or two, but must finally succumb. This phenomenon is very familiar to those in charge of fruit nurseries, where, sometimes, whole plantations of Cherry and other stocks are killed to the ground. I readily admit that there are other destructive agencies at work among standard Roses, but at the same time think the cause I indicate is the most general one to which standard Roses succumb.—*W. B. G.*

A FINE FRILLED HARTSTONGUE.

THE varieties of the common Hartstongue (*Scolopendrium vulgare*) number many hundreds, in fact their name is legion. Their nomenclature, too, is considerable; so much so that none but the pupils in the highest school board standards would be able to wrestle with some of their names, or propound their orthoëpy. Our purpose here, however, is not with the common forms, but with the frilled, ruche-like, or crispum section; and whether or not their names offend is immaterial—the beauty of the plants is beyond question. In this section alone—perhaps the most highly developed—Mr. E. J. Lowe describes, in his scholarly little work on "British Ferns," no less than fifty-eight varieties. Unfortunately, nearly all of these are sterile, that is, they do not produce spores, hence their propagation is slow and their acquisition, in consequence, somewhat prohibitive. Still, they are very fine decorative plants, and an absolute necessity in a collection of our native Ferns.

The particular variety which has called forth these remarks is known as *Scolopendrium vulgare crispum* (Stewartson), and is in the possession of Mr. A. Wright, Falkland Park Gardens, South Norwood Hill, S.E., Mr. Wright being a lover of British Ferns, as well as every other vegetable product in the horticultural line.

The Fern in question occupies a 6-in. pot, possesses twelve evenly-balanced fronds, arranged in shuttlecock fashion, which measure from 3½-ins. to 4-ins. in diameter, the average length of the fronds being about 14-ins. As the stipes are very short the whole plant presents a very foliaceous and beautifully frilled appearance. As the normal width of a Hartstongue is about 2½-ins. only, the massiveness of this one will be apparent.

The plant is perfectly barren, this barrenness being probably due to hypertrophy, or over-nourishment of the leafy parts, the plant thus having, so to speak, no energy left for the production of spores.—C. B. G., Acton, W.

PEOPLE WE HAVE MET.

MR. ALBERT F. UPSTONE.

MR. ALBERT F. UPSTONE, F.R.H.S., whose photograph we have much pleasure in reproducing this week, and who is well known in horticultural circles, is now in business on his own account in Rotherham, near Sheffield. He commenced his career in the seed trade with Mr. George Prince, in the university city of Oxford, having previously been educated at St. John's College School, where he was a solo chorister for many years, and, indeed, at one time, Mr. Upstone had serious thoughts of taking up music in the vocal department as a profession, as he has been for many years well known as a very able exponent of the art.

After leaving Mr. Prince, where he received a very fair ground-work, in order to fit him for his future career, he was successively assistant with Messrs. Thos. Perkins & Sons, Northampton, the late Mr. Donald Cuthbert, of Liverpool, Messrs. J. R. Pearson & Sons, Nottingham, five years traveller for Messrs. John Peed & Sons, Norwood, where he proved very successful on the road and gained many friends, who stick to him even now, though severed by many miles away in South Yorkshire. Leaving the Messrs. Peed, who regretted his departure, he took up the position of local manager at Norwich to Messrs. Daniels Bros., and during the five years he remained here he led an exceedingly busy life. He formed and carried through as managerial secretary what became well known in the Eastern Counties as "Daniels Brothers' Dramatic Corps," and cleared in successive years some substantial amounts for different charities, which latter included the Benevolent Fund of the East Anglian Horticultural Club, of which he was also hon. secretary during the whole time he was in Norwich. Leaving here to take up the management of the seed department for the Messrs. Veitch, at Chelsea, he was presented at Norwich with a handsome clock and a purse of money, the outcome of general appreciation, as a conscientious worker who has always faithfully, honestly, and with considerable ability fulfilled his duties to employers, and studied the welfare of the gardener.

He soon afterwards resigned his position with Messrs. Veitch, being on the look-out for a place to

settle down, and commence business on his own account, for which he had for many years had a craving. After a time he chose Rotherham as his destination. We are pleased to hear that success is attending him so far, whilst we do not think for a single moment that Mr. Upstone is one of those gentlemen who is at all likely to give way under any ordinary circumstances. He is now thirty-eight years of age, and has become, already, a very well-known gentleman in South Yorkshire.—"Omnia bona bonis."



MR. ALBERT F. UPSTONE.

ALPINE AND ROCK PLANTS.

ERANTHIS CILICICA.—With us this is an early spring flowering subject like its congener *E. hyemalis*, so well known under the name of Winter Aconite. In its native home, in the Alpine region of the Cilician Taurus, it blooms in the month of May, while the upper part of the mountain is still clad with its mantle of snow. At that time bulbous plants begin to bloom in great abundance, including Tulips, Crocuses and Fritillaries, which make the grass look bright and cheerful. *Erantnis cilicica* in millions covers the sward, as it were, with a yellow carpet. The flowers have more numerous petals than in the case of *E. hyemalis*, and when this native of the Taurus becomes more common it will make a welcome addition to our early spring flowering rock plants, whose requirements are really very few and easily satisfied.

CAMPANULA G. F. WILSON.—The general aspect of this plant indicates that it is a hybrid, apparently between *C. pulla* and *C. turbinata* or one of that group. The plant is compact and squat in habit; but instead of bearing a single drooping flower, it often produces a number on stems which have acquired a vigorous growth. The blooms are much larger than those of *C. pulla*, and nodding, with the rich blue-purple colour of the latter. In the course of a few years the plant spreads over the ground, forming a large patch, provided it is not planted in a roasting, dry spot. For this reason there is no difficulty in propagating it; and pieces may be taken off with a trowel during moist weather in early autumn, so that it may get established in the fresh soil before winter.

ACANTHOLIMON ACEROSUM.—The near relations of this plant, the *Statice*, are natives of the mud flats of the sea shore, and in some instances of the dry chalk, where the wonder is how they can subsist. All the species of *Acantholimon* I have seen are truly rock plants, and well adapted for planting in exposed positions, though they must not be planted skin-deep, so to speak, amongst stony rubbish, where they cannot find moisture. The roots must have plenty of room to extend downwards into good soil. The large pink flowers are not very numerous, but are very pretty nestling on the top of the carpet of spiny-pointed leaves. The latter are glaucous as in the case of *A. venustum*, but much narrower.

VERONICA TEUCRIUM RUPESTRIS.—The profusion of rich blue flowers produced by this dwarf Speedwell entitles it to a prominent position in every garden. Although it is first-class for bold and projecting parts of the rockery, it is equally serviceable in the flower garden where those concerned with its management are not all gone upon the usual run of bedding plants. It makes a grand edging to permanent beds of herbaceous plants and dwarf subjects generally. The flower stalks only rise 4 in. or 5 in. above the ground.

DIANTHUS CAESIUS.—There is nothing more charming amongst Pinks than the Cheddar Pink during June and part of July. The flowers, about the size of a shilling, vary from light to dark rose-pink, but are always so fresh and pleasing that no rockery should be without a good clump. The gray foliage also looks happy, and forms a cheerful setting for the flowers. The latter vary considerably in size and colour, making it doubtful whether, after all, one has got the Cheddar Pink. Such plants, I believe, are sometimes obtained from Continental seed, and are very convenient for those who have a new name to give away. The plant is, however, capable of variation, and some enterprising hybridist should develop a new race of Pinks.

ASTER ALPINUS.—A perennial Aster that flowers in June and July cannot be regarded as a Michaelmas Daisy. It is a neat growing Starwort, 3 in. to 6 in. high, and carrying blue-purple flowers about the size of a florin. The plant is of the easiest culture, and may be propagated freely enough by division in early autumn.

ACHILLEA UMBELLATA.—Of the dwarf species of *Achillea* this will always merit a place amongst Alpine plants for its neat habit, forming as it does a patch of gray, closely hugging the soil and stones of the rockery. The umbels of white flowers rise a few inches above the gray, deeply-cut leaves, having narrow-spreading segments. Cuttings of the flowerless shoots root very readily in pots of sandy soil in a frame. The plant comes from Greece.

TANACETUM ARGENTEUM.—At first sight, this closely resembles *Achillea umbellata*; but even if the resemblance is only superficial, it is remarkably close. Outwardly, the flower might be regarded as identical, and the leaves only differ in being narrower, with more numerous, spreading but overlapping, lobes of a silvery-gray as indicated by the name. It comes from Asia Minor, and is worthy of a place amongst a select collection. Cuttings soon furnish all the plants wanted.

ACHILLEA MONGOLICA.—This may be regarded as a Sneezewort in miniature, the stems and leaves being like our native *A. Ptarmica*, except in being smaller in every way. The white flowers are much larger and purer white, so that the plant well merits all due consideration. Its appearance is of no mean order.

SILENE QUADRIFIDA.—The petals of this hardy European Catchfly have four short and rounded teeth at the apex, thus suggesting the name employed by the botanists. The plant forms a neat tuft of upright habit, surmounted by the snow-white flowers. The general aspect of the whole plant reminds one of *S. alpestris*, but the slender, linear leaves are very different. It is a gem of the first water for the rockery, and of easy cultivation. Planters might give ease of culture a primary consideration, because a well-furnished rockery is always more interesting than one which is occupied with rare and slow-growing or half hardy sorts that never make a real show.—J. Effe.

The Orchid Grower's Calendar.

COOL HOUSE ORCHIDS.—As promised in the last calendar, I will just run through a few of the best kinds for cool house culture.

The first on the list is undoubtedly *Odontoglossum crispum*, on account of its variability, lasting qualities and beauty. Besides it is out of *O. crispum* of all cool house Orchids that you get the plums. As I touched on the culture of this particular kind in the preceding calendar I shall pass on to

COELOGYNE CRISTATA, which is one of the finest Orchids grown for early spring flowering. We find they do wonderfully well when grown cool. We use pans about eight inches in diameter; into these you

can get a sufficient number of leading growths that will give you ten to twelve racemes of flower. This we think is much better than putting them into large pots or pans, because they can be suspended above the Odontoglossums. The compost is similar to that used for most Orchids, that is, good peat and live Sphagnum moss in about equal parts, added to which a little silver sand is useful, as it affords better drainage. They are great lovers of moisture at the roots and should never be allowed to shrivel much, although during the dull winter months water must be given very cautiously or the spikes are likely to turn black and sometimes damp off altogether. During the summer months when growth is most active a dose of *weak* manure water will be found beneficial about once a week.

CATLEYA CITRINA.—This is the only *Cattleya* as yet that lends itself to cool-house culture, but in time, perhaps, the hybridiser may, through the aid of the above species, come to the rescue. On account of their peculiarity in growing head downwards, blocks seem to suit them best, and on these they do very well for a time, but in the long run pans will be found the most suitable, in which they must be well elevated. In time they will be found to resume their natural habit by growing over the sides of the pans, so that in fixing the wires keep this trait of theirs before you, and tilt the pans in a manner that the growths may assume their natural conditions. It may be necessary, however, to secure the plants in the pans by copper wire, using as compost good drainage and a small quantity of peat and moss.

CYPRIPEDIUM INSIGNE.—This is so well known, and the culture understood, that it only remains for me to say that for general usefulness it still holds its own. It does best in a compost of peat, loam, and chopped moss in equal parts, with a little sand. It flowers best when it becomes pot-bound.

DENDROBIUM INFUNDIBULUM AND ITS VARIETY D. 1. JAMESIANUM.—These do well in the cool house, but should be placed at the warmest end. The beautiful white flowers, set off with a deeply stained cinnabar-red lip, are very attractive. The usual compost of peat and moss does them well. When in flower they may be kept in a moderately dry place, so that the flowers do not spot, but no attempt should be made at resting them, as is practised with most other Dendrobies.

SOPHRONITES GRANDIFLORA is a most brilliant dwarf-growing Orchid that should be in every collection. Hanging pans suit it best, and treatment as advised for *Odontoglossum*.

ONCIDIUM MACRANTHUM is one of the best grown. It makes long, fleshy roots, and on that account should be provided with plenty of pot room. The compost should be placed about them rather loosely with a preponderance of moss.—C.

THE PLANT HOUSES.

The Stove.

Cold winds and fluctuating temperatures out of doors have rendered it anything but easy work to regulate conditions of temperature and moisture under glass, but with the advent of July we, at least, expect more settled and summer-like weather. Everything should now be in full vigour of growth, and this will apply not only to the plants but also to the insect pests which infest our stoves. In order to keep these from multiplying the syringe must be kept regularly at work twice a day, and should, in bad cases, be further supplemented by sponging with insecticides.

CLIMBERS.—The growth of these will need to be regulated to some extent, for where the plants are making too much growth it is advisable to remove some if only for the sake of the subjects which are occupying the stages beneath.

BOUGAINVILLEA GLABRA.—Instead of keeping the shoots of this showy plant strained tightly to wires upon the roof they should be loosened and allowed to hang nearly at their full length, or at least just so that there is room to pass beneath them. As the strain of flowering is very great a good deal of water will be needed, and liquid manure may be given once or twice a week according to circumstances.

NYMPHAEAS.—As a rule the tanks in the stoves are rather small for the number of plants that one would

like to get into them. Some of the stronger growing *Nymphaeas* are apt to crowd the other occupants of the tank by their superabundant foliage. Some of this may with advantage be removed, for while to do so will give more room the flowering abilities of the plants will not be appreciably lessened. Both black and green fly are apt to prove troublesome at this time of the year, and as fumigation is out of the question the best method of dealing with the pest will be to sponge the dirty leaves with tobacco water.

ADIANTUMS IN BASKETS.—Maidenhair Ferns make exceedingly pretty baskets when properly looked after, but in the hot weather the great danger is that they are allowed to become too dry. Once this happens the plants are well nigh ruined, since they lose a great part of their fronds. It will be well to dip all those that can be easily lifted down, and those that are too heavy to lift must be watered at least twice a day, and three times in hot weather will not be too much. Liquid cow manure will be found to suit these Ferns admirably if it is not given too strong.

Pits and Frames.

CHRYSANTHEMUMS.—The tall plants that are to produce the show flowers have been in their summer quarters for a few weeks. Owing doubtless to the moisture-laden air they do not appear to have received the slightest check, and are growing strongly, too strongly, it is almost to be feared. As it is difficult to find stakes tall enough for them that are not also too clumsy a few stout posts should be driven in at intervals of a few yards all along the line, and light cross rails or stout string fastened to these. The uprights should be at least 6 ft. in height after they are driven in, and if 7 ft, so much the better. It is very customary to plunge the bush plants with a view to saving labour in watering. If this plan is to be followed it should be carried out at once. Give each plant sufficient room for the light to get all round it. Crowding is to be deplored, although necessity knows no law. Some growers there are who do not believe in plunging, and who prefer to have the pots fully exposed. Something may be said for both sides of the question. Where the plants, in pursuance of this system, are stood in lines along by the sides of paths or on vacant pieces of ground they should be stood on boards, slates or paving tiles, so as to keep the worms out of the pots.

WINTER FLOWERING ZONAL PELARGONIUMS.—These will need to be occasionally looked over to pick out all the flower buds, and to pinch such shoots as are growing too strongly at the expense of the rest. In about another fortnight's time some liquid manure may be given, for by then the plants will be in a condition to benefit by it.

CLERODENDRON FALLAX.—The plants raised from seed sown in early spring are now sturdy specimens in 5-in. and 6-in. pots. They like plenty of heat, and nothing suits them so well as a place in an ordinary brick pit, where they are brought up near the glass by standing them on a bed of fermenting material. Thin the plants out as growth proceeds, and keep the syringe well at work amongst them, for mealy bug is a great nuisance.

HERBACEOUS CALCEOLARIAS.—The young seedlings from the early sowing are now ready for pricking off. Use rather sandy soil, and drain the pots or pans thoroughly. Do not be in a hurry to discard all the weaker growing plants, for to do so would possibly mean that some of the finest varieties would be thrown away. Shade the young seedlings carefully. This is most important, for even a few minutes exposure to a hot sun would be likely to prove fatal. Light, thin tiffany is the best material for shading. If other plants are wanted, either to come in a bit later than those from the first sowing, or if the first sowing has only been a qualified success, a little more seed should be sown in pans prepared in the same way as for the first lot. The seed pans may now be placed in an unheated frame, where germination should be rapid enough.

CYCLAMEN.—The plants from the seed sown last August or September are now quite ready for transference from 60-sized pots to 48's. The plants from the January sowing have not been long in the 60's, and will not need shifting just yet. Use a compost of two-thirds of good loam, one of leaf soil, and plenty of coarse silver sand. Pot with medium firmness. Shade carefully, and as long as the weather proves as capricious as it has been throughout June, be cautious in ventilating.—A. S. G.

Gleanings from the World of Science.

Vagaries of Tulips.—A similar case to that described on p. 663 comes to us from Messrs. James Cocker & Sons, 130, Union Street, Aberdeen, whose representative picked it up in the garden of Mrs. Davidson, of Foresterhill, Aberdeen. The bulb came up amongst a lot of late mixed Tulips, and was a double, rectified bizarre, flamed with dark crimson on a golden-yellow ground. The stem was branched and carried four flowers. Two of the branches carried two small but perfect leaves each, which may have resulted from the degeneration or reversion of the outer floral leaves, as some of them were green, and others half green and half flamed like the rest of the segments. The upper portion of the stem also carried two leaves, one of which was caught between the main axis and an axillary branch that was amalgamated with the leaf, and the latter with the leading stem. Thus the leaf had a stem fixed to the front of it and another along the back of it. One of the floral leaves ran down a branch, being adnate to it for 2½ in. The ovary and styles were broken up into 3—6, some of the pieces being petaloid, that is, coloured. Mr. Chas. Urquhart, the gardener, said that several of the stems carried two flowers, but only one had four. Reaching us as these flowers did in the last week of June, they show a vast difference of one month between the season of flowering at London and Aberdeen.

THE undermentioned subjects were discussed at the meeting of the Scientific Committee of the R.H.S. on the 14th ult.

"Silver" Leaf Disease.—Specimens of this disease were received from Mrs. Floyer, Basingstoke. The disease is known to be very common on Pomaceous plants, the silvery appearance being due to the raising of the epidermis from the underlying tissue. The disease is very fatal both indoors and out, and is in all probability attributable to the growth of a fungus, the nature of which has not yet been ascertained.

Apple-leaves.—Some leaves injured by frost or scald from the effect of the sun shining on a damp surface were also sent.

Plant Diseases.—Dr. W. G. Smith reports as follows on the specimens submitted to him:—

Palania Disease.—From a further specimen of this disease I have confirmed my previous opinion. The latest specimen sent bore the fructifications of a fungus which I hope to have identified. The diseased tissues contain abundant mycelium, and the starting point for attack was from last year's old wood. I shall be glad to communicate further results later.

Begonia.—From the material sent by Mr. Caddy it was difficult to say really what was the cause of disease. One or more fungi were easily developed on the withering leaves, but whether these were saprophytic on the dying tissue or were the cause of trouble, it is not safe to say. Begonias of this class are so liable to wither at the margins (from draughts, &c.), and are so unsuitable for transit to a distance, that accurate observation can only be made on plants in their actual habitat.

Fungus on Thuja (Biotia).—The plants sent were attacked by *Pestalozzia funerea*, Desm., a fungus well known to occur on dying Thuyas and allies. The life-history is, however, imperfect.

Cytisus Adami.—Mr. Herbert E. Brooks sent specimens of the curious *Cytisus Adami*. The three forms of flowers on a Laburnum is from the well-known "graft hybrid," as it is supposed to be, known as *Cytisus Adami*, for Mr. Adams budded *C. purpureus* on *C. Laburnum* in 1825. The purple and yellow flowers are of the true species, but the brick-red is the hybrid. It was described in the *Gardeners' Chronicle*, 1841, p. 325, 336; 1842, p. 397, and often subsequently. The fullest account is in Braun's *Rejuvenescence*, 1851 (English translation, 1853); in Prof. Morren's paper in the *Belgique Horticole*, 1871; and a summary of the whole subject is given in Darwin's *Variation of Animals and Plants*, vol. i., ed. 2 (1875), p. 413.

An old tradition has it that the Beech is never struck by lightning.

HINTS FOR AMATEURS.

CANNAS.

WHEN the horticultural history of the last decade of the nineteenth century comes to be written the chief theme of discourse will be the vast improvements made in the various races of garden plants, some of which, as, for instance, the tuberous Begonia, have sprung into popularity since the termination of the seventies. Possibly the most remarkable flower of all, however, will be the Canna, for within the period alluded to it practically began what has since proved to be a glorious course. As the years have rolled on not alone have we seen rapid and important changes made in the appearance of the flower, but we have experienced something closely approaching a revolution in its culture. It has been demonstrated beyond question that in the gardener's hands the Canna is a very tractable subject indeed, and that although, in common with everything else, it has its likes and dislikes, yet it has probably fewer of the dislikes than most other things. It is a truly tropical plant, and likes plenty of heat as a consequence, but if proper care be accorded, it may be had in full beauty during our all-too-short summers in our out-of-door gardens, whilst under glass there is no difficulty in having plants in bloom for seven months of the year, from May to November inclusive.

Perhaps a feeling of surprise may be caused by the statement that the Canna is not quite so new to this country as it is popularly supposed to be. Most people, if asked to name approximately the date of the commencement of its rise, would be say about ten years ago, and they would be right in a sense. On the other hand, the ancestors of the modern Canna were cultivated in this country away back in Elizabethan times, although only to a limited extent. The parent species, *C. indica*, was first introduced to this country from the West Indies in 1570, so that for upwards of three centuries it has been in our midst, unknown to the great majority of gardeners, perhaps, but still there. Some of the more energetic of sixteenth century gardeners, however, noticed it, and cultivated it, and, what is more, recorded their experiences of varying successes and failures, usually the latter, it must be confessed. Thus John Gerarde, of herbal fame, wrote in 1596 that he had planted it in his garden a number of times, but that he had never been able to get it to flower. Parkinson, who came after Gerarde, had a little more luck, since he states that he obtained flowers from his plants in favourable years, but that they never came to seeding. This was about thirty years after the record left by Gerarde. Even at that date the original *C. indica* had acquired a "sporting" character for itself, for Parkinson speaks of a variety with yellow spotted flowers. The development of distinct varieties was slow, however; possibly the gardeners of that date had something else to think about, for the age was a troublesome one, or even more probably they had not recognised the vast potentialities that the then comparatively insignificant flower possessed, and certainly the rage for improvement of races of garden plants was not then so keen and consistent. We find, however, that Aiton, of Kew, mentions four species or well-marked varieties, called respectively *C. rubra*, *C. coccinea*, *C. lutea* and *C. patens*.

The cultivation of the Canna was continued more or less intermittently down to our own times, but the prevailing idea concerning it seems to have been that it was chiefly serviceable as a foliage plant simply. Flowers may have been obtained or they may not; it is not at all probable that they were in any great numbers. From fourteen to eighteen years ago a collection of varieties, even then mustering a respectable number, was grown for trial in the garden of the Royal Horticultural Society, but even then the foliage value of the plants overshadowed that of the flowers. Since that date, however, the development has been in the floral line, owing chiefly to the labours of Continental florists, who, in the enjoyment of more genial climes, were able to appreciate more correctly the excellencies, both hidden and revealed, of the flower.

Nowadays we grow Cannas almost solely for their flowers, at least, as far as pot cultivation goes. The

foliage is handsome certainly, and its true tropical appearance in the flower garden is not to be despised or even underestimated, but the modern gardener would be apt to be highly dissatisfied if his plants, like the Fig tree of old, and the Cannas of John Gerarde's time, bore "nothing but leaves."

The modern Canna is distinguished from the old not only by the size, brilliancy and various hues of the flowers, but by the exceptional freedom with which these flowers are produced. Certain it is that the needs of the plant are better understood now than they used to be, and it is equally certain that the modern gardener with his vastly increased facilities is in an incomparably better position than the old-time practitioner to supply these needs, but even taking all this into consideration the change is truly marvellous. Then, again, there is a wonderful change in the habit of the plant, for, whereas, the modern plant is dwarf, some of them not being an inch above 2 ft. in height, while the ancestral forms were at least double, and more often nearly treble that height.

The break away from the old style may be said to have commenced with the introduction of the variety Madame Crozy, still a grand form, but since that auspicious event the hybridiser and cross-fertiliser have been hard at work, and the number of varieties of a similar strain or habit is legion.

The past few years has seen almost as great a change in the cultural routine followed. Not so very long ago it was the prevailing idea that in order to get Cannas to do well under glass huge pots must be given them. Pots having a diameter of 10 in. or 12 in. were then frequently, and are now occasionally, to be seen. Fine handsome plants were grown in them we neither can, nor wish to, deny, but such plants were only suitable for large houses, and it is not every one that has large houses to spare. Again, the work of potting up, watering, and shifting these heavy plants was a serious item in the labour bill, and quite enough to deter an amateur cultivator from tackling the subject.

Small wonder was it, therefore, that certain enlightened cultivators set about looking for a more excellent way than that offered by the old style, and the amateur has much to thank these men for, since they have brought the Canna well within his reach as a pot plant, either suitable for his greenhouse or conservatory, or even in the case of the dwarfest plants as a subject for the window. What a wonderful change is this. Although it is not desirable to make invidious distinctions it is impossible to refrain from mentioning the name of Messrs. H. Cannell & Sons, of Swanley, in this connection, for they have certainly done more than anybody else to demonstrate the possibility of growing grand Cannas in 5 in. and 6 in. pots, plants with flowers and spikes that would compare very favourably with those formerly borne by plants in 10 in. and 12 in. pots. On the other hand, for practical utility there can be no comparison, for the smaller plants are so far and away ahead of the others.

The system of cultivation followed is both a rational and an easy one, and we may commend it strongly to the notice of all amateur cultivators. Vigorous plants are continually throwing up suckers from the base, and these suckers must be taken away from the parent plant before they get too big and potted up. Fairly strong suckers will flower on their own account within about three months of their separation from the parent. The breaking away of the suckers is not a matter of any difficulty, although occasionally a knife is necessary for a very tough specimen. The young plants come away with plenty of roots, and thus do not feel the check of severance. In potting use a compost of two-thirds of good loam, one of old mushroom bed dung, or cow manure, and a nice sprinkling of sand. Pot pretty firmly.

The first batch of plants should be started about the beginning of February, and if a temperature of 60° Fahr. by night, rising to 65° and then to 68° or 70°, as the season goes on, is given, they will be in full flower by May. By potting up the suckers as they can be obtained, a succession of bloom may be had right on until November, the last batch, that is, those flowering in November, being produced from suckers taken off about the middle of August.

Next week a selection of some of the best varieties will be given.—*Rex*.

London has an average of 178 rainy days in a year.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Herbaceous Plants Dying.—On taking possession of my present house at the end of last year I found the garden in a most neglected condition. I dug it well over, however, finding the usual quantity of brickbats and kettles beneath the surface, and manured it. At the end of February I planted a quantity of herbaceous subjects. These did fairly well up to a certain point, but during the last two months a number of things have succumbed, amongst them being *Polemonium Richardsoni*, every plant of which has gone home. *Lychnis Viscaria splendens plena*, and several varieties of *Papaver bracteatum*, whilst *Physalis Alkekengi* has never appeared at all, and *Violas* are at an absolute standstill. Can you help me to a probable reason?—*Suburban*.

There is no doubt that the soil of your garden is in a sour and unkind condition, which renders it very hard for plants with tender constitutions to get along. You cannot do anything now, whilst the plants are growing, except occasionally stir the surface of the soil in order to keep it as well aerated as possible. Next autumn we should advise you to take the plants up and give it a good liming in order to sweeten it. You might follow this up in the spring by introducing a quantity of ashes, road sweepings, or anything of that nature which will work a mechanical improvement. You should then have better luck. Meanwhile, you may also keep an eye upon the cats.

Poinsettia Cuttings Failing.—*C. Mason*: Poinsettia cuttings are often afflicted with what our American friends call "cussedness," and they damp off for no reason at all apparently. In your case, however, the reason probably is that you have not given them enough of heat. A temperature of 65° Fahr., such as you gave yours, is too low; it should be at least 68° or 70°, the latter preferably. It is getting rather late for cuttings now, and they will not have time to make big plants, but if kept in small pots they will be useful. Try again, and give a higher temperature.

Rhodanthes.—*Q.*: The flowers are rather too far advanced to keep well. You should have cut them just before they were fully opened, and then you would have preserved the colour of the centre or disc florets, which will now turn, or possibly have, in most cases, turned, black or dirty brown.

Thunbergia alata.—*C. E.*: You did quite right to start the *Thunbergias* in heat, and to place the baskets in a warm house after they were made up. Now, however, they should have made sufficient growth to warrant removal to a cooler place where they will flower and grow freely enough all the summer.

Dahlias in June.—*A. E.*: Your energies have been misapplied. Nobody wants Dahlias in June, no matter how good they are. They are pretty flowers, of course, but we want them in Autumn, not at Midsummer.

Swarms of Bees Uniting.—*Aura*: It is certainly a curious phenomenon, although a frequently occurring one, that two swarms of bees, each, perhaps, coming from hives a half a mile or so apart should unite of their own free will. Bees are very social as far as the members of their own hives go, but they do not like strangers, and under ordinary circumstances for one colony to join with another would mean a junction for battle. The swarming bee, however, is really in that interesting condition known as 'blind drunk,' and her sense of smell by which she distinguishes friend from foe, or what is the same thing, acquaintance from stranger, is blurred, and she usually forgets to sting even a meddlesome man. We believe the loss of the senses is not unusual in other cases when the subject is 'blind drunk,' we never confess to more than temporary exhilaration ourselves. Once the junction is effected between swarm and swarm, however, everything goes on peaceably after one of the rival

queens has triumphed over the dead body of her rival. Here the bees are sadly like the human, for—"the king is dead, long live the king." The most curious instance of union of swarms that we remember personally is one when three went together, one swarm settling on the cluster formed by the other, both being hived together, and the third lot coolly walking into the hive that contained the two within half an hour of the time that they had been placed there.

DIANTHUS MONSPESSULANUS ALPESTRIS.

THE great bulk of the plants coming under the genus *Dianthus* belong to *D. Caryophyllus*, *D. plumarius*, *D. sinensis* and *D. barbatus*. There is, however, a mass of material from which to choose for the enrichment of our gardens, but particularly the rockery, for 238 species are known to science, and most of them are suitable for planting on the rock garden. Botanically, that under notice comes under *D. monspessulanus*, as the original had been found at Montpellier, in France. The type has rose flowers, but several wild varieties, with pale rose and white flowers, and others differing in habit have been picked up and named by botanists. This is not to be wondered at, for in a wild state the species occurs in Hungary, Calabria, Caucasus and Corunna, the latter being its most westerly habitat in Spain. The plant forms a dense patch covering the ground, and during June and July throws up a profusion of flowers whose petals are deeply and beautifully fringed. The accompanying illustration was prepared from a photograph taken in the nursery of Messrs. R. Veitch & Son, Exeter.

NOTES ON PARIS GARDENING.

(Concluded from p. 684).

CHATEAU TURESNES.

BEING a gardener, and, as the old saying goes, "Birds of a feather, &c.," my natural desire was to make the acquaintance of some of the French gardeners, and I must admit, with pleasure, that those few I had the honour of being introduced to were most courteous and willing to show the products of their skill, and also to give any information respecting the treatment of these products, or, indeed, any information, even to the smallest details; only, unfortunately, I had to take my information second-hand, and *vice versa*. This was rather trying to me, who was bent upon getting as much information as possible, and having to go such a roundabout way to obtain it.

The first private garden I had the privilege to look over was at Chateau Turesnes, the residence of the late M. Worth. The place is situated about midway between Paris and Versailles. The spot was well chosen, as the house is built on the side of a hill, commanding fine landscape views. M. Louis Morin, the energetic and courteous gardener, very kindly conducted me over the establishment. The place was well worth a visit, as it was the first of its kind I ever saw, and no wonder, considering with whom the design and ideas originated, namely, the late M. Worth, who was, I believe, the pioneer of many new designs for Paris fashions. It was not by any means what we should call an all-round place, as flower gardening and house decoration were the two leading features; in fact, they were the all-important part, and, practically, during the summer months these two branches of gardening almost converged into one, for during that period of the year the family really lived in the garden, the house proper being only used for domestic and sleeping purposes.

The dining, drawing, billiard, and other reception rooms, with the conservatory were built quite apart from the house, and were, so to speak, accessories to the flower garden, or the whole grouped into one. The dining-room was like a grotto; in fact, it was under ground, with nooks and corners about, planted with Ferns and other suitable subjects. On the centre of the table a small fountain played at will to the occupants. The other rooms, as regards artistic taste, both from a horticultural and upholstery point of view, were the essences of originality and perfection. Baskets with drooping Ferns, Asparagus, Tradescantias, and other plants of pendent habit hanging in festoons were one of the chief features; whilst about the walls ornamental receptacles were built here and there to hold similar and other plants.

Besides this, a choice collection of china was arranged about the rooms to the best advantage, adding a considerable charm to the picturesque surroundings, and seemed to give one the impression of an intermingling of the old order and the new.

The general arrangement of the flower beds, and bedding was quite in keeping with the taste and skill shown in the inside furnishing. Begonias and Cannas were well to the front, and besides these many other choice and tender plants were employed for the purpose, and to summarise the whole they were in the pink of perfection. M. Morin informed me that he bedded out at least three times during the season, beginning early, and continuing as late in the autumn as possible. They have a fair amount of glass there, principally low span-roof houses and pits, for growing plants to meet the requirements of the flower garden, &c.

CHATEAU LEBAUDY.

The next place of special interest was at Chateau Lehaudy, Bogival, the residence of M. Lehaudy, situated between Paris and St. Germain. These gardens were more after the English style, and more of an all-round place than the one previously alluded to. Although the bedding here was quite a speciality, M. Page, the head gardener, who is a most enthusiastic plant cultivator and hybridist, and

results of the head gardener's handiwork were pointed out and compared with the parents. Cannas were largely used with good effect, especially in one instance, where a huge mass of these popular subjects was planted on a slope and graduated down from plants of 3 ft. to 4 ft. to 1 ft. and under.

Besides these, many of the high class *Pelargoniums* were used, also other choice plants of the higher order, including such subjects as *Anthurium andreanum*, *A. crystallinum*, *A. ferrierense*, *Crotons*, and *Dracaenas* of sorts. The lawn was quite in keeping with the flower beds, rather spongy to walk on, but pleasing to the eye. In fact, I should not be wide of the mark in saying that the whole place was in tip-top order, and it only took a cursory glance to come to the conclusion that there was no lack of the incentive that keeps good gardens up to the mark. In addition to the other subjects previously mentioned. M. Page has taken the *Gloxinia* and *Streptocarpus* in hand, with a view to improvement by cross-fertilisation, and judging by the size of the flowers and variety of colours on view, he fully demonstrated that he was no mean hand at the work. I cannot leave M. Page without passing one more remark. I trust his fellow countrymen will not think him unpatriotic when I say that he has a little weakness towards the English. Anyhow, on this occasion he



DIANTHUS MONSPESSULANUS ALPESTRIS.

his son, who, by the way, had spent several years in English gardens, kindly conducted me around the establishment. Of glass there is a considerable quantity, built much after the English style, and with the latest improvements. One block consisted of a long corridor, with several span-roofed stoves and Orchid houses, leading out at right angles. The corridor was used as a show house, and contained some well-grown Palms, Bamboos, &c. Orchids were well represented, and the several houses were filled to their utmost capacity, with a clear healthy-looking collection, *Cattleyas* and *Cypripediums* taking the lead in quantity. M. Page goes in for hybridising, and amongst his latest products, which was varied and in quantity, he pointed out many fine forms of *Cypripediums*. The general collection of Orchids contained some very fine pieces of *Laelias*, *Cattleyas*, *Vandas*, *Phalaenopsis*, &c. Besides these I noticed some grand *Anthuriums*, showing exceptionally large spathes.

The flower garden, well, to say the least of it, was truly magnificent. The principle feature here was the massive beds of one colour. Begonias, both tuberous and fibrous rooted, being the chief subjects. Many fine varieties of both sections, the

exhibited his appreciation of them in a very practical manner.

FERRIERES.

The establishment of Baron Alphonse de Rothschild was the next and last place I visited. This place is too generally known for me to enter into any geographical details, and as my time there was limited in proportion to the magnitude of the place, I could not grasp enough in the time to go into any horticultural details. I may say, that this is an establishment where gardening is carried out in all its branches to as near perfection as it is possible to get it. There are, I believe, about sixty glasshouses in all, and about 6,000 frames, besides many other temporary erections for protecting plants. Nine of these houses are devoted to Orchids; twenty-one to fruit, and the remainder to stove and greenhouse plants. Orchids in the various sections were well represented, especially *Odontoglossums*, and looked the picture of health.

The plant houses were furnished with nearly every kind of stove and greenhouse plant worth growing; and in appearance were everything that could be desired. One noticeable feature about the plant houses was the mixture of plants grown together, the

whole being arranged like show houses, with mixed groups only, of course, in their respective sections, that is, cool and warm.

Fruit under glass, including Pines, is a strong point here, Peaches and Nectarines being quite a speciality. At the time of my visit, the season with these was nearly over; still, they had some left, and those were of the highest order of merit. Turning to the kitchen garden, in size it was quite in proportion to the other parts of the establishment, and was a model of what a kitchen garden should be, both in cleanliness and cultivation. Here it is that one can see the French system of fruit tree training to perfection. Devices worked out with Apple and Pear trees were numerous, and it seemed almost incredible that the branches could be manipulated to such an extent; even the proprietor's name was growing from an Apple tree and flourishing so amazingly, that even the Apple shoots seemed to vie with each other, as to which should do the most in converting the name into the vegetable world. Peaches on the outside walls were very fine and highly coloured. The flower garden and pleasure grounds are very extensive and of the highest order. The indispensable Begonia and Canna were in the first rank in the bedding. Before I close I will mention one more plant, the Carnation. Here it is legion as a pot plant and for decorative purposes; and like the Apple tree previously mentioned, seems to have an affinity for the name. M. Schwart, the head gardener, appeared to have a good grip of the whole establishment, and is to be congratulated on his efficiency in keeping the gardens up to such a standard of perfection.—*D. Cooper.*

HARDY HERBACEOUS PLANTS.

Tradescantia virginica rubra.—The handsome *Tradescantia virginica*, the common Spider-wort, also known as Flower-of-a-day, has given rise to progeny even more handsome than itself, and in the case of the variety under notice we have one of the largest flowered forms of all. The individual blooms are fully 1½ in. in diameter under favourable circumstances, and exhibit a rich shade of carmine-purple. The height varies from 15 in. to 20 in. I was most favourably impressed with the merits of this variety when I saw some fine specimens the other day.

T. virginica alba.—This is probably the most popular of all the forms of *T. virginica*, and there can be no doubt that the popularity is well deserved, for it is a handsome plant for the herbaceous border. The flowers are not so large as those of *T. v. rubra*, but they are produced with exceptional freedom. Now and again the plant shows a tendency to revert, and in at least three cases this year, all in different localities, I have noticed the one plant bearing both blue and double flowers. In the case of my own plants, one that threw some white and some blue flowers last year, has changed again this, and is producing all white flowers this, whilst another that bore all white flowers last season has thrown up several stems that are carrying all blue flowers, there being little or no difference between these and those of the type, *T. virginica*. Truly, Nature's vagaries are occasionally very puzzling.

There are other good forms that are well worthy of cultivation, and there is a great uniformity of height and similarity of habit amongst them all. *T. v. delicata* has soft blush pink flowers, and *T. v. flore pleno* has fine double blue flowers. *T. v. azurea*, as the varietal name would signify, has bright blue flowers, and whilst those of its double form are of exactly the same hue.

All these plants are of the easiest culture. They will grow and flower freely in almost any soil, and although the blooms are ephemeral, yet they are showy and their numbers make up for the lack of "last." Planted in clumps in the herbaceous border or in nooks on the rockery they look exceedingly pretty, and excellent results may be obtained by filling beds entirely with them, as has been done at Kew from time to time.

Propagation is best conducted by division of the roots in Spring, just before growth commences. The divisions may either be consigned to the ground straight away, or they may be potted up, grown on in frames, and planted out subsequently. The latter method is to be preferred when the divisions are small, as it gives them a better chance to make plants at an early date.

Polygonum sachalinense.—Attention has been

drawn at various times to the value of this subject as a fodder plant, but it is not of its economic uses I wish now to speak. It is of noble presence, and, growing as it does, to the height of 8, 10 and even 12 ft., with its large, cordate lower leaves and truncate upper ones, it is a capital thing for the wild garden. It loves a moist root-run, and hence should be planted by the side of streams or ponds, where it soon establishes itself. There is a fine clump of it in such a position in the Long Ditton nurseries, and it forms a pleasing feature of the place. *P. sachalinense* was introduced from the Sachalin Islands in 1869.

Iris Pseudacorus variegata.—Everybody knows, or at least ought to know, our native yellow Iris or Water Flag, with its long sword-shaped leaves, and large bright yellow flowers. In the variety under notice we have a golden and green form of it, whose foliage is distinctly handsome. The flowers do not differ in any material way from those of the type, and so call for no special comment. As a subject for planting in the mud by the borders of streams or ponds, where its roots can enjoy the ooze that they so much love, there is nothing finer than this plant, I was pleasantly reminded of this by the sight of a number of plants flourishing by the side of the stream that runs through Messrs. Barr & Sons' rockery at Long Ditton.

Melissa officinalis variegata.—Of late years there seems to have been almost a craze for variegated forms of common hardy plants, and it seems rather curious that the variegated form of the common Balm should have been forgotten in the persistent pushing of variegated things, but very few nurserymen catalogue it. I lately saw a clump of this old-time favourite in one of those old-fashioned gardens that are now all too scarce in the country. How it got there the owner of the garden could not tell me. It had always been there so far as he could remember, he said. At one time it appears the plant was a favourite as an edging subject, a purpose for which its dwarf, stocky habit, and abundant leafage render it eminently suitable. The fragrance is fully as strong, and the medicinal value fully as great in the variegated form as in the type, but the habit is neater and more compact. Those who like sweet-smelling things about the house might well employ it, for it makes a capital window-box plant. A stock of plants may soon be worked up by division in spring just before growth commences for the season.—*Plant Lover.*

HARDY BAMBOOS.

(Continued from p. 682.)

As a guide to intending planters of Bamboos the species and varieties established in the Bamboo garden at Kew may be taken as representative, both on account of its comprehensiveness, and as being situated neither in the warmest nor the coldest district of Britain, in which a collection of Bamboos may be planted with reasonable hope of success. Paradoxical as it may seem there are species which may be grown in the Midlands with equal, if not greater success than in Cornwall, for the simple reason that the greater summer heat in the counties of the former is more conducive to the ripening or hardening of the stems, than the moister and more equable climate of Cornwall, the heat of which is tempered by proximity to the Atlantic and the English Channel. No description need be given of the species which have been tried, and have failed at Kew, as they do not come into the category of hardy in the broader sense of the term, though cultivators in the more favoured spots may reap a fair amount of success with them. Japan is the metropolis of the hardy Bamboos as far as Britain is concerned. A smaller number come from China, and one each from the Himalayas and North America.

Propagation is effected by division of the root-stock, and pieces will grow so long as they are provided with a piece of the underground stem or rhizome with its attached roots. Small pieces may be established the more quickly by potting them up and placing them in heat, which accelerates growth, as those know who grow them in pots or tubs for indoor decoration, either by themselves or in association with Palms. May and June is the best time for dividing the clumps in the open air, as growth is just commencing and soon repairs any damage that may be done to the roots.

For some years past the nomenclature of Bamboos

has been in a very tangled condition in gardens, which is quite natural and customary where cultivators have been working independently amongst a class of plants which is practically new to cultivation in Britain. It is true that they are well known to the Japanese, who make use of them for an infinite variety of purposes, both as food, decorative work in the living state and for use or ornament, in the case of the wood which is manufactured into all sorts of articles for which the Japanese are famous. The Japanese names do not, however, greatly assist the systematic botanist. Order out of disorder has now been effected in the Kew collection by the aid of various workers, of whom A. B. Freeman-Mitford, Esq., has been particularly active, judging by the frequency with which he is quoted as the authority for the specific name of the species under notice. Synonyms are pretty numerous in many cases, but only the more important may be noted here. The *Hand-list* of trees and shrubs grown at Kew may be consulted by those desiring an exhaustive synonymy. The Japanese names quoted may assist those who have plants obtained directly from the Far East. Many, if not all, of the best are now obtainable in this country. The alphabetical arrangement of the genera and species given hereunder is adopted for facility of reference, rather than for the natural affinity of species.

ARUNDINARIA.

The number of distinct species, computed by the *Genera Plantarum*, as belonging to this genus is 24, but, independently of synonyms, 41 have been described by botanists, and recorded in the *Index Kewensis*. Even these figures may undergo considerable alteration as a more complete knowledge of the species is attained as a result of original observation by botanists and cultivators, because these woody grasses seldom flower, and are difficult to define. The branches arising from the main stem are sometimes fasciated in a semi-whorled manner, giving them a characteristic appearance, though this, unfortunately for cultivators, is not a constant feature. The leaves are jointed with a sheath that is persistent, and form a noticeable feature of the species, especially when the nodes of the stem are long, bringing the dried and dead sheaths into prominence. The transverse veinlets of the leaves are obscure, or occasionally conspicuous and interesting. Flowers are seldom produced in Europe, and may be disregarded. The distribution of the species is tropical Asia and America, some extending into ultra-tropical regions of America, the Himalayas and Japan, the latter concerning the British cultivator most.

A. ANCEPS.—The origin of this Bamboo is unknown. The stems attain a height of 6 ft. to 8 ft., and vary from olive to brown and purple tints; they are erect, and give off tufts of very slender twigs at the nodes. The linear leaves vary from 2 in. to 4 in. in length, and are light green with purple sheaths, bearded at the apex, that is, the sheath has a fringe or collar of bristly hairs at the top. The habit of the plant is graceful, and the general effect of the foliage attractive.

A. AURICOMA.—In gardens this is well known under the name of *Bambusa Fortunei aurea*, having been grown as a golden variegated companion to *B. F. variegata*, which is even more common. *Arundinaria Fortunei aurea* is less often applied to it. In the open air it reaches a height of 4 ft., forming a dense, erect bush, with greenish-yellow and golden-yellow leaves, thinly striped with green. The foliage is handsome till winter cripples the leaves, causing many of them to drop. Pot plants seldom attain a greater height than 18 in. During July, August and September it is at its best. It comes from Japan.

A. CHRYSANTHA.—The reed-like stems attain a height of 3 ft. to 4 ft., forming a dense bush, clothed with grassy, finger-like leaves of a dark green. The leaves are generally of a soft yellow, with a few green lines, and are 4 in. to 8 in. in length. The species is a native of Japan. It is hardly so ornamental as *A. auricoma*, the variegation not being so conspicuous or attractive.

A. FALCONERI.—Amongst the Himalayan species of the Bamboo hitherto tried, this is the only one that has proved at all hardy at Kew. It loses its leaves in winter and occasionally its main stems, but comes up again from the root. Last winter the stems survived and commenced sprouting again about the beginning of June. The stems arise from the ground

in a dense tuft like erect willows about the thickness of a goose quill, and 5 ft. to 8 ft. high. They are olive-green and give rise to dense fasciated tufts of very slender twigs from the nodes. The lanceolate, bright green leaves are thin, 2 in. to 4 in. long, and clothe the twigs in such a way as to constitute an object of great beauty when full grown. For this reason and owing to the neat, upright habit of the plant it is much grown in pots and tubs for decorative work, and for planting in the sub-tropical garden out of doors in summer, when in full beauty. When grown entirely in the open ground, the season is far advanced before it attains its characteristic development. Nevertheless it is a most graceful and desirable Bamboo. Some years ago it was often grown under the name of *Thamnocalamus Falconeri*.

(To be continued.)

GARDENING MISCELLANY.

CARNATION MRS. LEOPOLD DE ROTHSCHILD.

THE quantity of flowers obtainable annually from this tree variety is surprising, when accorded suitable cultural treatment as practised at Gunnersbury Park, Acton, by Mr. George Reynolds. Flowers are produced in quantity during the winter months; but the plants seem in no wise disposed to go to rest even when the summer is well advanced, but continue to develop vigorous shoots, which in due time terminate in flowers, thus affording, as it were, an aftermath. The flowers are of a rich pink, and fragrant; those produced in spring and summer, when light is good, are of large size, and very useful in the cut state. Malmaison Carnations also receive due attention in the same establishment. A large quantity of rooted layers of border varieties are also potted up in autumn and brought along slowly in a greenhouse for early summer flowering, and seem admirably adapted for the purpose. They grow and flower freely, affording a great variety of colours for cut flower purposes.

MAGNOLIA PARVIFLORA.

WHEN the early flowering Magnolias have shed their last petals *M. parviflora*, a pretty and most interesting species, comes on the scene. The specific name is not particularly appropriate seeing that there are species with much smaller flowers in cultivation. As Magnolias go, the flowers of the little tree under notice may be described as of medium size, and produced in association with the leaves towards the middle and end of June. The three sepals are broad but short, reflexed and white; the six petals, on the contrary, are very much longer and of a beautiful pure white. The purple mass of stamens in the centre shows off to advantage against the white background. The light green obovate leaves are similar to those of *M. conspicua* and *M. obovata*, though smaller and not precisely identical. It has been flowering beautifully for some time past in the Bamboo garden at Kew, and hails from Japan.

A FRUITFUL ORANGE.

THE genus *Citrus* is found in most large gardens, where it is grown not only for the sake of its flowers and fruits, but for its cheerful, glossy green leaves. These latter, however, require frequent sponging, otherwise the "cheerful" appearance will soon become an absent quality. *C. Aurantium* and its varieties are those which usually find a place in British gardens, when it often occupies a conspicuous place, especially the tub on the terrace of the mansion during the summer months. Mr. D. Cooper, however, of the Gardens, Hanger Hill House, Ealing, W., disposes of the tub by interring it, in funereal phrase, beneath the sod, so that nothing but the tree and its golden fruits appear to please the eye. Several other sub-tropical subjects like *Ficus elastica*, &c., are similarly dealt with, the effect in consequence being very much enhanced. Moreover, less watering is required—a serious item in a droughty season—and the conditions generally are much improved. The tree in question is about 6 ft. high from the green sward, and 4 ft. through. It is a good, bushy specimen, clothed to the ground, and carries about 100 medium-sized fruits.—*C. B. G. Acton, W.*

SOLANUM JASMINOIDES.

THIS most certainly is one of the best half hardy climbing plants we have. A good plant of it under cover is never long out of bloom. The flowers which, in the shade, come almost pure white, are borne in large trusses, and are very useful among other cut flowers. The climber will live outside in a sheltered position near London, and then flower at the end of summer, and on till the frost comes.—*W. B. G.*

SOCIETIES.

THE ROYAL AGRICULTURAL AT BIRMINGHAM.

June 18th to 24th.

SINCE the inauguration of this Royal Agricultural Show in 1839 the number of entries for, and the importance of, the function has steadily increased. This year it was held at Four Oaks, Birmingham, and another success added to the already long list of successes.

Amongst the numbers of noteworthy exhibits which were to be seen in the Midland town last week was the Royal Stand erected by Messrs. Sutton & Sons, of Reading. This, when it was shown at Windsor in 1889, was honoured by visits from Her Majesty the Queen, and other members of the Royal Family. It is a stout and handsome structure, built of English Oak, and in its huge recesses were exhibited on this occasion, as on others, a large collection of flower and vegetable seeds, Potatos, &c. A highly interesting portion was a collection of grasses in flower, each bearing its popular and botanical name, with its duration of growth, season of flowering, and habitat, with other useful information. Some twenty varieties of disease-resisting Potatos were on view; also samples of growing crops of Peas and Tomatos. Another special feature of the exhibit was a seed germinator, the method of testing seeds being shown in operation. To the horticulturist not the least interesting portion was the grand display of Gloxinias.

Messrs. Webb & Sons had a fine stand of seeds and vegetables of all kinds, of which we gave particulars in last week's issue.

From Messrs. Dicksons, Ltd., Chester, came a collection of grass and Clover seeds, for permanent and temporary pastures. Special machinery for cleaning the samples of seeds was also shown in working.

Messrs. John Fowler & Co., Ltd., of the Steam Plough and Locomotive Works, Leeds, and of Lombard Street, London, E.C., had two stands containing various ingenious labour-saving machines. These included their patent six-furrow, turn-round plough, eminently suitable for light ploughing in countries in which it has hitherto been found difficult to compete with horses. The single cylinder ploughing engines with self-acting coiling gear, double crank compound spring-mounted road locomotive engines, and the 12-ton single cylinder steam road roller were also all on view. Of the machinery in motion the 10 horse power patent steam digger represented an exceedingly valuable machine.

Messrs. Potter, Hawthorn & Co., showed their improved patterns of poultry houses, greenhouses and pigeon cotes.

Messrs. Hill & Smith contributed a large assortment of fencing hurdles, guards and gates. The continuous iron fences vended by this firm are cheap and strong, and the unclimable fencing is worthy of attention.

Mr. Duncan Tucker, of Tottenham, made a fine display of horticultural buildings. These comprised a conservatory specially built for the show, fitted up with the latest and most improved ventilating gear, and with a projecting bay for folding entrance doors. The Orchid house was of Teak, which is specially recommended for buildings of this character, as the wood possesses great strength and "last." This house was fitted with special insect proof staging with iron frames and slate slabs, an evaporising tank under the heating pipes and modern ventilating gear. Tucker's patent anti-drip bar was also fixed in position.

The Pomona Cider made by Mr. John Watkins, Pomona Farm Nurseries, Withington, Hereford, has acquired a great name and has obtained many honours. It is pleasant in flavour, and while not too sweet, is free from roughness. Samples of this

Cider were on view, and visitors were invited to taste.

Cider and Perry in casks and bottles were also shown by Mr. Henry Godwin, of Holme, Hereford.

The responsible trust of protecting the showyard against fire was placed in the capable hands of Messrs. Merryweather & Sons, Ltd., of London. The firm showed some of their most valuable fire extinguishers, which have in their time gained sixty-nine gold medals and awards at various exhibitions. The "Greenwich" and "Gem" double cylinder fire engines, the "Farm Homestead" and other pumps suitable for farms, gardens, nurseries and Hop gardens, excited much interest on the part of visitors. The "Valiant" steam pump, used on one of Her Majesty's ships, was likewise a source of interest. The engine weighs 6 cwt., and is balanced on a small hand carriage.

Messrs. Webb & Sons were entrusted with the decoration of the exhibition hall, and this they carried out in an exceedingly tasteful fashion, Palms and flowering plants in variety being liberally employed.

Stand No. 1 was occupied by Messrs. Jas. Carter & Co., of High Holborn, with some remarkably fine samples of farm and garden produce. Cereals were strongly represented, and amongst them such grand varieties of Oats as Carter's Cluster, Golden Black Tartarian and Triumph, as well as Royal Prize Red Wheat, Prize Prolific, and Goldthorpe Barley. Unique clumps of pasture Grasses and Clovers were so arranged as to offer precise information to those requiring it as to the relative values of the various forms for different soils and localities. The piles of last season's Mangel Wurzel excited considerable attention, for the roots were as sound as if they had just been taken from the ground.

A neat and comprehensive collection of trees for park and pleasure ground ornamentation was staged by Messrs. Little & Ballantyne, of Carlisle. They included the new Holly Golden King, a great improvement in every way upon the older Golden Queen. Here, too, were specimens of pasture Grasses in flower, and swards of lawn Grass and permanent pasture grown from mixtures made and recommended by the firm. Cereals were represented by high class samples of seed, and these included pure stocks of pedigree Chevalier Oats, Barley and Wheat.

Messrs. Dickson, Brown & Tait, Manchester, showed dried Grasses and Clovers commonly employed in British agriculture. The root seed section was evidenced by specimen bags of the finest Turnips and Swedes, whilst Oats, Barley and Wheat were all in capital condition.

Manchester had another capable representative in the firm of Messrs. Dickson & Robinson, who had a particularly noteworthy exhibit of seeds. Capital samples of the famed Swedes Robinson's Eclipse, Lord Derby and Perfection were shown, and the seed Potatos were likewise a commendable feature. The seeds shown were representative of the best strains of both vegetables and flowers.

Messrs. W. H. Wilcox & Co., 23, 34 and 36, Southwark Street, London, E.C., are large manufacturers and vendors of engineers' tools, india-rubber and leather goods of all descriptions connected with the trade, including their wire-bound hose and lubricating and cylinder oils. Of all these they had a great store on view, and great interest thereby attached to their stand. All the goods shown were of the highest stamp.

NATIONAL ROSE, AT BATH.—June 23rd.

IT is some nine or ten years ago since the National Rose Society located their annual southern provincial show at Bath, and the committee are to be congratulated upon their selection of Bath for the 1898 fixture, which was in every way a most successful one. All but one or two of the twenty-seven classes provided brought competitors, and in not a few instances the struggle for premiership was exceedingly close. On the whole the quality of bloom forthcoming was exceptionally good, especially when we consider the backwardness of the season, and the difficulties which rosarians in all parts of the country have had to surmount.

The exhibition was held in the Sydney Gardens, in connection with that of the Bath Rose and Begonia Show.

NURSERYMEN'S CLASSES.—In the big class for forty-eight blooms there were three competitors,

first of whom was Mr. B. R. Cant, of Colchester; second, Messrs. D. Prior & Son; and third, Messrs. Frank Cant & Co., Braiswick Nursery, both from Colchester, so that the growers from the Essex town had matters all their own way. In the first-prize stand, which thus won the Silver Cup offered by the Mayor of Bath, all the blooms were good, both for size and form, as well as colour, but the best amongst them were the samples of Ulrich Brunner, Souvenir de S. A. Prince, Kaiserin Augusta Victoria, Suzanne Marie Rodocanachi, Niphetos, Gustave Piganeau, La France, Mme. Cusin, The Bride, Comtesse de Nadaillac, Mme. Gabriel Luizet, Marie Van Houtte, General Jacqueminot, Caroline Testout.

The twenty-four blooms, distinct, sent by Mr. Geo. Prince, of Oxford, were largely composed of Teas, and the fine form and delicate colouring of these were largely responsible for the gaining of the first prize. La France, Marechal Niel, Niphetos, Medea, Cleopatra, Kaiserin Augusta Victoria, The Bride, Mme. Hoste, Viscountess Folkestone, and Marchioness of Dufferin were the strongest varieties. Messrs. J. Burrell & Co., Howe House Nurseries, Cambridge, were second.

In the class for twenty-four trebles the Colchester growers had again all the running between them, although only two exhibited. Messrs. D. Prior & Son had rather the better lot, and just scored over Messrs. F. Cant & Co. Mrs. Sharman Crawford, La Fraicheur, Prince Arthur, Fisher Holmes, A. K. Williams, White Lady, Hon. Edith Gifford, La France, Grace Darling, Caroline Testout and Mrs. Harkness were the finest blooms in the first prize lot.

Colchester again carried off all the honours in the class for a dozen blooms of any Rose, Tea or Noisette excepted. The fragrant variety Lady Mary Fitzwilliam, shown in splendid condition by Messrs. D. Prior & Son, was adjudged first. Then followed Madame Gabriel Luizet, from Mr. B. R. Cant; and Lady Mary Fitzwilliam, exhibited by Messrs. F. Cant & Co.

In the premier class for Teas and Noisettes, that for twenty-four blooms, distinct, Mr. Geo. Prince, of Oxford, was an easy first. The blooms of Princess of Wales, Hon. Edith Gifford, Mdme. Cusin, Mdme. de Wateville, Comtesse de Nadaillac, Catharine Mermet, Innocente Pirola, Cleopatra, and Souvenir d'Elise Vardon were all exceptionally good. Colchester was not to be denied, however, for Messrs. F. Cant & Co. were second, and Messrs. D. Prior & Son, third, in this competition.

The premier stand of a dozen Teas was sent by Messrs. J. Burrell & Co. It contained a grand lot of flowers, Souvenir d'un Ami, Cleopatra, Princess of Wales, The Bride, Mme. Hoste and Souvenir d'Elise Vardon being the best. Mr. J. Mattock, New Headington, was second; and Messrs. G. Cooling & Sons, Bath, third.

OPEN CLASSES.—Mr. Geo. Prince came to the front in this section for twelve trebles of Teas and Noisettes. The blooms submitted of Cleopatra, Princess of Wales, Hon. Edith Gifford, M. Furtado, and Madame Cusin were some of the handsomest amongst a very fine lot. Mr. B. R. Cant came in second, and Messrs. D. Prior & Son, third.

The competition for twelve blooms of one variety was very keen, there being no fewer than seven entries. Mr. G. Prince headed the list with a grand stand of Marechal Niel; Mr. B. R. Cant secured second prize with Cleopatra; and Messrs. D. Prior & Son the third with Souvenir de S. A. Prince.

AMATEURS' CLASSES.—In this section Mr. Alexander Hill Gray, of Beaulieu, Bath, greatly distinguished himself. His most notable victory was in the class for a dozen Teas and Noisettes, the first award being the Silver Cup offered by Messrs. Cooling & Sons. The Rev. J. H. Pemberton was second, and Dr. S. P. Budd, Bath, third, in this competition. Mr. Gray's other successes were for two dozen blooms, distinct, eighteen distinct Tea and Noisette varieties, and six trebles, in all of which classes he showed some splendid material.

The Rev. W. Powley, Upper Scudamore, Warminster, was the only exhibitor of a dozen blooms, open to those growers who have less than a thousand plants. He was accordingly awarded the first prize.

Mr. Conway Jones showed the best twelve blooms in the class for growers of 500 plants.

GARDEN ROSES.—A magnificent array of large bunches of garden Roses was staged by Messrs. G.

Cooling & Sons, of Bath, and the first award in the class for thirty-six bunches of as many distinct varieties of this class of Roses was thus well won by the firm. Messrs. Paul & Son, of Cheshunt, won the second prize, also with a grand exhibit.

Mr. Charles Turner, of Slough, led for eighteen bunches, Messrs. F. Cant & Co. being second, and Mr. J. Mattock, third. Messrs. Paul & Son, of Cheshunt, secured the leading prize in the small class for twelve bunches.

In the amateurs' division for garden Roses the Rev. J. H. Pemberton, Havering-atte-Bower, Essex, exhibited the first prize lot of eighteen bunches, and although he was the only competitor he fully deserved the first prize. Mr. E. Mawley, of Berkhamstead, had the best six bunches, distinct—a very choice and handsome set.

NOTABLE ROSES.—The Gold Medal went to Messrs. A. Dickson & Sons, Newtownwards, Co. Down, Ireland, for the new H. T. Rose Miss Bessie Brown, a creamy-white variety of splendid form and noble presence. The Silver Medals for the best blooms in the exhibition in their respective classes were given to hybrid Tea Lady Mary Fitzwilliam, shown by Messrs. Burrell & Co.; to Tea Comtesse de Nadaillac, shown by Mr. G. Prince; to hybrid perpetual Tom Wood, sent by Messrs. Alexander Dickson & Sons, in the nurserymen's and open classes. In the amateurs' division Tea Maman Cochet, shown by Mr. A. Hill Gray; hybrid perpetual Alphonse Soupert, from Dr. Budd; and hybrid Tea Caroline Testout, sent by the Rev. J. H. Pemberton; all received medals.

BATH SOCIETY'S CLASSES.—In this section five groups of miscellaneous plants, each occupying 250 sq. ft., were put up, the first prize being carried off by Mr. J. Cypher, of Cheltenham, in whose group were many fine Orchids and Caladiums; Mr. Tanzer, gardener to R. B. Cater, Esq., Bath, was second.

Messrs. Cooling & Sons deservedly obtained the first award for a handsome table of Roses, in which the Penzance Sweetbriars appeared to great advantage, as well as the long sprays of Rosa Harrisoni. The other Roses shown were chiefly Teas.

MISCELLANEOUS EXHIBITS.—Messrs. Barr and Sons, of Covent Garden, had a superb lot of hardy flowers, particularly Irises, Paeonies and Delphiniums. Messrs. R. Veitch & Son, of Exeter, erected a charming miniature rockery, and had also some notable new plants. Mr. F. Hooper, Widcombe Hill, Bath, had fine show and fancy Pansies. Mr. J. H. White, of Worcester, had hardy flowers; whilst an interesting lot of Cacti came from Mr. W. F. Gould, Bath.

WINDSOR.—June 25th.

THE seventh annual exhibition of the Windsor, Eton, and District Rose and Horticultural Society was held in the Home Park, under the slopes of Windsor Castle. It was a very pretty show and amply accommodated in five tents, a large one, a long one, and three smaller ones. Heavy thunder showers prevailed at intervals all day and greatly marred the enjoyment, and hindering the crowd from being so large as it might otherwise have been. The exhibits were of a high order of merit.

The Queen's Cup, value £10 10s., in the open division, for forty-eight distinct Roses, in single trusses, was secured by Mr. B. R. Cant, Colchester, whose property it now becomes, having been won by him for the second time. He had magnificent blooms of Caroline Testout, Catherine Mermet, Souv. de S. A., Prince, Souv. d'Elise Vardon, Princess of Wales, La France, Ulrich Brunner, Mrs. John Laing, Lady Mary Fitzwilliam, Duchesse de Vallembrasa, Suzanne Marie Rodocanachi, Golden Gate and others. Messrs. D. Prior & Son, Colchester, came in second with fine blooms of Mrs. John Laing, White Lady and Lady M. Fitzwilliam. Messrs. Harkness & Sons, Hitchin, were third with a fresh, even exhibit. There were seven entries for the cup.

Mr. George Prince, Oxford, secured the leading prize for eighteen Tea or Noisette Roses, with fine blooms of Cleopatra, Rubens, Medea, Souv. d'Un Ami, Catherine Mermet, and others. Messrs. Frank Cant & Co., Colchester, were a good second, showing several grand blooms. Messrs. D. Prior & Son, Colchester, were third. Mr. G. Prince had the best Rose in the show, in Comtesse de Nadaillac.

For twelve distinct, three trusses of each, Mr.

Benjamin R. Cant was again to the front, showing fine triplets of Cleopatra, Gustave Piganeau, &c. Messrs. Frank Cant & Co. were second with a very fine exhibit, the hybrid perpetuals being of large size. Mr. Geo. Prince was third, showing Tea Roses almost solely.

Messrs. Frank Cant & Co. took the lead for twelve blooms of any H.P. or H.T., showing charming blooms of Mrs. W. J. Grant. Mr. B. R. Cant came second with La France. Messrs. D. Prior & Son were third with Lady M. Fitzwilliam.

Mr. Geo. Prince had the best twelve blooms of any Tea or Noisette, showing Comtesse de Nadaillac in grand form. Messrs. D. Prior & Son were second; and Messrs. Frank Cant & Co. third.

Messrs. Paul & Son, Cheshunt, had the best eighteen bunches of garden Roses, showing bunches of the new Royal Scarlet, and Dawn, as well as W. A. Richardson, Carmine Pillar and others in grand form. Mr. Charles Turner was second with a very interesting lot. Messrs. Frank Cant & Co. were third with a varied and showy lot.

In the amateurs' division the first prize for twenty-four blooms of Roses was taken by Mr. R. E. West, Reigate, who had fine blooms of Gustave Piganeau, Captain Hayward, Anna Olivier, &c. Mrs. Irving (gardener, T. Elisha) had the best six blooms of one variety. Mr. R. E. West again took the lead for twelve Teas or Noisettes, followed by C. Romaine, Esq. (gardener, Mr. T. Guttridge), The Priory, Old Windsor. Mr. R. E. West was first for six varieties, three blooms of each.

In the section for local classes the first prize for eighteen blooms was taken by A. Munt, Esq., securing Mr. Frank Cant's Challenge Cup. Sir Robert Harvey, Bart., was second. Mrs. Burton (gardener, W. Wicks) had the best twelve blooms. Mrs. Irving had the cup for the best display of cut Roses arranged in a space 4 ft. by 3 ft.; W. H. Austin, Esq., was second.

There were seven groups arranged for effect round the side of one of the tents. The first prize group was bright, tastefully displayed and shown by Sir Charles Piggott, Bart. (gardener, Mr. T. Fleming), Hexham Park, Slough. Lilies, Carnations and Orchids were largely employed. Sir Robert Harvey, Bart., took the second place; and Miss Ridge (gardener, Mr. G. Lane) was third. The first prize for four specimen plants was taken by Major the Hon. H. C. Legge (gardener, Mr. J. G. Mowbray) with huge specimens. L. Baker, Esq. (gardener, Mr. T. Osman), Ottershaw Park, Chertsey, was second; and A. F. Lovett, Esq. (gardener, Mr. W. Smith), third.

L. Baker, Esq., took the first prize for Ferns with grand plants; Lord Boston had the best dinner-table plants; and C. Romaine, Esq., the best ten pot plants.

Dinner-table decorations occupied one round tent. The first prize for a table 8 ft. by 4 ft. was taken by Miss Edward Gould, who used mauve Sweet Peas and Iceland Poppies besides the greenery. Miss Gee was second, using Sweet Peas and Honeysuckle. Miss Amy B. Brown was third.

In the fruit tent Lord Boston had the best four dishes of fruit, showing Grapes, Figs, and Nectarines. L. Baker, Esq., was a good second. Miss Ridge had the best two Black Grapes; L. Baker, Esq., being second; and N. J. Cohen, Esq., (gardener, Mr. A. Street), third. L. Baker, Esq., had the best White Grapes, beating Miss Ridge. Major Hon. H. C. Legge was first for Peaches; and Lord Boston for Nectarines. A. F. Croth, Esq. (gardener, Mr. W. Smith), had the best Melon; and T. D. Irving, Esq., the best Strawberries.

The Hon. C. S. Teby (gardener, Mr. D. Paxton), had the best collection of six vegetables, showing well. L. Baker, Esq., was second; and George Quelde, Esq., third. Lord Boston had the best Tomatos; and Major Hon. H. C. Legge the best Cucumbers.

Vegetables were also well exhibited by the cottagers, Mr. H. T. Lambert taking first for four varieties. For the prizes presented by Messrs. Sutton & Sons, Reading, some good vegetable exhibits were forthcoming. Miss Ridge was first; and L. Baker, Esq., was second. For Mr. W. H. Titt's prizes the Hon. C. S. Teby took the first prize.

MISCELLANEOUS EXHIBITS.

Baron Sir Henry Schroder (gardener, Mr. H. Ballantine), The Dell, Egham, exhibited a showy table of Orchids in the centre of the large tent. He had fine

pieces of *Vanda teres*, *Cattleya Mossiae*, *C. Mendelii*, *Laelia grandis tenebrosa*, *Masdevallias*, and *Miltonia vexillaria* in great variety, and well flowered. The forms of *Odontoglossum crispum* were also grand, particularly *O. c. Lord Sherbourne*, and several others to which no special name was given. *O. Hallii leucoglossum* carried a spike $3\frac{1}{2}$ ft. long, with flowers almost to the base.

Messrs. Hugh Low & Co., Bush Hill Park, Enfield, also had a central table of Orchids, amongst which *Cattleya Mossiae*, in an infinite variety of shades of colour, was the most prominent and showy. Both dark and light forms were very pretty and interesting. Other fine things were *Laelia grandis tenebrosa*, *Oncidium ampliatum*, *Cypripedium superciliare ornatum*, and *C. Curtisii*. The gorgeous colours were toned down, with Palms, Crotons and Ferns.

Messrs. J. Veitch & Sons, Ltd., Chelsea, had a grand display of hardy herbaceous plants such as Chinese Paeonies, Irises, Delphiniums, Pyrethrums, *Lychnis Viscaria splendens plena*, *Digitalis purpurea alba maculata*, handsomely blotched, *Heuchera sanguinea*, *Gaillardias*, long trails of *Tropaeolum polyphyllum*, *Inula glandulosa*, *Verbasum olympicum* and many other things in season.

Messrs. Barr & Sons, 12 and 13, King Street, Covent Garden, London, also staged hardy herbaceous plants extensively. Delphiniums, Irises, and Chinese Paeonies were particularly prominent, including a new Paeony named Mr. Jules Elie. Handsome Irises were *I. ochroleuca gigantea*, *I. Monieri*, and *I. Monspur*. Oriental and Iceland Poppies, Campanulas, and Violas were also fine. *Philadelphus erecta* is a new hybrid Mock Orange, deliciously scented.

Messrs. R. Wallace & Co., Colchester, had a splendid display of Lilies, Irises and Paeonies. Amongst the Lilies, very fine were *Lilium washingtonianum purpureum*, *L. pardalinum minus*, *L. tennifolium*, *L. thunbergianum* The Sultan, *L. t. alutaceum*, the new *L. rubellum* in quantity, *L. Henryi*, and many others.

Mr. Charles Turner, the Royal Nurseries, Slough, had a showy and effective group of show, fancy and regal Pelargoniums, all beautifully flowered, and charming in effect.

Messrs. George Jackman & Son, Woking Nursery, Surrey, had an exhibit of hardy herbaceous plants, Roses, hybrid Briers, Sweet Peas, and hybrid Clematises including *C. Countess of Onslow*, *C. Duchess of Albany*, and *C. Duchess of York*. They also showed Chinese Paeonies, Campanulas and other hardy subjects. The Sweet Peas were sown in the open last autumn, and were handsome.

E. F. Such, Maidenhead, exhibited a collection of hardy herbaceous plants in season, including *Gaillardias*, Irises, Delphiniums, &c. At the other end of the large tent Mrs. Charles Turner had a circular group of Roses in pots, most of them being remarkably dwarf and well flowered.

Mr. W. H. Titt, 24, Thames Street, Windsor, had a fine display of cut flowers and various floral devices, including a magnificent shower bouquet. In one of the devices the pink Carnation *Duchess of Fife* was very noticeable and pleasing. Hardy herbaceous plants were also tastefully displayed and gorgeous.

Lady Mary Currie (gardener, Mr. F. H. Beney) had a beautiful collection of Sweet Peas on the round central table of the fruit tent.

ROYAL HORTICULTURAL.—June 28th.

THE meeting on Tuesday last was a very full one as far as exhibits were concerned, all the tables, both central and round the sides of the hall, being loaded with a galaxy of flowers of all sorts. Orchids were very prominent, as were hardy Campanulas, Paeonies, Delphiniums, Annuals in great variety, Sweet Peas, tuberous Begonias, Malmaison and other Carnations, Lilies, Crotons, &c.

Messrs. J. Veitch & Sons, Ltd., Chelsea, staged a very varied exhibit of Orchids, prominent amongst which were *Laelia purpurata*, *Cattleya Warscewiczii*, (gigas), *C. Mendelii*, *C. Warnerii*, and *C. Mossiae*. The bigeneric hybrids, *Laeliocattleya Eudora*, *Lc. Eudora alba*, and *Lc. canhamiana alba* were gorgeous in colour, and magnificent for size. Valuable and showy also were *Phalaenopsis ludde-violacea*, *Epiphronitis Veitchii*, *Disa kewensis*, *D. Veitchii*, *Thunia veitchiana*, *Vanda cristata superba*, *Dendro-*

bium Dearei, &c., in fine condition. (Silver Flora Medal.)

A grand exhibit of Orchids was also set up by Messrs. Hugh Low & Co., Bush Hill Park, Enfield. *Cattleya Mossiae*, in a great variety of shades of colour, including the beautiful *C. Mossiae arnoldiana*, were gorgeous and prominent. They also had *C. Mendelii*, *Laelia tenebrosa*, *Oncidium crispum*, *O. macranthum*, *Cypripedium superciliare*, and the pretty *C. lawrenceanum hyanum*. They were set up with Palms and Ferns. Very fine were the new hybrids *Cypripedium Iansonii* and *C. Mr. Reginald Young*. (Silver Flora Medal.)

Messrs. B. S. Williams & Son, Upper Holloway, also staged a collection of Orchids, of which *Laeliocattleya Edouard André* and *Cattleya breanteana* were noticeable features. Very fine also were *Cypripedium lebaudyum*, *Aerides expansum*, *Cochlioda roezliana* and several varieties of *Odontoglossum crispum*. (Silver Banksian Medal.)

Messrs. Stanley-Mobbs & Ashton, Southgate, exhibited a collection of Orchids, that were located on two tables. *Cattleya Mossiae*, *C. M. reineckiana*, *C. Mendelii* and *Laelia grandis tenebrosa* were very prominent, on account of their showy flowers. Interspersed with them were interesting subjects, such as *Mormodes unicolor var.*, *Oncidium spilopterum*, *O. Papilio*, *O. lanceanum*, *Chysis aurea*, the blue *Dendrobe (Dendrobium Victoriae Reginae)*, *Laelia purpurata*, *Cattleya schilleriana* and various others. Particularly fine were *Stanhopea Ashtonii* and *Lycaste Deppei virens*. (Silver Banksian Medal.)

Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking, exhibited the magnificent *Stanhopea rodigasiana*; also *Cattleya gigas*, *Odontoglossum excellens Sanderae*, *Laelia tenebrosa*, &c., most interest being displayed in the *Stanhopea*.

Thomas McMeekin, Esq. (gardener, Mr. A. Wright), Falkland Park, South Norwood Hill, staged a well-grown piece of *Cypripedium Rothschildianum* Falkland Park var. *Cattleya guttata Leopoldii* in fine form was shown by the gardener, Mr. W. Pope, The Willows, Wargrave, Berks. Sir F. Wigan, Bart. (grower, Mr. W. H. Young), Clare Lawn, East Sheen, exhibited *Laeliocattleya canhamiana*, *Lc. c. Joyce Wigan*, *Sobralia Xantholeuca*, *S. Wiganiae*, and others. De B. Crawshay, Esq., (gardener, Mr. S. Cooke), Rosefield, Sevenoaks, exhibited *Odontoglossum excellens*, Mrs. de B. Crawshay, and a fine variety of *Cattleya Mendelii*. Messrs. J. Veitch & Sons, showed the hybrid *Cattleya Adela*, *C. Clarissa* and *Phaius bicolor purpurascens* on the new plant table.

An exceedingly handsome and well set up group of flowering and foliage plants was sent by Mr. E. Beckett, gardener to Lord Aldenham, Aldenham House, Elstree, Herts. All the plants were stood upon the floor. Amongst the flowering element. Lilliums and *Odontoglossums* were especially prominent, and these were charmingly varied with Crotons and Ferns. An edging was furnished by *Caladium argyrites*, *C. minus erubescens* and *Isolepis gracilis*. Some large *Kentias* and *Arecas* dotted about the group served to give height and finish. The general contour of the front line of the exhibit was a series of curves. (Silver Gilt Flora Medal.)

Mr. H. B. May, of Dyson's Lane Nurseries, staged a splendid representative collection of *Adiantums* which included some ninety species and varieties. *A. farleyense*, the very rare *A. speciosum*, the new *A. hemsleyanum*, *A. Veitchii*, magnificently coloured, *A. gracillimum*, *A. fasciculatum*, *A. ciliatum*, *A. lambertiatum*, *A. Capillus-Veneris imbricatum*, and *A. C. V. magnificum* were some of the most noticeable forms. All these as well as the others not mentioned were in perfect health and condition. (Silver Gilt Banksian Medal.)

Messrs. Wm. Paul & Son, Waltham Cross, Herts., had a grand lot of Roses, chiefly cut blooms. Such varieties as *Queen Mab*, *White Lady*, *Soprano*, *Antoine Rivoire* and *Victor Verdier* were especially good. Samples of *Polyantha* varieties and Lord Penzance's Sweet Brier were also shown. (Silver Banksian Medal.)

Messrs. Jas. Veitch & Son, Ltd., Chelsea, sent sprays of a number of flowering shrubs, including *Styrax japonica*, *Robinia hispida*, *Escallonia langleyensis*, and *Philadelphus coronarius erecta*. On the cross table at the end of the hall the same firm put up a splendid array of varieties of *Campanula Medium calycanthema*. A number of

charming shades of rose and purple were included, and the plants were exceptionally well flowered. In the centre of this group was a stand of cut trusses and small flowering plants of the hybrid greenhouse *Rhododendrons* for which the Chelsea Nurseries are so famous. The flowers were exceptionally large and fine.

In another part of the hall the Messrs. Veitch had a long table filled with cut hardy flowers. There was a wealth of colour here. In the background was a double row of fine *Delphiniums* and in front of these was a splendid collection of herbaceous Paeonies, *Emile Lemoine*, *Delicatissima Vittata*, *Potsii superba*, *Duchesse de Nemours*, and *General McMahon*, were some of the best varieties. In the front rank were sprays of the free flowering *Tropaeolum polyphyllum*. Another charming feature was the collection of annuals and biennials, the flowers being arranged in bunches. These included three pretty vases set up for the Sherwood Cup Competition. (Silver Flora Medal.)

Messrs. Paul & Son, The Old Nurseries, Cheshunt, also had a handsome collection of cut Paeonies. (Silver Banksian Medal.)

From Messrs. H. Cannell & Sons, Swanley, Kent, came a capital lot of single-flowered tuberous Begonias. The plants were admirable samples of high-class culture, the flowers were of immense size and good shape, and there were some fine yellows, crimsons and roses. (Bronze Banksian Medal.)

Double Petunias were shown to great advantage by Messrs. Sutton & Sons, of Reading. Double Pink, Double Fringed White and Sutton's Superb, mixed, were the three strains shown, and all of them are of a high standard of merit. The new *Gladiolus Queen of the Roses* as shown by the Reading firm on this occasion created a most favourable impression. The flowers are of a delicate blush rose, and the variety is exceptionally free.

Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester, received a Silver Banksian Medal for a showy lot of Lilies, *Brodiaeas* and Irises. Of the Lilliums, *L. szovitzianum*, *L. auratum rubrovittatum*, *L. thunbergianum* in variety, and *L. Henryi* were all good, whilst the distinct *L. tenuifolium* was a gem. *Paeonia albiflora striata*, white, striped carmine was another notable plant.

Messrs. Kelway & Son, Langport, Somerset, filled a long table with grand cut blooms of Paeonies, *Gaillardias* and *Delphiniums*. The last-named were especially good, and comprised, among others, such fine forms as *Sailor Prince*, *Clovelly*, *Julia*, *True Blue*, the yellow *Beauty of Langport*, *Wonder*, *Ustane*, and *Miss Salway*. Of the Paeonies *Princess of Wales*, *Dorothy Welsh* and *Cavalleria Rusticana* were the most noticeable. (Silver Flora Medal.)

The cross table at the bottom of the hall near the entrance was filled with a profusion of cut hardy flowers sent by Messrs. Geo. Jackman & Son, Woking. Sweet Peas, Delphiniums and Paeonies were all good here. (Bronze Banksian Medal.)

The cut hardy flowers from Messrs. Barr & Sons were, as usual, much in evidence. Amongst the Paeonies a number of leading varieties were represented, and Irises and Delphiniums in variety were very showy. (Silver Banksian Medal.)

The Sweet Peas sent by Mr. F. G. Foster, Brockhampton Nurseries, Havant, Hants, were in capital condition, the flowers being large and the colours good. Upwards of sixty bunches, in as many varieties were staged. *Blanche Burpee*, *Lady Mary Currie*, *Countess of Radnor*, *Black Knight*, *Lady Grisel Hamilton*, *Meteor*, and *Countess of Aberdeen*, were a few of the best. (Bronze Banksian Medal.)

Mr. Davis, of Yeovil, Somerset, staged a nice lot of tuberous Begonias both single and double flowered, for which a Silver Banksian Medal was voted. A tray of *Nymphaea* flowers was exhibited by Mr. Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton. (Silver Banksian Medal.) Three large spherical-headed plants of *Lavatera arborea variegata* were shown by Messrs. H. Cannell & Sons.

A first-rate group of Malmaison Carnations in 8 in. pots was put up by Mr. Geo. Norman, gardener to the Marquis of Salisbury, Hatfield House, Hatfield. The plants were wonderfully well flowered. (Silver Flora Medal.)

Mr. C. Blick, gardener to Martin R. Smith, Esq., The Warren, Hayes, Kent, had a grand lot of Carnations, the Malmaison blood being very apparent in

most of them. The flowers were of great size and good form throughout, such varieties as Margot, Lord Welby, Lady Grimston, Mrs. Torrens and Calypso being specially noteworthy. (Silver Gilt Banksian Medal.)

On the left hand side of the entrance Messrs. W. Cutbush & Son, Highgate, N., set up a remarkably fine group of Carnations, chiefly Malmaison varieties. The group had a pretty background of Bamboos, and an edging of Ferns. Churchwarden, Princess of Wales and Prime Minister were the cream of the Malmaison forms, whilst of border varieties, Duchess of Fife, Editb Ledenham and Andrew Noble (new) were all first-rate. (Silver Flora Medal.)

On the opposite side of the doorway, Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., had a nice lot of Carnations, the crimson R. H. Measures being a special feature. This is a very free flowering and useful variety (Silver Banksian Medal.)

Ten grand plants of Phenocoma prolifera Barnesii came from Messrs. W. Balchin & Sons, Hassocks, Hove and Brighton. It is not often that we see this old favourite so well grown.

From Reed's Nursery, Beckenham Hill, came sprays of ornamental trees and shrubs. Mr. Howe, gardener to Sir Henry Tat, Bart., Park Hill, Streatham Common, sent inflorescences of Chamaerops Fortunei.

At a meeting of the fruit and vegetable committee a Silver Gilt Banksian Medal was awarded to Mr. J. Hudson for a collection of very fine Tomatos, which included such varieties as Golden Nugget, Peachblow, and Abundance; and four trays of ripe Cherries.

A Silver Gilt Knightian Medal went to Mr. M. Gleeson, gardener to A. Von André, Esq., The Warren House, Stanmore, Middlesex, for eight magnificent fruits of Pineapple The Queen, each fruit of which had the remarkable average weight of 5½ lbs. They were well finished.

Messrs. T. Rivers & Son, Sawbridgeworth, showed six huge fruits of the new late Peach Thomas Rivers. Messrs. Jas. Veitch & Sons, Ltd., had a tray of delicious dessert Cherry Guigne Annonny. Mr. Geo. Wythes, gardener to Earl Percy, Syon House, Brentford, showed Royal Sovereign Strawberry ripened in the open within eleven months from the date of layering.

A Cultural Commendation went to J. J. Rolfe, Esq., Stanford le Hope, Essex, for Tomato Rolfe's Challenge.

QUESTIONS AND ANSWERS.

Book on Preparing Fruit, &c., for Exhibition.—*F. M. P.*: "The Horticultural Handbook and Exhibitors' Guide" is the only book on this special subject which has come to our knowledge. It deals with fruits, flowers and vegetables, giving details of the cultural treatment to be given, and other directions to be followed in preparing certain things for exhibition. The hints given as to what you should aim at in selecting the specimens should be as useful as anything in the book to the cultivator and would-be exhibitor. It is published by Messrs. William Blackwood & Sons, Edinburgh and London. Price 2s. 6d. cloth, and 2s. paper covers, exclusive of postage. You would also get many hints from a pamphlet on "Rules for Judging," published by the Royal Horticultural Society, 117, Victoria Street, London, S.W. It is priced at 1s., or by post 1s. 1d.

Malmaison Carnations failing.—*P. K.*: The specimen you sent us must have been in a worse condition than the one you examined, and found the roots apparently healthy. When we laid hold of the plant you sent it came away from the ball of soil easily, the stem being completely rotten just where it entered the soil. The latter consisted of good material and was in excellent condition, not wet and sour as we should have expected it to be on seeing the plant. The roots below were also good, and the growth of the plant showed that nothing was wrong with the cultural treatment, though it was drooping and turning yellow by the time we received it. The microscope showed the presence of Eel-worms in considerable numbers, leaving no doubt as to the cause of the malady. The Nematoid worms in question are white or colourless, and so minute that the naked eye can with difficulty detect them. They may have been introduced by the soil or by water, and appear to have entered at the cut end of the cutting or layer, and are now working their way up the stem. That sent us showed them to be already a little above the surface of the soil. If all your plants are affected in this way you cannot save them; but by way of trial you might stand the healthy ones by themselves on boards or shelves away from any other Carnations you may have in pots. The dying plants should be burned, and the soil buried deeply somewhere outside the garden. The only

chance of saving stock would be to take cuttings from near the top of the plants, observing whether they are perfectly healthy at the cut ends. A safer plan than that would be to get fresh stock somewhere else, using soil from a different source. You might also clean out your water tank, using quicklime in washing it as a precaution.

Thinning Potato Stems.—*F. P.*: Of itself we do not think that the thinning of Potato stems would be of any material advantage. It all depends upon how thickly the Potatos have been planted and the relative number of stems they have produced in a given area. So long as all the stems are fully exposed to light and air they cannot but be conducive to a good crop of Potatos. There are several things to be considered, however, in deciding about this. If the sets were planted too thickly in Spring they may become too crowded; or if the sets were too large and all the eyes allowed to develop stems the same results would obtain. Another view is that if tall growing varieties are planted in lines too closely together, in rich old garden soil, you are likely to get such a development of haulm that the stems will get crowded, or even fall over one another before the end of the season. Under any of these adverse conditions then it would be advisable to thin the stems with the object of allowing them full exposure to light and air. A better plan would be to guard against all of these conditions when planting.

Books for R. H. S. Examination.—*J. J.*: There are several books which would prove useful to you. "Elementary Botany," by Joseph W. Oliver is published by Messrs. Blackie & Son, Ltd., London, Glasgow, Edinburgh and Dublin, price 2s. This is a recent book with numerous illustrations. "Edmund's Botany" is sold by Messrs. Longmans, Green & Co., Paternoster Row, London, at 2s. 6d. if you rightly remember, and similar in character to the previous one. Either one or other of the above would be sufficient for a commencement. "Henfrey's Elementary Course of Botany," by Masters & Bennett, 4th edition, is a much larger book and more exhaustive of the subject. It is sold by Messrs. Gurney & Jackson, Paternoster Row, London, price 15s. All these are up-to-date books, and we should dissuade you from getting old ones, that is, old-fashioned and out-of-date books on the subject, because they are useless. Those we have mentioned you might be able to get second-hand at the book shops, but you would have to be there on the outlook, it might be for some time before you stumbled across any of them. Of course, you could ask your bookseller to be on the outlook for them. By getting new ones at once you could commence study immediately.

Propagating Pinks.—*Westbury*: You can propagate Pinks by layering just as well as Carnations in the case of the stronger growing varieties at least; but it is a tedious operation on account of the great number of stems crowded into a small area. The best plan when getting up a large stock would be to make up a bed of fermenting manure about 1 ft. deep. Tread it down firmly and place 3 in. or 4 in. of light, sandy soil over it. Make the soil firm; take off and prepare as many cuttings as you want and dibble them into the bed so prepared. A frame should be placed over the bed before putting in the soil. After the cuttings are all inserted give them a good watering with a rosed watering-pot to settle the soil. Put on the sash and shade lightly for a week during the hottest part of the day. Transplant as soon as rooted into beds in the open ground.

Variety and Kind of Vegetables.—*R. M. G.*: Asparagus, Cabbages, Leeks, Onions, Celery, and such things are considered distinct kinds of vegetables; but such as Ellam's Early, Winningstadt, Enfield Market, and Early York Cabbages would be considered mere varieties and not sufficiently distinct to be classed as kinds of Vegetables. There is an exception to the general rule; for though Brussels Sprouts, Cauliflower, Curled Kale, and Savoys are mere varieties of the Cabbage, they are, for exhibition purposes regarded as distinct kinds. You should not, however, use more of them in the same collection than you can help. Cauliflower and Broccoli are too closely allied to be regarded as distinct for exhibition purposes.

Names of Plants.—*L. M.*: 1, Stellaria holostea; 2, Tradescantia multiflora; 3, Spiraea japonica (this must not be confused with the garden plant of that name, which is Astilbe japonica); 4, Clematis Vitalba, probably, but send it when in flower; 5, Santolina Chamæcyparissus incana; 6, Polygonum Bistorta, well worth growing in the herbaceous border; 7, Silene inflata.—*F. M. P.*: 1, Hippeastrum aulicum var.; 2, Gymnogramme calomelanos; 3, Platycerium alcicorne; 4, probably Hymenocallis ovata, often named Pancratium fragrans in gardens. You might send a flower when the bulbs bloom.—*A. J.*: 1, Odontoglossum crispum, of good form; 2, Epidendrum prismatocarpum; 3, Cochlioda vulcanica; 4, Cyrtopodium Curtisii.—*J. M.*: 1, Geranium pratense album; 2, Campanula portenschlagiana; 3, Inula glandulosa; 4, Iris orientalis; 5, Campanula glomerata dahurica; 6, Viburnum plicatum; 7, Iberis amara.—*A. S. Cargill*: 1 and 2 are Tea Roses with remarkably healthy foliage, but we cannot undertake the naming of garden varieties; 3, Actæa racemosa; 4, Ourisia coccinea, upon the flowering of which we congratulate you.

Communications Received.—*M. M'Laren*.—H. Ludwig Jones.—*A. W.*—*P. J. G.*—*H. C. Zwart*.—*C. B.*—*W. R.*—*H. J.*—*A. J.*—*J. L.*—*G. M.*—*A. C.*—*A. O.*—*P. T.*—*Jos. Ringold*.—*F. L. Ames*.—*Ohio*.—*C. C. R.*—*Arry*.—*Suburban*.—*Y.*

COVENT GARDEN MARKET.

June 29th, 1898.

FRUIT.—AVERAGE WHOLESALE PRICES.

| | s. d. | s. d. | | s. d. | s. d. |
|---------------------|-------|-------|------------------------|-------|-------|
| Apples ...per hnshe | 0 0 | 0 0 | Pine-apples | | |
| Cobbs | 0 0 | 0 0 | —St. Michael's each | 2 6 | 7 6 |
| | | | Strawberries per lb. | 2 0 | 5 6 |
| Grapes, per lb. | 1 6 | 3 6 | Cherries per box | 2 6 | 3 0 |

VEGETABLES.—AVERAGE WHOLESALE PRICES

| | s. d. | s. d. | | s. d. | s. d. |
|-----------------------|-------|-------|-----------------------|-------|-------|
| ArtichokesGlobe doz. | 2 0 | 4 0 | Herbsper bunch | 0 2 | |
| Asparagus,per bundle | 3 0 | 8 0 | Horse Radish, bundle | 1 0 | 2 0 |
| Bsans, French, per | | | Lettnces ...per dozen | 1 3 | 1 6 |
| per lb. | 0 9 | 1 6 | Mnshrooms, p. basket | 1 0 | 1 6 |
| Beet..... per dozen | 1 0 | 1 0 | Onions.....per bunch | 0 4 | 0 6 |
| Brussels Sprouts | | | Parsley ... per bunch | 0 3 | |
| per half sieve | 1 0 | 1 6 | Radishes... per dozen | 1 0 | 1 3 |
| Cabbages ... per doz. | 1 0 | 1 3 | Seakale...per basket | 1 6 | 2 0 |
| Carrots ... per bunch | 0 3 | | Small salad, pnnnet | 0 4 | |
| Cauliflowers.....doz. | 2 0 | 3 0 | Spinach per bushel | 2 0 | 3 0 |
| Celery.....per bundle | 1 0 | 1 6 | Tomatos..... per lb. | 0 6 | 1 0 |
| Cucumbers per doz. | 2 6 | 3 6 | Turnips ... per bun. | 0 3 | |
| Endive, French, doz. | 1 6 | 2 0 | | | |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| | s. d. | s. d. | | s. d. | s. d. |
|-------------------------|-------|-------|------------------------|-------|-------|
| Atom Lilies, 12 hlms. | 3 0 | 4 0 | Narcissus, various, | | |
| Asparagus Fern, hun. | 2 0 | 3 0 | doz. buns. | 1 6 | 3 0 |
| Azaleas, doz. sprays | 0 6 | 0 9 | Orchids, doz. blooms | 1 0 | 8 0 |
| Bouvardias, per hnn. | 0 6 | 0 8 | Pelargoniums, 12 bun. | 4 0 | 6 0 |
| Carnations doz. blms. | 1 6 | 3 0 | Red Roses, per doz. | 1 0 | 3 0 |
| Encharlis ...per doz. | 3 0 | 4 0 | Roses (indoor), doz. | 0 6 | 1 0 |
| Gerardias ...per doz. | 1 6 | 3 0 | Tea, white, doz. | 1 0 | 2 0 |
| Geranium, scarlet, | | | Perle 1 6 | 2 0 | |
| doz. bunches | 4 0 | 6 0 | Safrano 1 0 | 2 0 | |
| Lillium longiflorum | | | (English), | | |
| per doz. | 3 0 | 4 0 | Pink Roses, doz. | 2 6 | 4 0 |
| Lily of the Valley doz. | | | Smlax, per bunch | 2 0 | 2 6 |
| sprays | 0 9 | 1 6 | Tuberose, doz. | | |
| Lilac(French)per bun. | 3 6 | 4 0 | blooms 1 0 | 1 6 | |
| Marguerites, 12 bun. | 2 0 | 4 0 | Violets (Parma), per | | |
| Martenhair Fern, 12hs. | 4 0 | 6 0 | bunch 2 6 | 3 6 | |
| | | | Wallflowers, doz. bun. | 2 0 | 4 0 |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES.

| | s. d. | s. d. | | s. d. | s. d. |
|--------------------------|-------|-------|------------------------|-------|-------|
| Arborvitæ, per doz. | 12 0 | 36 0 | Hydrangeas, per doz. | 8 0 | 10 0 |
| Aspidistra, doz..... | 18 0 | 36 0 | Ivy Geraniums, | | |
| specimen | 5 0 | 10 0 | per doz. | 5 0 | 8 0 |
| Coleus, per doz. | 3 0 | 4 0 | Lillium Harrissii, | | |
| Dracaena, various, | | | per pot | 2 0 | 4 0 |
| per doz. | 12 0 | 30 0 | Lycopodiums, doz. | 3 0 | 4 0 |
| Dracaena viridis, doz. | 9 0 | 18 0 | Lobelias, per doz. ... | 3 0 | 5 0 |
| Euonymus, var. doz. | 6 0 | 18 0 | Marguerite Daisy doz. | 4 0 | 9 0 |
| Evergreens, invar. doz. | 6 0 | 24 0 | Mignonette, per doz. | 4 0 | 6 0 |
| Erica, various, per doz. | 12 0 | 30 0 | Myrtles, doz. | 6 0 | 9 0 |
| Ferns, invar., per doz. | 4 0 | 12 0 | Palms in variety, each | 1 0 | 15 0 |
| Ferax, small, per 100 | 4 0 | 6 0 | Palms, Specimen ... | 21 0 | 63 0 |
| Ficus elastica, each | 1 0 | 5 0 | Pelargoniums ... | 9 0 | 12 0 |
| Foliage Plants, var., | | | Rhodanthe...per doz. | 5 0 | 6 0 |
| each | 1 0 | 5 0 | Scarlets ...per doz | 2 6 | 6 0 |
| Fuchsia, per doz..... | 6 0 | 9 0 | Spiræa, per doz.... | 6 0 | 9 0 |
| Heliotrope, per dozen | 4 0 | 8 0 | | | |

INDEX TO ADVERTISEMENTS.

| | | | |
|---------------------------------|--------------------------------|-----------------------------|--|
| Auction Sales. | Protheroe & Morris690 | Insecticides. | Exors. Robt. Camphell ...690 |
| Catalogues. | Barr & Sons689 | Corry & Co.689 | Gishurst Compound 689 |
| Bunyard & Co.689 | J. Forbes.....691 | XL All.....690 | |
| Kelway & Son689 | J. Peed & Sons.....691 | Lawn Mowers. | Ransomes, Sims & Jefferies, Ltd.704 |
| Simpson & Son.....689 | W. Wood & Son, Ltd. .. 691 | A. Shanks & Son, Ltd....690 | |
| Chrysanthemums. | Devon Nursery.....689 | Manures. | C. Beeson689 |
| Florists' Flowers. | J. Douglas689 | Chemical Union689 | Clay & Son.....689 |
| R. W. Hockey689 | T. Jannoch.....691 | W. Colchester704 | Lawes'702 |
| Kelway & Son689 | R. Owen689 | Meggitt's.....689 | H. G. Smyth691 |
| J. Peed & Sons.....691 | J. Stevens689 | W. Thomson & Sons....690 | |
| Flower Pots. | Sankey & Sons, Ltd.704 | Miscellaneous. | Cooper's Cycles690 |
| Fruit Trees. | G. Bunyard & Co.689 | Corry & Co., Ltd.....689 | Epps's Cocaine704 |
| Garden Sundries, &c. | J. Arnold689 | Gishurstline689 | Juno Cycles704 |
| Corry & Co.689 | Eveson Coal & Coke Co. 689 | Smyth's Baskets689 | |
| Fowler's Lawn Sand704 | Hirst, Brooke & Hirst. ...689 | Netting. | H. J. Gasson689 |
| J. & H. R. Hounam.....691 | Leeds Orchid Co.704 | A. Potter.....689 | |
| A. Outram703 | Porter's Stakes.....689 | Orchids. | J. Cypher691 |
| G. H. Richards.....690 | H. G. Smyth691 | W. L. Lewis & Co.....689 | P. McArthur691 |
| Heating Apparatus. | W. Cooper, Limited ...690 | F. Sander & Co689 | |
| Thames Bank Iron Co ... 690 | Horticultural Builders. | Publications. | American Gardening ...704 |
| J. Boyd & Sons.....689 | J. Gray.....689 | Darlington.....703 | GARDENING WORLD.....703 |
| W. Cooper, Ltd.690 | W. Richardson & Co. 689 | Gilvie.....703 | J. S. Virtue & Co.....703 |
| J. Weeks & Co., Ltd.689 | Hose. | Seeds. | Simpson & Son.....689 |
| F. Reddaway & Co., Ltd. 689 | | Sutton & Sons689 | |
| | | Shows. | |
| | | Situations, &c. | 691 |
| | | Strawberries. | Bunyard & Co.....691 |
| | | Laxton Bros.....691 | |
| | | Tents. | A. Potter.....690 |



ORCHIDS.

Clean Healthy Plants at Low Prices.
Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

GLOXINIAS FINEST MEDAL COLLECTION
* IN THE WORLD. *
Send for CATALOGUE to
JOHN PEED & SONS, West Norwood, London

The Royal Nurseries, Maidstone, Kent.

GEORGE BUNYARD & CO.,

Are now booking orders for early delivery of the very best
NEW AND OLD STRAWBERRIES.
For crop 1899, or for forcing.

They offer the largest stock and the best plants in the trade.
Change of stock pays.
Catalogue of Strawberries and Summer Fruits now ready.

POCKET KNIVES FROM MAKER.

Stag Handle Pruning Knives, a real good article, 1s. 1d. each; Ivory Handle Budding Knives, no better made, 1s. 3d. each; Ivory Handle, 2 blade waistcoat pocket Knife, 1s. 1d. each; Corn Knives, 1s.; Workman's Stag Handle Sheepsfoot and Pen Blade, 1s. 1d. The blades of all the above are made from the very best English crucible cast steel. Post free.

J. & H. R. HOUNAM,
Sheaf Island Works, SHEFFIELD.

1898. FORBES' CATALOGUE 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants

Is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and prices of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other Valuable Information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,
Nurseryman, Hawick, Scotland.
ESTABLISHED 1870.

IMPORTANT TO GARDENERS.

If you have not received our Illustrated Supplement with particulars of Important Horticultural Improvements and Hints by Specialists upon successful

CARNATION CULTURE

please send post card for same.

MOST VALUABLE INFORMATION!

Wm. WOOD & SON, Ltd., WOOD GREEN, LONDON.

LAXTON'S STRAWBERRIES.

If you wish for the best, write for our new Illustrated Catalogue with descriptions of Laxton's new Fillbasket, Mentmore, Monarch, Leader and Royal Sovereign. The largest cultures specially for runner plants.

LAXTON BROTHERS, BEDFORD.

Caladiums FINEST COLLECTION
in the World. We make
a speciality of CALA-
DIUMS. Gold Medals
Manchester & Leicester.
Silver Cup, R.H.S., &c.
Satisfaction guaranteed. **JOHN PEED AND SONS,**
West Norwood, London.

RETARDED LILY OF THE VALLEY CROWNS.

Headquarters at Dersingham.

For prices &c., apply to—

T. JANNOCH,
Lily Nursery, Dersingham, King's Lynn, Norfolk.

WEBB'S SEEDS

WEBB'S EMPEROR CABBAGE.

The Earliest and Best.
6d. and 1s. per packet; 1s. 6d. per oz.

From Mr. G. H. BALL, Comer Gardens.

"I herewith forward you a photograph of your valuable Cabbage—The Emperor. I find it is the earliest, largest, and most compact variety I ever grew."

WEBB'S, WROESLEY, STOURBRIDGE.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Malda Vale, London W.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—Bacon.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JULY 9th, 1898.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, July 12th.—Royal Horticultural Society; meeting of committees at 12 noon.
Woking Show (2 days).
Wolverhampton Floral Fete (3 days).
WEDNESDAY, July 13th.—Ipswich Rose Show.
Durham and Newcastle Horticultural Society's Show (3 days).
THURSDAY, July 14th.—National Rose Society's Show at Hallifax.

ROSES AT THE CRYSTAL PALACE.—The great annual exhibition of Roses at the Crystal Palace is once more a thing of the past; and visitors seemed more than usually pleased with the results, probably because they greatly exceeded expectations, after such a late and unfavourable season. Some of the visitors complained that their Roses were so badly cut up with the cold winds of May, that they thought the plants were dead. Since then, however, they have made favourable progress, but are late. Many growers consider that the season is two or three weeks later than usual, and seeing that the Palace show was held on the first Saturday of July as usual, it is not surprising that there were some misgivings about the success of the show. Most growers would have liked another week to open their flowers. The southern growers have practically had it all their own way on this occasion; and Colchester has fully maintained its previous reputation in respect of the mixed collections of Roses and the hybrid perpetuals. Oxford has taken the lion's share of the honours for Tea Roses, than which we have seldom, if ever, seen anything uniformly better in this class. There was some falling away in the number of entries in our opinion, judging from the general display; but the big prizes were just about as well contested as ever. All the classes were, however, well represented, there being no falling away in that respect. The dry atmosphere of the Palace and the oppressive heat for a short period in the forenoon caused the Roses to wilt a little, compared with their freshness at the close of the day last year; but there was no collapse such as we have seen in droughty seasons like 1887, 1893 and 1895. The blooms elicited well-deserved admiration even to the last.

Of Roses that distinguished themselves on this occasion, we consider that Comtesse de Nadaillac, White Lady and Mrs. W. J.

Grant stand at the top of the list. The first named furnished the best Teas both in the nurserymen's and the amateurs' sections. It also constituted the first prize stand of 12 blooms of any Tea or Noisette, and came from Oxford in two out of the three cases here mentioned. Mrs. W. J. Grant was the premier hybrid Tea in the nurserymen's classes, and secured the leading award as the best stand of any light pink or rose-coloured variety. White Lady was a sport from Lady Mary Fitzwilliam in 1889, and was not only the best hybrid Tea in the amateurs' section, but the best of that class in the show. Hybrid Tea Roses are now regarded by the National Rose Society as a distinct section, and it seems they are destined to increase in numbers, importance and in the estimation of growers largely on account of their perpetual flowering character and beautiful forms. Mrs. John Laing and Gustave Piganeau took the lead in the two principal sections as the premier hybrid perpetuals in the show and were characterised by fine form and colour, rather than by absolute size. Ulrich Brunner well sustained its reputation as an exhibition Rose, but did not gain the honour of being a premier bloom in the show. Large light Roses like Her Majesty and Captain Christy were conspicuous by their absence, so that we may conclude a stormy, late season is not in their favour.

The Colchester Roses in the "Trophy Class" gave entire satisfaction, several of the exhibits forming a very close competition, though there was little doubt as to the order of the winning stands. Here and there was a little evidence of stress of weather or the effects of insect depredations, probably a combination of both; for both of these adverse conditions seem to have been prevalent throughout the length and breadth of the land this year. There can be no doubt that many have got an impression of the difficulties attending the cultivation of Roses, though we do not apprehend that such checks will be anything more than accidental or temporary. The Rose is the universally popular summer flower, and most people with a garden give more or less particular attention to its cultivation. There was some evidence of this in the number of amateurs bent on note taking, and who were evidently familiar with a good many of the varieties, but had ocular demonstration that they were by no means masters of the art of cultivating them to that perfection of which they are capable.

The garden Roses were undoubtedly a feature of the show and no doubt converted many to an opinion of their surpassing beauty either in the garden or in the cut state. The annual shows at the Crystal Palace have been the means of increasing the popularity of this class, by demonstrating their superiority for effectiveness and general display. They far surpass the hybrid perpetuals for decorative effect at some distance away. Profusion of bloom, and the greater liberty of growth which the plants are allowed to enjoy is doubtless responsible for the widely prevalent and growing predilection for this race or mixture of races of the Rose. Hitherto the bulk of them have been blamed for their short season of flowering; but this can be extended by a more liberal use of the China or Monthly Roses, the Fairy Roses and others which owe their origin to Rosa indica. Nor can we forget that Tea Roses really originated from the same source. Many of the so called Polyantha Roses owe as much to Rosa indica as R. multiflora. The true Polyantha or cluster Roses ought really to belong to the latter; but no doubt hybridisation and cross-fertilisation have played their part in mingling the blood of the two, originally distinct races. We want now to

give increased incentive to the use of hybrid Teas for garden decoration. The Gold Medal for a new seedling Rose not distributed earlier than 1897 was granted to a variety named Purity and described as a new garden Rose. Without knowing its pedigree we suspect it to be a hybrid Tea, so that the race is bound to lay firm hold of cultivators everywhere in the near future. The flowers are white, and of beautiful form, with the outer petals revolute at the edges. It comes from Bath. The delicious fragrance of Sweetbrier's that pervades collections of garden Roses is another and distinct recommendation for their use. We are surprised that the whole race has not been more generally used for floral decorations. The light and graceful character of many of them favour artistic arrangements to a far greater extent than the heavier and more formal blooms for the exhibition table proper. The National Chrysanthemum Society might encourage their advancement for this particular purpose, as Chrysanthemums have been by the National Chrysanthemum Society. The dwarf or pot Roses from Chelsea demonstrated the limited compass within which well flowered plants may now be kept by an intelligent use of the knife and skilled cultivation.

Bamboo is the sole material of which the bridge of Shi Tsuen, China, is constructed. It spans a distance of 300 ft.

Royal Horticultural Society.—The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, July 12th, in the Drill Hall, James Street, Westminster, 2 to 5 p.m. On this occasion special prizes will be offered for Roses, and at 3 o'clock a lecture on "Edible Peas" will be given by Mr. N. N. Sherwood, V.M.H.

Mr. Thomas Humphreys, the assistant superintendent, Royal Horticultural Society, Chiswick, who met with an unfortunate accident a little over a fortnight ago, is now, we are pleased to learn, in a fair way to recovery; and we hope to see him at his accustomed duties again very shortly. At the time of the accident he was so badly hurt on the head as to be unconscious for some hours; and all who know him will be pleased to hear of his progressive recovery.

National Carnation and Picotee Society (Southern Section).—In consequence of the backwardness of the season, the date of the annual show to be held at the Crystal Palace, Sydenham, by the southern section of the National Carnation and Picotee Society has been postponed from Wednesday, July 20th to Wednesday, July 27th. Intending exhibitors would do well to note this, and that entries must be sent in at least four clear days before the day of the show, to the Superintendent of the Crystal Palace. The tickets of admission that have been issued for the 20th inst. will hold good for the 27th. We note that two classes have been added to the schedule, one each for six dressed blooms of any self Carnation, and six dressed blooms of any fancy variety.

Dutch Horticultural and Botanical Society.—At the Floral Committee meeting of June 8th, 1898, the committee awarded First-class Certificates to Messrs. E. H. Krelage & Son, of Haarlem, for *Acalypha Sanderi*; to Messrs. J. H. Kersten & Co., of Heemstede, for *Anemone coronaria* fl. pl. White Lady; to Mr. J. H. Schober, of Putten, for *Epidendrum purpureum*; and to Mr. J. C. de Lange, of Rotterdam, for *Lilium rubellum*. Certificates of Merit were awarded to Messrs. E. H. Krelage & Son, of Haarlem, for *Brodiaea Howelli* lilacina; and to Mr. H. D. Willink van Collen, of Breukelen, for *Lupinus nutkaensis*. Botanical Certificates were awarded to Messrs. E. H. Krelage & Son, of Haarlem, for *Calochortus maweanus* major, *Iris nigricans*, *Kniphofia Tucki* and *Tulipa Sprengeri*; and to Mr. W. C. Baron van Boetzelaer, of Maartensdijk, for *Masdevallia rosea* and *M. Ehippium*. An honorable mention was accorded Mr. Baron van Boetzelaer, of Maartensdijk, for *Odontoglossum crispum* in three varieties.

The Banana is reputed to be the most prolific of all plants grown for human food, being 44 times more productive than the Potato, and 123 times more than Wheat.

A Trade Alteration.—The firm trading under the name of Messrs. W. L. Lewis & Co., Southgate, N., was dissolved by mutual consent on the 31st of May last; and since then the business has been carried on by Messrs. Stanley-Mobbs & Ashton, who will receive all debts owing to and discharge all contracted by the late firm. Messrs. Stanley-Mobbs & Ashton continue to enjoy all the exceptional facilities for the direct importation of Orchids possessed by their predecessors, and will give unremitting attention to business.

Feeding Chrysanthemums.—There is a great tendency on the part of "Mum" growers to overdo the thing in the way of feeding their plants, undoubtedly fostered by the consistent pushing of the various vendors of the chemical manures, whose name, by the way, is legion. The mistake of over-feeding seems to have been carried to its extreme last year by a grower in the "States," who commenced to feed his plants with liquid manure in May. It is stated, in *The Florists' Review* for May 12th, that the "results did not make any great stir in the horticultural world," and the writer also sarcastically observes that this year that grower "will use more judgment and less manure."

Germinating Peas, Cress and Barley.—At a meeting of the Linnean Society of London, on June 16th, Professor J. B. Farmer, F.L.S., and Mr. W. G. Freeman, F.L.S., demonstrated the action of germinating Peas, Cress and Barley in causing the de-oxidation of a watery solution of methylene blue to a colourless liquid on shaking up the latter with air, while on adding a drop of hydrogen peroxide the blue colour was restored. Green plants placed in the solution were found to act in a manner precisely similar to the seedlings, though the action may be modified by assimilation in sufficient light. A number of experiments were shown. A discussion followed, in which Mr. Bennett, Prof. Howes, and Mr. Thomas Christy took part.

Leeds Flower Show.—The flower show held at Leeds last week, although a good one from a horticulturist's point of view, and despite the fact that it was favoured by fine weather, has been, we are sorry to learn, a financial failure. It leaves the committee with a deficit of about £150 in addition to last year's deficit of £40. Only £15 was taken at the gates before 6 p.m. on the first day, when the entrance fee was 2s. 6d. The attendance was more satisfactory on the second day, but on the third day, when the entrance fee was only sixpence, not more than 1,200 passed the turnstiles. In face of this great lack of local support the committee has a disheartening hill to climb. It is proposed to make an appeal for help to the principal residents of the town and neighbourhood, and if another show is projected steps will no doubt be taken to offer extraneous attractions, since it is evident that a flower show alone is not sufficient to draw the people of Leeds in any number.

Popular and Pretty Pot Plants.—Amongst the various subjects which have been given extensive trials in America as to their suitability for standing in dwelling rooms, the number of plants that have turned out satisfactorily is not large. *Latania borbonica* was condemned because the edges of the fronds turned brown so quickly. *Livistona rotundifolia* has been an equally qualified success, but the apparently more delicate *Cocos weddelliana* has done better. *Areca Bauerii* has not done well, but both *Pandanus utilis* and *P. Veitchii* have reaped golden opinions. *Phoenix canariensis* stands fairly well; but a complaint has been raised as to its stiff appearance. *Phoenix rupicola* is more elegant and stands equally well. *Cycas siamensis* has not been tested so much as the others but has been received well so far. Of Ferns the favourite appears to be *Nephrolepis exaltata bostoniensis*, but *Polypodium aureum* is in considerable demand. *Cyrtomium falcatum* is recommended in some quarters as being the best Fern for dwelling rooms inasmuch as it is always the last to succumb to adverse conditions. It will stand dry heat better than any other Fern.

Orange Juice is said to make an excellent dressing for black boots and shoes. The leather is rubbed with a slice of an Orange, and afterwards, when dry, brushed with a soft brush till it shines.

A Plague of Green Fly.—According to all accounts we have been enjoying a precious pest of red, brown and black, green fly. We ought to be terribly thankful for small mercies and this is not the least of them. The fly is altogether too deep for tears.—*Snaggs*.

Paper Flower Pots are a novelty that is being pushed by the trade on the other side of the water. They are made of stout waterproof card-board, are square in shape, and are stitched with wire. They are said to possess the advantages of economizing space. They can be shipped flat, so that they do not take up much space, and they are also very light and handy. They can be had in all sizes. Truly this is a paper age.

Rose Show at Southampton.—The Rose show held on the 28th and 29th ult., at Southampton Pier, under management of the Southampton Royal Horticultural Society is the first since that at Westwood Park some fifteen years ago. Roses were, of course, the predominating feature of the show, but it was not exclusively confined to the national flower. Moreover there were splendid displays of fruit and vegetables. The exhibits of Mr. Geo. Prince and Messrs. Prior and Cant were really superb, as were the Orchids shown by Mr. W. A. Gillett (gardener, Mr. Carr). In the first section Lady Ashburton secured no less than four prizes. The only seed merchants exhibiting were Messrs. Toogood & Sons, of Southampton, who were for the occasion representing the Ichthemic Guano Co., in addition to their own exhibit. The attendance during the afternoon was large, the interior of the pier pavilion presenting a very charming appearance. Music was supplied by the Police Band.

Floral Decorations at Chislehurst.—H.R.H. The Duchess of Albany opened a charity at Camden House, Chislehurst, on the 27th ult., on behalf of the poor of Deptford. Messrs. John Laing & Sons, Forest Hill, S.E., arranged to decorate the large tent 70ft. in length by 40ft. in width. An enormous quantity of material was used, Messrs. Laing & Sons sending something like nine van loads of plants for making groups, &c. Along the centre of the tent were three trophies, large Palms being elevated on pedestals so as to afford room for lounges beneath and for promenading about as if the tent were a winter garden. The floral lounges were decorated with Begonias, Orchids, Carnations, Caladiums, and various rare and choice plants. There were three groups of herbaceous plants. The water tower at Camden House was also decorated with garlands of flowers and foliage, and Palms were placed round the buttresses, &c. A great concourse of important personages and the élite of the neighbourhood were gathered together. After the opening ceremony the Duchess was presented with two bouquets of choice Orchids by the daughters of Alderman Truscott and A. Lyne, Esq.

Norwich Rose Show.—The picturesque Bracondale Woods were, on June 30th, open to the people of Norwich on the occasion of the Norfolk and Norwich Horticultural Society's Rose Show. Unfortunately for the complete success of this function, rosarians have had to deplore a rather unfavourable season, the result being that the exhibits were not up to the standard usually seen at this show. Mr. B. R. Cant, of Colchester, was first for the forty-eight, although, even here, the blooms were not so good as usual. Messrs. F. Cant & Co., of Colchester, were second. Miss Penrice, of Witton, was the only exhibitor of thirty-six blooms, and the second prize was awarded her. Mr. T. C. Blofield led for the twenty-four; the second prize going to Col. Rous. For eighteen blooms the Rev. A. L. Fellowes carried off premier honours, his stand being largely composed of Tea varieties. Mr. E. E. Burchier staged the best twelve. Miscellaneous cut flowers were a great feature, and in this section Mrs. Petre received a first prize for Antirrhinums. Mr. E. B. Fletcher secured a first prize for a bridal bouquet, with Col. Rous as second. Messrs. Burrell & Co., Howe House Nurseries, Cambridge, staged the winning lot of cut hardy herbaceous flowers. Mrs. Petre was second, and Mr. Charles Jacobi of Ipswich, third.

The Spaniards would Shell American Peas.—The current joke is that American market gardeners who live along the Atlantic sea board will not plant Peas this spring for fear that the Spaniards should come along and shell them.

Age of Trees.—The *Journal Horticole-Agricola* of Porto gives the ages of certain trees, but does not indicate by what process of reasoning or calculation it arrives at the deductions. Commencing with *Cercis Siliquastrum*, it gives the age as 300 years; *Ulmus campestris* reaches 335 years; *Hedera Helix*, 450; *Acer campestre*, 516; *Betula alba*, 576; *Citrus Aurantium*, 630; *Cupressus sempervirens*, 800; *Olea europaea*, 800; *Juglans regia*, 900; *Platanus orientalis*, 1,000; *Tilia europaea*, 1,100; *Abies pectinata*, 1,200; *Quercus rohur*, 1,500; *Cedrus Libani*, 2,000; *Taxodium distichum*, 3,000, and *Taxus baccata*, 3,200. The reputed age of the Lime is probably excessive, while several more durable species might have been cited.

Paper and Parchment.—The quality of the paper largely influences the permanency of the ink, and this matter is of considerable importance when we consider how largely wood pulp is used for paper-making nowadays. Such paper soon turns brown, and becomes so brittle that it may be broken into small pieces by merely crumpling it in the hand, says the *Journal of the Society of Arts*. The parchment skins, which were formerly used for writing on were infinitely superior to our modern paper, as far as the preservation of the writing is concerned. Even the old-fashioned unbleached paper was better than our present day bleached, glazed paper, for small quantities of both chlorine and lime remain in the latter, and apparently exert a detrimental effect upon both paper and ink.

THE R.H.S. COMMITTEES AT CHISWICK.

THE invitation of the council of the Royal Horticultural Society to the various committees to lunch with them at Chiswick was responded to by one hundred, who put in their presence at Chiswick on the 5th inst. The meeting took place at 12 noon, when the members of the committee proceeded to inspect the gardens and some of the subjects on trial. The luncheon took place at 1.30 p.m. in a large tent on the lawn, and was served by Messrs. Spiers & Pond.

This is the second of the kind, and the president, Sir Trevor Lawrence, Bart, who occupied the chair, after the usual loyal toasts, proposed "The Committees," and hoped that the gathering would become an annual institution. He expressed the thanks of the council to the committees for their unremitting and loyal attention to duty at the fortnightly and other meetings throughout the year.

Referring to the garden, he said that it had been so long under cultivation that for horticultural work the soil had become played out. Sooner or later they would have to find a different place to establish a garden. The speculative builder had got his eyes upon it as a valuable spot for partition in building plots. The society wanted a larger piece of so as to give greater scope for horticultural work. As long as the society continued to devote its attention to purely horticultural matters it was bound to succeed. There were few countries in the world which were so devoted to horticulture as this one. While at Geneva a lady had sent him a basket of fruit at his hotel, and everybody who saw it looked on with astonishment at the perfection of the fruit such as was but seldom seen outside of England.

The relations between the council and the committees continue to be of the most cordial character; and if at any time a difference should arise the council would be most anxious to remove it. Concerning the Temple Show, he had had most gratifying assurances from visitors that they had never seen a more beautiful show. A more tangible assurance of the success of the society was forthcoming in the fact that, at the first council meeting after the show, 110 new candidates had been proposed for election as Fellows. He coupled with the toast the name of Mr. W. T. Thiselton-Dyer, C.M.G., the director of the Royal Gardens, Kew.

Mr. Dyer, in rising to respond, said that he was at once flattered and not a little astonished at being invited to return thanks to this toast. The assembly that day had given him peculiar pleasure.

With the help he saw around him he had no doubt as to the cause of the society's success. The policy of having committees was not wrong. He made a humorous allusion to a kind of popularity which would make it difficult to see a flower without tread upon a duchess, but that might not be horticulture. The Horticultural Society must have a backbone; and that must rest upon the committees—a fact which could not be too widely acknowledged.

He then referred to the time when they practically held a council of despair in view of the first Temple Show, as they thought the tents could not be filled, though the show had since outgrown the limits of space at their disposal. Mr. Dyer was advised to take council of the market growers for Covent Garden, and he went to lay his case before Mr. Wm. Poupart, with the result that the market growers evinced a ready desire to come to the assistance of the society. Since then the show had grown to be what it is, and which had been well expressed as the high-water mark of horticulture. The Horticultural Society is now in touch with the entire horticultural world. One of his most earnest and interested hopes was the prosperity of horticulture. He further made reference to a case in which the nurserymen of England had supplied the Paris markets with a certain article of garden produce, which had met with encouraging success. The Legislature of France might well have excluded an article which was presumably very injurious to the interests of their countrymen. The experiment might well be repeated in other directions to the advantage of the growers in this country, particularly in the sending of fruit, some kinds of which were brought to greater perfection in this than in any other country of the world, notwithstanding the indifferent character of our climate. He also reminded his audience that the president of the society and he had been deputed to look after the interests of British horticulture at the forthcoming great international exhibition at Paris.

In concluding, he stated that the work of the committees had been subject to criticism, but all other useful institutions were subject to similar inconveniences. He considered that posterity would not regard them with less appreciation on that account. The differences of opinion about the granting of a First-class Certificate would soon be forgotten. Criticism was evanescent, and small outbursts of it would die like the gently diminishing ripples on a summer sea. Mr. Dyer was listened to throughout his speech with wrapt attention, and applauded as he resumed his seat.

A vote of thanks to the president for taking the chair was proposed by G. A. Smith-Dorrien, Esq., of the Scilly Isles, and after the president had replied, the company dispersed in parties through the garden.

GARDENING MISCELLANY.

SWEETBRIER LADY PENZANCE.

OF all the hybrid and cross-bred forms of Briers that have been raised few of them equal and none surpass the fascinating beauty of Lady Penzance. The flowers are of good average or even large size, and when they first expand they are of a rich salmon-rose shade, with a distinct yellow zone in the centre, but as they reach their full development the salmon mostly disappears. These colours indicate the union of the Sweetbrier and the Austrian Copper; but in any case the delicious perfume of the former is dominant. There is no more beautiful garden Rose in its season, during June and July particularly; and to the charming combination of colours may be added that of profusion of bloom, as visitors have seen in a bed of this variety near the greenhouse at Kew.

GRAMMATOPHYLLUM ELLISII v. G. RUMPHIANUM.

Among a number of interesting things at present in flower in the Orchid houses at Kew, these two species may be seen and comparison made of the differences and yet similarity. It is seldom that these two friends are seen in flower at the same time. Occasionally one or the other may be successfully bloomed; and to carry the differences in one's mind is not always safe or practical, for at first some little

doubt arose as to which was the one and which the other. This can be set at rest in the mind of any orchidist who has any doubt in the matter, and a journey to Kew will give opportunity of inspecting not only this but several other things equally interesting. In the case of *G. Ellisii* grown in a basket, the spike is some 2 ft. 6 in. in length with about twenty flowers on the spike.—W. S.

PRESERVATION OF MUSHROOMS.

LAY the Mushrooms around a stone jar, the cap separated, well cleaned, and the stalk cleft. The jar may be enamelled or glazed. The first closely packed row being arranged a layer of salt is laid on the top, and so on. The salt melts and hatches the Mushrooms with water; a weight is placed on the top to keep them in the water.

MUSCARI BOTRYOIDES ALBUM.

THIS pretty little white Grape Hyacinth is a great favourite in collections of hardy plants in this country, and it is occasionally grown in pots for the Alpine house by those who treat their choice Alpines very tenderly. In the United States, however, its pot culture for supplying cut flowers for market work has been taken up systematically. In this direction it has acquitted itself well, as it can be grown easily, flowers readily, and forces well; in fact, it is one of the greatest rivals of Lily of the Valley, although it has not the fragrance of the latter flower. As many as from eighteen to twenty-five fine spikes of bloom can be obtained from the plants grown in a 6-in. pot.

RHODODENDRON CINNABARINUM.

THE forms and features to be met with amongst Rhododendrons are remarkably varied. For all the world the flowers of *R. cinnabarinum* may be compared to those of a *Blandfordia nobilis*, a *Clivia nobilis* or *Desfontainea spinosa*. They are funnel-shaped, produced in umbels, while the individual flowers are decidedly pendulous on their pedicels. The tube is long and the segments short, orange-red or cinnabar, with yellow edges. The oblong-oval, leathery leaves, are evergreen and rich in colour, thus giving the finishing touches to a Himalayan species which seems to be perfectly hardy in the southern counties of Britain at least. Plants on the grass and in the Rhododendron collection at Kew have been flowering away with tolerable freedom for some weeks past. The blooms are not so plentiful as those of *R. ponticum*, *R. catawbiense*, and their hybrids; but so novel are the flowers that hybridists might well turn their attention to the improvement of this native of the Sikkim Himalayas, as it might give rise to a new race.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Odontoglossum tripudians xanthoglossum.—A richly coloured flower of this variety comes to us from Mr. J. O. Clarke, gardener to Ludwig Mond, Esq., The Poplars, 20, Avenue Road, Regent's Park, N.W. The sepals were of the darkest glossy chestnut with a bright yellow tip and base. The ground colour of the petals was bright yellow, but this was almost covered by large, dark chestnut blotches. The apical lobe of the lip was canary yellow, thus supplying the motive for the varietal name to distinguish it from the white-lipped variety. The basal two-thirds of the lip was purple-brown, with the exception of a pale area round the crest. The bristle-like processes of the latter were variegated with violet-purple on a white ground. Taking it altogether this is one of the darkest and finest varieties of *O. tripudians* we have seen.

Strange behaviour of *Odontoglossum crispum*.—Recently we gave an illustration of a three-lipped *Cattleya Mossiae*. The other day we had a flower of *Odontoglossum crispum* that seemed to consist of an amalgamation of two distinct flowers, but so complete was the union that few would guess at such an origin. It was handed to us by Mr. A. Wright, The Gardens, Falkland Park, South Norwood Hill, who had two flowers which behaved in the same or a similar manner. They had two lips,

and the dorsal sepal as well as one of the lateral ones were unequal sided, as if a supernumerary one were joined to a side of each of them. The column was of large size, but perfectly symmetrical, with wings, and a large anther cap of the usual form. On the removal of the anther cap of the flower given us, there were two pairs of unequal pollinia lying loose in the cavity, but firmly joined to one another at the base, and having the smaller lobe of each towards one another. Two pedicels were apparently perfect, and attached to two glands in the usual way on either side of the central line of what should have been the rostellum. The pedicels were not attached to the pollinia, however. A ridge ran down the middle of the face of the column showing further that the column was double.

FLORAL AND BOTANICAL DEMONSTRATION.

THE fourth of these series of lectures was given by the Rev. Professor Henslow, at the Drill Hall, on the 28th ult. Mr. H. J. Veitch presided over a fairly large audience.

The Canterbury Bells (*Campanula Medium calycanthema*) formed the first subject of discussion. The lecturer drew attention to the formation of the corolla in addition to the ordinary green calyx. In other cases the calyx became petaloid, and in others the stamens were turned into petals. Professor Henslow then proceeded to generalise upon the phenomena of doubling. In the case of the second corolla of the *Campanulas* it was probably due to a superfluity of nourishment, whilst from data he had collected it would appear that it might be brought about by some check sustained by the plant such as starvation.

The two methods of doubling were illustrated by reference to the Paeony, which had originally five petals. In some flowers it would be noticed that the calyx first became petaloid, then the outer stamens, the transformation working towards the centre of the flower. In other flowers the carpels were first changed, then the inner stamens, thus working outwards until, perhaps, only the green calyx was left. It was mentioned incidentally that the only British Paeony, *P. corallina*, was at one time to be found on Holmes Island at the mouth of the Severn, but that it had been extirpated, owing to the construction of forts there. In the *Canna* the calyx and half the stamens had been turned into petals. As if to show how doubling had been carried on, Nature had given them a permanent example in the Water Lily, in which it would be found there was a gradual transition from petaloid sepals outside to petaloid stamens and stamens in the centre of the flower. *Ranunculus acris* fl., pl., one of our oldest garden plants, and popularly known as "Bachelors' Buttons," was cited as another instance of a flower that had doubled under Nature's hands, for it was occasionally found double in the fields.

The next theme was the results obtained in the improvement of cultivated plants by selection over a long series of years, considered apart from, and in comparison with, those obtained by hybridisation and cross fertilisation. Great things had been done by selection alone. It was still a moot point whether the modern race of *Cinerarias* had been assisted by hybridisation. *Cyclamen persicum* had been mentioned as an instance of what could be done by selection, but he thought the Sweet Pea a still better one. He did not think a *Lathyrus* had ever been crossed with a Pea. *Antirrhinums*, again, were to be had in white, yellow, crimson, and in a multitude of intermediate shades, and they were all raised from the one species. Here the lecturer reminded his audience that by crossing a white form with another one a great variety might be obtained, and he again instanced the case of the *Abutilons*, which were always copper coloured until a white flower, *Boule de Neige*, was obtained. This, by subsequent crossings, gave the numerous shades that are now to be had.

Rhodanthe Manglesii alba was exhibited as illustrating a case in which the flower, as it was popularly called, was formed by the showy bracts of the involucre.

The curious habit of *Phaenocoma* was next referred to. It was explained that the little knobs on the branches were in reality branches themselves, clothed with very small leaves. A similarity of habit was to be observed in all those plants which

came from localities where periods of drought were experienced. *Phaenocoma* was one of the plants having "everlasting" flowers, and was allied to the *Helichrysums*. The old Latin writers confused these "everlastings" with the flowers of *Celosia pyramidalis*, for Pliny, writing of the latter plant, said that if cut it will revive at any time afterwards. The Greek, Dioscorides, describes *Helichrysum*, continued the lecturer, and says that some people call it *Celosia*. In the biblical passage, "an inheritance that fadeth not away," the word *amarantos*, unfading, was used, thus likening the "inheritance" to the "everlasting flowers."

The handsome *Paeonia albiflora striata* was employed to illustrate the curious effects caused by the dissociation of colours, the striation being described as a common occurrence in the progeny which had a white flower for one of their parents. The garden races of *Petunias* were given as other instances. These *Petunias* were the descendants of two species, the one with white flowers, and the other with purple, introduced to this country at the commencement of the present century. There were no double *Petunias* until a few years ago—they appeared simultaneously in Germany, France and England.

Lavatera arborea variegata was shown to exemplify the common occurrence of variegation. Proceeding to discuss the causes of variegation, the lecturer said that one cause was the want of iron, because Professor Church had found that if a variegated leaf were brushed over with a weak solution of iron it would turn green, and the same effect would be produced if the soil in which the plant was growing were watered with the iron solution. Variegation was also produced by depriving the plant of potash and magnesium, although exactly how it was brought about was not known.

The exhibition of the male inflorescence of *Chamaerops Fortunei* led to a discourse upon artificial fertilisation. The knowledge that it was possible to fertilise various flowers was possessed to some extent by the ancients, and Pliny said that "perhaps men might be able to set seed of the Date Palm by transferring the flowering branch of the male to the female." The knowledge was lost to the middle ages, but was now recovered.

The production of intermediate forms of plants by crossing two species was next touched upon and illustrated by *Philadelphus coronaria* and *P. microphylla*, an intermediate form having been called into existence by crossing these two. Another interesting hybrid was shown, a cross between a Black Currant and a Gooseberry. Although these two species were very distinct from each other they had been induced to cross. The hybrid partook of the characters of both parents, for the fruits, although of the same shape and appearance as Gooseberries, were no larger than Currants, and were produced in bunches in the same way. The leaves were scentless, and the branches destitute of spines.

The last plant shown was the new *Campanula mirabilis*, a native of the Caucasus mountains. The flowers called for no remark, but the leaves, which were nearly round, were very thick and fleshy, suggested that the plant must be a native of a very dry region. The flower buds and the margins of the leaves were protected with stiff, sharp spines.

At the close of the lecture, Mr. H. J. Veitch made some interesting remarks. Amongst other things he spoke of the way in which the dwarfed and stunted *Conifers* found in Japanese gardens had been considered so distinct that they had been described as new species by Dr. Lindley. They preserved their distinct characters as long as they were propagated by cuttings, but when grafted they broke away from the Japanese forms, and grew into trees almost identical with what English nurserymen had been growing for years.

PLANTS RECENTLY CERTIFICATED.

THE awards mentioned hereunder were made by the Royal Horticultural Society on the 28th ult.

Orchid Committee.

STANHOPEA RODIGASIANA, *Nov. sp.*—The flowers of this *Stanhopea* are very striking on account of their size and markings. The sepals are creamy or straw-yellow externally, and star-mottled with brown; while the inner face is creamy, and heavily spotted with crimson-purple blotches on the central and

basal portions. The lip is a very remarkable structure; the hypochile is black at the base, spotted at the sides, and the hollowed portion is rather shallow; the mesochile has hatchet-shaped side lobes, spotted with crimson-purple, and tailed at the anterior ends. There is also a tongue-shaped and tailed structure in the middle of the mesochile. The epichile is curved in a curious fashion, and spotted with crimson-purple. First-class Certificate. Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking.

CATTELEYA ADELA, *Nov. hyb.*—The seed bearer was *Cattleya Trianaei*, and the pollen parent *C. percivaliana*. The sepals and petals are rosy-purple, with a paler margin, and displays the peculiar combination of deep-orange and crimson in the throat, which is characteristic of *C. percivaliana*. It is intermediate between the parents, and quite distinct from either. Award of Merit. Messrs. J. Veitch & Sons, Ltd., Chelsea.

CYPRIPEDIUM IANSONI, *Nov. hyb.*—The parentage of this striking hybrid is a guarantee of the bold character of the progeny. *C. Morganiae* was the seed bearer, while *C. Rothschildianum* was the pollen bearer. The upper sepal is oblong-ovate, and heavily lined with crimson-brown on a creamy-white ground. The petals are broad, gradually narrowed to the apex, pale straw-yellow, and heavily blotched with blackish-crimson all over. The scape carried three grand flowers, and the ligulate leaves are leathery and green. First-class Certificate. It has been named in compliment to Mr. George Ianson, grower to Messrs. Hugh Low & Co., Bush Hill Park, Enfield, who exhibited it.

CYPRIPEDIUM MR. REGINALD YOUNG, *Nov. hyb.*—In this case the parents were *C. Lowii* and *C. sanderianum*, the latter being the pollen parent. The dorsal sepal is pale yellow veined with brown. The widely arching and drooping petals are linear, twisted, and 6 in. to 8 in. long. The basal quarter of their length is nearly white, blotched with purple, and wavy at the edge, the remaining portion being brownish-purple. The lip is short, wide and truncate at the mouth, and rich shining brown. First-class Certificate. Messrs. Hugh Low & Co.

LAELIOCATTELEYA CANHAMIANA JOYCE WIGAN, *Nov. hyb. var.*—The sepals and petals of this grand bigeneric hybrid are of a soft lilac with a paler centre. The lip is the distinguishing feature of the variety, being much darker in colour than the original *Lc. canhamiana*. The colour of the rich, crimson-purple lamina extends far down into the tube, which is orange-crimson; the margins are wavy and paler.

Floral Committee.

CAMPANULA MIRABILIS.—The rootstock of this species is fleshy, like that of a *Platycodon*; and the leaves are remarkably unlike those of any *Campanula* we have hitherto seen in cultivation. They vary from oblong to orbicular, with a subcordate base, leathery, dark green, and crenate at the margins, which are furnished with bristly hairs. The large, pale blue, bell-shaped flowers are erect and produced on short, cymose branches, as well as at the apex of the main stem, which is about a foot high. They are also thinly bearded in the throat, and furnished with bristly hairs on the five prominent angles of the buds. The species is a native of the Caucasus and has proved hardy during the past three years at least in this country. First-class Certificate. Messrs. Geo. Jackman & Son, Woking Nurseries, Woking.

LILIUM MARHAM.—Judging from the flowers this is a close ally of *L. pardalinum*. The back of the revolute segments is orange-brown. The face is yellow spotted with crimson in the lower half and buff orange in the upper half. The flowers are of good substance. First-class Certificate. M. C. G. van Tubergen, Junr., Haarlem, Holland.

PHILADELPHUS LEMOINEI.—The sweet-scented, four-petalled, white flowers of this hybrid are produced in great profusion just now in gardens. The leaves are small, ovate and numerous. Award of Merit. Messrs. Barr & Sons, King Street, Covent Garden.

NASTURTIIUM QUEEN OF TOM THUMB.—The flowers of this variety are dark, maroon-crimson; while the leaves are thickly mottled and splashed with silvery white. Award of Merit. Messrs. Watkins & Simpson, Neal Street, Long Acre, London.

BEGONIA FLORENCE NIGHTINGALE.—The *Camellia*-shaped flowers of this tuberous variety are large, double and pure white. The leaves are large, dark

green, and the habit of the plant dwarf and bushy. Award of Merit. Mr. B. R. Davis, Yeovil Nurseries, Yeovil.

BEGONIA THUNDERER.—The wavy and slightly fringed petals of this tuberous Begonia are imbricate and rich crimson. Award of Merit. Mr. B. R. Davis.

GAILLARDIA W. B. CHILD.—The blooms of this single variety are of great size and golden yellow, with a crimson-brown disc. Award of Merit. Messrs. Kelway & Son, Langport, Somerset.

LUPINUS POLYPHYLLUS SOMERSET.—This looks like a hybrid between *L. polyphyllus* and *L. arboreus*, having the long spikes of the former, but the branching habit and fine yellow flowers of the latter. It should prove a great acquisition to the perennial Lupines. Award of Merit. Messrs. Kelway & Son.

IRIS JUNCEA NUMIDICA.—The rich yellow flowers of this variety have the falls finely striated with brown on the lower portion or claw. The blade of the falls is orbicular, and the standards spatulate. The leaves are slender and rush-like. It is one of the bulbous Irises, and is rather later in flowering than the Spanish Iris. Award of Merit. Messrs. R. Wallace & Co., Colchester.

HEDYSARUM MULTIJUGUM.—After being brought up to the committee tables on three separate occasions, this has at last received a well-deserved Award of Merit. For small beds and rockwork it is a graceful and beautiful dwarf shrub belonging to Pea family. The long racemes of flowers are of a rich purple-red, striated on the standard with deeper veins. Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain), Burford Lodge, Dorning.

CARNATION MARGOT.—This Malmaison variety produces large and shapely flowers of a bright rose and deliciously fragrant. Award of Merit. Martin R. Smith, Esq. (gardener, Mr. C. Blick), Warren House, Hayes, Kent.

CARNATION MRS. DE SATGE.—The habit of this Malmaison variety is excellent, and the scarlet flowers are of medium size and fragrant. Award of Merit. Martin R. Smith, Esq.

CARNATION LORD WELBY.—Of the four Malmaison varieties shown this was the darkest, being of a rich dark crimson, large, and very fragrant. Award of Merit. Martin R. Smith, Esq.

CARNATION BALDWIN.—This was the most deliciously fragrant of all; and the flowers were of very large size and rich rose-pink. Award of Merit. The large group of Malmaison Carnations showed what an immense variety of colour has been developed in this popular race by Martin R. Smith, Esq.

ROSE UNA.—Rose macrantha seems to have played a part in the production of this large-flowered single variety. The flowers are white, tinted with blush at certain stages, and have a few more than the normal number of petals. Award of Merit. Messrs. Paul & Son, Cheshunt.

ROSE REV. ALAN CHEALES.—The blooms of this hybrid perpetual variety are of average size, with a conical centre, and many of the outer petals revolute at the margins. The petals are of a bright and dark rose, with a pale pink reverse. Award of Merit. Messrs. Paul & Son.

GLADIOLUS SUTTON'S QUEEN OF ROSES.—This belongs to the early-flowering race, and has large flowers of a charming, soft, rosy or salmon-pink. The three lower segments have each a deeper, central rose blotch, enclosing a yellow one. It is an acquisition to the early-flowering race. Award of Merit. Messrs. Sutton & Sons, Reading.

DIGITALIS PURPUREA GRANDIFLORA.—Our native species of Foxglove is finer than any exotic, and has also been most extensively improved. The numerous varieties shown by Messrs. J. Veitch & Sons, Ltd., contained many fine forms far superior to the old *D. p. gloxiniaeflora* strain, both in size and markings. The ground colour varied from dark to light purple, rose, lilac and white. The last-named was a magnificent variety, having large blackish-purple blotches on the lip and in the throat.

Fruit and Vegetable Committee.

PEACH THOMAS RIVERS.—The fruits of this Peach are of huge size, suffused and marbled with red on a pale yellow ground. They were gathered from pot trees in the forcing house, which was started on the 20th December last. Other varieties in the same house were gathered nearly two months ago, so that this new variety is a late Peach. First-class Certificate. Messrs. T. Rivers & Son, Sawbridge-worth.

THE FLOWER GARDEN.

THE ordinary routine of summer treatment is at this time of the year somewhat exacting, for mowing, watering, sweeping, weeding, and rolling have all to be attended to week by week if the flower garden is to possess that trim and well kept appearance that is so much a charm. This year, despite the heavy rainstorms, insect pests, more especially red spider and aphides, have been having a good innings, and this has meant a heavy addition to the labour bill.

VERBENAS.—These have suffered to some extent from mildew, but the plants are now growing nicely, and will, it is to be hoped, outdistance the fungus. Attend to the pegging down of growths as occasion offers, not only that the plants may be kept dwarf, but that the whole of the ground may be covered as soon as possible.

HELIOTROPES.—These, too, will need timely pegging down, which should not be a difficult operation even although the shoots are brittle, if the plants were 'laid down' at planting. Keep the soil well stirred amongst the plants until growth has carpeted the ground, and the hoe can no longer be used. In the case of late-struck cuttings which were not stopped prior to planting, a little judicious pinching may be necessary.

ORNAMENTAL VASES.—In far too many cases these, even the most massive of them, have none too much soil-holding capacity, and yet a good deal of head growth is needed to furnish them properly. Tall, vigorous-growing plants have thus to be employed, and these soon exhaust the goodness in the little soil they have to grow and bloom in. Feeding with manurial stimulants must, as a consequence, be conducted at an early date, especially where such rich-feeding things as Castor Oil Plants, Maize, Cannas, and other subtropical foliage subjects are concerned. Liquid cow manure, or fresh farmyard manure are better than chemicals if the proximity of the vases to the mansion admits of their use. As a rule, however, a watering in early morning gives plenty of time for the odours to become dissipated by the breakfast hour.

CARNATIONS, like many other things, are rather backward this year, and they have suffered a good deal from greenfly. Keep up the dustings with tobacco powder, as advocated in the last calendar, for it is imperative that the health of the plants should not be impaired, seeing that the layering season is now within measurable distance. Dishudding to some extent will be found necessary, although where beds of Carnations are planted for effect the whole of the buds may be left to develop. The side blooms, although small, are useful, and continue the show for some time after the secondary flowers are gone. Even in the case of the plants grown for cutting from, only the small buds round the large central ones at the apices of the shoots should be taken out, for these would in any case be removed with the first flower cut. The secondary or lateral blooms will be sure to come in handy. Seedlings, as they commence to flower, should be carefully watched, and any especially good or distinct ones marked for propagation. Seedling Carnations ought to be raised in numbers in every private place, for not only is there always a chance of getting something good and new, but the plants flower much more freely than the plants raised from layers. Even if the flowers come single, as a certain percentage will, they are bright and useful.

VIOLETS.—With a view to keeping down red spider a sprinkle overhead with a rose-can should be given the plants during the evenings of hot days, with proper waterings as they may require it. Keep the soil constantly stirred by hoeing between the rows, and cut back all runners as fast as they make their appearance, so as to foster the development of sturdy tufts and crowns.

WALLFLOWERS.—As soon as the plants from the June sowing are a couple of inches in height make preparation to remove them to their nursery quarters. The soil should not be rich, but must be sweet and friable if sturdy, short-jointed growth is required. It is a good plan to plant in rows about 9 in. apart, with about the same distance between the plants in the row. Lift carefully, so as to preserve as many as possible of the roots intact, and water the young plants well in. If the position is a sunny one a little shading given by means of a few boughs of ever-

greens scattered over the ground will be very grateful to the plants during the time that the sun is on them, as it will enable them to get hold of the new soil more speedily. The old seed beds may be turned into nursery beds by lifting alternate rows completely, and by thinning down the plants in the row to from 6 in. to 9 in. apart.—A. S. G.

Kitchen Garden Calendar.

HAVING now arrived at the turn of the year, when it is necessary to consider the winter and spring crops, and so make preparations for them accordingly, it is advisable to apportion to each kind a sufficient space to secure ample supplies through the dull months, when vegetation for the most part is at a standstill.

In every well-appointed kitchen garden there should always be planted a goodly quantity of Celery, as this vegetable is much in request until quite late in the spring, and to have it in the finest possible condition several plantings must be made, but to waste no ground the latest plantings may be made at the present time, for if these are well looked after in the way of watering they will be equal in point of size and quality to those planted early in June. One thing must be specially guarded against in the cultivation of late Celery, and that is not to commence blanching until it is actually necessary, for be it remembered that this plant is perfectly hardy when left exposed, and will withstand the most severe of our winters unharmed. It is the blanching that makes it tender and so liable to be injured from frost and wet. So long then as the plants are left unearthed there is little danger of them suffering; for this reason, the late planted lots are best for spring use, as blanching takes place slowly. During winter the plants are not rendered tender till the severest of the weather is past. For blanching the early crops it is not necessary to earth, as there would be no danger of them suffering from frost; therefore, a more simple process may be adopted. If the stems are brought together and loosely tied this will hold them in position while Celery collars made of brown paper are fastened round them. All that is necessary to secure clean, well blanched stems is to exclude the light and air. Watering at the roots may go on as usual, which will soon cause the hearts to push up as white as possible.

Planting ought now to be completed of such things as Savoys, Sprouts, Borecole, Broccoli, and other winter crops, that they may be well established. As the ground becomes cleared of Potatoes, the same should again be sown with Turnips, as they will not so soon get stringy. When we have shorter days a greater breadth at a time may be sown; but it is not well to put too great a quantity at once until the middle of the next month, as young Turnips drawn fresh from the ground are always preferable to those that have been stored. Young Carrots are always much appreciated in winter. A good breadth of these should be sown now on a warm sheltered border where protection could be afforded in case the winter is unusually severe. The early varieties are best for this purpose, though, where the ground is in good heart, the intermediate ones will do just as well. Endive may now be sown with a surety of having fine hearts, as there will not be any danger of it running to seed after this date. A sowing ought now to be made of Brown Cos Lettuce. As these do not grow so rapidly as the summer varieties there is less risk of losing them during wet Autumns.

In the Northern counties a sowing of early Cabbage should now be made on a piece of well-prepared soil in an open situation. As the seedlings appear keep them well supplied with water. Colewort can also be treated in the same way. Attend to the staking of Peas and Runner Beans, and do not allow either to suffer for want of water, or mildew will soon make its appearance with the former, and the latter will fail to set any fruit. Sow Parsley for Winter and Spring use, and pay particular attention to small salads.—*Kitchen Gardener.*

A Big Price for a Carnation.—A United States florist recently refused an offer of \$4,000 (£800) for the stock of Carnation Mrs. T. W. Lawson.

HINTS FOR AMATEURS.

A LIST OF SELECTED CANNAS.

CARRYING out the promise appearing in last week's "Hints," the undermentioned varieties will be found some of the finest in existence:—

Aurea.—This is one of the finest of Crozy's many fine varieties. The flowers are of great size, and the individual segments very broad and of great substance. The colour is a rich golden-yellow. If space can only be afforded for one self yellow variety, this is the one to have.

Aurore.—Here we have a rich salmon-scarlet hue exhibited. Both spike and segments are large.

Ami Chretien is another huge flower in which the prevailing colours are rose and orange. The mixture of the two gives an exceedingly beautiful shade of rosy-salmon.

Florence Vaughan.—In America this variety is thought well of, and it is equally amenable to treatment in this. The flowers are deep yellow, heavily spotted with chocolate-brown.

I. J. Berkman.—Here the colour is a peculiar shade of rose-scarlet that is both distinct and handsome.

Madam la Baronne P. Thenard has been blessed with a name whose length is sufficiently cumbersome, but it is a noble flower notwithstanding. The colour is a rich shade of red-orange; with a more or less distinct margin of golden-yellow.

Incendie, appropriately enough, is one of the brightest of all. The colour is a rich orange red, with an unusually broad margin of yellow, which also bears a few spots of the same colour as the body colour. The flowers are of extra size, and are produced with exceptional freedom.

Milne Redhead.—Than this there is a number of larger flowers, but the variety is especially remarkable on account of its colour, which renders it quite distinct from everything else. It may, perhaps, be best described as dull scarlet-red. The plant is very dwarf in habit, and a free bloomer.

L. G. Bally is a variety of a number of years' standing, but is a real good thing still, although it can be obtained very cheaply. The colour is yellow, and there are numerous spots of deep carmine.

Mrs. W. Marshall, on the other hand, is one of the newest, for it received an Award of Merit from the Royal Horticultural Society no longer ago than the last meeting, viz., that on the 25th ult. On that occasion it was shown by Messrs. Paul & Son, of Cheshunt. It is a large and handsome flower, in colour yellow, but heavily spotted with large spots of deep crimson-scarlet.

Alpha is another new variety of great merit. The flowers exhibit a deep apricot hue, which, if not exactly a new colour, is distinct from anything we have as yet.

Mosaic is a showy flower that will doubtless find its admirers, although, personally, we prefer to see a more loosely built spike, which is also not so heavy in appearance as the close ones, of which this new variety is a good sample. The Royal Horticultural Society gave this also an Award of Merit on the 28th ult., but it is not nearly so good a flower as Mrs. W. Marshall. The colours are good, golden-yellow ground, with many blotches of red-orange.

Doyin J. Liabaud is light canary-yellow, with large blotches of pale salmon-red. The flowers are large, and the plant dwarf, and of vigorous habit.

Gloire Lyonnaise is also canary-yellow, but in addition to blotching and mottling with red the centres of the segments bear a number of stripes of the same colour.

Henry Irving.—Here we see a fiery orange-scarlet flower, with a broad orange margin to the segments. It is very showy, and the best of its colour.

Konigin Charlotte.—Although an old variety, this is still one of the most useful sorts in cultivation. It is dwarf, vigorous, a free bloomer, and very easy to grow. The flowers are bright red, with a very broad margin of golden-yellow. The price for this is very low, since good plants can be obtained for a shilling each.

All the above-named varieties have foliage of various shades of green. For the sake of contrast, however, one or two of the dark or purple-leaved sorts should be grown, since whether in or out of flower they are always effective.

Geoffrey Saint-Hilaire is one of the best of these, since not only is the foliage rich and effective, but the rich orange-red flowers are also large and showy, and fully up to the standard of many of the green-foliaged ones.

Paul Bert—This is a dwarf and sturdy variety that may well be included amongst the dark-leaved forms. The flowers are bright amber-yellow, the contrast between flowers and foliage thus being very conspicuous.—*Rex*.

WATERING FRUIT-TREE BORDERS.

THE man who has mastered the question of watering, whether it be of pot plants, or of plants growing in enclosed borders, or in the open ground, where the roots are free to run as they list—has gained a considerable knowledge of the whole art of gardening. On the other hand, without a man possesses a knowledge sufficient to guide him in giving water in sufficient quantity, and at the right time, he cannot be regarded as anything else than a novice.

Now, curiously enough, even after the watering of pot plants has been mastered by the amateur gardener, the treatment of borders seems to present a further difficulty. Many an amateur seems to think that the rules that apply to plants in pots do not apply to plants in borders, and if only the upper strata of soil appear to be damp it is assumed that all is well below, and the poor plants are left to look after themselves. In the case of Vines particularly it must be admitted that they often do the "looking after themselves," with great success. Their roots will travel almost incredible distances in the search for moisture, and in doing so will penetrate the sides of cesspools and wells to get at the precious liquid.

I have in my mind a case of an old gardener who always used to take the prize at the local show for Black Hamburgs. No matter how sunless the season, his bunches were always the best finished, and as black as Sloes, and yet he never appeared to treat his Vines any differently to other people. The secret came out, however, when an old well, situate at some little distance from the vinery producing the prize fruit, was opened in order to see what had gone wrong with the pump leading to it, which suddenly refused to work. It was found that the sides of the well were literally festooned with active feeding Vine roots, and it was these that had choked up the pipe and prevented the pump from working. The well was speedily covered over again, for the gardener was too shrewd to risk his Vines by disturbing these roots to any extent.

This only goes to show how important is the question of the water supply. At this season of the year, when Vines, Peaches, and other fruits are feeling the heavy strain of carrying a heavy load of foliage, and of developing their several crops of fruit, it becomes a matter of the first importance to see that the borders are not allowed to get dry. In vineries and Peach houses the regular damping down and syringing are apt to keep the surface soil wet, whilst underneath the soil is dry. The surface, therefore, must not be taken as an index of the true condition of the border, or the results may be disastrous. If Vine and Peach borders have been properly made in the first instance, and if the trees are in fairly vigorous health, they will take a thorough soaking every two or three weeks, not a dribble merely, but enough to moisten every particle of soil in the border. When such regular waterings are not given the roots are induced to push outside the border in search for moisture, they get into poor or sour soil, and shanking follows as a matter of course. It will thus be seen how desirable it is to keep the roots from straying too much by giving them what they require.

Liquid manure water is of the greatest value to trees carrying heavy crops, but it is not infrequently carelessly used, and its virtue to a large extent wasted. An all-too-common instance of this is to be seen when the borders are allowed to become so dry that cracks open in them, liquid manure is given, perhaps stronger than the roots are able to bear under ordinary conditions, and the roots, if not killed outright, are sadly injured. Liquid manure should never be given to very dry borders, but the latter should be first prepared for the stimulant by a good soaking of clear water, when, if desired, the manure water may follow.

Another fruitful cause of check to under-glass fruits is the application of large quantities of cold water drawn directly either from wells or the water

company's pipes, which, perhaps, are not any too deep in the ground, but the water from which is often cold and always hard.

All water used, therefore, should be exposed for a day or two in open tanks to the action of the sun, which will speedily raise it to something like a suitable temperature. The liquid manure, too, should always be rather too weak than too strong.—*Practice*.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Tropaeolum Sunlight.—*Apt*: This Tropaeolum is new only to this country. We believe it has been cultivated for some time in the United States. It is a pretty plant, and produces its bright yellow flowers with great freedom. You would find it very useful for cutting, for the flowers last well in water.

Origin of Garden Petunias.—*Enquirer*: The parents of all the numerous fine Petunias that we find in our gardens are *P. nyctaginiflora*, a white flowered species introduced to this country in 1825, and *P. violacea*, a plant with purple violet flowers, introduced here in 1831, or six years after. Both are natives of South America.

Plunging Chrysanthemums.—*Jos. Ringold*: We think too much fuss has been made about the plunging and non-plunging of Chrysanthemums, for it has been conclusively proved that excellent results have been obtained from both methods. Some growers hold to the one, and some the other, but it is very largely a matter of convenience, and even more largely still a matter of habit—gardeners are highly conservative creatures and do not care about treading the mazes of the unknown in making experiments. We know gardens where early Chrysanthemums are plunged, and others where not a single one is thus treated. Again there are others which have come under our own observation in which the bush plants are plunged, but those plants which are to bear large flowers are not. In your own case we should advise you to do whatever is most convenient—you have plenty of latitude as to your choice of method.

Cucumbers Dying.—*R. P.*: From what you say we should say that your surmise is correct, and that the plants have been attacked by eel-worms. These are very diminutive creatures, and you would have need to have magnificent eyesight in order to see them without the aid of a microscope. You can do nothing in the way of cure. The only thing is to root the remains of the plants out, remove the soil, put in fresh, and start again with new plants. You should adopt some means of sterilising the soil, especially if you obtain it from the same sources as you did the last. This can be done either by soaking it with boiling water or by baking. If you want to use it soon the latter method would be preferable to the former.

Canna Suckers.—*Geo. Findlayson*: You will find that *Rex* has answered your question fully in last week's "Hints."

Descriptive Book of Carnations.—*J. G.*: As far as we are aware there is no book upon Carnations issued with coloured plates. "The Carnation," by E. S. Dodwell, will give you a deal of valuable information on all phases of Carnation culture, but it has only one illustration, and that not a coloured one. The book can be obtained from this office for 1s. 6d., or 1s. 7d. post free. The 'Carnation Manual,' published by Cassell & Co., Ltd., for the National Carnation and Picotee Society (Southern Section) is also a valuable book. The price is 3s. 6d., cloth boards. It has only one illustration, in fact, the same one as that appearing in "The Carnation." The book may be obtained either from the publishers or from the Hon. Secretary of the National Carnation and Picotee Society, Mr. T. E. Henwood, Auricula Villa, 16, Hamilton Road, Reading.

Strawberries.—*Awa*: You need not be apprehensive of being too late. The runners will make good plants if they are pegged down after the fruit crop has been gathered.

Apricot Moor Park.—*S. Menzies*: This otherwise fine variety is especially susceptible to the dying away of branches in the way yours has done. The only thing to do is to cut out the dead wood, and train the other in to fill. It is sometimes difficult to do this satisfactorily, and the symmetry of many a fine tree has been spoilt by the untimely deaths of branches.

A FAMOUS CANON HALL MUSCAT HOUSE.

The grapes grown purposely to supply the market are very limited in the number of varieties. The

wood very badly and sets its fruit in an equally unsatisfactory way as a rule, but Mr. Kay manages it splendidly, by according it the requisite amount of heat and by fertilising the berries artificially. The berries of well-grown samples measure $3\frac{1}{2}$ in. to $4\frac{1}{2}$ in. in circumference. The magnificent appearance of the grapes enables Mr. Kay to realise very high prices for them. The illustration shows an enormous number of bunches on the Vines. Something like 8,000 lbs. of Grapes are taken out of this house annually. Other houses are also devoted to the same variety.

The house in question is 400 ft. long by 38 ft. wide, and was built by Mr. W. Duncan Tucker, F.R.H.S., horticultural builder and hot water engineer, Lawrence Road, Tottenham, London, who supplied us with the illustration. Mr. Tucker builds market garden structures very extensively, at one time devoting his attention chiefly, if not solely, to

STRAWBERRIES, LEADER AND MONARCH.

A BOX of samples of these comparatively new Strawberries reached us the other day from Mr. J. Mayne, gardener to the Hon. Marke Rolle, Bickton, Budleigh Salterton, Devon. Mr. Mayne says he commenced gathering Strawberries in the open quite a fortnight later than usual.

Both varieties sent were noble-looking Strawberries of enormous size, and tempting enough to make the mouth water. The variety Leader was the darkest in colour, the exterior being of a dark, rich crimson, and the interior scarlet to the centre, with the exception of the white veins running through it. In shape, the largest fruits were dilated, sometimes angled, and lobed, the lobes being rounded; occasional ones were flattened and comb-like. The seeds or true fruits were inserted in slight cavities,



A FAMOUS CANON HALL MUSCAT HOUSE.

principal black sorts are Black Hamburg, and Gros Colman. Others that take a second place are Black Alicante, Madresfield Court, and Lady Downes, the latter now enjoying but little repute. Muscat of Alexandria is the most popular white variety; while Foster's Seedling and Buckland Sweet Water take a secondary position. Duke of Buccleuch and Canon Hall Muscat may be regarded as specialities, seeing that they cause gardeners, whether in private or market garden establishments, a great amount of trouble in their cultivation, so that few succeed with them. The berries of both are magnificent in appearance when well done, and of excellent quality. Nobody succeeds better with Canon Hall Muscat than Mr. Peter E. Kay, Clagmar Vineyard, Finchley, London. The accompanying illustration shows an interior view of his famous Canon Hall Muscat House, when in full bearing. This Vine ripens its

this kind of work. He now undertakes the construction of winter gardens, conservatories, vineries, ferneries, Camellia houses, Peach, Rose, and Chrysanthemum houses, and, in fact, plant houses in general for private establishments. The conservatories, &c., are designed to suit any situation. He now issues a well got up catalogue of designs of all these houses, giving exterior, interior, and roof views of the same. The illustrations chiefly represent houses, now filled with their occupants, which he has designed and built.

Olive Oil is said to improve the action of the skin, preventing eczema, if taken medicinally. The disease can be cured by a liberal use of fresh or dried fruit, olive oil, eggs and milk, avoiding starchy foods.

but fairly prominent. The riper fruits were soft and very juicy, with a rich aroma and slightly acidulated, just sufficient to make the fruit very pleasant eating, and to prevent the insipidity which is characteristic of those varieties which are merely sweet and watery. Of the two varieties Mr. Mayne says that Leader is cropping with him by far the better, and taking all things into consideration he thinks it is the better of the two.

The larger fruits of Monarch were dilated and flattened or comb shaped; and the smaller ones were conical, but nevertheless a little flattened. They were paler than those of Monarch, being scarlet externally and light orange-scarlet internally. The seed-like fruits are small, but prominent on the surface. The larger of the fruits were the more juicy and richly flavoured, being sweet and less acidulated than in the case of Leader, and possessed

a fair amount of aroma. The smaller fruits were firmer, but not quite so rich in aroma. It has done well at Bicton, but has not fruited so heavily.

Of the other varieties grown at Bicton, Royal Sovereign, Empress of India, Gunton Park, President and Sir Joseph Paxton are all carrying heavy crops. Both Leader and Monarch are handsome-looking fruits as grown by Mr. Mayne, but judging from its size, rich colour, very fair flavour and heavy cropping qualities we feel sure there is a great future before Leader. Opinions may differ, however.

BELGIAN NURSERIES.

VIII.—MESSRS. LUCIEN LINDEN & Co.,
MOORTEBEEK.

WHILE in Brussels on the 20th April last we went by the light railway to Moortebek, about three and a half miles or thereby out of town, to see the Orchid establishment of Messrs. Lucien Linden & Co., which was established there about three years ago. The situation is an ideal one for the cultivation of Orchids, being practically in the country, where only a few scattered houses are yet to be seen, and on the sloping side of a valley by no means common in Belgium, to the west of the capital. The houses are all new, and built on the most approved modern plan for the cultivation of Orchids. This was the establishment visited by Leopold II, the King of the Belgians, as mentioned at p. 692, in our last week's issue. The King himself is an ardent horticulturist, having a grand establishment at Laeken, and, being about to build many more glass-houses, is well able to judge for himself when he sees gardening in any of its branches well carried out. He spent several hours upon the establishment, and expressed his admiration at everything he saw.

In Belgium it is more often the custom than here to build large blocks of houses all connected together in such a way that the area enclosed is continuous, so that a uniform temperature is maintained throughout. The span ridges take the usual form, but there are no dividing walls between one house and another. At the time of our visit there was something between 50,000 and 60,000 plants of *Odontoglossums* on the establishment. On entering we were immediately ushered into a block of seven houses entirely filled with *Odontoglossums*, the bulk of them consisting of *O. crispum*, imported two years ago. They were a picture of rude health, the leaves being of a red or bronzy hue, leathery, and the pseudobulbs of large size. The pieces were mostly in 60-size pots. Blossom was abundant on the occasion to which we refer, but they reached their best about three weeks later. The cut flowers are sent to Italy, France and Germany, chiefly to the two latter countries. The benches consist of teak, the spars for carrying the pots being 2½ in. to 3 in. wide, and painted.

The second division of this block contained many interesting things including well flowered pieces of *Cochlidia noetziiana*, *Odontoglossum Pescatorei*, *O. triumphans* and *O. cirrbosum*. All were grown in a compost of *Polypodium* fibre and sphagnum. Of *O. cirrbosum* there were at least 200 plants in bloom, and carrying fine panicles of bloom. There was a considerable amount of variation, some having numerous maroon spots, others crimson, maroon-crimson on a yellow ground, and rose-tinted varieties. Of *O. Pescatorei* one hundred plants were in bloom, many of them deeply tinted with rose, and most of them carrying huge panicles of fine flowers. *O. P. Roi Leopold* was characterised by a large violet blotch on each of the sepals, with a few smaller ones on the petals. Natural hybrids were plentiful, *O. Tigre Royal* representing a form between *O. triumphans* and *O. crispum*, having the sepals almost covered with rich chocolate blotches, and a smaller number on the petals. *O. venustum* might be regarded as a white *O. wilckeanum*, blotched with purple-brown, the blotches on the petals being large, circular, and numbering six or seven. In like manner *O. Princess Victoria* appeared to be intermediate between *O. crispum* and *O. sceptrum*, the numerous light chestnut blotches on a pure white ground being very pretty. Handsome also was *O. crispum Van Cauwenbergii*, with a solitary, large purple blotch on each sepal, and numerous small spots on the petals and lip.

The next division contained beautifully spotted and tinted varieties of *O. crispum ruckerianum*, and

O. Pescatorei. The latter bore a panicle 3½ ft. long, carrying sixty flowers. A fine piece of *O. vexillarium Memoria Lindeni* carried six spikes of six flowers each, of a beautiful rich rose-magenta. The sepals of *O. wilckeanum Lindeni* were mostly of a dark chocolate, and the petals handsomely blotched.

A houseful of specialities we might term that which contained many named varieties. The colour of *Mesospinidium vulcanicum* was very rich. One large, brownish-purple blotch on each of the sepals and petals was the feature of *Odontoglossum crispum Prince Albert*. *O. vexillarium vittatum* had white sepals, and rose petals edged with white. *O. wilckeanum nobile* had two large blotches, and the petals numerous spots on a clear yellow ground. The soft rose flowers of *O. ruckerianum amabile* were thickly spotted all over. A fine light variety was that named *O. wilckeanum versicolor*, having one or two large, brown blotches on sulphur yellow. The numerous brown blotches on the canary-yellow sepals of *O. wilckeanum Princess de Canaries* and the crest of the lip pointed to a cross between *O. wilckeanum* and *O. sceptrum*. *O. hunewellianum maximum* has already been seen and admired in this country, the flowers being much larger than the type, and spotted all over. The large, circular, purple blotch on each of the sepals is characteristic of *O. crispum Comte de Flandre*, the petals being white. The sepals and petals of *O. ruckerianum delicosum* were richly spotted on a rosy ground. *O. Princesse Clementine* had white sepals and petals thickly spotted all over and indicated *O. sceptrum* and *O. crispum* as the parents. It is named in compliment to the King of Belgium's daughter. Quite of another type was *O. aspersum fulgens*, having maroon-brown sepals, rosy petals spotted with maroon at the base, and a deep purple lip. *O. Queen of the Belgians* recalled *O. crispum* and *O. sceptrum*, being of the same shape as the latter, but larger, with the sepals and petals richly blotched with dark cinnamon. *O. wilckeanum Wm. Stevens* is named after a well-known English gardener, the sepals and petals being handsomely blotched and spotted with chocolate.

Time being pressing, we now hurried through several other houses all directly connected with one another, the passages being under cover. Numerous varieties of *O. crispum*, *O. Hallii*, *O. luteo-purpureum* and *O. triumphans* monopolised a house. Then came two more, similarly occupied with plants in the picture of health. Very fine was *O. ruckerianum rubiginosum*, having large flowers richly blotched with crimson-purple. Batches of *Dendrobium nobile* and *Odontoglossum vexillarium* next engaged our attention. *O. v. candidulum* is a white variety with a yellow blotch at the base of the lip. Cattleyas were well represented by *C. Mossiae*, *C. Mendelii* and others of that type, which filled six houses and the large central hall. They were well furnished with sheaths at that time, and ready to throw up their flowers. The next two were largely devoted to *C. Trianaei*. A surprise was in store for us here in half a houseful of *Cypripedium lawrenceanum*, having magnificent foliage. The flower stems were 1½ ft. to 2½ ft. high, and the flowers measured 5½ in. to 6 in. across the petals. Equally well grown, though in smaller numbers, were *C. hirsutissimum*, *C. grande*, *C. villosum* and *C. v. Boxalli*.

Cattleyas were in force in another house, including *C. Mendelii The Pearl*, having pearl-tinted flowers and a pale yellow blotch in the throat. Isolated at intervals in this house amongst the Cattleyas were profusely flowered specimens of *Dendrobium nobile*. Elsewhere, *Cypripedium rothschildianum* was very fine, with three massive flowers fully opened upon a spike. The hybrid *C. lebaudianum* is finding its way into various gardens. It was derived from *C. Stonei* crossed with *C. haynaldianum*. The upper sepal was beautifully spotted with maroon in rows along the veins, and the petals were blotched on the lower third with the same colour. There was also a houseful of the beautiful and varied *C. insigne montanum*. The central staging of the large central hall was monopolised by *Cattleya labiata*, and flowering plants of *Odontoglossum vexillarium* occupied the front next to the entrance.

Hybrid and cross-bred Anthuriums were conspicuous here and there in several of the houses, the space beneath the staging of the central hall being occupied with seedlings of *A. scherzerianum*. In another house a variety of *A. scherzerianum* with twin and opposite, salmon-coloured spathes attracted

our notice. Varieties of the same species in another house presented orbicular spathes, as well as different colours in spathes of the ordinary shape. *A. s. rothschildianum Fascinator* was notable for its rich scarlet blotches on a rosy ground. Particularly handsome was *A. s. Triomphe de Moortebek*, in one of the Orchid houses. The large, oblong spathe was of a uniform light salmon, and therefore totally distinct from the original.

SOCIETIES.

RICHMOND HORTICULTURAL.—June 29th.

REAL Queen's weather favoured the summer fixture of the Richmond Horticultural Society on the above date, which took place, as usual, in the Old Deer Park. Four large tents were devoted to the various exhibits of flowers, fruits and vegetables. The quality was high and well maintained throughout, but there appeared to be a falling off in the groups of miscellaneous and specimen plants, also in the fruit and vegetable classes. The show arrangements throughout were excellent, and reflected great credit upon the executive.

In the large tent, which was given up to the specimen plants and groups, there was some first-class material.

In the competitive classes D. H. Scott, Esq. (gardener, R. Johnson), The Old Palace, Richmond, was first for a group of tuberous Begonias; also for twelve Begonias. Mr. H. E. Fordham, The Nurseries, Twickenham, was placed first for the large group of miscellaneous plants, having a very tastefully arranged exhibit. Mr. Wm. Vause, Royal Leamington Spa, was second, and Mr. John Russell, third.

In the class for a smaller group, open to gardeners and amateurs, Mr. C. Want, gardener to Sir F. Wigan, Bart, J.P., Clare Lawn, East Sheen, was first. The first award for a dozen specimen show Pelargoniums went to Mr. C. Turner, of Slough.

Mr. W. Farr, gardener to Andrew Pears, Esq., Spring Grove, Isleworth, received first prize for a capital group of Malmaison Carnations.

In the classes for specimen plants Mr. W. Farr was first, and Mr. C. Want, second, for six Ferns. Mr. Farr showed some huge pieces of *Polypodium aureum* and *Davallia fijiensis*; also for the single specimen stove foliage plant, showing *Asparagus tenuissimus*.

The best six foliage plants came from Mr. Wm. Vause, who had two grand Crotons. Mr. J. Allsop, gardener to W. Cunard, Esq., Orleans House, sent the best six Caladiums. Mr. W. Vause received a second prize for six stove and greenhouse flowering plants.

Messrs. Barr & Sons, King Street, Covent Garden, were first for two dozen bunches of cut bardy flowers. Messrs. Paul & Son, of Chesbunt, were second.

In the tent devoted to Roses and table decorations some grand lots of Roses were forthcoming from Messrs. Paul & Son, of Chesbunt; Frank Cant & Co., Colchester; B. R. Cant, also of Colchester; and Chas. Turner.

The table decorations showed the exercise of much taste and skill in construction.

The non-competitive floral exhibits were numerous, and added much to the general excellence of the show.

Messrs. W. Cutbush & Son, Highgate, N., set up a grand lot of Malmaison Carnations, in which the new crimson Churchwarden was a great feature.

Messrs. H. Cannell & Sons, of Swanley, Kent, sent a magnificent array of Cannas in small 32 pots. All of the plants were splendidly flowered, and we have really never seen Cannas shown so well before. Many of the leading varieties were represented.

Mr. J. Hudson, gardener to Leopold de Rothschild, Esq., sent a collection of fruit trees in pots, all of them well cropped. Peaches, Nectarines and Plums were represented, and there were some fine baskets of Tomatos.

Mr. John Russell, Richmond, set up a very comprehensive collection of hardy ornamental trees and shrubs, of which he makes a speciality, in pots. Variegated subjects were most in evidence, and very nice they looked. Mr. Russell also showed the new *Dracaena Russellii*. Messrs. Wm. Fromow & Sons had a pretty semi-circular group of miscel-

laneous plants; also a pretty group of Japanese Maples.

From Messrs. Jas. Veitch & Sons, Ltd., Chelsea, came a capital lot of Roses in pots. In the back ground of these were some tall samples of *Hydrangea paniculata grandiflora*. Two groups of flowering and foliage plants were also contributed by Mr. Wm. Thompson, Sheen Nurseries.

A handsome lot of Orchids was sent by Messrs. B. S. Williams & Son, Victoria and Paradise Nurseries, Upper Holloway, N. Finely-coloured flowers of *Laeliocattleya Edouard André*, and *Cattleya brantiana* were special features.

A very showy and varied lot of hardy cut flowers was contributed by Messrs. Geo. Jackman & Son, Woking. Mr. W. Spooner, also of Woking, had cut Roses.

In the tent set apart for Orchids and herbaceous subjects, Messrs. F. Sander & Co., of St. Albans, had an imposing group of Orchids and new plants, chief among which were *Acalypha Sanderi*, *A. godseffiana*, and *Dracaena sanderiana*.

Mr. A. Howard, gardener to Henry Little, Esq., Baronshalt, E. Twickenham, had a nice lot of Orchids, principally *Cattleyas*. Mr. Davis, of Yeovil, sent some first-rate tuberous *Begonias*. Messrs. Barr & Son, of Covent Garden, had some capital hardy flowers. Similar exhibits came from Mr. John Russell, Messrs. A. W. Young & Co., Stevenage, and Mr. A. Perry, Winchmore Hill, while Mr. F. Foster had a bright lot of Sweet Peas. The cut flowers from Messrs. R. Wallace & Co., Colchester, were chiefly *Liliums* and *Irises*.

A highly interesting feature was the charming miniature rockery staged by the Guildford Hardy Plant Co. It was composed of tufa and virgin cork and was well furnished with the choicest Alpines. A background of dwarf Conifers furnished a finish to the prettiest exhibit of the kind we have yet seen.

Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., had a nice group of Carnations.

Upon the grass outside the exhibition tents, Mr. Duncan Tucker, of Tottenham, N., had on view several of the convenient modern glasshouses of which he makes a speciality. They were fitted with the latest and handiest ventilating apparatus.

In the fruit and vegetable tent Messrs. T. Rivers & Son, Sawbridgeworth, had a superb collection of fruit, comprising huge Peaches, capital Plums, Nectarines and Cherries.

Mr. James Gibson, gardener to E. H. Watts, Esq., Devonhurst, Chiswick, was first for Strawberries, whilst Mr. A. Meaton, gardener to J. B. Hilditch, Esq., Ashgill House, Richmond, took a similar place for both black and white Grapes. Mr. Allsop led for a dish of Nectarines, Mr. Gibson being second. Mr. Bolton, gardener to Mrs. Blacker, Coome End, Kingston, carried off premier honours for a dish of Peaches. Mr. Thos. Osman, Ottershaw Park Gardens, Chertsey, was first for two bunches of white Grapes, and Mr. H. W. Blake, gardener to the Earl of Onslow, Clandon Park, Guildford, had the best three bunches of black Grapes.

Mr. C. J. Waite, gardener to Sir Patrick Talbot, Glenhurst, Esher, won the first award for the collection of vegetables grown from Sutton's seeds. Mr. A. J. Basile, gardener to the Rev. Powell, Woburn Park, Weybridge, was second, and Mr. J. Gibson, third. Mr. C. J. Waite was likewise first for the collection of vegetables grown from Carter's seeds, with Mr. Gibson as second, and Mr. Basile, third.

ROYAL HORTICULTURAL OF IRELAND—

June 30th.

THE beautiful grounds of Merrion Square, Dublin, were *en fête* on the above date with the Rose show of the Royal Horticultural Society of Ireland. Four large tents were required for the housing of the various exhibits, which were characterised throughout by remarkably high quality.

Roses, of course, were the special feature, and there was brisk competition in the various classes. The Challenge Plate, value £25, presented by Messrs. Alex. Dickson & Sons, Newtownards, for thirty-six blooms, in not less than twenty-four varieties was won by Lord Ashdown (gardener, Mr. Andrew Porter), Woodlawn. F. A. Millar, Esq. (gardener, Mr. D. Colohan), Monkstown, was second. Mrs. McCann (gardener, Mr. Thomas Goff), Simmonscourt, staged the premier stand of

twenty-four blooms, distinct, F. A. Millar, Esq., being second. The first prize for the twelve blooms went to E. D'Olier, Esq. (gardener, Mr. Harvey), Knocklin. A similar number of Tea and Noisette varieties brought to the front Lord Cloncurry (gardener, Mr. W. Rigg), Lyons.

The Silver Challenge Cup, value £5, presented by Edmond Johnson, Ltd., Grafton Street, Dublin, for a stand of seventy-two blooms of thirty-six varieties was carried off by Messrs. Alex. Dickson & Sons, who had a grand lot of flowers.

F. A. Millar, Esq., led for six blooms of any dark variety, and a similar place was taken for six blooms of any light by Lord Ardilaun (gardener, Mr. Campbell). Mrs. McCann sent the prettiest basket of Roses and foliage.

The society's Silver Medal for twelve blooms of new varieties, introduced since January, 1894, was well won by Messrs. Alex. Dickson & Sons, who moreover received certificates for the two new varieties *Bessie Brown* and *Ulster*. The Newtownards firm added to their list of successes the first award for the stand of twenty-four Tea Roses in twelve varieties, the twelve dark Roses of one variety, and the twelve light Roses of one variety. Messrs. R. Hartland & Sons, Cork, were second in the two last-named classes.

In the other classes for plants and flowers the Challenge Cup, value £6, presented by Messrs. Richard Hartland & Sons for an exhibit of twenty-four double flowered tuberous *Begonias* in not less than eighteen varieties was carried off by Lord Ashbrook (gardener, Mr. J. McKellar), Durrow, the variety *Miss Augusta Martin* being a special feature of the stand. Lord Ashbrook was likewise first for a collection of twelve zonal *Pelargoniums*.

The first prize for a stand of twenty-four bunches of cut hardy herbaceous flowers went to Lord Ardilaun who had a bright and varied exhibit. Robert Tedcastle, Esq. (gardener, Mr. Caldwell), was second. Lord Ardilaun scored another first in a class for similar material from which, however, bulbous subjects were excluded. The Challenge Plate, value £10, for twenty-four bunches of three sprays each of Carnations and Picotees was likewise won by Lord Ardilaun, Lord Cloncurry (gardener, Mr. W. Rigg), Lyons, being second. The smaller class for twelve bunches of three sprays each of Carnations and Picotees was yet another success for Lord Ardilaun.

J. Miller, Esq. (gardener, Mr. Geoghegan), was placed first for a table of show *Pelargoniums* set up with Ferns and other foliage plants, thus winning the prize presented by Mr. Robert Jameson, Park Avenue Nurseries, Sandymount.

The classes for fruit and vegetables, particularly the former were well patronised. The winning two bunches of white Grapes were sent by the Marquis of Downshire, whilst in another class for one bunch of black Grapes and one bunch of white, the Marquis was second to R. Tedcastle, Esq. The last named exhibitor scored another win for two bunches of black Grapes. J. C. Parkes, Esq. sent the winning dish of six Peaches, and Mr. Tyler the best dish of Strawberries. Mr. Tyler was also first for a dish of Tomatos.

In the classes for vegetables a handsome collection of nine kinds staged by General Sir R. Palmer was awarded the leading position in its class; the Rt. Hon. Lord Carew was second.

The non-competitive exhibits included contributions from most of the leading Irish houses, but the most conspicuous exhibit from the English side of the St. George's Channel came from Messrs. Dicksons, Ltd., Chester, in the shape of an imposing array of cut flowers.

From Mr. Jameson's Nursery at Sandymount came a beautiful series of floral devices which displayed great taste and ability in execution.

Messrs. R. Hartland & Sons, The Lough Nurseries, Cork, showed tuberous *Begonias* of the high quality that we always expect to see from this firm. Collections of Roses and *Pelargoniums* were also forthcoming from the same source.

Messrs. Dickson & Sons, of Newtownards, had hardy herbaceous plants in profusion, for which they were highly commended.

Messrs. W. Watson & Son were highly commended for hardy herbaceous plants, and sprays of Pansies.

Messrs. Ramsey & Son, Ball's Bridge Nurseries, exhibited a magnificent group of foliage plants, cut *Begonias* and floral devices of great merit, and the

numerous visitors evinced very keen interest in the fine display forthcoming from this celebrated firm. Hardy herbaceous plants were likewise shown in capital condition by Mrs. R. Jameson, of Park Nurseries.

NATIONAL ROSE.—July 2nd.

THE grand annual exhibition of Roses inaugurated by the National Rose Society on the first Saturday of July was held under very favourable auspices as to weather. Very early in the morning heavy rain fell but later on it was dull and dry; but as midday was reached the sun shone brightly. A large concourse of the votaries of the Rose assembled in the afternoon, though the crowd was fairly dense soon after the Palace was opened to the public. The show itself far exceeded the most sanguine expectations of most people, who had their fears that the Roses would not be fully developed by the day of the show. Visitors, however, were agreeably surprised at the display produced.

NURSERYMEN.

The Champion Challenge Trophy and Replica for seventy-two blooms of distinct varieties was secured by Mr. Benjamin R. Cant, Colchester, with a splendid display. He had grand blooms of *Souvenir d'Elise Vardon*, *Madame Cadeau Ramey*, *The Bride*, *Medea*, *Catherine Mermet*, *Ernest Metz*, *Madame de Watteville*, *Maman Cochet*, *Bridesmaid*, *Golden Gate*, *Kaiserin Augusta Victoria*, *Souvenir d'un Ami*, *Maréchal Niel*, *La France*, and *Cleopatra* as representatives of the Tea, Noisette and hybrid Tea section. Amongst hybrid perpetuals *Ulrich Brunner*, *Caroline Testout*, *Marie Verdier*, *Captain Hayward*, *Madame Jules Finger*, *Marie Finger*, *Abel Carriere*, Mrs. Paul, Duke of Edinburgh, *Senateur Vaise*, *Marchioness of Dufferin*, *Prince Arthur*, *Margaret Dickson*, Mrs. John Laing, *Horace Vernet*, A. K. Williams, Mme. Gabriel Luizet, Thos. Mills, Mme. Delville, *General Jacqueminot*, *Lady Mary Fitzwilliam*, *Crown Prince* and Mrs. W. J. Grant were some of his best. The second award for the seventy-two was taken by Messrs. Frank Cant & Co., Colchester, who had grand blooms of Mrs. John Laing, *Le Havre*, J. D. Pawle, *Viscountess Folkestone*, *Helen Keller*, *Etienne Levet*, Mrs. Frank Cant, Dr. Andry, *Lady Mary Fitzwilliam*, *Ulrich Brunner* and *Beauty of Waltham*. Messrs. Harkness & Sons, Bedale, Yorks, were a very good third, judged from the size of their flowers, but many of them had apparently been battered by storms. They had, however, some shapely blooms. There were six entries.

Mr. B. R. Cant again held the sway for forty triplets, having grand blooms of Mrs. Sharman Crawford, *Suzanne Marie Rodocanachi*, Mme. Gabriel Luizet, *Margaret Dickson*, Mrs. W. J. Grant, *Marchioness of Downshire*, *Duke of Edinburgh*, *Marie Baumann*, *Caroline Testout*, *Ulrich Brunner*, &c. Messrs. A. Dickson & Sons, Newtownards, Co. Down, Ireland, took the second place with smaller but fresh and well coloured blooms. Messrs. Frank Cant & Co., were third with an even lot of blooms. Competition was pretty good.

Messrs. D. Prior & Son, Colchester, took the lead in the class for the best forty-eight varieties, showing fine blooms of *Gustave Piganeau*, *White Lady*, *La France*, Mrs. John Laing, *Marie Baumann*, *Lady M. Fitzwilliam*, Mrs. W. J. Grant, Mrs. Sharman Crawford, *Marchioness of Dufferin*, *Etienne Levet*, *Caroline Testout*, *Ulrich Brunner*, *Abel Carriere*, *Prince Arthur*, &c. They were followed by Messrs. Townsend & Sons, Lower Broadheath, Worcester, who had very large blooms of *Ulrich Brunner*, *Henrich Schultheis*, Mme. Gabriel Luizet, *Etienne Levet*, *Gustave Piganeau* and *Caroline Testout*. Messrs. Burrell & Co., Howe House, Cambridge, took the third place with smaller blooms, many of which were charmingly coloured.

Mr. Charles Turner, The Royal Nurseries, Slough, took the lead in the class for twenty-four varieties, with fine blooms of Mrs. R. G. S. Crawford, *Caroline Testout*, *Etienne Levet*, *Beauty of Waltham*, *La France*, &c. Mr. George Prince, Oxford, took the second award with grand blooms of *Comtesse de Nadaillac*, A. K. Williams, *The Bride*, &c. Messrs. Geo. Cooling & Sons, 11, Northgate Street, Bath, came in third with some beautiful blooms in a great variety of colours.

Messrs. D. Prior & Son took the lead for twenty-four triplets, showing fine blooms of *La France*,

Alba Rosea, A. K. Williams, Mrs. John Laing, Mrs. R. G. S. Crawford, Caroline Testout, Mrs. W. J. Grant, Souv. d'un Ami, &c. They were closely followed by Mr. Geo. Prince, who showed fine triplets of Comtesse de Nadaillac, La France, Rubens, Souv. de S. A. Prince and The Bride. Mr. C. Turner took the third place with three fine stands.

The Dickson Challenge Cup for nurserymen presented by C. J. Grahame, Esq., was taken by Messrs. Dickson & Sons, for twelve varieties of Roses sent out by themselves. Killarney and Daisy were pretty varieties. Messrs. Frank Cant & Co. were a good second, but their blooms were of unequal size. Mr. B. R. Cant came in third. For twelve varieties, seven trusses of each, the first prize was taken by Mr. J. Mattock, Oxford. The flowers were neatly displayed in stoneware jars. Messrs. Paul & Son, Cheshunt, were a very good second, and Mr. G. Prince was third.

TEA AND NOISSETTE SECTION.—Mr. Geo. Prince took the lead in the class for twenty-four varieties of Tea and Noisette Roses, showing grand blooms of Comtesse de Nadaillac (the premier Tea Rose in the nurserymen's section), Anna Olivier, Cleopatra, Innocente Pirola, Ernest Metz, Maman Cochet, Souv. d'un Ami, Golden Gate, Muriel Grahame, Maréchal Niel and others. The second prize was taken by Messrs. D. Prior & Son, who showed some beautiful samples of Souv. de S. A. Prince, Souv. d'un Ami, Ernest Metz, Maman Cochet, &c. Mr. B. R. Cant came in third with some charming blooms of The Bride, Medea, Cleopatra, Souv. d'Elise Vardon, &c.

The first prize for twelve hlooms of distinct varieties was taken by Mr. John Mattock, whose hlooms of Rubens, Souvenir d'Elise Vardon and The Bride were fine. Messrs. Burrell & Co., were a good second; and Messrs. Townsend & Sons took the third place.

Mr. Geo. Prince took the lead for eighteen varieties in triplets with a magnificent and much admired array. He had glorious blooms of Comtesse de Nadaillac, Souvenir de S. A. Prince, The Bride, Catharine Mermet, Marie Van Houtte, Medea, Bridesmaid, Madame Cusin, Devoniensis, Rubens, Ernest Metz, Marechal Niel, Souvenir d'un Ami, &c. Visitors greatly admired them, whether gardeners or otherwise. Messrs. D. Prior & Son took the second place with smaller but fresh blooms of even size; Messrs. Frank Cant & Co. took the third place with a very meritorious exhibit.

Messrs. Paul & Son, Cheshunt, took the leading award for thirty-six bunches of garden Roses, which were more tastefully set up than we have seen them before from this firm. Very fine single Roses were Una, Alba, Royal Scarlet and Amy Rohsart. Other charming things were W. A. Richardson, Gustave Regis, Madame E. Resal, Moss Rose James Veitch, Camoens, Rosa rugosa fimbriata, R. r. Madame C. Worth, Madame P. Ducher, L'Idéal and Ma Paquerite. Messrs. G. Cooling & Sons took the second place with a very neat and showy arrangement, including such fine things as Papa Gontier, Rosa rugosa, Blanche de Coubert, Madame Falcot, Camoens, Purity, Rosa macrantha, Benda and many other charming things.

Mr. J. Mattock secured the leading award for eighteen bunches of garden Roses, which were very attractive. He was followed by Mr. Charles Turner, with fine moss Roses, &c.

OPEN TO NURSERYMEN AND AMATEURS.

Mr. B. R. Cant had the best twelve hybrid Teas, showing La France, White Lady, Kaiserin Augusta Victoria, Mrs. W. J. Grant, &c. Messrs. D. Prior & Son were second; and Messrs. Frank Cant & Co., were third.

Messrs. D. Prior & Son had the best twelve blooms of a yellow Rose, showing charming samples of Marie Van Houtte. Mr. Geo. Prince came second with Marechal Niel. He came to the front for twelve white Roses, showing Souvenir de S. A. Prince; Mr. B. R. Cant was second, with Margaret Dickson. Mr. C. Turner had the best twelve light or dark crimson hlooms in Ulrich Brunner; Mr. B. R. Cant took the lead for pink Roses, showing Mrs. W. J. Grant.

Mr. Geo. Prince took the lead for twelve hlooms of any Tea or Noisette, showing Comtesse de Nadaillac in grand form. Messrs. Townsend & Sons were second with Rubens. For nine blooms of any new Rose Mr. B. R. Cant took the lead with Mrs. W. J.

Grant; and for twelve varieties of new Roses he was equally successful.

Messrs. Geo. Cooling & Sons, Bath, had the best twelve bunches of single garden Roses, which were very fine and often sweet scented. Messrs. Paul & Son were second. The Gold Medal for a new seedling Rose was secured by Messrs. Geo. Cooling & Sons, Bath, with a new garden Rose named Purity, like a white Tea or hybrid Tea.

Mr. Geo. Prince had the best nine varieties of Roses suitable for buttonholes and shown in vases. Mrs. O. G. Orpen, Colchester, had the best three sprays of Roses.

The best hybrid Tea in the nurserymen's class was Mrs. W. J. Grant, exhibited by Messrs. Paul & Son, securing the Silver Medal. The best hybrid perpetual in the nurserymen's class was Gustave Piganeau, shown by Messrs. Townsend & Sons. The premier bloom in the Tea or Noisette section was Comtesse de Nadaillac shown by Mr. G. Prince.

AMATEURS.

In the amateurs' classes the best H.P. Rose was Mrs. J. Laing, shown by E. B. Lindsell, Esq., Hitchin, Herts. The best H. Tea was White Lady, shown by C. J. Grahame, Esq.; and for any Tea or Noisette the Silver Medal was given to Comtesse de Nadaillac, shown by A. Hill Gray, Esq., Bath.

There were six competitors for the challenge trophy in the class for thirty-six hlooms, distinct. The first prize was won by E. B. Lindsell, Esq., Bearton, Hitchin, who had a fine and even lot of samples. Captain Hayward, Gustave Piganeau, Mrs. John Laing, Ernest Metz, Marie Van Houtte, Mrs. Grant, Madame Cusin and Dr. Sewell, were the strongest flowers. The Rev. J. H. Pemberton, Havering, was second; and S. P. Budd, Esq., 8, Gray Street, Bath, was third.

Six exhibitors likewise competed for the twenty-four hlooms, distinct. Here F. W. Flight, Esq., Cornstiles, Twyford, scored. White Lady, Ulrich Brunner, Duke of Wellington, Mrs. Sharman Crawford, and Chas. Lefebvre were his best varieties. R. E. West, Esq., Reigate, was second, and A. Tate, Esq., Leatherhead, was third. This class was open only to those who have not won the Challenge Trophy within the last ten years.

In the classes for growers of under 2,000 plants, four competitors staged; pride of place went to G. B. Lindsell, Esq., for three blooms each of twelve distinct varieties. Captain Hayward, Dr. Sewell and Souvenir d'Elise Vardon were the strongest in these stands; T. B. Haywood, Esq., Woodhatch Lodge, Reigate, was second; and Col. J. H. Pitt, Turkey Court, Maidstone, third.

C. J. Graham, Esq., Wrydelands, Leatherhead, won the first prize for twelve blooms of any Rose, Tea or Noisette excluded. White Lady was the sort shown; E. B. Lindsell, Esq., was second, with Horace Vernet; and S. P. Budd, Esq., third, with Caroline Testout.

The classes for growers of 1,000 plants were well patronised. In this section Conway Jones, Esq., Hucclecote, Gloucester, won for eighteen blooms, distinct, with a very even lot; E. M. Bethune, Esq., Denne Park, Horsham, was second; and R. E. West, Esq., third. There were eleven exhibitors in this class.

R. E. West, Esq., came to the front for three blooms each of eight varieties, P. G. C. Burnand, Esq., Reigate, being second. E. M. Bethune, Esq., was first for the nine hlooms of any variety, Tea or Noisette excepted, with Kaiserin Augusta Victoria.

Amongst the small growers, *i.e.*, of less than 1,000 plants, G. Moules, Esq., of Hitchin, had the best twelve hlooms, distinct. J. C. Trueman, Esq., Oaklands, Swanley, was first amongst the nine competitors for nine blooms, distinct; whilst G. A. Hammond, Esq., Camhrian House, Burgess Hill, had the best stand of six.

Extra classes were organised in this section of the schedule, and here G. Moules, Esq., won for twelve blooms, distinct. The Ramsey Cup, for three hlooms each of four varieties, was carried off by G. Wilkins, Esq., Rosedale, Sidcup, J. H. Scott-Tucker, Esq., Headington Vicarage, Oxford, being second. G. W. Cook, Esq., The Briars, North Finchley, was first for the six blooms of any variety, Tea or Noisette excluded, showing Mrs. W. J. Grant.

The Ramsey Cup, for twelve blooms, distinct, was well won by O. G. Orpen, Esq., of Colchester, with a capital stand; the Rev. J. H. Pemberton was second. The last named exhibitor received the first

award for nine bunches of distinct varieties. He was the only exhibitor in this class.

Fourteen growers competed for the six distinct, the first award going to J. Carter, Esq., Mill House, Halstead. J. Hinton, Esq., Batheaston, won for six blooms in four varieties, and G. Moor, Esq., Lyminster Vicarage, Arundel, was first for another lot of six blooms, distinct.

The Langton Memorial Cup, for six blooms, distinct, grown within a radius of eight miles of Charing Cross, was carried off by G. W. Cook, Esq. The premier stand of six blooms, of new and distinct varieties, came from C. Jones, Esq.

TEAS AND NOISSETTES.—Five stands of eighteen blooms, distinct, were forthcoming. A. H. Gray, Esq., Beaulieu, Bath, received the premier award for a magnificent lot. Catharine Mermet, Medea, Comtesse de Nadaillac, Maman Cochet, Bridesmaid, and Marie Van Houtte were the premier varieties. C. Jones, Esq., was second, also with a capital exhibit, and O. G. Orpen, Esq., third.

In the smaller class for the twelve, Mr. Gray repeated his success, the Bride, Bridesmaid, and Ernest Metz, being his best blooms in this stand. A. Tate, Esq., was second, and E. M. Bethune, Esq., third.

Another first award fell to the lot of Mr. Gray in the competition for three hlooms each of eight distinct varieties. S. P. Budd, Esq., was second, and Col. J. H. Pitt, third, amongst the five competitors. Mr. Gray had also the winning stand of nine hlooms of any variety, showing Catharine Mermet. S. P. Budd, Esq., was second.

Conway Jones, Esq., led for twelve blooms, distinct, in the classes for the smaller growers. His flowers were good all round. J. T. Strange, Esq., Aldermaston, staged the best nine hlooms, distinct. E. Mawley, Esq., Berkhamstead, was second.

Ten stands of nine hlooms each were forthcoming. Mahlon Whittle, Esq., 60, Belgrave Avenue, Leicester, being first, and A. Munt, Esq., Hedgerley, Slough, second. The Rev. G. E. Jeans, Shovewell Vicarage, Isle of Wight, had the best lot of six hlooms, distinct. J. C. Trueman, Esq., Oakland's, Swanley, was second.

Conway Jones, Esq., led for three blooms each of four distinct sorts, Comtesse de Nadaillac and Souvenir de S. A. Prince being particularly well shown. R. E. West, Esq., was second.

Conway Jones, Esq., was also successful for the six blooms of one variety, showing a fine stand of Maréchal Niel. L. Parry, Esq., Stinsford House, Dorchester, was second with The Hon. Edith Gifford.

Seven trusses of six varieties were best shown by O. G. Orpen, Esq., who had good Anna Olivier and Marie Van Houtte. J. Hinton, Esq., Batheaston, was first for the six hlooms in three varieties.

GARDEN OR DECORATIVE ROSES.—A. Tate, Esq., staged a magnificent exhibit of twelve bunches of garden Roses in as many varieties, winning the first award. Hebe's Lip, W. A. Richardson, Anna Maria Montravel, Safrano, Marquis of Salisbury and Gustave Regis were some of the best, but all were really good. The Rev. J. H. Pemberton was second with a much inferior lot, and O. G. Orpen, Esq., third.

Nine bunches of similar varieties were best shown by Mrs. A. F. Perkins, Oak Dene, Holmwood, Paul's Crimson Pillar, Cameons, Madame Notte and Marquis of Salisbury were the most effective varieties here. Miss Dorothy A. Nesfield, Shadwell, Speldhurst, Kent, was second; and Miss Beatrice H. Langton, Raymead, Hendon, was third.

O. G. Orpen, Esq., was first for twelve bunches of Lord Penzance's Sweet Briers; Mr. F. W. Champion, Colley Manor, Reigate, was second.

DECORATIVE SECTION.—The first-prize vase of Roses, Ferns and Grasses came from Mrs. O. G. Orpen, whose vase was an exceedingly pretty one. Mrs. G. Mawley was second; and Miss Beatrice H. Langton, third. This class was open only to lady amateurs, who are also members of the National Rose Society.

MISCELLANEOUS.

Messrs. Barr & Sons, 12 and 13, King Street, Covent Garden, London, exhibited a table of hardy herbaceous cut flowers, amongst which Chinese Paeonies, Iceland Poppies, Irises and Delphiniums were conspicuous. Very fine were Iris ochroleuca, I. Monieri, Heuchera sanguinea, Hemerocallis fulva, Potentilla Wm. Rollinson, &c.

Messrs. Wm. Cutbush & Son, Highgate, London, N., exhibited a fine group of Malmaison and other Carnations on the floor, and backed with Bamboos. The Malmaison varieties were arranged in three undulating mounds, in front of which were pyramids of the taller tree Carnations in several fine varieties. Visitors were much taken with them.

Mr. F. G. Foster, Brockhampton Nurseries, Havant, Hants, exhibited a collection of Sweet Peas tastefully set up in glasses, and interspersed with Ferns in pots. Countess of Aberdeen, Prima Donna, Little Dorrit and Daybreak were fine amongst the light colours.

Messrs. John Laing & Sons, Forest Hill, had some baskets and other devices filled and decorated with cut flowers. Begonias, early Gladioli, Roses and Chinese Paeonies were the flowers used. They also had a long table of hardy herbaceous and Alpine plants in the cut state and in pots. Amongst them was a new plant named *Gazania nivea latifolia*, with large white flowers and a yellow centre, Delphiniums, Iceland Poppies, Violas, Gaillardias, &c. The Alpines were interesting.

Messrs. Laing & Sons also set up a splendid group of tuberous Begonias, backed with Palms, Caladiums, Dracaenas, &c., and mixed with Adiantums, Orchids, and other fine foliage plants. Countess of Dartmouth was a splendid pure white double variety, and Sir William Lockhart, scarlet, Diamond Jubilee, orange, the Hon. Cecil Rhodes, crimson, Laing's Picotee Improved, and Lady Charles Beresford, cream, were good doubles; Dr. Nansen, scarlet, and Viscount Grimstone, crimson, were good singles.

Messrs. Geo. Bunyard & Co., Maidstone, exhibited five stands of hybrid perpetual and Tea Roses, and two stands of Roses suitable for buttonholes. The latter were done up in bunches and were charming, particularly Perle d'Or, Mme. Chedane Guinoisseau.

Mr. John Pinches, 3, Crown Buildings, Crown Street, Camberwell, S.E., exhibited a stand of metal labels of many sorts and for different purposes, some for suspending to trees and shrubs, and others for fixing in the ground. Amongst other things he had Mr. Wright's Orchid clip and suspender in combination.

Messrs. Geo. Jackman & Son, Woking, Surrey, sent a handsome lot of cut hardy flowers, in which Roses played an important part.

The cut hardy flowers sent by Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester, consisted chiefly of Lilliums, amongst which varieties of *L. thunbergianum*, *L. auratum* Wittei, *L. Brownii*, and the chaste *L. rubellum* were particularly noticeable. Irises and Delphiniums were also shown.

The Cannas in five-inch pots, shown by Messrs. H. Cannell & Sons, Swanley, Kent, were as usual of exceedingly high quality, the spikes and flowers being immense, and the variety of colour great. Between forty and fifty distinct forms were on view.

The cut hardy flowers from Messrs. Cheal & Sons, The Lowfield Nurseries, Crawley, Sussex, comprised Roses, sprays of Violas and some good Delphiniums.

In a corner of the gallery beneath the large organ was a capital group of pot Roses, contributed by Messrs. Jas. Veitch & S. n, Ltd., Chelsea. In the background were tall Bamboos, *Cocos plumosa* and *Hydrangea paniculata grandiflora*. The latter was heavily laden with large panicles of flower.

Mr. Wm. Spooner, Arthur's Bridge Nursery, Woking, had half a dozen stands of very neat, cut Roses. Kaiserin Augusta Victoria was well shown here, also the pretty apricot-hued buttonhole Rose, Perle d'Or.

Messrs. Dobbie & Co., Rothesay, had a superb display of bedding Violas. They were made up in pyramidal sprays with their own foliage. Amongst the numerous varieties shown, A. J. Rowberry, Countess of Hopetoun, Mrs. Kinnaird, Cherry Park, Duchess of Fife, Sylvia, Lucy Ashton, Florizel, Rob Roy, Lady Isobel, White Duchess and Marchioness were exceptionally good. In front of the Violas, which were in the background and upon a brown-velvet covered stand, tilted at an angle of 45° to the stage, was a collection of cut flowers of Sweet Peas. Most of the leading varieties were to be seen here, and the flowers were all large and fine.

NATIONAL VIOLA.—July 2nd.

THE annual exhibition of the National Viola Society was held in conjunction with the Rose show on the above date, the exhibits being accommodated in the

centre transept close to the organ. The display was a small one, and not up to the standard of former years. The flowers all round, although bright, were smaller than usual, and there was a considerable falling off in the number of amateur exhibits. This is not to be wondered at when we consider how trying to Violas, as well as to other things, the present season has so far proved, for both aphids and red spider have worked great havoc among the plants.

OPEN CLASSES.

The Gold Medal for the collection of forty-eight sprays of Violas, distinct, nine blooms going to a spray, was won by Mr. Wm. Sydenham, Tamworth, who was joined by one other exhibitor only in this class. Mr. Sydenham had some remarkably fine flowers, and the samples of such varieties as Goldfinch, Primrose Dame, Magnificent, Rover, Stephen, Lemon Queen, The Mearns, J. B. Riding, Virginius and Mr. H. Bellamy, which were shown by him, were from all points first-class. Messrs. Isaac House & Son, Westbury-on-Trym, Bristol, were second also with a lot of capital material.

In the corresponding class for Pansies Mr. M. Campbell, High Blantyre, N.B., was the only exhibitor, but his exhibit fully deserved the Gold Medal awarded it. Mrs. R. Stewart, Miss Sterling, Constance Steele, Mrs. D. Johnstone, Annie Ross, John Jackson, Jas. S. Irvine, Mrs. Wm. Steele and John Menzies were all exceptionally fine flowers; in fact, the average of size throughout was large, and the form and substance were good.

Mr. M. Campbell scored another well-merited success for the twenty-four sprays of Violas, six blooms to a spray. A. J. Rowberry, Lavender King, Lord Salisbury, Maggie, Lily Barron, Butterfly and Stobhill Gem were a few of the cream of the collection. Messrs. J. Cheal & Sons, Crawley, Sussex, were a very close second; and Mr. W. Baxter, Woking, was third.

Mr. D. B. Crane, 4, Archway Road, Highgate, N., sent the winning stand of twelve sprays of rayless Violas. He had white Empress, Florizel, Pembroke, Rosea Pallida, Nellie, Mary Scott, and Britannia, all of them in excellent condition. Mr. Crane's flowers were shown on two triangular and black velvet covered stands. Messrs. Isaac House & Son were second.

For twenty-four varieties of Violas, nine blooms of each, arranged in specimen glasses with Viola foliage, Messrs. Isaac House & Son were an easy first, showing good blooms of Acme, Flower of Day, Princess Ida, Iona, Goldfinch, Admiration, Bullion, Blue Cloud and Cissy Thornley. Mrs. C. C. Lowe, Ryhall, Stamford, was second.

In the smaller class for six vases of Violas, distinct, nine blooms in each vase, arranged with any foliage, Mr. D. B. Crane carried off chief honours, having his flowers very prettily set up with fronds of Maidenhair Fern. Messrs. Isaac House & Son were second, and Mrs. C. C. Lowe, third.

Mr. M. Campbell sent the winning stand of twenty-four fancy Pansies, also the best twelve, showing in each case fine bold flowers. Messrs. Isaac House & Son were second in both classes.

AMATEUR CLASSES.

Very little material was forthcoming under this section of the schedule. Mr. B. D. Crane was first for twelve sprays of six blooms each, of distinct varieties. His strongest blooms were of Mary Scott, Duchess of Fife, Pembroke, Endymion, Mrs. C. F. Gordon, and Isa Fergusson. Mr. Leonard Brown, Brentwood, received the first prize for six similarly sized sprays. He had Stephen, Mrs. C. F. Gordon, and Goldfinch particularly good.

In another class for six sprays of distinct varieties Major-General Gillespie, Sydenham, was first.

Mr. Brown was likewise first for six sprays of rayless varieties, showing Lucy Franklin, A. J. Rowberry, Pembroke, Florizel, Blanch, and Wm. Tell. Mr. D. B. Crane was second. Mr. Brown was also first in the smaller class for six sprays of rayless varieties.

B. J. Sinclair, Esq., won for six saucers of violets of distinct varieties. Mr. D. Shackleton, Sydenham, won for nine distinct varieties of Violas arranged in specimen glasses. Mr. B. J. Sinclair was second.

NON-COMPETITIVE.

Messrs. Isaac House & Son showed a score of bunches of capital Sweet Peas in as many varieties.

Mr. Wm. Sydenham had a table of charming floral

devices showing how Violas might be advantageously used for decorative purposes. Among these devices were baskets of several sizes, and two specimens of "Prince of Wales' Feathers," all very pretty.

HACKWOOD PARK TOMATO.

It may seem a little late in the day to draw attention to this variety, which is, as Tomatos go, an old sort. I grew it when first sent out, but afterwards discarded it in favour of others which took my fancy, because they bore a smaller proportion of misshapen fruit, and I believe many others did the same. So finding it being grown largely by Mr. M. Mills, gardener, Coombe House, Croydon, I expressed some surprise; but when told the reason I ceased to wonder, being assured that after repeated trials he finds it less susceptible than others to the various diseases to which this favourite fruit is liable. We have so-called disease-resisting Potatos and why not Tomatos? Mr. Mills has given particular attention to this subject and tested the Hackwood Park against other kinds for some six years till he has formed the resolution to grow no other variety because of its merits as a disease resister.—W. B. G.

NOTICES OF BOOKS.

BORON FOOD PRESERVATIVES, and their Influence on the Human Organism. Being a Collection of Medical and Scientific Data on the subject. Price 6d. Published by Perkins, Bacon & Co., Ltd., 69, Fleet Street, London, E.C.

The pamphlet under notice runs to fifty-nine pages, exclusive of a good index at the end. Antiseptics, in the form of salt, saltpetre and other substances, have been used from the earliest times for the preservation of human and other food. The antiseptic power of the preservatives employed, however, was low, hence arose the necessity of using them in larger quantities than was desirable, to the injury of the food by hardening it and inducing chemical changes, which render such preserved food less nutritious.

Dr. Redwood, Ph.D., Emeritus Professor of Chemistry to the Pharmaceutical Society of Great Britain, has drawn up a report on the subject, of which the present pamphlet is an extract. He says that one of the strongest arguments in favour of the use of boric acid preservatives is that the better class of preparations produce the required effect, even when used in very minute quantities. The food retains all its natural characters and qualities, while the presence of the preservative medium is imperceptible to the senses. This applies to meat, mild-cured bacon, milk, butter and other articles of food which are imported to the British Isles to the value of £150,000,000 annually, and some of which is preserved with boron antiseptics. Even milk cannot be conveyed from agricultural districts to towns during hot weather without something to prevent it from getting sour and entering into a state of decomposition.

The first part of the pamphlet deals with the scientific side of the question, experiments, analyses, &c; and the second takes up the medical phase of the subject. There is always sure to be an outcry against every innovation, though the use of boric acid preservatives is by no means new. The best way, undoubtedly, is to go to the root of the matter and get the scientific facts and plain evidence, which cannot be too fully disseminated and made public property. Answers are here given to the questions put to prominent medical practitioners in various parts of the country.

POTATO CULTURE, either for Pleasure or Profit.—Published by George Tucker, 1, 2, & 3, Salisbury Court, Fleet Street, London. Price 2d.

The pamphlet under notice is No. 11 of the "Salisbury" series of garden-produce handbooks, issued by the above firm. One would think that the literature of the Potato was already sufficiently extensive to enable cultivators to produce the best crops possible, and supply all our home wants; but we fear that the market gardener, to whom this pamphlet is chiefly directed, is very often blameless in the matter of reading about Potato culture, by improved methods or otherwise. The noble tuber is cultivated to the extent of 500,000 acres in the United Kingdom, independently of Ireland, yet the

author says that the foreign grower sends us thousands upon thousands of tons of early new Potatos every year. He seems to give the greatest credit to the Scotch growers and the poorest and least to the Irish, strange as it may seem. The Maincrop Potato is one of the easiest to grow and receives the greatest amount of attention, but yet he declares it to be the least profitable of all, and attributes to it the probable unsatisfactory condition of the industry. He also thinks that the home grower should supply the early Potatos, whether forced in greenhouses or grown out of doors, apparently basing his statements upon the fact that the home grown article is of far superior quality to the imported. That may or may not be the case, but it carries little weight with those who are always on the outlook for the cheapest article. The questions of climate and cheaper labour, together and separately, tell in favour of the Continental grower.

Amongst the remedies put forth to remedy the present state of matters are the sorting or grading of late Potatos to be put on the market; the planting of small but uncut sets, all of which should be sprouted in heat previous to planting; that more care should be given, without which there can be no improvement; that the sets should be hurried to the depth of 4 in., and afterwards earthed up moderately high; and that culture in rows is preferable to the bill or mound system for commercial purposes. For the earliest crops of Potatos, Peas are recommended to be planted alternately with the rows in order to protect the haulm from frost. If Peas are not wanted then the Potatos should be protected with straw litter worked in between sticks. Change of seed, varieties, early, second early, and late Potatos are also discussed.

MAY'S PRACTICAL METHODS to ensure instant Relief and Permanent Cure of Diseases, without Drugs, Minerals or Doctors' Fees. Compiled by E. and B. May. London: F. Pitman, 20, Paternoster Row, E.C., and other agents, and all Booksellers. Price 6d.

In this we have a medical book intended for home use, that is, that people when unwell should themselves apply the remedies suggested; but that there is little or no reason at all why persons should be unwell if they take the proper precautions against all excesses, and what is unsuitable for them, particularly in the matter of foods and drinks. This sounds well enough, but there are thousands of people in the United Kingdom who have to use food partly or wholly prepared by others outside their own families, and entirely beyond their control. Again, at public banquets, &c., the participants have to take what is presented or go famishing for a change.

Under the diet question people are recommended to eat succulent ripe fruits and vegetables, which have the effect of cleansing the whole system. In the case of acidity, biliousness, &c., the patient is advised to avoid certain foods, but to take plenty of salads, Artichokes, Dandelion, Tomatos, Celery, Oranges, Apples, Cherries, and all kinds of acid fruits. Strawberries, Bananas, Apples, Grapes, Watercress, &c., are recommended for Anaemia. Herb Tea of various kinds are prescribed for back-ache; Blackberries and Tomatos for Bright's disease; and in many other ailments to which human flesh is heir, garden produce of various kinds.

QUESTIONS AND ANSWERS.

Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

Royal Horticultural Society's Examination.—H. Lodwig Jones: You will note in last week's issue, p. 702, that we mentioned a number of books suitable for the purpose of enabling gardeners to pass the R. H. S. examination in horticulture. What you will have to study chiefly is the physiology of plant life, that is, what functions are performed by different parts of plants, the nature of plant food, and the sources from whence the plants obtain it. A study of vegetable morphology, that is, of the structure of plants, will enable you all the better to comprehend the physiology. Your knowledge of gardening should enable you to answer the practical questions. We may refer you to p. 683 of our issue for June 25th, where last year's questions are printed, because they will give you an idea of what you are required to know in order to answer them. The date of next year's examination will be announced later on; and when you require further information we shall be pleased to assist you. In the meantime you should get one or other of the books we mention and commence studying the same.

Communication from Barnard Castle.—Would the correspondent who sent us something wrapped up in brown paper communicate with us again? Nothing reached us but the brown paper bearing the address, with the information from the Post Office authorities that it was found empty in the newspaper basket.

Tomatos Diseased.—C. Chick: The specimens you sent were very badly affected with the sleepy disease of Tomatos caused by a fungus named *Fusarium Lycopersici*. The fungus enters by the roots, and finds its way up the stems, finally reaching the leaves and fruit, all of which are much damaged and discoloured. The centre of the stem in many cases is destroyed, hollow and brown, the discoloured portions in the interior being interlaced with very fine threads of the fungus. You will understand from these remarks that cure is impossible, seeing that the fungus is quite inside, and, therefore, completely protected from any fungicide that may be applied. The best plan you can adopt is to carefully dig up every plant affected and burn it, roots, stems, leaves and fruit. Dig in a quantity of quicklime in the spaces from which the plants have been taken. You may get some fruit from the plants which are still healthy, but all that show signs of drooping or flagging may be destroyed at once, as they never recover. The soil may be removed, and fresh material put in the beds, so that the young plants may get a healthy start. When cleaning out the old soil use plenty of lime for disinfecting the walls and other places in contact with the soil. It would be a good plan when making up the beds afresh to use as much lime as could be done without injuring the plants.

Rose La France.—R. B.: For many years little attempt was made to separate hybrid Tea from hybrid perpetual Roses, so that La France could take or had to take its place amongst the hybrid perpetuals. It is, nevertheless, a hybrid Tea, and will now take rank as such in societies where a separate section is made for the reception of Roses of that class, which are yearly becoming more numerous and important. It was raised by MM. Guillot Fils in 1867. There are now three varieties of that name, the old one being only of moderately vigorous growth. La France de '89 is a vigorous grower with long buds and large flowers. Climbing La France is a vigorous grower of climbing habit. These variations alone would indicate a hybrid origin.

The Spanish Iris.—R. W.: If the Iris in question had been named *I. hispanica*, it would have been correct usage to translate this as the Spanish Iris; but it does not follow that this so-called Spanish Iris is *I. hispanica*. The English or popular name is given to the garden race of varieties, which have been raised from *Iris Xiphium*, the latter being the correct botanical name. Less frequently, *Xiphium vulgare* is used to denote this hulchous species, but good botanists hold all bulchous Irises as forming a section only of *Iris* proper.

Increasing Aubrietia.—H. T.: You can raise seedlings from any variety, but the chances are that a large percentage would not be true to name. You can of course, select those that come true after they come into flower. You can get up a stock, however, by means of cuttings under a bell-glass or handlight. Later on, when you have something to work upon, you can increase the same by division in spring or in autumn, say about the end of September.

Names of Plants.—P. J. G.: 1, The Marsh Mallow (*Althaea officinalis*); 2, *Alchemilla arvensis*.—C. E. Nicholson: 1, *Pyrus torminalis*; 2, *Hesperis matronalis*; 3, *Anchusa italica*; 4, *Hemerocallis flava*; 5, *Polygonum Bistorta*; 6, *Senecio Doronicum*; 7, *Veronica Teucrium rupestris*; 8, *Allium Moly*; 9, *Iris Pseudacorus*; 10, *Dactylis glomerata elegantissima*. All were well grown.—Wm. Galloway: *Laelia grandis tenebrosa*, not the darkest, but still a fine evenly coloured variety.—A. D. W.: *Philadelphus microphyllus*.—Heber Woodward: 1, *Habenaria chlorantha* (the largest flowered form of the Butterfly Orchis); 2, *Gymnadenia conopsea* (not *Orchis pyramidalis*); 3, 4, 5 and 6 are different colour varieties of *Orchis maculata*, which varies immensely from the dark and richly spotted forms to pure white. No. 1 is the most important.—A. C.: 1, *Campanula pusilla*; 2, *Sidalcea malvaeflora*; 3, *Hemerocallis fulva variegata*; 4, *Geranium sylvaticum*; 5, *Corydalis lutea*; 6, *Saxifraga rotundifolia*.—H. J.: 1, *Cistus ladaniferus maculatus*; 2, *Deutzia crenata flore pleno*; 3, *Euonymus japonicus maculatus*; 4, *Spiraea salicifolia*; 5, *Coronilla Emerus*.—T. L.: *Cattleya Mossiae* var.; 2, *Oncidium pulvinatum*; 3, *Lycaste plana*; 4, *Aerides odoratum*; 5, *Oncidium pumilum*; *Odontoglossum Pescatorei*.

Communications Received.—G. J. Leadbetter.—A. D. W.—J. Mayne.—W. S.—Scotch Grower.—Buds, next week.—Leonard Brown.—J. L. & Sons.—Spencer Pickering.—R. M.—W. J.—A. R.—E. A.—S. L. C.—Carolus.—Y.—Geo. Henson.—Craft.—Fuchsia.—C. P.

TRADE CATALOGUES RECEIVED.

JAMES DOUGLAS, Edenside, Great Bookham, Surrey.—List of Carnations, Tree Carnations, Picotees and Auriculas for autumn 1898, and spring 1899.

COVENT GARDEN MARKET.

July 6th, 1898.

FRUIT.—AVERAGE WHOLESALE PRICES.

| | s. | d. | s. d. | | s. | d. | s. d. |
|-----------------------|----|----|-------|------------------------|----|----|-------|
| Apples ... per bushel | 0 | 0 | 0 | Pine-apples | | | |
| Cobbs | 0 | 0 | 0 | —St. Michael's each | 2 | 6 | 7 |
| per 100 lbs. | | | | Strawberries per lb. | 0 | 4 | 1 |
| Grapes, per lb. | 1 | 6 | 3 | Cherries per box | 2 | 6 | 3 |

VEGETABLES.—AVERAGE WHOLESALE PRICES

| | s. | d. | s. d. | | s. | d. | s. d. |
|------------------------|----|----|-------|------------------------|----|----|-------|
| Artichokes Globe doz. | 2 | 0 | 4 | Herbs per bunch | 0 | 2 | |
| Asparagus per bundle | 3 | 0 | 8 | Horse Radish, bundle | 1 | 0 | 2 |
| Beans, French, per | | | | Lettuces ... per dozen | 1 | 3 | 1 |
| per lb. | 0 | 9 | 1 | Mushrooms, p. basket | 1 | 0 | 1 |
| Beet..... per dozen | 1 | 0 | 1 | Onions..... per bunch | 0 | 4 | 0 |
| Brussels Sprouts | | | | Parsley ... per bunch | 0 | 3 | |
| per half sieve | 1 | 0 | 1 | Radishes... per dozen | 1 | 0 | 1 |
| Cabbages ... per doz. | 1 | 0 | 1 | Seakale... per basket | 1 | 6 | 2 |
| Carrots ... per bunch | 0 | 3 | | Small salad, punnet | 0 | 4 | |
| Caullflowers..... doz. | 2 | 0 | 3 | Splnach per bushel | 2 | 0 | 3 |
| Celery..... per bundle | 1 | 0 | 1 | Tomatos..... per lb. | 0 | 6 | 1 |
| Cucumbers per doz. | 2 | 6 | 3 | Turnips per bun. | 0 | 3 | |
| Endive, French, doz. | 1 | 6 | 2 | | | | |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| | s. | d. | s. d. | | s. | d. | s. d. |
|-------------------------|----|----|-------|-----------------------|----|----|-------|
| Aium Lilies, 12 blms. | 3 | 0 | 4 | Marguerites, 12 bun. | 1 | 6 | 3 |
| Asparagus Fern, bun. | 2 | 0 | 3 | Marigold Fern, 12bs. | 4 | 0 | 6 |
| Bonvardias, per bu. | 0 | 6 | 8 | Orchids, doz. blooms | 1 | 0 | 8 |
| Carnatious doz. blms. | 1 | 6 | 3 | Pelargoniums, 12 bun. | 4 | 0 | 6 |
| Eucharis ... per doz. | 2 | 0 | 4 | Red Roses, per doz. | 1 | 0 | 1 |
| Geraniums ... per doz. | 1 | 6 | 3 | Roses (Indoor), doz. | 0 | 6 | 1 |
| Geranium, scarlet, | | | | Tea, white, doz. | 1 | 0 | 2 |
| doz. bunches | 3 | 0 | 6 | Perle | 1 | 6 | 2 |
| Lilium longiflorum | | | | Safrano | 1 | 0 | 2 |
| per doz. | 3 | 0 | 4 | (English), | | | |
| Lily of the Valley doz. | | | | Pink Roses, doz. | 2 | 6 | 4 |
| sprays | 0 | 9 | 1 | Smilax, per bunch | 2 | 0 | 2 |
| Lilac (French) per bu. | 3 | 6 | 4 | Tuberose, doz. | | | |
| | | | | blooms ... | 1 | 0 | 1 |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES.

| | s. | d. | s. d. | | s. | d. | s. d. |
|-------------------------|----|----|-------|-------------------------|----|----|-------|
| Arbor Vitae, per doz. | 12 | 0 | 36 | Hydrangeas, per doz. | 8 | 0 | 10 |
| Aspidistra, doz..... | 18 | 0 | 36 | Ivy Geraniums, | | | |
| speolmen | 5 | 0 | 10 | per doz. | 4 | 0 | 6 |
| Coleus, per doz. | 3 | 0 | 4 | Lilium Harrissii, | | | |
| Diacaena, various, | | | | per pot | 2 | 0 | 4 |
| per doz. | 12 | 0 | 30 | Lycopodiums, doz. | 3 | 0 | 4 |
| Dracaena viridls, doz. | 9 | 0 | 18 | Lobellias, per doz. | 3 | 0 | 5 |
| Euonymus, var. doz. | 6 | 0 | 18 | Marguerite Daisy doz. | 4 | 0 | 0 |
| Evergreens, Invar. doz. | 6 | 0 | 24 | Mignonette, per doz. | 4 | 0 | 6 |
| Ferns, Invar., per doz. | 4 | 0 | 12 | Myrtles, doz. | 6 | 0 | 9 |
| Ferns, small, per 100 | 4 | 0 | 6 | Palms in variety, each | 1 | 0 | 15 |
| Ficus elastica, each | 1 | 0 | 5 | Palms, Specimen ... | 21 | 0 | 63 |
| Foliage Plants, var., | | | | Pelargoniums ... | 9 | 0 | 12 |
| each | 1 | 0 | 5 | Rhodanthe... per doz. | 4 | 0 | 5 |
| Fuchsia, per doz..... | 6 | 0 | 9 | Scarlets per doz. | 2 | 6 | 6 |
| Heliotrope, per dozen | 4 | 0 | 8 | Splraea, per doz.... | 6 | 0 | 9 |

INDEX TO ADVERTISEMENTS.

| | |
|---------------------------------|------------------------------|
| Auction Sales. | Insecticides. |
| Protheroe & Morris706 | Corry & Co.705 |
| Bulbs. | Gilhurst Compound705 |
| C. G. Van Tubergen705 | XL All.....706 |
| Catalogues. | Lawn Mowers. |
| Barr & Sons705 | A. Shanks & Son, Ltd....706 |
| Bunyard & Co.705 | Manures. |
| J. Forbes.....707 | Anglo-Continental705 |
| Kelway & Son705 | C Beeson705 |
| J. Peed & Sons.....707 | Chemical Union705 |
| Simpson & Son.....705 | Clay & Son.....720 |
| W. Wood & Son, Ltd. ...707 | W. Colchester720 |
| Chrysanthemums. | Lawes'.....718 |
| Devon Nursery.....705 | Meggitt's.....705 |
| Ferns. | Standen's720 |
| L. Wye705 | W. Thomsson & Sons.....706 |
| Florists' Flowers. | Miscellaneous. |
| R. W. Hockey705 | Cooper's Cycles705 |
| T. Jannoch.....707 | Corry & Co., Ltd.....719 |
| Kelway & Son705 | Epps's Cocoa.....719 |
| R. Owen705 | Gishurstue705 |
| J. Peed & Sons.....707 | Juno Cycles720 |
| J. Stevens705 | Smyth's Baskets705 |
| Flower Pots. | Netting. |
| Saukey & Sons, Ltd.720 | H. J. Gasson705 |
| Fruit Trees. | A. Potter.....705 |
| G. Bunyard & Co.705 | Orchids. |
| Garden Sundries, &c. | J. Cypher707 |
| J. Arnold705 | P. McArthur707 |
| Corry & Co.705 | F. Sander & Co705 |
| Eveson Coal & Coke Co. 705 | Stanley-Mobbs & Ashton705 |
| Hirst, Brooke & Hirst. ...705 | Publications. |
| J. & H. R. Hounam707 | Darlington719 |
| A. Outram719 | GARDENING WORLD.....719 |
| Porter's Stakes.....705 | Midland Cos'. Herald.....719 |
| G. H. Richards.....706 | Ogilvie.....719 |
| H. G. Smyth.....705 | J. S. Virtue & Co.....719 |
| "Summer Cloud".....720 | W. Wood & Son, Ltd. ...707 |
| Heating Apparatus. | Seeds. |
| W. Cooper, Limited ...706 | Simpson & Son.....705 |
| Messenger & Co.720 | Sutton & Sons705 |
| Richardson & Co.720 | Webb & Sons707 |
| Thames Bank Iron Co. ...705 | Shows. |
| Horticultural Builders. | 706 and 719 |
| J. Boyd & Sons.....705 | Situations, &c. |
| W. Cooper, Ltd.706 | 706 |
| J. Gray.....705 | Strawberries. |
| W. Richardson & Co.720 | Bunyard & Co.....707 |
| J. Weeks & Co., Ltd.705 | Laxton Bros.....707 |
| Hose. | Tents. |
| F. Reddaway & Co., Ltd. 706 | A. Potter.....706 |



ORCHIDS.

Clean Healthy Plants at Low Prices.
Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

GLOXINIAS FINEST MEDAL COLLECTION
* IN THE WORLD. *
Send for CATALOGUE to
JOHN PEED & SONS, West Norwood, London

The Royal Nurseries, Maidstone, Kent.

GEORGE BUNYARD & CO.,

Are now booking orders for early delivery of the very best
NEW AND OLD STRAWBERRIES.
For crop 1899, or for forcing.

They offer the largest stock and the best plants in the trade.
Change of stock pays.
Catalogue of Strawberries and Summer Fruits now ready.

POCKET KNIVES FROM MAKER.



Stag Handle Pruning Knives, a real good article, 1s. 1d. each; Ivory Handle Budding Knives, no better made, 1s. 3d. each; Ivory Handle, 2 blade waistcoat pocket Knife, 1s. 1d. each; Corn Knives, 1s.; Workman's Stag Handle Sheepsfoot and Pen Blade, 1s. 1d. The blades of all the above are made from the very best English crucible cast steel. Post free.

J. & H. R. HOUNAM,
Sheaf Island Works, SHEFFIELD.



1898. FORBES' CATALOGUE 1898.

(Over 150 Pages. Nearly 150 Illustrations.)

of Florists' Flowers and Hardy Border Plants

Is got up regardless of trouble or expense, with the result that it is by unanimous consent pronounced the most comprehensive, most accurate, most reliable, most complete and best extant.

It gives full and accurate descriptions of everything in the way of Florists' Flowers, also colour, height, time of flowering, and price of all the best Hardy Border Plants, together with their English or Common Names, and a mass of other Valuable Information that cannot be had elsewhere.

It is in fact a veritable reference-book, invaluable to all growers of these plants, and should be in the hands of all intending purchasers. Free on application.

JOHN FORBES,
Nurseryman, Hawick, Scotland.
ESTABLISHED 1870.

IMPORTANT TO GARDENERS.

If you have not received our Illustrated Supplement with particulars of Important Horticultural Improvements and Hints by Specialists upon successful

CARNATION CULTURE

please send post card for same.

MOST VALUABLE INFORMATION!

Wm. WOOD & SON, Ltd., WOOD GREEN, LONDON.

LAXTON'S STRAWBERRIES.

If you wish for the best, write for our new Illustrated Catalogue with descriptions of Laxton's new Fillbasket, Mentmore, Monarch, Leader and Royal Sovereign. The largest cultures specially for runner plants.

LAXTON BROTHERS, BEDFORD.

Caladiums

FINEST COLLECTION in the World. We make a speciality of CALADIUMS. Gold Medals Manchester & Leicester. Silver Cup, R.H.S., &c.

Satisfaction guaranteed. JOHN PEED AND SONS, West Norwood, London.

RETARDED LILY OF THE VALLEY CROWNS.

Headquarters at Dersingham.

For prices &c., apply to—

T. JANNOCH,

Lily Nursery, Dersingham, King's Lynn, Norfolk.

WEBBS' SEEDS

WEBBS' EMPEROR CABBAGE.

The Earliest and Best.
6d. and 1s. per packet; 1s. 6d. per oz.

From Mr. J. TURNBULL, The School House.

JULY 9TH, 1898.
"I sowed some seed of Webbs' 'Emperor Cabbage' and the Cabbages have been simply grand; they get better each time we have them."

WEBBS', WORDSLEY, STOURBRIDGE.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Malda Vale, London W.



"Gardening is the purest of human pleasures, and the greatest retreachment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JULY 16th, 1898.

NEXT WEEK'S ENGAGEMENTS.

WEDNESDAY, July 20th.—Cardiff Show (2 days.)

THURSDAY, July 21st.—Siccup Rose Show.

Tiverton Show.

FRIDAY, July 22nd.—Southern Counties Carnation Society's

Show at Southampton (2 days).

N. Meneage Show.

FLOWER AND FRUIT FARMING IN ENGLAND.

—These two branches of horticultural industry are annually extending their boundaries and influence, but as far as home cultures are concerned it would be difficult to formulate an idea as to the quantities produced, for it seems that no record is kept by the stall holders of Covent Garden, nor by the management officials of the market. Mr. William E. Bear gives a lengthy account of the industry, as carried on in various parts of England, in the *Journal of the Royal Agricultural Society*, for June 30th last. In speaking of the great increase of production, he mentions the fact, now well known to our readers, that Lily of the Valley may be had in bloom all the year round, by the use of the refrigerator for retarding the crowns beyond their natural season, and by forcing from early winter onwards. Spring flowers are extensively forced in vineries, Tomato and Cucumber houses, so that they come into the markets contemporaneously with the natural productions of the South of France and Italy. This takes place in December, and is immediately followed by the open air productions of the Scilly Islands and the more favoured parts of the mainland of England. The flowers include Narcissi, Anemones, and Marguerites. It may afford home growers some satisfaction to know that few forced flowers are imported, with the exception of French Lilac, in the early part of the year. As soon as flowers in the open air become plentiful the foreign supply ceases, until it commences with Chrysanthemums in early autumn. British wild flowers find a ready sale, including Violets, Primroses, Chrysanthemum segetum, C. Leucanthemum and others. The fruit houses are extensively utilised to bloom Chrysanthemums late in autumn and early winter, until last year the production was so overwhelming that prices were unremunerative. The modern development of the Narcissus industry is the most remarkable phase of flower growing, including the production of bulbs.

The Scilly Isles are first dealt with by the writer, appropriately, for it is from thence that the earliest supplies of flowers grown in the open are obtained. Only eight of the Scilly Isles are used for agricultural or horticultural purposes. The soil is mostly of granitic origin, the surface consisting of a sandy loam, mixed with clay in some places, and peat in others, but always light and well adapted for bulbous plants and vegetables. The islands are enveloped by the Gulf Stream, so that the climate is mild and equable at all times. Frost is rare, and snow more so, never lying more than twenty-four hours when it does come. The prosperity of the islanders really depends upon the mild and equable character of their climate. The mean annual rainfall is 34.38 in.; the maximum temperature, 55.5°; the minimum, 48.5°; and the mean, 52.1°. It will thus be seen that the weather is never very hot nor very cold.

In 1870, or the previous year, the father of the present steward packed a box of Narcissi for the late Mr. Augustus Smith, then Lord Proprietor of the islands, and sent it to Covent Garden. The return was £1, and this proved in fact the turning point in the prosperity of the islands, which had been in an impoverished condition, owing to over-population and the excessive division of the land. A few of the farmers began quietly to collect bulbs wherever they could find them growing in the fields or hedgerows, and to get up a stock for market work. The species and varieties of Narcissus then growing in the islands were confined to N. *Telamonius plenus*, Campernelli, Scilly White, Grand Soleil d'Or, two varieties of Grand Monarque, N. *biflorus*, N. *poeticus recurvus*, and N. *p. flore pleno*. It is believed that some of the above were first brought to Tresco by the monks, and later on by the Governors in St. Mary's. Two bulbs of Campernelli were obtained by Mrs. Gluyas from a French captain about sixty years ago, and from them the whole of the stock has been developed. The industry in Daffodils did not become thoroughly remunerative till 1880, and even then the quantity produced was small. Mr. T. A. Dorrien-Smith, the present Lord Proprietor, took up his residence at Tresco in 1875, and being greatly interested in the welfare of his tenants he visited the principal bulb-growing centres in 1883. He found that Daffodils flowered a month later in Holland than at Scilly, and from that concluded it would be safe to extend the business; he bought bulbs largely for himself and his tenants, introducing many new varieties. In 1885 the produce in flowers amounted to 65 tons a year, and this went on steadily increasing till the amount reached 448 tons in 1893, after which there was a falling-off; but in 1896 the climax was reached in the export of 514 tons of flowers, consisting of 3,598,000 bunches. The islands are subject to frequent gales of wind, and the Daffodils have to be sheltered by means of hedges consisting of Veronica, Escallonia, and Euonymus, which thrive splendidly. Accounts are also given of several of the bulb farms in the Scilly Islands.

Within the last twenty years there has sprung up a considerable industry in the growing of bulbs and of flowers for cutting in Lincolnshire. Snowdrops were grown, however, for the sake of their bulbs as far back as forty years ago; but the continuous production of them on the same land renders them liable to disease, and this militates against their production. Mr. White, of Spalding, has twenty-four acres of his farm devoted almost entirely to the cultivation of Narcissi. The only manure he uses is bone dust, of which he applies 14 to 15 cwts. per

acre before planting, and 5 cwts. every autumn afterwards as long as the bulbs are still in the soil. The land is fallowed about every fourth year, when the plough is used. At other times the spade, fork, and hoe are the only implements used. Mr. White forces about 500,000 bulbs annually. Some idea of the popularity of certain varieties may be judged from the fact that 1,500,000 bulbs of *N. poeticus ornatus*, between 400,000 and 500,000 each of *Sir Watkin* and *Horsfieldii*, 750,000 *N. Telamonius plenus*, 1,000,000 Double Whites, 100,000 each of *Emperor* and *Grandee*, and 40,000 *Empress*, are grown upon this farm, besides smaller quantities of others. In the open ground the cutting of the *Daffodils Emperor* and *Empress* at Tresco would be finished by March 14th, whereas at Spalding it is not commenced till April 7th or 8th. As far as open air flowers are concerned, the *Daffodil* cultures at the two places do not clash with one another.

At Frampton, Boston, *Daffodils*, *Lily of the Valley*, and early *Potatoes* are grown. A few flowers of the first-named were obtained on February 28th, and picking is continued till the middle of May, when *Roses* become plentiful in the market. *Crown Imperials* and *Aconites* are also grown here. *Tulips* thrive well enough, but can be obtained more cheaply from Holland. Messrs. Richard Bath & Co., of Wisbech, have fifty acres of land devoted to *Daffodils* and various other flowers for market, the rest of the farm of 450 acres being planted with fruit trees and bushes. Altogether the company holds about 900 acres of land devoted to flowers and fruit. In a bed of *Narcissus Sir Watkin*, an average of ten flowers are obtained from each bulb. Surely this is excessive. *Daffodil* bulbs generally are planted in October and lifted in July when to be sold. *Tulips* are grown for cutting. Other flowers cultivated here are *Roses*, *Carnations*, *Pansies*, *Polyanthuses*, *Wallflowers*, *Violets*, *Clematises* and *Dahlias*.

The *Potato Shaws* were blackened by frost at the end of June in the neighbourhood of Keith, Aberdeenshire.

Postponement of Show.—The Redhill, Reigate and District *Carnation* and *Picotee* Society's show has been postponed from Saturday the 23rd to Friday the 29th inst., owing to the lateness of the season, and the backward state of the *Carnations*.

What is a Drummer?—On this side of the water he is simply a man who murders music and paralyzes people by hammering away on a thing called a drum; in the "States" the horticultural trade has bestowed the title on the traveller who comes to look up business.

Honour to M. Baltet.—The well-known French nurseryman, M. Charles Baltet, has just received a gold medal from the National Horticultural Society of France, on the occasion of his publishing the 6th edition of his book, entitled "The Art of Grafting." This book is not unknown amongst British horticulturists.

Bamboos at Bicton.—Several species of these woody and noble-looking grasses are grown in the beautiful grounds of the Hon. Mark Rolle, at Bicton, Devon, including such fine species as *Arundinaria japonica*, *A. Simonii*, *A. falcata* and *Phyllostachys aurea*. They make very fine canes, ripening up perfectly, and Mr. Mayne, the gardener, cannot understand why they do not do better down in Cornwall. He should have thought it was just the home for them. He enquires whether it may not be the case that the growers there give too much in shade and moisture, as he thinks they would then be so soft that frost would play havoc with them. At Bicton he has to cut them back annually to keep them within bounds.

Jules Verne has now reached the age of seventy and attributes his health and vitality to a meagre diet of herbs and eggs.

A Lighthouse of Bamboo has recently been built in Japan. It does not rot like other kinds of wood and is said to resist the waves better.

A New Rose-flowered Lilac.—According to the *Bulletino Della R. Societa Toscana di Orticultura*, M. Thureau, of Garches, presented a new variety of Lilac, named *Monsieur Thureau*, at the last meeting of the Central Society of France. The flowers are of a beautiful lively rose colour.

The Richmond Show.—The Rose show recently held at Richmond, Surrey, was better all round than on any previous occasion, with the exception of trade groups. The *Roses* were fine, and the local people were much taken with the rockery of Alpine plants put up by the Guildford Hardy Plant Co. The gate money was the largest ever taken, and amounted to £139.

Kniphofia longicollis.—A species of Red Hot Poker has recently been introduced to Italy under this name, but its relative hardiness has not yet been sufficiently proved under conditions similar to those of *K. aloides*, the best known species. It promises to be an ornamental summer flowering plant in the opinion of the editor of the *Bulletino della R. Societa Toscana di Orticultura*. The flowers are rosy in bud and of a beautiful lemon-yellow when fully expanded.

Children's Geranium Club.—This unique club has this year organised a flower show, which was opened on Monday evening last, the 11th ult., by the Duchess of Devonshire, at the Cambridge House Settlement, Camberwell Road. The chief feature was a competition of "Geraniums" (*Pelargoniums*) amongst the members of the club. Young plants were sent out in the spring to 700 members, and of that number no fewer than 670 were returned into competition. Amongst the notables who were present at the show were the Attorney-General, the Countess of Jersey, Lady George Hamilton, and Lady Darling.

Onoclea Struthiopteris, the Ostrich Fern, is cultivated largely in the States. In Michigan, where it abounds in a wild state, its fronds are extensively used for decorations on public holidays, such as Memorial Day, Children's Day, and Fourth of July, for which occasions the plants are dug up in quantities from the woods and planted in pots, boxes and other receptacles. This *Onoclea* does wonderfully well under cultivation, and in addition to being perfectly hardy it may be lifted at almost any time of the year, and its fronds will not show any signs of distress. Even in winter it can be dug out from under several feet of snow, potted up, and started growing. It likes a soil rich in humus, and when given this, with partial shade and plenty of moisture during the growing season, it develops an exceedingly imposing presence.

Carnations, *Picotees* and *Auriculas* at Edenside.—The improvement of florists' flowers continues to enjoy marked attention at the hands of that veteran florist, Mr. James Douglas, Edenside, Great Bookham, Surrey. He has just issued a list of border and tree *Carnations*, *Picotees*, and *Auriculas*; but it is something more than a list, for much useful information to beginners and would-be cultivators of these popular flowers is added. The best varieties are also fully described, so that the reader can pick and chose for himself if he has any notion at all of the flowers under notice. New varieties, filling up gaps in the range of colour, and also furnishing improvements upon older sorts, are annually being raised by Mr. Douglas, who also secures the best of the acquisitions of other people, including the *Hayes Carnations*. The constitution of the new self and fancy varieties, now so plentiful, is remarkable by comparison with that of the old pets of the florist. An article entitled "Notes on Culture" gives a history of *Carnations* in this country, and then proceeds to deal with propagation by seeds, layers, and cuttings. *Malmaison Carnations* and tree or perpetual flowering varieties are dealt with in the same way, the respective articles being followed by descriptive lists of the best sorts. Cultural notes are also published concerning *Auriculas*, and all can be relied upon from such a skilled florist.

Woodthorpe, Southend Road.—It is always interesting to note any fresh extension of horticulture. H. G. Simonds, Esq., recently residing at Mendham House, Park Place, Leyton, found the accommodation there altogether inadequate for the housing of *Orchids*, of which he is getting together a choice collection. For some time past he has been on the outlook for a larger place within easy reach of London where he could build a suitable range of houses to enable him to extend his collection of *Orchids*. He has now acquired Woodthorpe, Southend Road, Beckenham, where he is to grow *Orchids* and *Roses*—by no means a bad combination. We wish him hearty success. His gardener, Mr. G. E. Day, also has these flowers fully at heart.

The Flag in Plants.—An eminent Frenchman has said that flowers and plants form a ground upon which all nations can meet amicably, since each nation can see in flowers the colours of its own flag. Lincoln Park, Chicago, U.S.A., has for one of its most popular features the "Stars and Stripes" exemplified in the shape of a carpet bed. The red "stripes" are formed of *Alternanthera Lindenii*, and the white ones of *Leucophyta Brownii*, the folds in the flag also being shown by the *Alternanthera*. *Echeverias* set in a field of crushed blue stone represent the "stars." The blue stone has been obtained by crushing limestone and then staining it blue with a mixture of Prussian blue, turpentine, linseed oil and Japan.

A Post-Gardener.—In the Buchan district of Aberdeenshire the grave recently closed over the remains of Mr. Alexander Kennedy, who was born in the parish of Slains seventy-three years ago. He commenced life as a farm servant, from which the transition to a gardener was easy. He was head gardener at Pitlurg House for thirty years until old age compelled him to resign his onerous duties. He still had a love for his profession and undertook the management of the farmers' gardens in the district where he resided, giving them great satisfaction by his skill and taste. He commenced to write verses while he was yet a young man, describing the scenes by which he was surrounded, and was received with considerable favour by the labouring country people who were his patrons and readily bought his book which he published under the title of "Rhymes and Love Strains." He also wrote metrical epistles to his friends and other effusions relating to a pastoral life.

A Fine *Odontoglossum Pescatorei*.—A beautifully blotched variety of this species, having shapely, round flowers, turned up at the Sale Rooms of Messrs. Protheroe & Morris recently, and several having their eye upon it the price was quickly run up to seventy-five guineas, at which figure it was knocked down to H. T. Pitt, Esq., Rosslyn, Stamford Hill. The elliptic sepals were spotted with dark violet-purple, the spots being the more numerous on the lateral sepals. The petals were white with a cluster of dark purple blotches on the centre. The lip had a triangular cluster of dark purple blotches tinted with crimson. The golden crest was ornamented with brown and violet. On the 8th inst. there was a lively demand for *Laelia* (*Brassavola*) *digbyana*, in the shape of newly imported pieces in fine condition. They were bought at prices ranging from £1 to 4½ gs., several good bits going at the latter price, and many of them not much less.

The Japanese as Flower Lovers.—A correspondent to *American Gardening*, who has had very intimate relations with the Japanese, writes, that "of all the denizens of the earth none are so passionately devoted to the culture and love of flowers. They have special days set aside for the enjoyment and worship of flowers, as each season brings them forth. When in early spring the *Cherry blossoms* break their buds and show forth in all their glory the *tokaido* (public roads) of the empire, where in many places these trees are planted, are alive with throngs of happy mortals, old and young, small toddlers carrying on their backs, securely strapped, wee infants, all bent on admiring the pink and white blossoms." That flowers have been assiduously cultivated in Japan for centuries the numerous subjects which have found their way to our gardens from thence bear sufficient witness.

A Mysterious Drug.—From time to time many curious problems connected with plants and vegetable drugs are brought before the Kew authorities for solution. The latest and most curious example is one that relates to supposed malingering on the part of Egyptian soldiers, several of whom have been admitted to hospital suffering from intense inflammation of the eyes, produced, it was thought, by means of some drug. None of the doctors resident in Egypt were able to throw light upon the source of the mischief, and hence the matter was referred to Kew. Dr. Scott, honorary keeper of the Jodrell laboratory, conjectures that fragments of the paleae of some grass have caused the inflammation, the irritation thus being mechanically rather than chemically produced.

The Growth of Canada.—"The first Manitoba crop bulletin shows an increase of about 200,000 acres under wheat over last year, the estimated total acreage being placed at 1,488,238 acres. The total acreage of crops of all kinds under cultivation in Manitoba this year is placed at 2,212,300 acres, an increase over last year of a quarter-million acres. The year 1897 showed a very large increase over 1896. The export of Manitoba wheat and flour, according to the report of the Winnipeg Grain and Produce Exchange, rose from 10,500,000 bushels in 1890 to 29,000,000 bushels in 1895. The next two years showed a great falling-off on account of poor crops. The acreage of 1898, with the yield per acre of 1895, would give results which we scarcely like to put upon paper lest disappointment should ensue; but it looks as if Canada would this year make a good showing in the British markets. New portions of Manitoba are being opened up for settlement, and cattle-raising and dairying are industries of growing importance. A year ago nearly 2,400,000 pounds of butter and nearly 1,000,000 pounds of cheese were made in the Province. Then it is to be borne in mind that, great as the resources of Manitoba are, it is a sort of model farm on a gigantic scale, an example of what can be done in the millions of acres of fertile land that await the plough in the North-West."—*Toronto Globe, June 14th, 1898.*

Devon and Exeter Gardeners on Holiday.—For the past six years it has been the custom for the Devon and Exeter Gardeners' Association to organise annually an excursion to a place selected. Several interesting places in the neighbourhood of Exeter have been visited by the members of the society, and on every occasion the enjoyment has been thorough. The seventh of these excursions was arranged for Wednesday, July 6th, a goodly company going to Tavistock and Endsleigh, the seat of the Duke of Bedford. The party was accommodated by the London and South-Western Railway Company with three saloon carriages. After inspecting the most interesting features of the old town of Tavistock, the visitors proceeded in three 'four-in-hands' to Endsleigh, where, on arrival, they were met by Mr. Yole, the gardener. At this princely establishment there are about a hundred acres of lawn and pleasure grounds, and a riding path of over seven miles in extent. The grounds are naturally varied and beautiful, the river Tamar winding along the valley far below the eminence on which the mansion stands. The grounds throughout are in a capital state of preservation. Rare and beautiful as well as the commoner trees and shrubs are not wanting, and there is more variety of this material than is usually to be found in private establishments. There were many pretty views to be enjoyed, and the party spent a happy time in doing full justice to them. The shell grotto, the dell and the cascade, and the model dairy embowered in climbers were all visited, and all found favour in the eyes of the visitors. Mr. Rundle, the Duke's agent, was very kind in arranging the visit, whilst Mr. Hope and Mr. Mackay excited the admiration and earned the thanks of all by the excellence of their arrangements. Tea was served at Tavistock, and the return journey was then commenced. The day was gloriously fine throughout.

The Birkbeck Building Society.—The forty-seventh annual meeting of the Birkbeck Building Society was held yesterday at the offices, 29 & 30, Southampton Buildings, Chancery Lane. The report adopted states that during the financial year just closed the total receipts from all sources, taken with the disbursements, disclosed the fact that the annual

turnover has amounted to £37,488,736, being a daily average of upwards of £120,000 for every business day that the office has been opened throughout the year. The investments now exceed ten millions—£10,773,675—and the total liabilities on subscriptions and deposits also exceed ten millions; whilst the balance of assets in excess of liabilities amounts to £431,984. The amount received for subscriptions during the year has reached the sum of £266,511. After allowing for withdrawals, the amount standing to the credit of investing members at the close of the year is £888,896, and the balance of deposits to £9,457,794, amounting together to £10,346,691, an increase over the past year of £1,233,236. The investments in convertible securities and the cash in hand have been augmented to the extent of £1,212,079, and now amount to £9,213,785, of which £1,542,652 is invested in Consols and other Government Securities, and upwards of two-and-a-half millions—£2,652,483—are inscribed in the books of the Governor and Company of the Bank of England, and £619,206 cash at Bankers. The number of members who have joined the Birkbeck during the past year is 2,924. In the Banking Department 2,116 current accounts, and 7,377 deposit accounts have been opened, in all 12,417 new accounts, being at the rate of 1,034 per month. The register of shareholders now contains the names of 13,601 members, and besides these there are 19,160 current accounts, and 52,333 deposit accounts; thus making the total of members and depositors, 85,094—the highest number ever attained. The number of shares in existence at the close of the year was 69,611, which is also the highest number yet reached. Since its establishment the society has returned to the shareholders and depositors more than one hundred and ninety-four millions—£194,672,808, the whole amount having been repaid upon demand. The amount advanced to borrowers has been £3,559,256, the amount of interest and bonus paid to investors and depositors is upwards of three millions sterling—the exact figures being £3,322,147—and the invested funds now exceed ten millions sterling—£10,778,675.

"KITSHAYES."

THIS is a charming little country residence, four miles from Budleigh Salterton, in the parish of Colaton Raleigh. It is nicely sheltered from all quarters, and stands at the bottom of a valley, lying between Aylesbeare Common and Sidmouth Hill; and I was pleasantly surprised to find such a pretty little place so well cared for. It was *en fête* at the time of my visit, a bazaar being held there with the hope of clearing off a debt in connection with the church bells recently placed in the above parish.

The pleasure grounds and kitchen garden are in the shape of a parallelogram, about 100 yd. in length, and 25 yd. in width. An evergreen hedge shuts out the vegetable quarters from the flower garden proper, while a herbaceous border runs the entire length on one side, and was very gay with the queen of flowers (Roses) and Canterbury Bells of nearly all colours. A beautiful soft pink one caught the eye at some little distance. I wonder these are not more grown, as nothing so brightens the borders in the months of June and July as these do. The white Pink Mrs. Sinkins made a capital undergrowth, planted every few yards, and the flowers were giving forth their delicious fragrance after a very slight shower. The Roses were simply grand, standards and dwarfs alike being full of bloom and very free of aphids. The standards were evidently of many years duration, and escaped that fatality mentioned by your correspondent, "W. B. G.," in your last issue, just at hand. On the verandah round part of the house I noticed a very fine Climbing Devonensis Rose, by far the best specimen I have met with outdoors, and it was *en masse*. Conifers, too, appear to luxuriate here. Several good specimens, dotted about the grounds, of *Picea smithiana*, *Pseudotsuga Douglasii*, *Tsuga albertiana* and *T. canadensis* were well represented. *Abies Pinsapo*, a very healthy tree, *A. nobilis* and *A. cephalonica* are all doing well, and, I should say, have been planted from fifteen to twenty years.

At the farthest end of the herbaceous border, before mentioned, stands the finest clump of the Royal Fern (*Osmunda regalis*) I have ever seen. A catch pit for water is close by, and I presume it often gets a bathing, or else such good results would not be obtained.

In the vegetable department all was looking well. Some fine pyramidal Apple trees were carrying good crops, while on the wall I noticed an extra large Fig, presumably Brown Turkey, hard to beat, and full of fruit, partly owing, no doubt, to such good space being left between each branch, and the wood well ripened last year. Plums and a Morello Cherry or two were heavily laden; but a few Peach trees on the south wall were a sorry plight; probably the soil is at fault here. The place was in excellent order, scarcely a weed to be seen anywhere; and the owner, Mrs. Davies, a widow lady, I feel sure, must be proud of her garden, every little nook and corner exhibiting signs that a practised hand has been assisting Nature in her development.

The above remarks are solely from memory, not intending to make any notes, or I should have equipped myself with pencil and book, but finding myself in such a snug little retreat I cannot refrain from committing to paper the good impression it left on me as to the way in which it is kept, and things in general are thriving so well.

Kittshayes must not be confounded with Hayes Barton, East Budleigh, the birth-place of Sir Walter Raleigh, to whom lovers of the fragrant weed are so much indebted. There is not the least doubt that Colaton Raleigh, the parish before mentioned, took the latter name from this great traveller, in going there to lodge at one time. Even now tourists wend their way to see this old house, where Sir Walter took apartments, as well as his birth-place just two miles apart.—*J. Mayne, Bickton Gardens, East Devon.*

HARDY HERBACEOUS PLANTS.

Inula Hookeri.—This is the best of the Inulas, and although it has come into bloom earlier in the season than usual it is yet welcome, for the flower heads are exceedingly graceful and showy. Comparing it with *I. glandulosa*, the species that is probably the most commonly grown, a considerable difference is manifest. The flower heads are not so large or coarse as in *I. glandulosa*, and the long, narrow ray florets give them an elegant and graceful appearance. The plant grows to about 18 in. in height, although in wet seasons it will attain 2 ft. It is a native of the Sikkim Himalayas, from whence it was brought to this country as far back as the year 1849. It is an exceedingly easy plant to grow, since it will do well in any ordinary garden soil. Propagation, too, is easy, since divisions of the roots in spring soon make good plants. If a great quantity is required a packet of seed is a good investment.

Iris sibirica japonica.—The Siberian Flag Iris is a very versatile species, and under cultivation has given rise to a considerable number of very pretty forms. Of these, *I. s. japonica* is one of the prettiest. Like the type, it loves to have its roots in mud or water, and its head in bright sunshine, hence it is a capital plant for naturalising by the side of lakes and streams, where, if left alone, it forms bold, handsome clumps from 3 ft. to 4 ft. in height that bloom profusely. The falls are bright blue, striated and flaked with white, whilst the standards are violet-blue. The leaves are rather narrow for their length, and very graceful in pose. The plant flowers almost continuously through May and June, and by planting in a number of places, where variety of conditions as to shade and to sun are forthcoming they may be made to cover a considerable period.

Dictamnus Fraxinella.—There is no more showy subject either for the rockery or the herbaceous border than this old favourite, which has been an occupant of our gardens for over 300 years. There is a number of varieties of it, varying in the colour of their flowers from pure white to shades of purple. All of them are easily grown, however, and do not take long to establish themselves. The foliage, moreover, is not by any means unhandsome, as it exhibits a glossy deep green hue that shows up well against the long spikes of flower that terminate the growths. The foliage, too, is possessed of a very strong, although not disagreeable, odour, like so many other of the subjects belonging to the natural order Rutaceae. This odour does not become apparent until the glands in the leaves are ruptured by being bruised by rubbing between the fingers. The correct name of the plant is *D. albus*, but *D. Fraxinella* is more usually employed in gardens, the name "albus" being usually applied to the white variety only. Of course the plant is not without its popular names, and it would indeed be curious if it had escaped

them during its three centuries of cultivation. Dittany, Fraxinella, and Burning Bush are some of them that will probably be familiar to my readers. Propagation may easily be conducted by means of root division; but seed is very expeditious, and possesses the advantage that a number of shades of colour in the flowers is thus obtained.

Lupinus arboreus luteus.—As the specific name signifies this is of an arboreal or shrubby habit, and not a herbaceous plant, strictly speaking. I am induced to speak of it amongst the herbaceous plants, however, because it is such a grand thing for association with the other plants in the border. It forms large clumps, which are swathed right down to the ground with foliage, and the sub-erect racemes of bright yellow flowers. The latter are like those of an ordinary Lupin and hence do not call for special comment. They come in very handy for cutting, as they last well in water. Seed germinates readily enough, and plants in abundance can soon be obtained in this way.

Lupinus polyphyllus Foxii.—This is one of the handsomest of the varieties of the truly herbaceous *L. polyphyllus*. The spikes are very tall and imposing, the colour of the flowers being blue, striped with white, and hence distinct from anything else. It may be as easily grown as the type, *L. polyphyllus*, which is well known as a tractable border plant.—*Plant Lover*.

TRIALS AT CHISWICK. VIOLAS.

No fewer than 203 entries of Violas were received from various sources last spring for trial at the Royal Horticultural Society's Gardens at Chiswick. These were all planted on March 26th in a border running round one of the fruit tree quarters on the north-eastern side of the garden. Despite the trying season the plants have grown well and flowered freely, and the foliage is remarkably clean and free from red spider and other insect pests. The plants were examined by the committee on July 5th, when the award of XXX was made to the following fifteen varieties:—

MINIATURE WRAJMENT.—This is a large creamy-white variety with a small, yellow eye. The flowers are of good form, and the plant a strong grower. Mr. John Forbes, Hawick, Scotland

DIANA.—A light, lavender-blue flower of medium size with a small, yellow eye, and heavy, black rays running nearly to the margins of the segments. The leaves are rather larger than usual and very deep green. It commenced to flower on May 9th. Mr. John Forbes.

JACKANAPES.—This is a very showy and somewhat curious flower. It is not of the best form, but is a good bedding variety, a sturdy grower, a free bloomer, and totally distinct from everything else. The upper segments exhibit a rich chestnut-maroon hue, whilst the lower ones, *i.e.*, the lip and wings, are bright yellow. Mr. John Forbes.

J. B. RIDING is well known as a fine variety of excellent form. The rich crimson-magenta hue which we find here is not approached by anything else. It has done fairly well at Chiswick, and the plants look healthy enough, but they are not nearly so strong as many of the other varieties. There are a few black rays in the flower. Mr. John Forbes.

SIR ROBERT PULLER is a grand bedding variety, free and vigorous. The flowers are large, bright purple-blue in colour. The eye is unusually large, and next to it comes a zone of very light blue, from which the black rays stand out prominently. Mr. John Forbes.

COUNTESS OF HOPETOWN.—A large creamy-white rayless variety of great merit. It is a free flowerer, and a strong grower, with rather large leaves. Its great value lies in its earliness, for at Chiswick it was one of the first to bloom, commencing to open its flowers on May 7th. Messrs. Dobbie & Co., Rothesay, N.B., and Orpington, Kent.

BULLION.—This fine yellow variety is well known as one of the best bedders we have. At Chiswick it has fully sustained its reputation both for earliness and continuity of flowering. Messrs. Dobbie & Co.

MARCHIONESS.—A truly grand flower, large and pure white, save for the small yellow eye, and a few narrow rays. The blooms are of exceptionally good form, and open until quite flat. It is a strong grower and a fairly free bloomer. Messrs. Dobbie & Co.

MRS. H. BELLAMY.—A deep violet-purple form shading to lavender-blue along the margins of the upper segments. The yellow eye is very small, and the white ridge or eyebrow is very prominent. The habit is very satisfactory. Messrs. Dobbie & Co.

IONA.—This showy flower may best be described as bright blue with four heavy radial blotches of black purple and regular outline running to the margin of the segments. The flowers are of medium size and capital form. Messrs. Dobbie & Co.

MRS. C. F. GORDON.—This is much like Iona in style, but is not nearly such a good variety, the flower being inferior in form, size, and distinctness of colouring. Messrs. Dobbie & Co.

DUCHESS OF FIFE—This shares with one or two other forms the quality of being earliest to bloom at Chiswick this year. The yellow flowers, shading to white towards the margins, and with their irregular borderings and blotchings of lavender, are exceptionally showy and distinct. Habit and constitution alike are good at Chiswick as well as in the thousands of other places that the variety has been grown. Messrs. Dobbie & Co.

HAMISH—Here we have an exceedingly fine flower. The colour is deep purple-magenta, passing to violet-purple in the centre. The form is good, and the plant a strong grower. Messrs. Dobbie & Co.

BLUE GOWN.—An early, dwarf, free flowering sort of great merit. The colour is light purple blue with a pretty white eye. At Chiswick the earliness of the variety was well maintained. Messrs. Dobbie & Co.

PRINCESS LOUISE.—This is a fine self yellow sort with a deep orange eye, and a few faint rays. The flowers are of medium size, capital form, and are produced with great freedom. Messrs. Dobbie & Co.

VEGETABLES.

On July 5th the fruit and vegetable committee pronounced upon the respective merits of the varieties of Peas grown to test. The seed was sown on March 15th Awards of Merit were granted to three varieties. They were:—

THOMAS LAXTON.—A large, wrinkled Marrowfat Pea, averaging seven seeds to a pod; pods green, slightly curved, produced singly; haulm, dark green; height, 3 ft; a capital cropper. Messrs. Laxton Bros., Bedford.

DRUMMOND'S NEW PEA.—A fine Marrow variety, averaging seven to nine seeds in a pod; pods produced in pairs, curved, acutely pointed; haulm and pods dark green; evidently a first-rate cropper; height, 4 ft. to 5 ft. Messrs. Drummond & Sons, Dublin.

VEITCH'S ACME.—The result of a cross between Stratagem and Veitch's Extra Early; pods rather small but exceptionally well filled, slightly curved, a little pointed, light green; seeds from five to seven in a pod, relatively large, and closely packed; a heavy cropper; Height, 3 ft. Messrs. Jas. Veitch & Sons, Ltd., Royal Exotic Nurseries, Chelsea.

LETTUCE CRYSTAL PALACE also received an Award of Merit from the committee. It is an exceedingly fine Cabbage variety, of great size and weight, and very suitable for dry soils. The heads last a long time in condition, and the flavour is excellent. The leaves are much crisped at the margins, and thus are very ornamental in appearance. The colour is green, flushed a little with brown. Messrs. Watkins & Simpson, Exeter Street, Strand.

STRAWBERRY REWARD.—This is a new Strawberry, with very rich Pine flavour. The bright scarlet fruits are conical in shape, and very long relative to their width. The habit is dwarf, and the plants have done fairly well at Chiswick, although the season has been a very trying one for them. Award of Merit. Messrs. Laxton Bros.

The Orchid Grower's Calendar.

EAST INDIA HOUSE.—In this division the various species of *Phalaenopsis* are just now making good headway as regards growth, &c., and should, of course, receive every attention at the hands of the cultivator. Coming as they do from the East, it is easy to see that to do them well they must receive a great amount of heat. We are told that they are found growing on bare rocks, and on branches of trees, and where a great quantity of water falls during the growing season, and at no time we may reason-

ably suppose are they subjected to a long season of drought, as are most Orchids, for not being provided with pseudobulbs they could not stand it for long. At the same time, the leathery leaves which we find on imported pieces tells us pretty plainly that at times they have something to put up with, which is unknown to them under cultivation. However, I am not going even to suggest that we coddle them too much over here, for experience teaches us that they are more susceptible to injury by fluctuation in temperature and exposure to the sun's rays than any other Orchid.

Under cultivation the leaves become thick and fleshy, but would soon become scorched if exposed. As mentioned, they are great lovers of moisture, so that attention should be duly paid to their requirements in this direction.

A friend of mine, who does them well, grows them for the most part in teak wood baskets, using as small quantity of moss as is convenient. Some there are who fill in all the available spaces with live moss, sometimes covering up the roots, which would otherwise be exposed. This a mistake, as it sometimes causes the roots to go black at the points, and die off altogether.

A temperature of about 80° should be maintained by day with sun heat, and the shading down; and a night temperature of about 70°. Only on rare occasions can fire heat be dispensed with in this division; for we get very cold nights, so that it is always best to be on the safe side by keeping a little heat running through the pipes.

THRIPS are very partial to these plants and must be kept under by fumigation. Sponging the leaves, too, keeps them down, besides having a beneficial effect on the plants.

CATTLEYA HOUSE.—Here the beautiful *C. gigas sanderiana* is making a good show, and is much admired. So are most Orchids; but you have to keep them up to concert pitch or they would not respond by showing their beauty. This then can only be done by giving them the necessary food. It has been my practical duty, set forth from time to time in these notes, to do the potting of these species as soon as the flowers fade, as we find at this season the roots are most active. Some there are that have missed flowering and are now ready for a new pot or pan as the case may be. Good peat and moss in equal parts are what they require. Be careful to drain the pots well; very little water will be required until they are well rooted.—C.

CYPRIPEDIUM I'ANSONI AND MRS. REGINALD YOUNG.

To succeed in obtaining two first-class Certificates for *Cypripediums* at one meeting of the Orchid Committee of the R.H.S. is a feat that is seldom attained, and, when it does happen, is worthy of special mention. This Messrs. H. Low & Co. succeeded in doing at the meeting on the 28th ult., with the two hybrids mentioned, and it must be admitted they were of exceptional interest and beauty. The former is a hybrid having *C. Morganiae* and *C. rothschildianum* as its parents, and is in every respect intermediate, the best characters of each being fully developed. Of Mrs. Reginald Young, to say that it was the product of a cross between *C. Lowi* and *C. sanderianum* will give a good idea of the beauty and distinctness of this one also. The flowers of this latter one were better in form and general appearance to either of its parents, whilst the colours of each were intensified and most pleasing. They are set fairly closely, each bloom measuring about 2½ in. to 3 in. across. The under colour is a yellow, but the major part of the bloom is densely covered with small, dark brown spots, giving the flower an almost sooty appearance. It, nevertheless, is a showy thing, and its successful blooming must give satisfaction.

Grammatophyllum rumphianum is grown at Kew in a basket, full of roots, and has evidently been treated in a manner suitable to it. The spike on this is just 6 ft. in length, the flowers appearing on two-thirds of the length, and set somewhat sparsely on the spike. The two basal flowers develop only four segments instead of the usual six; that is, there is an upper sepal and a lower one instead of two. There are two petals and no labellum. The colour of the flowers is a bright yellow, with heavy spots and mottlings on the whole, which are of a dark

purple. This irregular mottling gives the flowers a very distinct character, and when this is once seen and noted there need be no further doubt in the mind of the grower.

Coming to us as the Grammatophyllums do from the hot countries of the Islands of Java, Madagascar, and Singapore, the treatment of the ordinary East India house should usually suit these. At the same time it must be confessed they sometimes do well, and after a season or two turn weakly and die away. The yellow thrip has been their greatest enemy, but now, thanks to the XL All, this can be successfully overcome, and the removal of the pest will doubtless ensure to many a longer lease of life than was the case a few years back. Plenty of moisture, heat and light whilst growing, and a fairly dry and cooler time when at rest must assuredly be given.—*W. Swan, Exmouth.*

Gleanings from the World of Science.

THE undermentioned subjects were brought up at the Scientific Committee Meeting of the Royal Horticultural Society on the 28th ult. :—

Pyrethrum Flowers Arrested.—Mr. E. Ballard sent some flowers, "taken from healthy roots, full of bloom, but on which some of the flowers fade, owing to the shrivelling of the stalk some 2 in. or 3 in. below the flower. Last year whole roots were affected." It is difficult to pronounce without seeing the early stages, but the general opinion was that frost had checked the buds, and a fungus, possibly a myxomycete, followed. Buds of Pyrethrum, arrested in an early stage, appeared to be spoilt by frost and wet having got into them.

Beeches Dying.—Mrs. A. C. Campbell Swinton, of Berrywell, Dunse, Berwickshire, sent some bark, &c., showing much decay, taken from a very fine old Beech at Kimmerghame. It was described as having a cavity at a fork in which rain water lodged, but since the tree is only nineteen yards from the bed of the river the suggestion that the roots have got into the cold river soil is with very little doubt correct. Beeches preferring dry soil by nature, the above would be a sufficiently probable cause. Mr. Wilks described a case where in a space of 150 yards by 20 yards every shrub and tree dies after a time. The destruction began with a hedge, then Scotch Firs, Oaks, Ashes, and lastly Beeches of about forty-five years of age perished. The cause appeared to be a bed of white sand into which the roots penetrated, thus starving the trees.

Black Currant Shoots Falling.—Mr. E. Ballard sent specimens from a large plantation, which break off at a slight touch or by the wind. Dr. W. G. Smith, who has examined them, reports upon them as follows:—"The Currant leaves bore a mildew, but other fungi were also present when I examined the material. The characteristic mode of attack pointed to a *Peronospora* species. I have raised good crops of one on fresh portions of the leaves, and am following up the clue. If it be really a species of this family it is new to Britain, although one (*Plasmophora ribicola*, *Schraeter*) has been reported from U.S. America. I have observed the emission of motile swarm spores from the sporangia (so-called spores) of fresh material, and otherwise feel sure of the *Peronosporae* nature of this fungus. As to remedy, I should recommend a spraying of Bordeaux mixture or allied copper mixture. To a Black Currant plantation this could be done by a knapsack sprayer. Probably one can be had from the Strawson Company."

Cherry Leaves Diseased.—Specimens of the foliage was received from Mr. B. G. Berry, F.R.H.S., Scarbutts Manor, Broughton, Faversham, and submitted to Dr. W. G. Smith, who reports as follows:—"I cannot make up my mind whether the fungus on Cherry leaves you sent last week is *Cylindrosporium padi*, Karst, or *Cladosporium amygdalearum*, Pass. Both are given as causing spots on foliage similar to that sent. The spores are different, but I get both forms (or something very like them) present. In any case the fungus is the cause of trouble. The disease is common in the United States, though I have no definite record of its occurrence here. It is not considered serious, and yields easily to spraying remedies. I am afraid at present the crop is too far

advanced to allow of immediate treatment, but as soon as it is plucked Bordeaux mixture should be sprayed on the foliage. Next year the spraying should be continued as soon as the foliage is strong enough to allow it. The preparation of Bordeaux mixture and allied fungicides I have already described in the "Gardeners' Chronicle," last August. It should not be used towards the season of ripe fruit, as it stains the Cherries, but applied before and after is reliable."

Black Currant × Gooseberry.—Mr. W. Culverwell, of Thorpe Perrow, Bedale, sent a fruiting spray of this curious hybrid, showing well the resemblance to the manner of fruiting in the Currant, though it was entirely without its scent. The fruit resembled small Gooseberries, but the leaves had no spines.

Tetramerous Odontoglossum.—Mr. McBean sent a spray of *O. crispum*, in which all the four blossoms upon it had the two anterior petals adherent to the sepal between them, three points indicating the fusion. In addition to the above, the sepals fused with the petals were petaloid and the ovaries were aborted. In two flowers it was S_2 and in the other two S_3 that was petaloid.

Tuberous Growth on Vine.—Dr. Masters exhibited a specimen; similar ones are sometimes associated with a multiplication of buds. It is probably caused by a puncture of some insect, which sets up a subsequent growth by hypertrophy. It is occasionally seen on *Maréchal Niel* Roses.

FALKLAND PARK.

SITUATED as this suburban residence is on the top of a dry hill it is not surprising that some difficulty should be experienced in the matter of outdoor gardening. A garden has been established at Falkland Park, South Norwood Hill, for many years, but when Thos. McMeekin, Esq. took it over he completely remodelled the garden, with a few trifling exceptions, and built a splendid mansion fitted with all the modern appliances.

We are most concerned with the various phases of gardening carried out both under glass and out-of-doors. Many of the crowded old trees and useless shrubbery were removed, and much planting has since been effected. The finest of the old trees were of course, left standing intact, including tall Elms, *Sequoia sempervirens*, Oaks, the purple Beech and various others, most of which have greatly improved by the greater amount of breathing room afforded them. The shrubs, notwithstanding the thirsty nature of the soil, are getting thoroughly established in most cases and looking the picture of healthy vigorous growth. Mr. A. Wright, the gardener, has more recently planted a hedge or rather a winding bank of shrubbery round one side of the hill for the purpose of screening the houses belonging to another establishment, and already this is a pleasing feature of the grounds abutting upon the drive leading to the mansion. Elsewhere the view into the lower portion of the grounds, which are wooded, is left open, with most interesting effects. Some of the finer trees and shrubs are isolated upon the grass, while in other places they are planted widely apart so as to allow of a covering to the ground of Roses and clumps of annual and perennial herbaceous subjects of an ornamental character. Banks of the choicest varieties of hardy Pontic Rhododendrons and Azaleas on the fringe of the wood were in the full beauty of their June garb of foliage and flowers on the occasion of our visit. Ghent Azaleas, including the hybrids of *A. nudiflora*, were past their best, but the forms of *A. viscosa* were still in full bloom, being later than those of the former. The varieties of *A. mollis* were also early and over.

The grass everywhere covering the crest of the hill is now well established, and covers the ground with a soft carpet of verdure. For several years it remained very thin, the dry weather during what should have been its growing period being most inimical to its welfare. Besides the grass clovers are now taking a firm hold of the soil, including *Trifolium repens* and *T. procumbens*, but particularly the latter, which seems particularly adapted for covering the ground in dry situations. This small species has been spreading of its own accord. In the neighbourhood of the winding, ornamental water progress is also visible in the clumps, beds and irregular masses of various flowering subjects. Masses

of *Kalmia angustifolia* and *K. a. rubra* have been most profuse in blossom. The same may be said of *Cistus florentinus* and a variety of *Cistus albidus*, the large white flowers and dark green foliage of the former being very handsome. A bed of *Bryanthus empetriformis* was particularly handsome in early June; and later on its place was taken by varieties of the allied *Daboecia polifolia*. Masses of *Hemerocallis flava*, *H. fulva*, *Lychnis Viscaria splendens plena*, Single Pyrethrums, London Pride, &c., were very effective; and Pinks to be followed by Carnations in the mass show what can be effected with these garden flowers. *Lilium umbellatum* has done splendidly, and masses of *Iris Pseudacorus* and Water Lilies waded into the water, as is their wont. A large clump of *Typha latifolia* has sprung up in an old gravel pit that has been turned into a pond, but no one has any idea how it came there.

The hothouses were attractive in all save the temperature, and that was not particularly inviting because of the tropical heat prevailing outside. We walked inside, nevertheless, to have a cursory view of the plants in bloom. House No. 7 is used as a conservatory, and here the atmosphere was comfortable, as it was in the long corridor leading from end to end of the range. Tuberous Begonias were flowering away freely, including some fine forms. Zonal, show and regal Pelargoniums made the shelves gay; while *Lonicera sempervirens*, *Solanum venustum* and other climbers draped the roof overhead. Sweet Peas grown in large baskets were very ornamental and quite novel in being suspended high overhead. They answer the purpose admirably. *Datura sanguinea* with its long red trumpets was flowering freely in the corridor, along with a great variety of climbers.

In one of the Orchid houses a fine variety or form of *Dendrobium Falconeri* bore two dozen flowers of rich colour. *Coelogyne dayana grandis* in a basket carried nine spikes, one of which had thirty-nine flowers. Numerous pieces of the fragrant *Odontoglossum citrosum* were suspended in baskets, and flowering freely. Other fine things were *Cattleya Warneri*, a fine form of *Trichopilia crispa marginata*, *Laelia grandis tenebrosa*, the dwarf *Sobralia macrantha nana*, and numerous beautiful varieties of *Odontoglossum crispum*. One had large purple blotches on a white ground; another shapely flower was white except the richly-blotched lip. Very interesting was a third sort which had no purple or brown whatever, merely a golden disc and a few yellow spots on the lip, the rest being white. A variety of *O. c. guttatum* was tinted with rose.

In another house we came upon a large and healthy plant of *Sobralia xantholeuca*, full of flower buds. A very richly-coloured form is *Cypripedium rothschildianum*, Falkland Park var., with broad dark bands on the upper sepal and heavily blotched petals, which had a spread of 11 in., though they were still growing. In different houses *Dendrobium dalhousianum* was flowering grandly.

The stove accommodated grand pieces of various fine foliage plants, including a handsome piece of *Anthurium warocqueanum*, the leaves of which measured 3 ft. 9 in. to 4 ft. in length, by 19 in. across. We do not remember seeing larger leaves of this species.

A fine strain of *Gloxinias* is grown here, including banded, edged, white, and other selfs, and spotted varieties. One sort had a petaloid outgrowth from the outer face of the corolla, resembling a *Canpanula Medium calycanthema*. Very handsome was a light blue sort having large flowers abundantly produced; another had white rings enclosing areas of a dark colour.

A collection of British Ferns is being got together here, and the collection is further being increased by the raising of sporelings of some of the more popular sorts, including the Lady Fern (*Athyrium Filix-foemina*). Seedlings of the latter were characterised by having extremely finely-divided fronds; others had short fronds, heavily crested on the top. Very pretty was one having a very heavy top of almost hair-like segments. Still another noticeable plantlet had narrow fronds for all the world like a *Woodsia ilvensis*. There seems no limit to the variations of this popular species.

The Wings of Butterflies are shown by the microscope to be covered with very minute feathers, each provided with a quill and filaments.

HINTS FOR AMATEURS.

Border Carnations.—These are the most important of all the outdoor flowers just now, with, perhaps, the single exception of the Rose, which is the strongest rival of the Carnation in the struggle for popular favour. The season is decidedly backward the country over, and, therefore, it causes no surprise that the National Carnation and Picotee Society's show at the Crystal Palace has been recently postponed for a week.

The cold, wet May tried the border plants sadly, and they were almost at a standstill at the time when they should have been making their most vigorous growth. The warm weather that we have had during the last two weeks has, however, caused them to pull up wonderfully, even although they have had a hard battle with green fly.

Staking.—This operation should no longer be delayed, otherwise the heavy buds will be splashed with mud, and the flowers spoilt ere they are yet open. For the purpose bamboos are the best stakes, as they are neat, light and strong. They can be purchased cheaply enough in bundles of any size required. As a rule 2 ft. or 2 ft. 6 in. stakes are quite long enough, although 3 ft. ones may be useful for very strong growing varieties. In any case it will not be economy to cut off the points if they are a little bit too long. If they are taken care of bamboo stakes will last for years, and thus they are even more economical in the long run than Hazel twigs, which, as a rule, have to be cut fresh every year, or at the least every two years.

In tying do not bunch all the flowering stems together, as if it was a hirsch broom that was being operated on. Such treatment will spoil the look of the best plants, and, besides, every time a flower is cut there is a bother to get it disentangled from the rest, with possibly a forcible grumble or two as the immediate result. All this may be avoided if a little trouble is taken now with the tying. A number of strings should be used, each supporting two or three of the stems, when, by steering clear of crushing, the flowers will have a better chance to open than they would under the broom-head style.

Disbudding.—As a rule Carnations produce plenty of buds, some of which may, under ordinary circumstances, be dispensed with. To dishud heavily, however, is neither necessary nor wise, for the size of the flowers left will not be materially increased thereby, although, of course, some increase will accrue. We are not speaking now of the zealot who has the show board and the shekels of prize money in view—for him a totally different system is required. His plants are heavily disbudded, shaded from the sun, watched over almost day and night as if untold wealth were at stake. We do not wish to decry all this trouble, for to the grower who has the show fever probably no trouble is too much, no pains too great, if but he can achieve his object; and this is as it should be.

For ordinary purposes, flowers of medium size are what is wanted, and the more there are of them the better. The only disbudding that will be necessary, therefore, is when a cluster of three or four buds is formed at the apex of a shoot. In such cases the centre one should be left and the others pinched out.

Pot Carnations.—Those amateurs who possess a cold frame or two and a greenhouse will find that it is a profitable undertaking to grow border Carnations in 7-in. and 8-in. pots, and flower them under glass. Where there is any difficulty in getting them to do in the open, as is the case in some urban and suburban gardens where the soil is anything but kindly, you will find that it is quite easy to obtain plenty of fine flowers by cultivation in pots. Nothing like forcing is attempted, of course, but the plants are kept quite cool and allowed to come on as gradually as their relatives in the open border, which they antedate in blooming by about ten days or a fortnight. Just now the plants will be all the better for an occasional dose of liquid manure, but it should not be given to them too strong, and only at alternate waterings. As the flowers commence to open see that proper shading is given, for the flowers burn much more quickly under glass than they do in the open, and even if there is no "burning," strictly speaking, the colours soon fade under the action of

the sun's rays. Green fly too is much more troublesome under glass than it is out of doors, but this is to a certain extent compensated for by the fact that it is easier to deal with it in the house. If much of it is about, a fumigation before the buds begin to burst is advisable.

Violas.—Up to the present the season has been anything but a favourable one for Violas, for insect pests have been more than usually numerous and destructive. It is to be feared that the present hot, parching weather will favour still further the spread of the dreaded red spider, unless, of course, remedial measures are taken. As long as the hot weather lasts the plants should be heavily sprinkled overhead each evening with the rose can, giving enough water each time to go right down to the roots. This system is a most beneficial one and I have known a number of cases within the past year or two in which the Violas would have done very little had it not been followed. The production and development of seed vessels is a very exhausting process for the plants, and hence, if the continuity of blooming is to be kept up, these seed vessels should be picked off before they are any size. This must not be done once or twice simply, but continuously, and the plants will look all the better for it.

Calendula officinalis—A few plants there are that once they are put into a garden can only with difficulty be got rid of again, and of this number the common Marigold, *Calendula officinalis*, is a notable example. It will grow almost anywhere, and under any conditions, and year after year the seedlings come up in increasing numbers, for the seed sows itself all over the garden. In addition to these hardy and insistent qualities, the plants are very showy and free blooming, and are certainly not to be despised by those who have to deplore the failures of many choice plants to grow in the mysterious soil that is often to be found in town gardens. There are several varieties that are well worth attention. Of these Orange King is the best of its colour, which is a rich orange. The flowers are of great size and very double, whilst they are produced all through the summer. The plants are dwarf and hushy, the height being about 1 ft. This variety is not nearly so weedy-looking as the type, upon which it is a decided improvement. Its counterpart, as far as habit and general utility go, is to be found in Lemon Queen, the difference being in colour, which is, as the varietal name suggests, lemon-yellow. Of the striped varieties Meteor is the best. The flowers are fully as large as those of the other forms mentioned, bright orange in colour, with stripes of pale yellow.

Dahlias.—Where early flowers are wanted large old plants will require to have the growth thinned to some extent. They throw up a lot more than there is any necessity for, and it is only by removing some of them in good time that the rest have a fair chance. Three or four good main stems are quite enough for an ordinary plant, and after the strongest and healthiest have been selected the rest may be cut out. Some of the lateral growths and buds may also be removed with advantage if good-sized flowers are wanted. This applies chiefly to the show, fancy and Cactus sections, for the singles, being chiefly wanted for cutting, may be allowed to throw many more flowers. Another point is to be gained by thinning out the growths besides increase in size of flower, and that is, earliness of blooming. Many Dahlias, especially those that were not started under glass, have scarcely a chance to bloom until the summer has gone and frost is expected.

Double Daisies.—These old-fashioned but none the less useful plants are exceedingly effective in spring bedding combinations. A good stock of them is thus of no importance, seeing that they can be associated in the beds with bulbs of all kinds as a ground work for the taller plants. An edging of the red and white forms is also a capital set-off to either bed or border. If no attempt has been made at propagation this should be seen to at once. The old plants should be lifted, and divided up into nice little tufts with plenty of roots attached. Choose a spot on a shady border where the soil is light and rich, and plant the divisions in rows about 8 in. apart—just wide enough to admit of the use of the hoe. Water them in, and give subsequent waterings as the state of the weather determines. Nice plants will then be forthcoming for autumn planting.—*REN.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Adiantum Capillus-Veneris var. cornubiense.—*Y.*: The common, bardy Maidenhair is not exclusively British, being almost world-wide in its distribution. It is an exceedingly variable species, and there are numerous, handsome, named varieties of it in cultivation. *A. C.-V. cornubiense* is one of the prettiest of these, but it is somewhat delicate in constitution, and we rarely see anything like a really good plant. The cool greenhouse is the place for it. We hope you will succeed in getting it to grow.

Selaginella kraussiana and S. denticulata.—*Suburban*: You are both right and wrong. The *Selaginella* you send as *S. denticulata* is undoubtedly the same as the one known as *S. kraussiana*, which is its correct name. The true *S. denticulata* is not synonymous with *S. kraussiana*, for they are distinct species.

Asparagus Bed.—*Arry*: You must pull out the weeds by hand. We should not advise you to sprinkle enough salt on the bed to kill them, for although *Asparagus* likes a little salt it must not be expected to put up with such a strong dose as this. Cutting should cease after the expiration of June. It is not wise to work the beds too hard, for what you will gain one year you will inevitably lose the next, and a few years of consistent over-cutting will ruin the bed entirely.

Dahlias Eaten.—*Arry*: The Dahlias have probably been eaten by earwigs. Set traps for the pests by placing near the plants small pots or tins filled with hay, into which the earwigs will creep for shelter. By examining every morning, and destroying any of the insects that may be in them their numbers will be lessened.

Lavatera arborea variegata.—*F. L. Ames*: Despite its woody appearance, and almost tree-like stature, this *Lavatera* is only a biennial. Its chief value is for sub-tropical bedding, for which it may be used with excellent effect, especially when the plants are well variegated.

Adiantum pedatum.—*P. T.*: Although this *Adiantum* looks delicate it is hardy enough, and will do very well in a shady nook in the rockery. It is a native of North America.

Marguerites.—*P. T.*: Your plants have probably flowered themselves to a standstill, so to speak. Marguerites are very free-flowering things, and not infrequently do this when they are kept pent up in small pots. Your best plan will be to cut them back a little, shortening each growth to, say about half its present length. Leave the plants in their pots until they commence to break into growth. They may then be planted out in an open border in rich soil, where they will grow with astonishing vigour. By September they will have developed into plants that will be three times their present size, and which may then be lifted, potted up, and placed in the conservatory for the winter. They will commence to flower soon after they are lifted, and keep right on through the winter.

Pinching Vines.—*S. L. N.*: As a rule, two or three nodes beyond the bunch is sufficient length to allow the shoot to run before it is stopped. If the Vines are very subject to the cracking of the berries it will not be a bad plan to let the shoots run a little longer than this, so as to form a safety valve for the surplus of sap. The lateral growths, that is, those thrown out from the main shoots of this year's growth, and lateral to them, should be pinched at the first leaf.

Aerial Roots on Vines.—*Why*: It is a common thing to see aerial or adventitious roots produced by Vines in bunches along the stem. They are really roots, and if they were brought into contact with the soil this would soon be seen. As it is they cannot reach the soil, and only exist for awhile, dying off towards the close of the season. They do no

harm in themselves, but are simply a sign of distress, so to speak, on the part of the plant producing them. Their presence shows that the plant has not all its wants supplied by the normal roots in the ground, so it desperately tries to make up for the deficiency by throwing out others in other places. If these roots are present in large numbers it is a sure sign that the border wants looking to, perhaps renewing, otherwise shanking or other ailments may set in.

POLLARD WILLOWS.

VERY characteristic of the Thames Valley, and the fens and stream sides in Cambridgeshire and other English counties are the Pollard Willows, of which the accompanying excellent illustration was taken by Mr. W. J. Potter, one of the masters at the Roan School, in Greenwich.

Fringing the banks of the water courses, usually in the richest of pasture lands, these round-headed and curiously grotesque Willow trees are very picturesque; indeed, they may well be described as the most characteristic objects that are to be found in such districts.

When old they assume quaint forms, some-

On the Continent, particularly in Belgium and Holland, these pollarded Willows stretch for miles throughout the marshy grounds, a scene that forcibly reminds one of what we may see at home either on the Mendip Hills, or in our own Thames Valley.—
A. D. Webster.

DEVONHURST, CHISWICK.

GARDENING in the suburbs of London becomes more and more difficult every year, and this fact is, of course, most in evidence during the winter months, when the moisture in the atmosphere, rain and fog bring down the filth upon vegetation, or prevent it from ascending and being carried away, as the case may be. Nature, under the skilled attention of gardeners, makes an attempt during the few summer months to repair the injury caused in winter, but even then plants in the open air, as well as under glass, have a difficulty in holding their own. This was hinted at the other week by the president of the Royal Horticultural Society. We had further evidence of this in the gardens of Devonhurst, Chiswick, formerly a portion of the R.H.S. Gardens, but now the property of E. H. Watts, Esq.

Notwithstanding the disadvantages, however, to

the trees of the former being taken into the dwelling house when the crop was ripe. Late Peaches here are Exquisite, Sea Eagle and Princess of Wales. The large trees trained against the glass are Grosse Mignonne, Lord Napier and Violette Hative. The fruits of the latter are mostly picked, and are beautifully coloured. All three varieties matured enormous crops, the fruits of Grosse Mignonne being of remarkable size.

The Vines in the early vinery are now three years old and bearing magnificent crops of Grapes, Foster's Seedling, Black Hamburg and Madresfield Court being the varieties grown. The Grapes are fine in bunch and berry. A Grosse Mignonne Peach on the back wall of this house is rather shaded and bears only a few large fruits. Curiously enough a number of branches, allowed to pass through an opening in the glass partition, into the late vinery, carry a heavy crop of fine fruits equally as mature as those in the early house. In the late vinery the Vines are two years old and carry a fine crop of fruit. The varieties grown are Alicante, Muscat of Alexandria, Gros Colman and Madresfield Court. The herries of the latter never give any trouble by splitting as is often the case with this variety. Mr. Gibson attributes his success to his custom of water-



POLLARD WILLOWS.

times perfectly rounded as if they had been pruned into shape with the garden shears; while at others they divide out into a number of distinct heads, and which, with the gnarled leaning trunks and warty mop-heads, have a curious and weird appearance, especially when destitute of foliage.

To the naturalist these masses of protuberances caused by yearly lopping of the heads are of unusual interest, insects, birds and vegetable life finding a cosy home in the half decayed centres of the oldest trees. Not at all uncommon is it for the Willow to send out roots at the crown of the stem, which penetrate downwards through the accumulated soil of the hollow trunk.

Usually these Pollards begin life as a simple stake pushed into the ground, for the Willow is far from being fastidious in the matter of growth, which readily takes root and grows away freely, soon forming a medium sized trunk and usually a massy rounded head of foliage. The crown of shoots is cut over annually, the demand for Willow posts and houghs being considerable, the larger being used for fencing purposes, while the young and limber find a ready market for the basket and crate-making industry.

plant life, Mr. James Gibson, the gardener, manages to raise fruit and vegetables in quantity from the limited area, and of quality which makes its presence felt at various shows in different parts of the country. This he manages to do by unremitting toil and attention during the growing season, and by giving the soil that cultural treatment most conducive to its welfare, which can only be accomplished by thoroughly understanding its capabilities, and acting upon that knowledge.

Fruit under glass is much more extensively cultivated now than formerly at Devonhurst. The Peaches and Nectarines in pots have given great satisfaction this year. They are grown in 12-in. pots, and the earliest trees carried on an average twenty fruits, while some of them bore two dozen or more. Lord Napier, Early Rivers, and Humboldt are the early ones grown in the old Peach house. They are now mostly gathered. Some of the trees were taken into the dwelling house, and left there for the fruits to be gathered by the owner and his family, who were delighted by the innovation. Later batches of Nectarines in pots are Elruge, Pine Apple, Pitmaston Orange, and Lord Napier. The early Peaches include Early Alfred and Condor,

ing freely all through the growing, colouring and ripening periods of the fruit, and by leaving a little ventilation on all night after the berries commence to colour. The results justify the practice. Neither trees nor Vines are allowed to become really dry at the roots during any part of the year.

Melons and Cucumbers are treated in the same way. The latter have been bearing since March. The Melons are of handsome size, and now being cut. The varieties grown are Hero of Lockinge, Sutton's Windsor Castle, Triumph and Ar.

Passing through the Orchid house we noted fine spikes of *Laelia purpurata*, and a profusion of flowers on *Lycaste aromatica*. *Cattleya Mendelii* and *Dendrobium Pierardi* were passing out of bloom.

A curious combination of plant life occupies one house, yet all are giving great satisfaction. The wide staging at the back is filled with Apple and Pear trees in pots. Beauty of Bath Apple is just about ripe. Pears bearing heavy crops are Beurré Alexander, Clapp's Favourite, Louise Bonne of Jersey and Marie Louise. On the front staging is as fine a crop of Tomatos in 12-in. pots as one could wish. Sutton's Eclipse, D. Wilkie and a local

unnamed sort are the varieties grown. The last is a free but small fruiting Tomato; but the other two bear large bunches of shapely fruits of exhibition size. Many varieties of zonal Pelargoniums carry a profusion of blossom, in large trusses. The relatively dry atmosphere of the house evidently suits all the tree classes of plants.

Out of doors the fruit crop is variable. The cold winds of May destroyed the blossom with the result that the crops of Pears, Plums and Sweet Cherries are very poor. Morello Cherries on a north aspect wall are splendid. The young shoots are allowed to project from the wall about their full length, and the results amply justify this plan of treating them. The plan might well be adopted elsewhere, for a succession of fruit is ensured. Apples in pyramid and bush form carry wonderful and satisfactory crops of fruit. Black and Red Currants are fair. Gooseberries are weighted to the ground with fruit, the berries being in many cases of enormous size. Whinbam's Industry, Creeping Jane, Abraham Newland and Lord Radcliffe are some of the numerous varieties grown. Strawberries have been a grand crop, though quite a month behind time. Royal Sovereign is the favourite both for size, colour, flavour and cropping qualities. President, Waterloo and Laxton's Latest of All (the latter now swelling its fruits) are also grown. Leader and Monarch are useless at Chiswick, the trusses of fruit possessing no vigour either in this or in the R.H.S. garden. Mr. Gibson took the first prize for Strawberries at the recent Richmond show, besides several prizes for vegetables.

Onions sown under glass this year and planted out later have never looked finer at the same stage than they have done this year. Some of the bulbs measure 8 in. to 9 in. in circumference. The soil is not trodden because of its liability to bake here; but on the contrary is mulched with short dung or horse droppings.

Peas have made excellent growth, though late this year. Duke of Albany was not ready for gathering till the fourth week in June. The pods now measure about 5 in. long. Carters Seedling sown at the same time will not be ready till about the 17th inst. It promises well. Autocrat is very vigorous but only now in bloom. Duke of Albany and Alderman grown side by side are positively grand Peas either for exhibition or table use. Alderman is the favourite of the two having darker foliage, pods, and seeds, the latter being better in quality, and the pods, 5 in. to 5½ in. long, but slightly later than those of the Duke. The haulm is 6 ft. to 7 ft. high, and in both cases bears an enormous crop of pods. No farmyard manure was employed, only wood ashes and bone meal, Mr. Gibson being satisfied that the old garden soil contains sufficient humic matter for this crop. The surface is mulched with dry litter. The application of nitrogen has been ignored, Peas being able to collect all they want. Late Peas, in various stages of advancement, are now making good progress. They include such sorts as Sutton's Peerless, Ne Plus Ultra, The Gladstone and others. The last named is very vigorous and very late, while Sutton's Early Giant sown upon the same date is now ready for gathering.

Magnum Bonum Cauliflower is an excellent sort with pure white heads, now nearly over. Sutton's new Early Giant is promising. Winter Onions are strong. The earliest batch of Celery is now being blanched with coils of brown paper. The varieties grown are Sutton's Solid White, Giant White and Standard Bearer, the latter being a red variety. The true Lyon Leek, the favourite here, is being treated like the Celery, and the blanched portion is already 1 ft. long.

The beds in the flower garden are now making progress, but they are late, having had to battle with adverse circumstances for weeks past. Chrysanthemums in pots are vigorous and just now commencing to make the shoots to furnish the buds from which the flowers will be taken in due season.

The Peaches and Nectarines planted out in the late house were rather severely root pruned about the middle of last August, to check the undesirable vigour of growth, and the effect was highly beneficial, for they now bear heavy crops of fruit. This applies to the first and second division of the house. Sea Eagle Peach is remarkably well loaded with fruits, yet the vegetative vigour is strong, the root pruning notwithstanding.

Some Fig trees on the back wall bore a heavy

crop of fruit, but a black shower of flakes of burnt paper, of three to five days' duration, from a neighbouring paper manufactory, ruined the prospects, as all the fruits fell about two or three days afterwards. Vegetable Marrows in frames were ruined in the same way, the hairy leaves retaining the filth, and suffering in proportion to the amount of moisture on the leaves. This also applies to the Figs. We understand that a lawsuit is pending concerning the damage done to various things. Even now the filth has not all been washed from the leaves of the Vines in another house. The shrubs in the open have been washed several times with water from the main by means of the hose.

THE NATIONAL AMATEUR GARDENERS' ASSOCIATION.

ONCE a year the members of this association have an exhibition elsewhere than at their usual rendezvous, making it a sort of holiday and fete. On this occasion, as last year, they assembled in the gardens of the Royal Botanic Society, Regent's Park, the show being located in the corridor while the miscellaneous exhibits were placed in the large marquee. Dry, though cloudy, weather favoured the outing, and a goodly company turned up.

Mr. H. A. Needs, Woking, secured the first place in the Dobbie Championship for an exhibit of cut flowers effectively set up in vases or glasses. The Irises, Delphiniums, &c., were gorgeous. Mrs. H. W. G. Morris, Thame, was second with a pretty display; and Mr. Bland G. Sinclair, Highgate, was third.

Mrs. H. W. G. Morris took the lead for a vase of Roses. Ernest R. Smith, Esq., Muswell Hill, secured the first place for twelve Tea Roses in the Frank Cant prize class. G. W. Cook, Esq., Tooting Park, took the lead for twelve H.P. Roses in the Frank Cant Championship class. Mrs. H. W. G. Morris, and Mr. B. T. Marsh, Claygate, were equal second. Those who take the highest number of marks in this and two subsequent exhibitions get the prizes accordingly. For nine Roses grown within seven miles of the G. P. Office, Ernest R. Smith, Esq., had the premier place; John Bateman, Esq., Archway Road, being second.

Mr. J. W. Jones led the way for six bunches of decorative Roses. The Silver Medal for eighteen cut Roses was taken by G. W. Cook, Esq., with Mrs. John Laing. He also led the way for six Roses, distinct, showing grand specimens.

Mr. A. J. Foster, New Cross, was first for single tuberous Begonias, as well as doubles. Mrs. H. W. G. Morris had the best epergne of cut flowers, showing Shirley Poppies. Mrs. H. Lance Gray, Walton-on-Thames, was second. Mrs. G. W. Cook had the best bowl of Tea Roses, and the best vase of Roses; Mrs. H. W. G. Morris being second.

Mr. E. W. Gibbs had the best six sprays of Violas in the novice class; and Mrs. H. W. G. Morris had the best six Roses. Mr. A. J. Foster was the only exhibitor of Streptocarpus.

Mr. Bland G. Sinclair, Dartmouth Road, N., had the best six-rayed self Violas, and the best six rayless sorts. Mr. D. B. Crane, Highgate, took the lead for six sprays of Violas, setting up a neat arrangement. Mr. W. E. Reeve was a good second. Mr. Leonard Brown, Brentwood, was first in Mr. J. C. Smith's competition for six saucers of Violas. Mrs. F. H. Barnes, Ilford, had the best three sprays. Mr. D. B. Crane again came to the front in the "Pye Championship" for twelve sprays of Violas. Mr. Leonard Brown was second; and Mr. W. E. Reeve was third.

Fruit and vegetables were also shown, Mrs. W. H. G. Morris being first for four dishes of bush fruit. Mr. F. M. Vokes, Sholing, was second. Mr. J. W. Jones had the best dish of Strawberries. Mr. F. M. Vokes came to the front for six sorts of vegetables, Mr. A. Lewis, Beckenham, being second. He also was first for six bunches of Annuals. Mr. L. Brown had the best zonal Pelargoniums. Mr. A. Lewis had the best six bunches of hardy flowers, Mr. A. Taylor, Finchley, being second. Mr. F. M. Vokes was first for six bunches of annuals in the Allnut competition, Mr. W. E. Reeve led the way for Sweet Peas, followed by Mr. H. E. Needs.

MISCELLANEOUS.—Mr. H. J. Jones, Ryecroft Nursery, Hither Green, Lewisham, set up a semi-circular group of plants in the large marquee. The flower-

ing plants consisted of tuberous Begonias, Gloxinias, Petunias, Heliotrope and Pelargoniums, set in a groundwork of Maidenhair and other Ferns. In the background were tall Palms, variegated Negundo and Bamboos, while there were isolated plants distributed through the bright masses of colour.

Messrs. Barr & Sons, 12 and 13, King Street, Covent Garden, set up a bold group of Delphiniums in many varieties, and along the front of these were bunches of Galega officinalis, double Potentillas, Phloxes, Eryngium alpinum, E. oliverianum in fine condition, Sidalcea malvaeflora, Lychnis chalconica, Anthemis tinctoria sulphurea and various other showy perennials.

Messrs. Wm. Cutbush & Son, Highgate Nurseries, London, N., set up a fine bank of Malmaison Carnations in the form of the Prince's Feather. Fine varieties were Princess of Wales, Mrs. C. H. Wilson, Churchwarden and Sir E. Wood. Other types of Carnation were Andrew Noble, Her Grace, Lorna Doone, Ness, Edith Ledenham and May Queen, all tree varieties.

Messrs. Dobbie & Co., Rothesay, N.B., and Orpington, Kent, exhibited a beautiful and varied display of Violas and Sweet Peas. Choice amongst the latter were Queen Victoria, Salopian, Mars, Ramona (new), Her Majesty, Little Dorrit, Coquette, Dawn of Day, Lovely, Lady Mary Currie (new and rich rose, shaded with scarlet), Duchess of York and other beautiful colours. Amongst new Violas were Jennie P. Robertson, Lucy Bertram, Marchioness, Hamish, Pembroke, &c.

The Ichthemic Guano Co., Ipswich, had a neat stand of their specialities, decorated with a considerable variety of flowering plants in pots. M. Le Cornu, the agent of the company for the Channel Islands and the Continent, was in charge of the stand, being the first time he has done so in England.

The Jadoo Co., Palace Gate, Exeter, exhibited plants grown in Jadoo Fibre, some plants such as Grevillea robusta being in a glass jar showing root action.

The Agricultural and Horticultural Association, Dyott Street, London, W.C., exhibited a collection of vegetables, including Cauliflower, Onions, Beet-root, Tomatos, &c.

Messrs. J. Cheal & Sons, Crawley, Sussex, had a group of Delphiniums, Violas, Roses, Campanulas, Tropaeolum polyphyllum, Lychnis chalconica and other herbaceous plants.

The Lawes Chemical Manure Co., Ltd., 116, Fenchurch Street, London, E.C., had a stand of Lawes' Horticultural Garden Manure in tins and bags of various sizes, the manures being a valuable specific for various crops.

Messrs. W. E. Ward & Co., 6, Wormwood Street, E.C., exhibited garden requisites. Messrs. Fenlon & Son, 8, Tudor Street, Temple, London, set up heating apparatus.

Mr. Septimus Pye, F.R.H.S., Catterall, Garstang, Lancashire, exhibited a fine collection of Violas, fancy Pansies, &c. The former were staged on tall sloping stands. Mr. W. Baxter, Woking, also set up a stand of choice varieties of Violas.

Mr. John Pinches, 3, Crown Buildings, Crown Street, Camberwell, S.E., had a stand of metal labels, cast and cut for suspending, and also for sticking in the soil. Wright's Pot and Orchid Basket Suspender was also in evidence. Messrs. D. Dowell & Son, Hammersmith, exhibited garden sundries.

VICTORIA TRICKERI.

ON the front page of a recent issue of *American Gardening* is a capital illustration of this handsome Water Lily growing in a pond in the open in Salem, N.C., U.S.A. This plant is much hardier than the well-known *V. regia*, and the self-sown seed has been known to germinate after having lain in the water all the winter, despite the fact that the pond was covered with several inches of ice. In appearance the most striking feature of the plants is the depth of the upturned rim of the leaves, which is to be seen in the leaves even when quite young. This feature is well shown in the illustration referred to. In *V. regia* the rim is only noticeable upon large, fully grown leaves, and even then the depth of the rim seems to be determined according to whether the plant is in vigorous health or not.

HARDY BAMBOOS.

(Continued from p. 699.)

ARUNDINARIA.

A. FORTUNEI.—Gardeners will recognise this species under the name of *Bambusa Fortunei variegata*, for it is one of the commonest and most widely cultivated species of Bamboo in British gardens, being more often grown in pots for decorative purposes than planted out. It is well adapted for rockeries and as an edging to beds of shrubs, as well as the Bamboo garden proper. The green form is unknown at present, so that if it ever arrives at our shores, the botanists will be giving the species a varietal name to indicate the typical form as in the case of *Aucuba japonica vera*, the green form. When planted out it forms dense erect tufts 1½ ft. to 2½ ft. high. The leaves are 3 in. to 6 in. long, and dark green, irregularly striped with creamy-white. The native country is Japan.

A. FORTUNEI COMPACTA forms neat little tufts 6 in. to 12 in. high.

A. HINDSII.—The garden synonym of this species namely, *Bambusa erecta*, is characteristic of its most striking feature, for it is one of the most strictly upright of the tall species in the Kew collection. The top of this plant is shown in the illustration on p. 681. The upright stems vary from 6 ft. to 12 ft. in height, are olive-green, and give rise to fascicled, erect twigs at the nodes. The linear-lanceolate leaves are long-pointed, intense green, grassy in appearance, 5 in. to 6 in. long, and ¼ in. to ½ in. wide. The old sheaths are short and moderately conspicuous. The species is desirable on account of its strikingly distinct habit. Its native habitat is in Japan, and its native name *Kanzan-chiku*.

An interesting variety of it is *A. Hindsii graminea*, so named by Mr. W. J. Bean, the foreman of the pleasure ground department, who is an enthusiastic Bamboo cultivator. It differs from the type chiefly in being much dwarfer, only 18 in. to 4 ft. high, and having greenish-yellow stems. It is the *Bambusa graminea* of French gardens, and has a rich dark green, grassy appearance. The Japanese name is *Taimin-chiku*.

A. HUMILIS.—This Japanese species grows 3 ft. to 4 ft. high, and is of erect, dense, reedy habit, but may often be seen only half that height. The dark green, finger-like leaves are 4 in. to 6 in. long. The plant is rather untidy just after winter, on account of numerous dead leaves, until the summer growth has been developed, when it greatly improves in appearance. It is the green form of *Arundinaria Fortunei* of gardens, but is totally distinct from that species.

A. JAPONICA.—Of this there are some grand specimens in the country, being one of the first hardy species with which gardeners became acquainted, *A. Fortunei* being the other. Here it is best known as *Bambusa Metake*, the Japanese popular name being *Mé-také*. It grows 6 ft. to 10 ft. high, the pale green stems being much covered with long, dry and dead, white sheaths that are very conspicuous in the early stages of the plant, but ultimately become hidden by the massive drapery of drooping branches, and intensely dark green and glossy foliage. The lanceolate leaves are 6 in. to 12 in. long, by 1 in. to 1½ in. wide in the middle, and drawn out to a long point. In rich soil of a substantial nature and fairly moist (though the latter condition is not absolutely necessary), this Bamboo forms large and massive bushes of great beauty after attaining their characteristic development. A sheltered position enables the plant to retain the beauty of its foliage throughout the year. The leaves, furthermore, are the largest of any of the arboreal Bamboos, and by this characteristic it may readily be recognised. It is a native of Japan, as the name suggests.

A. MACROSPERMA TECTA.—In this we have the dwarfer of the two distinct forms of the only hardy Bamboo coming to us from North America. The late Asa Gray, the well-known American botanist, considered it a distinct species. It has a number of synonyms. The erect stems are 3 ft. to 4 ft. high, and are furnished with ascending or spreading branches. The lanceolate and broad, finger-like, light green leaves are 3 in. to 6 in. long. The stems are much covered with sheaths that are bearded with a whorl of bristly hairs at the apex, and cover the stems all the year round, hence apparently the inference for the varietal name *tecta*.

A. NITIDA.—This may be described as the queen of all the really hardy species of *Arundinaria*, on

account of its graceful habit, handsome appearance and the surpassingly rich hue of the foliage. The slender stems attain a length of 6 ft. to 9 ft., varying in colour from olive to brown and purple, and very often are furnished with a glaucous bloom near the joints which are situated at no great distance apart. The twigs are very slender and densely fascicled at the joints. In these respects the species shows a close affinity with the Himalayan Bamboos, of which *A. Falconeri* may be taken as the type. It retains its foliage, however, generally in fine condition throughout the year, which the Himalayan species never do. The leaves are very small, being only 1½ in. to 3½ in. long, and glaucous-green when young, but ultimately assuming a rich, dark olive-green hue of a shade difficult to describe. A southern aspect suits it better than a northern one. The short, young sheaths are purple, but on the main stems fall away after a time, recalling the Himalayan species in this respect. Central China is its native home. *Bambusa Kan-si* is the garden name in China.

A. NOBILIS.—The origin of this Bamboo is uncertain, but opinions are not wanting that it is a seedling from *A. Falconeri*, whose *fascies* it bears in every respect, except that the slender stems are more or less tinted with olive, brown, or purple at the nodes. The leaves fall, and the stems are sometimes killed in winter, but shoot up to a height of 8 ft. to 10 ft. towards the end of summer. The sheaths, likewise, are purple.

A. PUMILA.—This is the *Bambusa pumila* of gardens, and forms erect, dense tufts, 12 in. to 18 in. high. It is clothed with oblong-lanceolate, or finger-like leaves, 3 in. to 6 in. long, and of a bright, ultimately dark green hue. The bushes have a reedy appearance, and though lacking in the distinctive traits of the Bamboo tribe, will doubtless prove useful for planting in situations where tall-growing species would be inadmissible. It comes from Japan.

A. SIMONI.—As the last-named is one of the dwarfest, this is the tallest of the hardy Bamboos, being quite a giant in its way, ranging from 6 ft. to 18 ft. in height. It stands head and shoulders above its brethren; and the stout stems being perfectly erect, it appeals to the eye at once by its conspicuousness. The long sheaths are persistent, and very noticeable on the main stems during the first year. The naked portions of the stems are glaucous-green. The branches are densely fascicled at the nodes in a semi-verticillate fashion, after the style of the Himalayan species, and are nearly erect, but after a time assume an arching or drooping habit, though still relatively open. The leaves are 6 in. to 10 in. long, and of a dark green hue, though lighter than those of *A. japonica*. They are long and finger-like. The species has a tropical appearance and should be in every garden. The sheaths are bearded at the apex with gray hairs. It enjoys several synonyms, the native Chinese name being *Naribiradaké*.

A. S. VARIEGATA differs merely in having white edges, and sometimes a few narrow white lines to the leaves.

A. VEITCHI comes from Japan, and has many synonyms, the Japanese names being *Ko-Kumasasa* and *Yakiba-Zasa*. The stems grow 2 ft. to 3 ft. high, and the sheaths covering them are bearded with coarse bristly hairs at the top when young. The leaves are dark green above, glaucous beneath, 4 in. to 6 in. long, and 1½ in. to 2 in. wide. In the young state they are handsome, but in the early part of winter become pale yellow and then brown at the edges, and remain disfigured in this way till they are replaced by those of fresh growth. The summer foliage, however, is handsome.

Of the sixteen species and varieties or forms of *Arundinaria* above described, *A. nitida* easily takes the first position for graceful beauty. *A. Falconeri* and *A. nobilis* would probably rank equally high, provided they retained their leaves throughout the winter. All things considered, *A. japonica*, *A. Simoni* and *A. Hindsii* follow very closely in order of merit, and together with *A. nitida* constitute the princes of the tall-growing and hardy species belonging to the genus. Of the dwarfer growing forms of *Arundinaria*, *A. Hindsii graminea*, *A. Fortunei*, *A. auricoma* and *A. macrosperma tecta* are the best.

(To be continued.)

SOCIETIES.

GLASGOW AND WEST OF SCOTLAND

PANSY.—July 6th.

THE annual exhibition in connection with this society was held in the Trades Hall, Glasgow, on the 6th inst. The entries were numerous and the quality of the blooms was excellent. Indeed, this season's show is said to be the best the society has ever had.

Messrs. Dobbie & Co., Rothesay, set up a fine exhibit of *Violas*, Sweet Peas, *Delphiniums*, *Fuchsias*, *Pelargoniums*, etc. Mr. H. Dickson, Belmont, Belfast, sent a fine exhibit of *Roses*.

In the competition open to nurserymen, Mr. J. Smellie, Pansy Gardens, Busby, carried off first for forty-eight fancy Pansies, distinct, having a very bright even lot, his best blooms being seedling *Miss Neil*, Wm. Brownlie, *Maggie McPhail*, Lord Sallsbury, and Mrs. Wm. Steele. Mr. M. Campbell, Blantyre, was a good second, his best flowers being *John Jackson* (fine) *John Sweeney*, and *John Menzies*. Messrs. A. Lister & Son, Rothesay, were third. They also won for twenty-four show Pansies open to nurseryman, followed by Mr. M. Campbell and Mr. Arthur Brown in the order named. Mr. J. Smellie won for twenty-four sprays of *Violas* open to nurserymen. He showed nice bunches of *Maud*, *Butterfly*, *Nellie*, *Dorothy*, and *Ulida*. Messrs. Lister & Son were a close second, showing fine bunches of *Sydney Masters*, *Jessie Pretswell*, *Princess Ida*, and *Alex. Renton*. Mr. A. Brown, Blantyre, was third.

Mr. Chas. Kay, Gargunnoch, was first for twenty-four show Pansies, open to all, followed by Messrs. Lister & Son, and Mr. M. Campbell, in this order. Mr. Kay also won for twenty-four Fancies, open to all. In this stand were some new Pansies of great merit, including *Kathleen Stirling*, *D. Airdrie*, *Sir John Watson*, *Robt. White*, and *Provost White*. Mr. J. Smellie and Messrs. Lister & Son were second and third respectively.

In the class for twenty-four Fancies, open to gardeners and amateurs, Mr. R. Dunsmure, Avon-bridge, won the first award and Championship Gold Medal. He had very fine blooms of *Mrs. W. L. Fraser* (the best bloom in the show), *Lord Dunraven*, *Col. Buchanan*, *Mrs. R. G. Moir*, and *Robt. Callan*. Mr. And. W. Frater, Llnlithgow, was second; and Mr. Geo. Kidd, Kilbarchan, third.

Mr. Campbell won for twelve sprays of *Violas*. This stand was also awarded the Championship Gold Medal; it included bunches of *Princess Ida* (the best self *Viola* in the show), *Sissy Mellows*, *Dorothy Stokes*, *Butterfly*, *A. J. Rowberry*, and *Liz. Barron*. Messrs. Lister & Son and Mr. J. Smellie were second and third in the order named.

Mr. J. C. Erskine, Bridge of Weir, had the best spray of a *Viola* in the show. This is a seedling of splendid substance, and great size. It is a sort of mahogany ground colour, striped with purple and crimson. This variety also won for the best seedling and best striped variety. It is named after the exhibitor.

Mr. Parlane, Helensburgh, won for twenty-four *Roses*, beating Messrs. Robertson & Co., Helensburgh, and Mr. H. Dickson, Belfast, in the order mentioned. Mr. J. Stewart, Lennoxton, was first with twelve fine bunches of herbaceous plants. Rev. R. Munro, Old Kilpatrick, was second. The following were also prize winners:—Messrs. W. Wilson, Kirkintilloch; T. Hunter, Carlisle; T. Grossart, Carlisle; A. Warnock, Carmunock; J. Fleming, Carmunock; J. A. Renton, W. Buchanan, Torrance; A. Gilchrist, C. W. Frame, Kirkliston; P. Braithwaite, D. Gourlay, Bishopbriggs; P. Carmichael, J. Marshall, Rutherglen; J. Maxwell, Newtown; Sam Caig, Stirling; Jas. Paul, Killearn; Jas. Smellie, Jas. Johnson, J. McLaughlin, R. Stewart, Lenzie; R. Lyon, Blantyre; A. Watson, Bearsden; and P. Robertson, Pollockshaws.—*Visitor*.

HANLEY FETE, July 6th and 7th.

THE second annual County Boro' of Hanley Fête opened on Wednesday morning. To say that the veritable floral feast provided was an agreeable surprise as a record of a second year's show is but faintly to convey the impression created upon the mind of the visitor.

Hanley Park is situated on an eminence on the south side of the town, is furnished with all the attributes of a modern public park, is well watered,

and has, withal, plenty of space and freedom under no ordinary climatic conditions, which our readers will readily realise from the fact that this is the centre of the pottery district. Mr. Joseph Kent, the talented curator, has succeeded in placing the park among the very first in the kingdom.

Not only is the laying out of the park itself unique, the conditions of the surrounding neighbourhood having been studied, but the winter garden, pavilion and conservatories are well filled, and their interiors give evidence of management by a master-hand.

To Mr. Kent's initiative and personal energies as secretary of the Horticultural Section the present success of the show is undoubtedly due, but the able co-operation of his colleague, Mr. J. B. Barrow, Assistant Town Clerk of Hanley, who undertakes the duties of general secretary, is also a fact worthy of record. The opening ceremony was gracefully performed by Mrs. Jas. Meaken, of Darlastone Hall, Stone, who was introduced by the Mayor of Hanley (M. Tunnicliffe, Esq.). A pretty feature was the presentation of a bouquet to Mrs. Meaken by Master Ernest Tunnicliffe.

The size of the show and the number of exhibits rendered the judges' duties very onerous. The gentlemen chosen to adjudicate were Mr. W. J. Grant, Bassaleg, Monmouth; Mr. Cranston, Hereford; Mr. Owen Thomas, Frogmore; Mr. Barnes, gardener to the Duke of Westminster, Eaton Hall, Cheshire; Mr. Speed, gardener to Lord Penrhyn, Penrhyn Castle; Mr. Gilman, gardener to the Earl of Shrewsbury; Mr. Peter Blair, Trentham Gardens; Mr. J. H. Goodacre, Elvaston Castle Gardens; Mr. Bolas, gardener to Mr. Chandos Pole-Gell; and Mr. A. Outram.

OPEN CLASSES.

PLANTS.—A great deal of interest centred around the large marquee where the various groups of plants were staged. Substantial prizes had been offered by the committee, and thus a keen competition was assured. The prizes in the class for a group of plants arranged for effect, and occupying not more than 300 sq. ft., alone exceeded £64. Here Mr. J. Cypher, of Cheltenham, scored a great success. Mr. Peter Blair, gardener to the Duke of Sutherland, Trentham Hall, was second, and Messrs. Jenkinson & Sons, Newcastle, Staffs., were third. For the 100 ft. group of Orchids, Mr. W. Stevens, gardener to W. Thompson, Esq., Walton Grange, was first, and Mr. J. Cypher, second. The last-named exhibitor was first in the classes for six flowering plants, and six Palms, whilst Mr. Peter Blair led for eight exotic Orchids, distinct, and twelve table plants.

Roses were exceedingly well shown. Messrs. A. Dickson & Son, Newtownards, Ireland, scored a great success for the forty-eight blooms, distinct. Messrs. Harkness & Sons, Bedale, Yorks, were second; and Messrs. D. Prior & Sons, Colchester, third. The best exhibit of three blooms each of thirty-six varieties came from Messrs. Harkness & Sons, with Messrs. Dickson, Ltd., Chester, as second, and D. Prior & Sons, third. Messrs. A. Dickson & Son led for twenty-four blooms, distinct, and Messrs. D. Prior & Sons for twelve Teas. The first prize for a decorative exhibit of Roses covering a table space of 12 ft. by 5 ft., was won by Mr. S. Lake, Stoke-on-Trent, Mr. W. Vause, Leamington being second.

FLORAL DEVICES AND TABLES.—Messrs. Perkins & Sons, of Coventry, are known the county over for their remarkable skill in the execution of bouquets, wreaths, sprays, and other creations of the decorative florist. On this occasion they well sustained their reputation, chief honours falling to them for a hand bouquet, a ball and bridal bouquet, and a basket of flowers. Messrs. Jenkinson & Sons were also very successful, for they won the first award for the 8 ft. by 4 ft. table of flowers; also firsts in each of the two classes for a bouquet of Sweet Peas. Mr. R. Cock, Stafford, sent the best collection of twelve varieties of Sweet Peas.

FRUIT AND VEGETABLES.—Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, staged the leading collection of six dishes of fruit. Mr. Goodacre won other firsts for two bunches of black Grapes, one green-fleshed Melon, and a dish of Strawberries. Mr. R. P. Richardson, of Chester, scored for two bunches of Black Hamburgh Grapes. Mr. T. S. Bolton, Oakamoor, led for two bunches of white Muscats, and for two bunches of any other white Grapes. Mr. P. Blair staged the best dish of six Nectarines; and Mr. T. Bannerman,

gardener to Lord Bagot, Blithfield Hall, Rugeley, the premier dish of Peaches.

Lady Guest sent the premier collection of nine kinds of vegetables, and also won in the classes for three Cauliflowers, six Carrots, and twelve Onions. Mr. W. Pope, gardener to the Earl of Carnarvon, Highclere Castle, Newbury, was first for twelve Tomatos.

GARDENERS' AND AMATEURS' CLASSES.

PLANTS.—Mr. B. Howson, Newcastle, won for six Orchids. Mr. J. F. Maddock staged the winning group of miscellaneous plants in the prescribed area of 100 sq. ft.; Mr. Howson being second in this class. Mr. J. F. Maddock was likewise first for six stove or greenhouse plants and six Caladiums. In another class for six stove and greenhouse plants Mr. J. McKnight, of Oakamoor, was first. The same exhibitor carried off the premier honours for six exotic Ferns and six tuberous Begonias.

MISCELLANEOUS EXHIBITS.

These were present in considerable force, and it must have been highly gratifying to the committee to see how well the trade and private growers supported the exhibition.

Messrs. Jas. Carter & Co., High Holborn, received a large gold medal for a very handsome Floral Temple which made a grand centre to tent No. 1. Messrs. Charlesworth, Shuttleworth & Co., of Heaton, Bradford, sent a fine lot of Orchids. Mr. F. Walton, of Birmingham, showed Cacti, in the cultivation of which he takes so prominent a part. Mr. R. W. Sydenham, of Tamworth, contributed Violas. Messrs. Sander & Co., of St. Albans, sent new plants amongst which *Acalypha Sanderi* was the most noticeable. Messrs. Webb & Son, of Stourbridge, and Mr. Henry Eckford, of Wem, Shropshire, both had grand collections of Sweet Peas, whilst Mr. Eckford had another stand of new varieties that was especially noteworthy. The Ichthemic Guano Company, of Ipswich, had an imposing stand of plants to illustrate the merits and qualities of Ichthemic. Collections of cut flowers were furnished by Messrs. Dickson, of Chester, Jarman & Co., of Chard, and Mr. J. H. White. Messrs. W. & J. Birkenhead, Sale, Manchester, staged a representative collection of rare and choice Ferns. Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., had a splendid array of Caladiums, also Gloxinias and tuberous Begonias in variety. Mr. John Pinches, 3, Crown Street, Crown Buildings, Camberwell, had samples of the Acme Label, and the flower holder (Outram's patent).

CHILDREN'S SHOW.

Not the least interesting section was the "children's show" which the worthy chairman of the society, Mr. Alderman Hammersley, takes under his especial control. No fewer than 800 exhibits were staged, and all from children of the working classes. Last year the exhibits in this section numbered only 300, so that the huge increase should be extremely gratifying to those who, like Mr. Hammersley, take an interest in children. Mr. John Cartledge, of Hanley, and Mr. Goodill, gardener to T. W. Harrison, Esq., were the judges for the children's exhibits.

MANCHESTER ROSE SHOW.—July 9th.

THIS annual fixture was held on the 9th inst., under the auspices of the Royal Botanical and Horticultural Society of Manchester, in their charming gardens at Old Trafford. The flowers were staged down the centre of the large show house, giving ample room for the arrangement of the blooms and for the large number of visitors who thronged the building and grounds throughout the afternoon. The exhibits, especially those of the open classes, were of considerable merit—a distinct improvement on those staged at the National. In fact, the show was considered by some of the exhibitors as the finest yet held this season. Nearly all the leading growers were present, and in some classes the judges had considerable difficulty in making their awards.

NURSERYMEN.

For sixty distinct single trusses six lots were staged, and all good. Mr. B. R. Cant, Colchester, succeeded in securing the premier award with many flowers of high excellence, the chief being White Lady, Helen Keller, La France, Gustave Piganeau, Caroline Testout, Marquis Litta, Mrs. John Laing, Ulrich Brunner, Mrs. Delville, Maman Cochet, Prince Arthur, Mrs. W. J. Grant, Souv. d'Elise Vardon (beautiful), Xavier Olibo, Golden Gate,

Comtesse de Nadaillac, Horace Vernet (fine form), Catherine Mermet, Mad. Gab. Luizet, Jas. Cocker (seedling), A. K. Williams, Le Havre, Mgr. Boudet, Countess of Roseberry, Bridesmaid, &c. Messrs. Harkness & Sons, Bedale, were second; Messrs. F. Cant & Co., Colchester, taking the remaining prize.

For thirty-six distinct single trusses Messrs. Harkness took the lead out of nine lots, Comte de Ludre, Suz. M. Rodocanachi, and Helen Keller being fine. Messrs. D. Prior & Son, Colchester, and Messrs. F. Cant & Co., followed in this order.

For twenty-four Teas or Noisettes, single trusses, Mr. G. Prince, Oxford, won out of seven lots with a fine stand including Innocente Pirola, Mme. Cusin, Mad. de Watteville, Bridesmaid, Maman Cochet, Cleopatra, &c.; Messrs. F. Cant & Co., and D. Prior & Son, were second and third. For twelve Teas or Noisettes, Mr. Prince was again to the fore.

For twelve trusses of any yellow, Mr. Prince scored with Comtesse de Nadaillac; Messrs. A. Dickson & Sons, Newtownards, and Mr. J. Matlock, Oxford, being placed as named. For twelve trusses of any light coloured Rose, Messrs. Harkness & Sons, with a grand box of Mrs. W. J. Grant, were to the front; Messrs. Townsend & Sons, Worcester, and Mr. G. Prince, being second and third respectively. For twelve crimson Roses, Mr. B. R. Cant took the lead in ten lots, with Ulrich Brunner, Messrs. F. Cant & Co., and Harkness & Sons, taking the remaining prizes.

AMATEURS.

For twenty-four distinct single trusses Mr. E. B. Lindsell, Hitchin, was accorded the place of honour, staging good Horace Vernet, Beauty of Waltham, Mrs. S. Crawford, Victor Hugo, Mrs. J. Laing, Dupuy Jamain, &c. The Rev. J. H. Pemberton was second, and Mr. S. P. Budd, third.

For twelve distinct trusses out of eight boxes, the Rev. J. H. Pemberton and Mr. E. B. Lindsell were placed equal first, and Mr. Budd, third.

For eighteen Teas or Noisettes Mr. Budd staged a good lot. The Rev. W. H. Jackson, Bedford, was second, and the Rev. J. H. Pemberton, third. For twelve varieties Messrs. E. B. Lindsell and Budd and the Rev. W. H. Jackson were the prize takers.

For twelve "yellows" the Rev. W. H. Jackson won with Madme. Hoste, Mr. Budd being second with Maréchal Niel.

For a dozen light varieties the Rev. J. H. Pemberton led the way with a splendid box of Mrs. J. Grant, Mr. Lindsell following with Mrs. J. Laing.

For twelve "crimson" Mr. N. T. Carrill-Worsley, Rusholme, won with Marie Baumann. Mr. Lindsell was second with Ulrich Brunner, and Mr. Budd third with Alfred Colomb.

In the district classes Mr. T. S. Jackson, Ashley, staged the best twenty-four, Mr. C. Burgers, Flumbley, the best twelve, and six, distinct, and the best six Teas, other prize takers being Messrs. R. Foster, James Brown, G. Morris Midwood, and N. T. Carrill-Worsley.

MISCELLANEOUS ROSES.

For the best twelve bunches suitable for buttonholes Mr. J. Matlock won with some charming varieties.

For a display to be arranged on a space 6 ft. by 3 ft. Mr. G. Prince scored with a tastefully arranged lot. Mr. Matlock was second. For the basket of Roses Mr. Townsend took the lead. For three bouquets Miss Lord, Ashton-on-Mersey, secured first honours; and Messrs. Harkness & Sons second. Miss Lord also won in the amateurs' class.

Messrs. F. Cant & Co. won the Silver Medal for the best H.P. with a massive, well-formed Star of Waltham. Messrs. D. Prior & Co. took a similar position for Teas and Noisettes with a splendid Maman Cochet.

The Gold Medal of the society was awarded to Messrs. William Paul & Sons, Waltham Cross, for a magnificent bank of cut blooms in a large number of varieties covering over a 100 sq. ft. of space, which were greatly admired by the visitors. A Certificate of Merit was awarded to this firm for Waltham Standard, a variety of considerable promise.

Messrs. A. Dickson & Son, Newtownards, staged a unique box of single varieties, raised by them, and all named after their country. Irish Beauty, a large, pure white, and Irish Eloquence, of good substance, the inner side of the petal a pleasing rosy-pink, the reverse being of a deeper shade were singled out by the judges for Certificates of Merit.

The arrangements were ably carried out by Mr. P. Weathers, the genial curator, and his capable

staff, the exhibitors speaking in high terms of the courtesy that was shown them.

The gardens themselves are looking well, and in two or three weeks when the bedding is a little more advanced, should be the means of drawing large crowds of lovers of floriculture.—R. G. W., Woolton.

ROYAL HORTICULTURAL.—July 12th.

THE Drill Hall presented a somewhat unusual appearance on Tuesday last owing to the presence of so many Roses, which occupied three of the long tables. Orchids, Lilies, Sweet Peas, Carnations, Ferns, fruit and vegetables were also prominent.

A large and very showy group of *Cattleya gigas* was exhibited by J. W. Temple, Esq. (gardener, Mr. E. Bristow), Leyswood, Groomsbridge. There was a considerable range of colour amongst the flowers, from pale to very dark colours, particularly in the case of the lip, which, in many instances, was crimson-purple. The spikes carried three or four flowers each. (Silver Flora Medal.)

Messrs. Hugh Low & Co., Bush Hill Park, Enfield, exhibited *Cattleya gaskelliana alba*, *C. g. delicata*, *Dendrobium dahousieanum giganteum*, *Bulbophyllum Dearei*, *Cypripedium Alice* and *C. T. W. Bond*.

Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking, received a Cultural Commendation for a plant of the hybrid *Vanda Miss Joaquim*, a hybrid between *V. teres* and *V. hookerianum*. He also exhibited *Oncidium alb-verrucosum*. Sir F. Wigan, Bart. (grower, Mr. W. H. Young), Clare Lawn, East Sheen, sent flowers of *Cattleya Warscewiczii rothschildianum*. Baron Schroder (gardener, Mr. H. Ballantine), The Dell, Egham, exhibited a variety of *Odontoglossum crispum*. Mr. Wm. Bull, 536, King's Road, Chelsea, exhibited *Oncidium macranthum chelseiense*. A Cultural Commendation and a Silver Banksian Medal were awarded to Herbert Hicks, Esq. (gardener, Mr. James Machar), Branwoods, Great Baddow, Chelmsford, for a large piece of *Dendrobium Dearei* having four old leafless stems and four young leafy ones, all carrying fine spikes of bloom. The stems were 3 ft. long, and two of the young ones bore three spikes each of flowers of large size. There were twelve spikes of bloom on the plant and everybody acquainted with Orchids was astounded at the evidence of cultivation displayed in this specimen.

The Ferns sent by Mr. H. B. May, of Dyson's Lane Nurseries, Upper Edmonton, were on this occasion all *Aspleniums*. Upwards of sixty-five species and varieties were staged, and these formed a very representative display of the members of this important genus. Four fine plants of *A. caudatum* suspended above the group on stands, were specially noteworthy, whilst *A. nidus musaeifolia*, *A. praemorsum*, the golden *A. divaricatum*, *A. ornatum*, the distinct and somewhat intractable *A. marginatum*, *A. nobilis*, *A. Neo-Caldeonicum*, *A. Mayii* and *A. erectum* were all exceedingly good. Every plant shown was in perfect health. (Silver-Gilt Banksian Medal.)

An imposing group of Ferns was also forthcoming from Messrs. J. Hill & Son, Lower Edmonton. The plants shown were chiefly market Ferns. *Pteris tremula smithiana*, *Nephrolepis rufescens tripinnatifida* and others were represented by fine specimens. Baskets of young, highly coloured plants of *Adiantum scutum roseum* and *A. macrophyllum* were other prominent features. (Silver Banksian Medal.)

On the left hand side of the entrance, just inside, a semi-circular group of superb Malmaison Carnations was set up on the floor of the hall by Mr. C. Blick, gardener to Martin R. Smith, Esq., The Warren, Hayes, Kent. The flowers were veritable giants in point of size, whilst the colours were also good, and the plants in first-rate condition. Mrs. Martin Smith, King Oscar, Lord Welby, and Mrs. Trelawny were some of the finest varieties shown. An edging of Maidenhair Fern imparted a finish to the group. (Silver-Gilt Banksian Medal.)

On the opposite side of the doorway, and also upon the floor was another excellent exhibit of Malmaisons from Mr. Thos. H. Young, gardener to Daniel Cooper, Esq., Warren Tower, Newmarket. (Silver Flora Medal.)

Messrs. Barr & Son, Covent Garden, had a most interesting exhibit of cut flowers of Japanese Irises (*I. laevigata*). There were about sixty distinct varieties shown, of which Tosa, Chiyo, Yamagata, Ada, Yeza, Akubo and Keiki were a few of the most

noteworthy. Three spikes of the lovely yellow *Eremurus Bungei* were likewise on view, and were certainly the best flowers we have yet seen of this grand form. (Silver Banksian Medal.)

Messrs. Carter & Co., High Holborn, made a brave display of cut Delphiniums and Sweet Peas. Many leading varieties of the latter charming flower were shown, the blooms being set up in ornamental china bowls, surfaced with moss. (Silver Banksian Medal.)

Mr. Jas. Douglas, Edenside, Great Bookham, sent a group of flowers of new border Carnations, amongst which were some real gems.

Messrs. Jas. Veitch & Sons, Ltd., Chelsea, staged a splendid group of cut flowers of annuals and biennials in competition for the Sherwood Cup. Campanulas, Poppies, Sweet Peas, and Rhodanthes were specially bright, and great taste was evinced in their arrangement. The Chelsea firm also showed *Cytisus nigricans*, and the charming pink *Richardia Rehmanni*.

There were several exhibits of Sweet Peas, and these in themselves contained much that was worthy of note. Messrs. H. Cannell & Sons, Swanley, Kent, had seventy-two bunches in as many varieties, and all good flowers. The samples of Her Majesty, New Countess, Prince Edward of York, Princess Victoria, Venus, Brilliant, Primrose, and Emily Eckford were particularly praiseworthy. A groundwork of common Bracken served as a foil for the bright hues of the Peas, and in the background a row of bunches of the elegant *Stipa pennata* added a finish to the whole. (Silver Banksian Medal.)

About fifty bunches of Sweet Peas in as many varieties were sent by Mr. F. G. Foster, Brockhampton Nurseries, Havant, Hants. Meteor, Monarch, Little Dorrit, Golden Gate, Aurora, Queen Victoria, and Countess of Radnor were some of the best sorts. The bunches of flower were prettily interspersed with Ferns. (Silver Flora Medal.)

Mr. Henry Eckford, of Wem, Shropshire, sent fifty bunches of the same lovely flower, which he has done so much to improve. The new sorts for 1898 comprised Duchess of Westminster, Lady Skelmersdale and Fascination, three grand forms. Others were Prince of Wales, Lady Beaconsfield, Lottie Eckford, Blanche Burpee, and Countess of Powis. Every bloom shown was up to a very high standard of merit. (Silver Banksian Medal.)

Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester, sent a select lot of cut Lilliums, amongst which *L. szovitzianum*, *L. canadense*, *L. dalmaticum* and *L. umbellatum Cloth of Gold* were particularly good. (Bronze Banksian Medal.)

A handsome plant of *Picea pungens glauca pendula* was sent by Messrs. Koster & Co., Boskoop, Holland. N. N. Sherwood, Esq., Dunedin, Streatham Hill, had new dwarf varieties of Sweet Pea Cupid.

At a meeting of the fruit and vegetable committee a Silver Knightian Medal was voted to Messrs. Jas. Veitch & Sons, Ltd., for a splendid display of Cherries and Strawberries. The former were represented both by trays of fruit and bearing trees in pots. Of Cherries there were about thirty varieties shown, of which May Duke, Bigarreau de Schrecken, Frogmore Early Bigarreau, and Elton were of the best. Strawberries were represented by a number of trays of grand fruit, especially of The Countess, Waterloos and British Queen. The new Veitch's Prolific was likewise well shown. Plants and fruiting sprays of this variety were also on view to illustrate its amazing fertility.

A Silver-Gilt Knightian Medal was awarded to Mr. Owen Thomas, gardener to Her Majesty the Queen, Frogmore, for a superb collection of fruit which comprised Strawberries, Cherries, Melons, Peaches, and Nectarines in great variety and all of magnificent quality.

Messrs. Laxton Bros., Bedford, showed trays of Strawberries Laxton Leader, and a seedling, a cross between Royal Sovereign and Commander. A dish of fruits of Peach Royal Charlotte was sent by Sir Trevor Lawrence (gardener, Mr. Bain), Burford Lodge, Dorking. A Bronze Banksian Medal went to Mr. G. Lane, gardener to Miss Ridge, Highfield, Staines, for six fine bunches of Black Hamburgh Grapes.

Messrs. H. Cannell & Sons sent a number of dishes of capital Peas.

A Silver Banksian Medal was awarded to Messrs. J. Carter & Co. for a representative collection of

Peas, upwards of fifty varieties being displayed. The quality throughout was first class.

SPECIAL ROSE SHOW.

The deferment of the Rose Show for a fortnight later than was primarily projected was attended with complete success, for the display of Roses was capital all round, considering the weather. Perhaps the most prominent feature was the conspicuous success of the variety Mrs. John Laing, as a perusal of the following prize list will show.

MIXED VARIETIES.—There were twelve entries for eighteen single trusses, distinct, open to amateurs only. Here O. G. Orpen, Esq., Hillside, Wes Bergholt, Colchester, staged the winning stand. His blooms of Mrs. John Laing, Maman Cochet, Gustave Piganeau, Ulrich Brunner, Mrs. W. J. Grant, Madame Hoste, Cleopatra, and Sharman Crawford were superb. Mr. C. J. Salter, gardener to T. B. Haywood, Esq., Woodhatch, Reigate, was second, also with a capital lot, and G. J. Grahame, Esq., Wrydelands, Leatherhead, third.

In the open class for eighteen trusses, distinct, there were seven entries. Here Messrs. D. Prior & Son, Myland Nurseries, Colchester, led with a splendid stand. Horace Vernet, Suzanne Marie Rhodocanachi, Helen Keller, Maman Cochet, Marchioness of Londonderry, Mrs. W. J. Grant and Mrs. J. Laing were the strongest blooms. Messrs. Frank Cant & Co., Braiswick Nursery, Colchester, were second; and Messrs. Paul & Son, The Old Nurseries, Cheshunt, were third.

Five entries were staged for the twelve. Here E. Mawley, Esq., Rosebank, Berkhamstead, won chief honours. Suzanne Marie Rhodocanachi, Beauty of Waltham, and Ulrich Brunner were his best blooms. Alfred Tate, Esq., Downside, Leatherhead, was second; and the Rev. A. Foster-Melliard, Sproughton Rectory, Ipswich, third.

G. W. Cook, Esq., The Briers, North Finchley, won first award for the six blooms, J. T. Thompson, Esq., The Laurels, Oak Lane, Bound's Green, being second.

For nine blooms of any H.T. or H.P. variety Mr. C. J. Salter came to the front with Mrs. John Laing. C. J. Grahame, Esq., was second with the same variety; and O. G. Orpen, Esq., third, with Kaiserin Augusta Victoria. This was a popular class, for there were eight entries, in no fewer than five instances Mrs. John Laing being the favoured variety.

There were seventeen stands of six blooms each of one variety, Mrs. John Laing appearing on eight of them, including the three winning stands. G. W. Cook, Esq., was first; Alfred Tate, Esq., second; and G. M. B. Thune, Esq., Denne Park, Horsham, third.

TEAS AND NOISETTES.—In the amateurs' class for eighteen blooms in twelve varieties, O. G. Orpen, Esq., led with a stand of lovely flowers, amongst which the samples of Maman Cochet, Cleopatra, Mme. Cusin, Bridesmaid, Caroline Kuster, and Comtesse de Nadaillac were well nigh perfect. E. M. Bethune, Esq., was second, and the Rev. Foster-Melliard, third.

Three stands competed in the open class for a similar quantity of material, Messrs. D. Prior & Son taking the lead. Mme. Hoste, Bridesmaid, Innocente irola, and Mme. de Watteville were the premier samples. Mr. Geo. Prince, of Oxford, was second, and Messrs. Paul & Son were third.

The Rev. W. H. Jackson, Stagsden Vicarage, Bedford, had the best twelve trusses, J. T. Strange, Esq., Aldermaston, Reading, being second. For six trusses in four varieties Miss B. H. Langton, Raymead, Hendon, was first, R. W. Bowyer, Esq., Haileybury College, Hertford, second; and J. T. Thompson, Esq., third.

O. G. Orpen, Esq., had the winning stand of nine trusses of one variety, showing Souvenir de S. A. Prince. C. J. Grahame, Esq., was second with Mme. de Watteville, and the Rev. W. H. Jackson, third, with Mme. Hoste.

The premier stand of six blooms of one variety came from E. M. Bethune, Esq., who had capital samples of The Bride. The Rev. A. Foster-Melliard was second with Souvenir d'Elise Vardon and F. W. Flight, Esq., Cornstiles, Twyford, third with Maman Cochet.

The competitive classes were admirably supplemented by miscellaneous groups of Roses. From Messrs. Wm. Paul & Son, Waltham Cross, came a magnificent lot of bloom, both cut and on the

plants, for which a Silver Banksian Medal was awarded.

Mr. Will Taylor, Hampton, Middlesex, sent two dozen grand trusses of the variety Mrs. John Laing.

A Silver Banksian Medal went to Mr. Joseph Pitt, gardener to F. W. Campion, Esq., Colley Manor, Reigate, for twenty-four bunches of garden Roses. Crimson Ramhler, Dundee Ramhler, L'Idéal and Longworth Ramhler were some of the most meritorious forms.

A Silver Flora Medal went to Mr. Chas. Turner, of Slough, for three dozen large bunches of garden Roses, all of which were in splendid condition.

Messrs. Paul & Son, of Cheshunt, received a Silver Banksian Medal for a group of similar material, a very showy and meritorious exhibit.

Facing the doorway, Messrs. F. Cant & Co. staged a splendid array of garden Roses, for which a Silver Banksian Medal was voted. The flowers here were exceptionally bright and good.

The exhibit of hybrid Sweet Briars and garden Roses from Mr. Geo. Baskell, gardener to Lord Penzance, Eashing Park, Godalming, was highly meritorious, a number of fine forms being included. (Silver Flora Medal.)

GARDENING MISCELLANY.

JUGLANS REGIA LACINATA.

We have in this a combination of the useful and ornamental, which, singularly enough, too often escapes notice, or it would more frequently be planted by those engaged in landscape gardening. Among the many varieties of trees with lacinated foliage, in my opinion this stands first, and merits a conspicuous position on any well kept lawn. At the same time it comes well into a fruitful condition in a comparatively young state. The nuts are of fair average size and are freely produced.—W. B. G.

LYCHNIS VISCARIA SPLENDENS.

This pretty Lychnis is not so much grown as it deserves to be. Coming as it does before the Pink and Carnation families, its fine spikes of rosy-pink flowers are very acceptable. Whether in the border or cut it is always much admired. It is also very hardy and easily propagated. This species has not the fault of many of the other species of this family whose shoots all run to flower. It blooms freely but there is always more "grass" than flower stems. Unless a very large stock is wanted the best way to increase it is to divide the rootstock after the flowering has finished. But if a large stock is wanted cuttings may be taken and treated in the same manner as Pinks.—Scotch Grower.

QUESTIONS AND ANSWERS.

Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Taking the Buds of Chrysanthemums—Buds: The varieties you mention, namely, G. J. Warren, Mrs. Hume Long, Royal Sovereign, W. H. Lincoln, Van den Heede and Duke of York are too early if showing the bud at present. You cannot, therefore, get the first crown bud, but you can secure the second crowns by simply pinching out those showing now. Do not cut back the tops, but merely pick out the buds carefully. They will show the buds again about the third or fourth week in August, and will then be in good time. Van den Heede and Duke of York being naturally rather late varieties, it will be necessary to place them in a sheltered and warm or sunny place so as to bring them on more rapidly than they otherwise would, and ripen or harden up their growths. Other varieties showing their buds may be treated in the same way. Make notes of all that you do, and the general character of the weather as to heat or cold, and you will be better able to regulate and guide your work accordingly in timing the buds next year. The buds, we may say, should have been removed about ten days ago or thereby, and we think you would have hit the time exactly for your part of the country.

Names of Plants.—D. W. D.: 1, Geranium ibericum; 2, Aster sp., send when in flower; 3, Tradescantia virginica alba; 4, Hemerocallis flava; 5,

Ranunculus acris flore pleno; 6, Spiraea Ulmaria variegata; 7, Lilium Martagon; 8, Veronica Teucrium; 9, Achillea Eupatorium; 10, Funkia Sieboldi; 11, Helianthus rigidus, apparently, but send when in bloom; 12, Chrysanthemum maximum; 13, Campanula grandis; 14, Veronica sp., send when in flower; 15, Campanula glomerata; 16, Centranthus ruher; 17, Iris sp. (the flowers had gone to pulp); 18, Alstroemeria aurantiaca; 19, Lilium umbellatum; 20, Papaver orientale bracteatum; 21, Eryngium alpinum; 22, Centaurea montana.—R. M.: 1, Retinospora plumosa aurea; 2, Libocedrus decurrens; 3, Fagus sylvatica cuprea; 4, Choisya ternata; 5, Spiraea Douglasii.—W. J.: 1, Oncidium pulvinatum; 2, Odontoglossum Hallii; 3, Cattleya Mendelii var.; 3, Utricularia montana.—A. R.: 1, Miscanthus japonicus variegatus, generally known in gardens under the name of Eulalia.

Centipedes in Hyacinths and Tulip Bulbs.—H. Marsh: These may not be entirely blameworthy in the matter. There are often decaying scales and other vegetable matter about resting bulbs; but very often slugs get at them and bore holes into the interior. Wireworms may be guilty of the same thing, and encouraged by these means the centipedes take up their abode in the cavities where they eat the decaying matter and hasten further decay. Lift the bulbs and lay them in a dry, shady place to thoroughly ripen off. After they are dry the centipedes will give them no further trouble.

Primula japonica.—R. W.: Wait till the seeds are thoroughly ripe, but no longer. Gather and sow them at once when that happens, and you will get any quantity of seedlings next spring. You need not look for them sooner; but if you keep them dry till next spring before sowing you need not look for them at all, as they seldom, if ever, come up when so treated. Sow in a cool, shady, border in the open, or in boxes of soil, which you must keep continually moist, and sheltered during winter in a cold frame. Seeds gathered from red or crimson-flowered plants will give rise to seedlings of the same colours; but seeds from the white variety will give seedlings with white flowers, some pink ones and probably a few red or crimson ones.

Caterpillar on Morello Cherry.—John Duff: The specimen you sent was a very fine one; and is the caterpillar of one of the Geometers or Loopers, so named from their peculiar method of walking. Having only six true legs in front and four behind, that is, ten in all, it can only walk by looping up its long, legless back and then draw in its hind quarters. It closely corresponds to the description of the Oak Beauty (Amphidasis prodromaria), which we think it is. It is the finest imitation of a half-ripened twig we have seen. The larva feeds on various trees. You ask if it is very destructive, to which we answer in the affirmative, for it can gnaw the leaves into narrow strips, without wasting a morsel, and that, too, as fast as you could clip a leaf with a pair of scissors. We do not think, however, it will cause you much trouble unless more numerous than we should suspect. The caterpillar feeds during June, July and August, but is so large that you could look over your trees and pick off every specimen in a very short time if you have sharp eyes. When resting it will cling by its two hind feet and the two claspers at the tail, while the head and body are projecting into the air like a leafless twig. You should set about finding all of them at once before further damage is done.

Green Fly on Celery.—Subscriber:—It is not often that green fly attacks Celery; at least that is our experience. You do not say whether the insects are inside the leaves or outside. We should suspect the former. If the leaves are blistered and brown in places, the Celery Fly is at work. There is a good deal of it this year. In this case you should cut off all the brown portions and burn them so as to destroy the grubs inside. Where the blisters are only small you may pick them off or squeeze them between the finger and thumb. Be sure you burn all that you cut off. Then syringe your plants with tobacco water to prevent the winged or mature flies from laying the r eggs upon the leaves. Trench the ground 2 ft. deep in winter, giving it a good dressing of gas lime to kill the pupae in the soil. If the pest is really green fly you might first syringe the plants with a strong solution of tobacco water (half a pound of tobacco to a gallon of water) with an addition of ¼ lb. of soft soap to make the tobacco juice adhere to the foliage. As a second remedy you might lightly syringe the plants with water, and then dust them with tobacco powder, which may be obtained from the horticultural sundriesman at a very reasonable price. Leave the powder on until it gets washed off with rain, but if the latter comes soon after the application, you may have to repeat the operation of dusting with tobacco powder. One application is usually very effective. It would help us greatly in giving directions if you would send specimens of leaves and the insects attacking them.

Communications Received.—Wilson.—W. B. G.—H. C. P.—A. Armfield.—A. E. S.—Caledonia.—J. G.—Robert B. M. Morris.—J. C. S.—W. L.—A. C.—B. L.—J. Mayne.—R. E.—Omega.—Albert F. Upstone.—J. B.—R.—Reader.—C. L.—Lettuce.—L. K.—M.—Geo. T. T.

COVENT GARDEN MARKET.

July 13th, 1898.

FRUIT.—AVERAGE WHOLESALE PRICES.

| | s. d. | s. d. | s. d. s. d. |
|------------------------|-------|-------|-------------|
| Apples ...per bushel | 0 0 | 0 0 | |
| Cobbs | 0 0 | 0 0 | |
| per 100 lbs. | | | |
| Grapes, per lb. | 1 6 | 3 6 | |
| Pine-apples | | | s. d. s. d. |
| —St. Michael's each | 2 6 | 7 6 | |
| Strawberries per lb. | 0 4 | 1 3 | |
| Cherries per box | 2 6 | 3 0 | |

VEGETABLES.—AVERAGE WHOLESALE PRICES

| | s. d. | s. d. | s. d. s. d. |
|------------------------|-------|-------|-------------|
| Artichokes Globe doz. | 2 0 | 4 0 | |
| Asparagus, per bundle | 3 0 | 8 0 | |
| Beans, French, per | | | |
| per lb. | 0 9 | 1 6 | |
| Beet..... per dozen | 1 0 | | |
| Brussels Sprouts | | | |
| per half sieve | 1 0 | 1 6 | |
| Cabbages ... per doz. | 1 0 | 1 3 | |
| Carrots ... per bnch | 0 3 | | |
| Caulliflowers.....doz. | 2 0 | 3 0 | |
| Celery.....per bundle | 1 0 | 1 6 | |
| Cucumbers per doz. | 2 6 | 3 6 | |
| Endive, French, doz. | 1 6 | 2 0 | |
| Herbsper bunch | 0 2 | | |
| Horse Radish, bundle | 1 0 | 2 0 | |
| Lettuces ...per dozen | 1 3 | 1 6 | |
| Mushrooms, p. basket | 1 0 | 1 6 | |
| Onions.....per bunch | 0 4 | 0 6 | |
| Parsley ... per bunch | 0 3 | | |
| Radishes... per dozen | 1 0 | 1 3 | |
| Seakale...per basket | 1 6 | 2 0 | |
| Small salad, punnet | 0 4 | | |
| Spinach per bushel | 2 0 | 3 0 | |
| Tomatos..... per lb. | 0 6 | 1 0 | |
| Turnipsper bnn. | 0 3 | | |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| | s. d. | s. d. | s. d. s. d. |
|--------------------------|-------|-------|-------------|
| Atom Lilies, 12 bims. | 3 0 | 4 0 | |
| Asparagus Fern, bun. | 2 0 | 3 0 | |
| Bouvardias, per bun. | 0 6 | 0 8 | |
| Carnations doz. bims. | 1 6 | 3 0 | |
| Encharis ...per doz | 2 0 | 4 0 | |
| Gardenias ...per doz. | 1 6 | 3 0 | |
| Geranium, scarlet, | | | |
| doz. bunches | 3 0 | 6 0 | |
| Lillum longiflorum | | | |
| per doz. | 2 0 | 4 0 | |
| Lilly of the Valley doz. | | | |
| sprays | 0 9 | 1 6 | |
| Lilac(French)per bun. | 3 6 | 4 0 | |
| Marguerites, 12 bun. | 1 6 | 3 0 | |
| Marjoram Fern, 12b. | 4 0 | 6 0 | |
| Grohids, doz. blooms | 1 0 | 8 0 | |
| Pelargoniums, 12 bun. | 3 0 | 6 0 | |
| Red Roses, per doz. | 1 0 | 1 0 | |
| Roses (Indoor), doz. | 0 6 | 1 0 | |
| Tea, white, doz. | 1 0 | 0 0 | |
| Perle | 1 6 | 0 0 | |
| Safrano | 1 0 | 2 3 | |
| (English), | | | |
| Pink Roses, doz. | 2 6 | 4 0 | |
| Smilax, per bunch ... | 1 6 | 2 0 | |
| Tuberose, doz. | | | |
| blooms ... | 1 0 | 1 6 | |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES.

| | s. d. | s. d. | s. d. s. d. |
|-------------------------|-------|-------|-------------|
| Arbor Vitae, per doz. | 12 0 | 36 0 | |
| Aspidistra, doz..... | 18 0 | 36 0 | |
| specimen | 5 0 | 10 0 | |
| Coleus, per doz. | 3 0 | 4 0 | |
| Dracaena, various, | | | |
| per doz. | 12 0 | 30 0 | |
| Dracaena viridis, doz. | 9 0 | 18 0 | |
| Euonymus, var. doz. | 6 0 | 18 0 | |
| Evsrgreens, invar. doz | 6 0 | 24 0 | |
| Ferns, invar., per doz. | 4 0 | 12 0 | |
| Ferns, small, per 100 | 4 0 | 6 0 | |
| Ficus elastica, each | 1 0 | 5 0 | |
| Foliage Plants, var., | | | |
| each | 1 0 | 5 0 | |
| Fuchsia, per doz..... | 6 0 | 9 0 | |
| Heliotrope, per dozen | 4 0 | 8 0 | |
| Hydrangeas, per doz. | 8 0 | 10 0 | |
| Ivy Geraniums, | | | |
| per doz. | 4 0 | 6 0 | |
| Lillum Harrissii, | | | |
| per pot | 1 6 | 2 0 | |
| Lycopodiums, doz. | 3 0 | 4 0 | |
| Lobellias, per doz. ... | 3 0 | 5 0 | |
| Marguerite Daisy doz. | 4 0 | 9 0 | |
| Mignonette, per doz. | 4 0 | 6 0 | |
| Myrtles, doz. | 6 0 | 9 0 | |
| Palms in variety, each | 1 0 | 15 0 | |
| Palms, Specimen ... | 21 0 | 63 0 | |
| Pelargoniums ... | 9 0 | 12 0 | |
| Rhodanthe...per doz. | 4 0 | 5 0 | |
| Scarletsper doz | 2 6 | 6 0 | |
| Splraea, per doz.... | 6 0 | 9 0 | |

INDEX TO ADVERTISEMENTS.

| | |
|---------------------------------|-----------------------------|
| Bulbs. | Insecticides. |
| Wm. Atkinson721 | Corry & Co.721 |
| C. G. Van Tubergen721 | Gishurst Compond721 |
| Catalogues. | XL All.....722 |
| Barr & Sons721 | Lawn Mowers. |
| Bunyard & Co.721 | A. Shanks & Son, Ltd...722 |
| J. Forbes.....723 | Manures. |
| Kelway & Son721 | Anglo-Continental721 |
| J. Peed & Sons723 | C. Beeson721 |
| Simpson & Son.....721 | Chemical Union721 |
| W. Wood & Son, Ltd. ...723 | Clay & Son.....721 |
| Chrysanthemums. | W. Colchester721 |
| Devon Nursery.....721 | Lawes'.....733 |
| Florists' Flowers. | Meggitt's.....721 |
| J. Douglas721 | H. G. Smyth.....722 |
| T. Jannoch.....723 | W. Thomson & Sons.....722 |
| Kelway & Son721 | Miscellaneous. |
| R. Owen721 | British Carpet Co.736 |
| J. Peed & Sons.....723 | Cooper's Cycles722 |
| J. Stevens721 | Corry & Co., Ltd.722 |
| Flower Pots. | Epps's Cocoalae733 |
| Sankey & Sons, Ltd.736 | Frosteen736 |
| Fruit Trees. | Gishurstine721 |
| G. Bunyard & Co.721 | Juno Cycles736 |
| Garden Sundries, &c. | Smyth's Baskets721 |
| J. Arnold721 | Netting. |
| Corry & Co.721 | H. J. Gasson721 |
| Eveson Coal & Coke Co. 721 | A. Potter.....721 |
| Fowler's Lawn Sand722 | Orchids. |
| First, Brooke & Hrst. ...721 | J. Cypher723 |
| J. & H. R. Hounam723 | P. McArthur723 |
| A. Outram735 | F. Sander & Co721 |
| Porter's Stakes.....721 | Stanley-Mobbs & Ashton721 |
| Reading Propagator736 | Publications. |
| G. H. Richards.....722 | Darlington.....735 |
| H. G. Smyth721 | GARDENING WORLD.....735 |
| Heating Apparatus. | Midland Cos' Herald.....735 |
| W. Cooper, Limited ...722 | Ogilvie.....735 |
| Richardson & Co.721 | J. S. Virtue & Co.....735 |
| Thames Bank Iron Co ...721 | W. Wood & Son, Ltd. ...723 |
| Horticultural Builders. | Seeds. |
| J. Boyd & Sons.....721 | Simpson & Son721 |
| W. Cooper, Ltd.722 | Sutton & Sons721 |
| J. Gray.....721 | Webb & Sons723 |
| W. Richardson & Co.721 | Shows. |
| J. Weeks & Co., Ltd.721 | 722 and 735 |
| Hose. | Situations, &c. |
| F. Reddaway & Co., Ltd. 722 | 712 |



ORCHIDS.

Clean Healthy Plants at Low Prices.
Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

GLOXINIAS FINEST MEDAL COLLECTION
* IN THE WORLD. *
Send for CATALOGUE to
JOHN PEED & SONS, West Norwood, London

The Royal Nurseries, Maidstone, Kent.
GEORGE BUNYARD & CO.,
Are now hooking orders for early delivery of the very best
NEW AND OLD STRAWBERRIES.
For crop 1899, or for forcing.
They offer the largest stock and the best plants in the trade.
Change of stock pays.
Catalogue of Strawberries and Summer Fruits now ready.

Caladiums FINEST COLLECTION
in the World. We make
a speciality of CALA-
DIUMS. Gold Medals
Manchester & Leicester.
Silver Cup, R.H.S., &c.
Satisfaction guaranteed. JOHN PEED AND SONS,
West Norwood, London.

RETARDED LILY OF THE VALLEY CROWNS.
Headquarters at Dersingham.
For prices &c., apply to—
T. JANNOCH,
Lily Nursery, Dersingham, King's Lynn, Norfolk.

1898. **FORBES' CATALOGUE** 1898.
(Over 150 Pages. Nearly 150 Illustrations.)
of Florists' Flowers and Hardy Border Plants
is got up regardless of trouble or expense, with the result that
it is by unanimous consent pronounced the most comprehen-
sive, most accurate, most reliable, most complete and best
extant.
It gives full and accurate descriptions of everything in the
way of Florists' Flowers, also colour, height, time of
flowering, and price of all the best Hardy Border Plants,
together with their English or Common Names, and a mass of
other Valuable Information that cannot be had else-
where.
It is in fact a veritable reference-book, invaluable to all
growers of these plants, and should be in the hands of all
intending purchasers. Free on application.

JOHN FORBES,
Nurseryman, Hawick, Scotland.
ESTABLISHED 1870.

VIOLET Roots. R. W. Hockey, Brid-
port, has been honoured with the distinguished patron-
age of Her Most Gracious Majesty the Queen. Is receiving
orders for Comte de Brazza, Lady Hume Campbell, Marie
Louise, California, Czar, &c. Prices on application.

**A
NEW
SHADING.**

As Cool
as a
Cucumber.

FROSTEEN SHADING.

Heat, but not light proof. Easily
applied. No beating required; no
mess, no trouble; the latest scientific
discovery; beautifies the greenhouse,
inexpensive and won't wash off;
entirely superseding old fashioned
methods and preparations. Can be
ordered through all seedsmen and
florists, or direct from the makers,
price 1s. FROSTEEN AZO must be
used in addition to make it permanent,
price 1s. 6d. Both sent carriage paid
for P.O. 2s. 6d.

FROSTEEN SYNDICATE, LTD.,
341, Argyle Street, Glasgow.

**IMPORTANT
TO
GARDENERS**

Hints by Specialists upon
Successfully Cultivating
CARNATIONS
Also our new Illus-
trated Supplement sent
post free upon application
to—
WM. WOOD & SON, LTD.,
Garden Specialists
(33 Medals and Awards for
Excellence),
WOOD GREEN, LONDON.

WEBBS' SEEDS

WEBBS' EMEROR CABBAGE.

The Earliest and Best.
6d. and 1s. per packet; 1s. 6d. per oz.

From Mr. J. TURNBULL, The School House,
July 9th, 1898.

"I sowed some seed of Webbs' 'Emperor Cabbage' and
the Cabbages have been simply grand; they get better each
time we have them."

WEBBS', WORDSLEY, STOURBRIDGE.

ORCHIDS of the highest quality, every
plant guaranteed true to name, from 2/6 each. Please
send for free list.—P. McARTHUR, The London Nurseries,
4, Malda Vale, London W.



"Gardening is the purest of human pleasures, and the greatest
retirement to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.
SATURDAY, JULY 23rd, 1898.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, July 26th.—Royal Horticultural Society: meeting
of committees at 12, noon.
WEDNESDAY, July 27th.—National Carnation and Picotee
Society's Show at the Crystal Palace.
FRIDAY, July 29th.—Redhill, Reigate and District Carnation
and Picotee Society.

WOBURN EXPERIMENTAL FRUIT FARM.—
Some three or four years ago the
Duke of Bedford established a fruit farm at
Ridgmont, Beds., for the purpose of conduct-
ing experiments, with the view of settling
various questions concerning the cultural
treatment of fruit trees and bushes, which
arise from time to time either in gardens of
large or small extent. The experiments are
superintended by Spencer Pickering, Esq.,
who is managing director, and is assisted
by Mr. Lewis Castle. In response to an
invitation, a party of gardeners and other
experts connected with fruit in some way
or other, visited the Woburn Experimental
Fruit Farm on the 13th inst., and were con-
ducted over the place by Mr. Pickering.

The experiments are of a very varied and
sometimes complicated character, and like-
wise vary in importance, though the points
they are intended to settle are of frequent
occurrence in gardening and fruit culture.
Geologically, Ridgmont is situated on the
oolite formation, not far from the lower
cretaceous, but decidedly on the former. The
surface soil of some depth consists of sub-
stantial loam inclined to clay and well mixed
with sand. It gets very hard and lumpy
during droughty periods, but readily crum-
bles down on the advent of rain, and in
winter assumes a very plastic and adhesive
condition. It is very fertile, however, as the
fruit trees amply testify by the vigorous
growth they make where good tillage is
carried out. This is not accomplished
throughout, however, because the intention
is to demonstrate the results of good and
bad methods of cultivation. The ground
slopes gently towards a brook, which
occasionally overflows its channel and sub-
merges the low lying ground in its vicinity.
This has been going on for centuries
evidently, for the soil in the lower part of
the grounds consists of alluvial silt laid
down by the brook, and even presents a
peaty appearance, being soft and allowing
the feet to sink into it.

We shall here indicate the nature of a

few of the varied experiments we noted in
passing over the grounds with the results
hitherto obtained. Trees of 1, 2, 3, and 4
years of age were planted, and up till now
the 3 year old trees have done best. Rows
of trees were pruned in autumn, others at
mid-winter and some in spring, but little
difference is observable amongst them. Plan-
tations of mixed cropping are under trial,
standard Apples being planted wide apart,
with bush and pyramidal Apples, Pears, and
Plums between the primary rows, and Cur-
rants and Strawberries in the interspaces.
A cottager's plantation was established in
1899, fruit and vegetables being grown
separately in the upper portion, and in
mixture in the lower part of the grounds.
The mixed plantation did better the first
year, which happened to be a dry one, be-
cause the resulting shade prevented evapora-
tion to some extent. Dwarf Apples are
grown on the Paradise stock, and standards
on the Crab. Bramley's Seedling, Cox's
Orange and Stirling Castle are largely used
in these experiments, and it was noted that
the first named, being the most vigorous
grower, took the longest time to become
established after removal, owing apparently
to its influence upon the stock.

A series of experiments were instituted
to prove the advantage or disadvantage of
various methods of pruning. During the
first year or two the leaves were counted,
and the leaf surface actually measured, but
this is now practically impossible, but the
leaves are weighed and the branches
measured in order to determine the amount
of annual growth. Some trees were pruned
when first planted and others not till the
end of the first year. The latter lost in
vigour during the first year, but made up
for it during the second. One row of trees
was pruned when planted, but not pruned
subsequently. Long portions of the
branches are now without either leaves or
spurs, so that this method is inadvisable.
One row has not been cut back at all from
the time of planting till now, with the result
that the branches are long and slender,
being weighted to the ground whenever
they carry a crop of fruit. This is ocular
demonstration that the practice is a bad
one and should not be adopted in garden or
orchard. Another row that has been
pinched in summer like a trained tree,
carries a crop that is making good progress;
but perhaps this may not prove an economi-
cal plan in the long run. A row of trees,
having the shoots shortened in summer but
not further pruned after the fall of the leaf,
has given similar results. Cox's Orange
was the variety used in both cases.

Root pruning has been tested in various
ways, and the results in many cases are
quite obvious. Good growth has been
made by trees root-pruned every third year,
and they are carrying a good crop of fruit.
Growth is not very rampant, however, in
the case of trees upon the Paradise. Trees
that have been root-pruned every year have
made little growth, the trees remaining
small and stunted. Lifting and replanting
trees with a ball of soil, and as little injury
to the roots as possible has given little or
no check. Trees conveyed to a distance
could hardly be placed under so favourable
conditions. Mulching with dry straw has
hitherto given no results even in dry sea-
sons. The whole of the ground was origin-
ally treated alike by being trenched 2½ ft.
deep. After the ground was planted a
broad strip containing a row of trees was
sown down with grass to imitate an orchard.
Another band was trodden very firm but
kept clear of weeds, but this gave no results
over the untrodden. On a third piece the
weeds were allowed to grow, and the results
were thoroughly as bad as when sown down
with grass. The trees in both cases remain

small, stunted, yellow, and of poor but very irregular growth. Mr. Pickering mentioned these two cases as samples of bad practice often pursued by the British farmer. Nothing is worse for the fruit trees than allowing the ground beneath to be covered with grass. The evaporation of moisture from grass-covered land is about four times the amount of that given off by naked soil.

A considerable number of trials have been conducted in the matter of manuring, by using nitrogen, phosphorus and potash, leaving out one or other of the fertilisers in each case. Fruit trees, at least in the young condition, do not seem to respond to manures in the same way as farm crops on the same soil. For instance, one plot received no manure; a second got half the usual quantity; a third got the ordinary amount; a fourth plot had this doubled, and other plots had three or four times the regular amount given them. No results were apparent in either case. At first the manure was scattered upon a circular area round the tree, and the circle is widened annually. When the trees are full sized and cover the ground, manure will be extended over the whole surface. Why there should be no results from the use of manures, either in large or small quantities, is a mystery which the near future may unravel; but in the meantime it would be interesting to determine the reason for this strange behaviour. The ground may contain all the elements of plant food which the trees can utilise at present, but the fact remains to be discovered and demonstrated. Artificial manures were employed in all cases.

Elsewhere some trees were carelessly planted in well prepared ground, and their rate of growth has been good. This is surprising and serves to show the accommodating nature of fruit trees, and their power of recuperating. Some trees were badly planted in unprepared ground, and a few of them are making headway, but very irregularly. In another instance close by, the ground which had been overgrown with weeds has been cleaned and the trees have greatly recovered making good bushes. There is another valuable lesson in this for the careless fruit grower. It shows that a neglected orchard may be renovated simply by improving the method of culture. Experiments were also made with deep and shallow planting. Trees were planted at depths ranging from one to three feet, but there is very little difference between either of the sets now. This may appear to explode a theory held by fruit growers generally; but it may have reference solely to the character of the soil in the matter of natural drainage and fertility.

Other experiments are being conducted near the brook in the lower portion of the grounds. Autumn, winter and spring planting was tried, and the evidence was slightly in favour of the latter, though there was little difference in growth. The Black Currant Mite threatens to destroy the plantations, particularly some of the varieties, in spite of spraying with insecticides. The Common Black Currant is most immune from attack. Lee's Prolific and Carter's Prolific are almost free; but Black Naples gets very much destroyed, and Baldwin's Black is the worst, the bushes being almost killed. No insecticide has yet proved efficacious and practical. A number of screens are placed round trees in one of the quarters to imitate crowding and ascertain the effect of it. Those trees entirely surrounded get drawn up and taller than the others. Some of the screens are open at certain angles to the points of the compass in order to ascertain the most suitable direction for the rows of trees to be planted. Plantations of Strawberries have been treated with different kinds of manure, and

last year the nitrates gave slightly the best return in fruit. The ground thermometer in the lower part of the ground shows that the disadvantage to fruit trees has reference to air drainage rather than moisture, the air being cold and stagnant by comparison with that on the high ground.

Oranges in China.—During the past year 53,614 cwt. of Oranges, valued at £10,218, were exported from Foochow, in China. The fruit trade, in the future, promises to be of some considerable importance.

Harvesting Hay on the Ice.—In one of the States of America there is a shallow lake where the grass, growing in the bottom, projects considerably above the water. During winter, when the lake is frozen over, the farmers find it a profitable occupation to cut the hay and sell it.

Carnation Countess Ferrers is the name given to a new Carnation that has been raised at St. Anne's, Clontarf, Ireland, which promises to be one of the most successful introductions of the season. In size and colour it approaches the popular Souvenir de la Malmaison, but exhibits rather a richer shade of pink. The perfume is both strong and agreeable, and in this respect the variety is far superior to some of the other modern forms.

Mr. James Gibson, who for some years past has given great satisfaction to his employer, E. H. Watts, Esq., Devonhurst, Chiswick, has been appointed head gardener to W. R. Hudson, Esq., Danesfield, Great Marlow, Bucks. The estate runs to 3,000 acres, and since the present proprietor took it over vast improvements have been effected, both on the agricultural portion and in the garden. Admirably furnished bothies have been built for both young and married men; some splendidly fitted glasshouses have been put up, and others are under the course of construction. The place has an ancient reputation, and that will not only be re-established but greatly increased. There is a fertile, walled-in vegetable garden, that will presently be turned to excellent account. We understand that there were between 300 and 400 applications by gardeners for the situation. Mr. Gibson leaves Devonhurst on the most friendly terms with his present employer, whose only regret is the losing of a good gardener. He commences his duties at Danesfield on August 1st next.

Visitors at Woburn Abbey.—After inspecting the Woburn Experimental Fruit Farm at Ridgmont, and partaking of luncheon in a fine building on the farm, the party of inspection on the 13th inst. were driven to Woburn Abbey in two brakes, under the care of Spencer Pickering, Esq. Amongst the visitors were Dr. Masters, Messrs. G. Norman, J. Jennings, Luckhurst, A. F. Barron, S. T. Wright, W. B. Latham, J. Asbee, Cheal, Jun., Udale, J. Fraser and others. Woburn Abbey is a great quadrangle of buildings enclosing a central court, and in these respects reminding us of Hampton Court. The party were broken up into two, and conducted through and round the whole quadrangle of rooms to inspect the pictures, &c. After this the beautiful grounds were inspected. The park is very extensive (three miles by two miles within the walls), and some parts of it are roamed by herds of deer from various parts of the world, including many species of deer and allied genera. There is a fine avenue of Beech, Oak, Elm, Lime, Ash and other trees, about 120 years of age, and now in the full beauty of summer leafage. One grand old Beech measures 110 ft. in height, and possesses 48½ ft. of clear trunk up to the first branch. Near the mansion are magnificent trees of Taxodium distichum, 65 ft. high, in a moist soil overlying blue clay; also Cedrus Libani, C. atlantica and C. a. glauca in healthy condition. Araucarias die after getting into the sand beneath. Huge, globular bushes of the Portugal Laurel were covered with masses of powerfully fragrant flowers. Beds of Heaths on the grass included Erica carnea, E. vagans, varieties of Caluna vulgaris and Daboecia polifolia. The beds in front of the house are planted chiefly with tuberous Begonias. The Duke of Bedford was away from home, but the privileges granted the party were much appreciated.

Grey Coat School, Westminster.—Her Royal Highness the Duchess of York distributed the prizes at this school on the 15th inst. The whole of the floral decorations were admirably carried out by Messrs. John Laing & Sons, of the Forest Hill Nurseries, Forest Hill, London, S.E. They also made the bouquet presented to Her Royal Highness.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held in the Drill Hall, James Street, Westminster, on Tuesday, July 26th, 1 to 5 p.m. Bamboos will be a special feature at this show, and at 3 o'clock Mr. A. B. Freeman-Mitford, C.B., will lecture on the "Economic Uses of Bamboos."

Making Himself Known.—At a recent show in the neighbourhood of the Metropolis, the following was overheard:—A gentleman in neat black cloth, and bright silk hat, patronises the refreshment tent, and draws near to some leading horticulturists sitting in a group. A gracious bow to each by the silk hat, and a word of expostulation. "Yes; I have certainly been overlooked. My merits have not been appreciated as they deserve. I quite think it time I advertised myself. Then probably I should become better known." Addressing each: "What paper would you suggest?" No. 1, replied, "The 'Referee.'" No. 2 advised "Pick-me-up." No. 3 recommended "A Society Journal." Roars of laughter. "Thank you gentlemen. Yes—Pick-me-up—Yes—that shall be the one. Good day." This is a fact.—Snaggs.

Victoria regia at Regent's Park.—The great Water Lily of South America has developed wonderfully fine proportions in the gardens of the Royal Botanic Society this year, several of the leaves measuring 5 ft. 9 in. to 6 ft. inside the very deep and upturned rim. The plant has been flowering for some time, and the other day three flowers in various stages of development were calling for attention from visitors. The oldest was in its second day of expansion, the petals being all reflexed and showing a remarkably dark colour. All the petals were of a deep rose, some of the smaller ones in the centre being tinted with crimson. The rose flowers and the deep rim of the leaves would indicate a distinct variety. A second flower was white, being in its first day of expansion. A third bud, rising well out of the water, had its sepals slightly parted, showing the white petals inside them. In spite of the moderate amount of sun we have had, the Victoria is really fine this year. The large square tank in the Lily house affords plenty of room for its development.

Self-irrigation in Plants.—For many years past there have been many believers in the old theory that plants absorb moisture, and even plant food in solution, through their foliage, even though it has been scientifically demonstrated that the leaves do not absorb water under normal conditions, that is, unless they are actually flagging owing to an insufficient supply from the roots. Another proof of it is that the plants have generally made ample provision to throw it off, not retain it. There is ample evidence, on the other hand, that plants have made ample provision to carry it within reach of the main body of feeding or absorbing roots wherever they may happen to be situated. This phase of the subject is taken up and explained, as well as illustrated, by the Rev. A. S. Wilson, M.A., in the July number of *Knowledge*. The fact is amply demonstrated in the general inclination of the leaves of the Beech, Elm, Lime, Plane and other trees of like habit, whose feeding roots are at some distance from the trunk, the leaves being directed outwards, and inclined tier above tier like the slates on a house. Caladiums, Alocasias and allied plants have the blades of their leaves inclined outwards from the top of the petiole, which is so bent or inclined to throw the water away from the centre. On the other hand, plants which have the main body of roots in a central position below them have channelled petioles to carry the water collected on the leaf surface towards the centre. This class of plants are very plentiful, and include such as Tulips, Hyacinths, Palms, Radishes, Bananas, Tree Ferns, Rhubarb, Thistle, Dandelion, and hundreds of others. The stems are also often angled and furrowed or fluted, or striated, so as to act as guides for the descending current. Auriculate leaves throw the water upon the leaves next below them.

An International Horticultural Exhibition will be held at St. Petersburg next year, commencing on May 17th, and continuing for ten days. The function will be carried on under the special patronage of the "Great White Czar."

Mr. J. H. Krelage.—A portrait of this well known Dutch nurseryman of the firm of MM. E. H. Krelage & Son, Haarlem, Holland, is given in the current number of *Tijdschrift voor Tuinbouw*. Having been born in 1824, he is now in his 54th year. His popularity amongst botanists, nurserymen and others is indicated by the fact that many plants have been named in compliment to him, including *Agapanthus umbellatus Krelagei* (Leichtlin), *Begonia tuberosa J. H. Krelage* (Zocher), *Bladcanna Krelagei* (Chatin), *Gladiolus gandavensis Monsieur Krelage* (Leveau), *Gladiolus Lemoinei J. H. Krelage* (Lemoine), *Hyacinth enkel rood Monsieur Krelage* (Kruyff), *Iris Kaempferi Krelagei* (Siebold), *Iris reticulata Krelagei* (Regel), *Paeonia albiflora (chinensis)*, *Monsieur Krelage* (Crousse), and *Anthurium hybridum J. H. Krelage* (Kottmann).

Floral Decorations at Nottingham.—On the occasion of his grace the Duke of Portland being installed grand master for Nottingham, the floral decorations were entrusted to Mr. C. J. Mee, the eminent florist of Long Row, Nottingham. This floral work was the admiration of everyone privileged to see it. Dozens of stately Palms and other foliage plants were used with telling effect. Hundreds of flowering plants such as *Hydrangeas*, *Kalosanthes*, *Petunias*, *Pelargoniums*, *Marguerites*—the yellow one—with deep purple Canterbury Bells where extensively used with grand masonic effect. The whole display was admirably executed and Mr. Mee received numerous congratulations upon the excellent and practical way in which he carried out this important work, which was undoubtedly the best ever seen in Nottingham. Mr. Mee is an old and skilled hand at this kind of work.—*Rusticus*.

Celluloid Auto-labels for Plants.—Samples of what appear to be a useful label have been sent us by Mr. Douglas Allport, 108, Queen Victoria Street, London, E.C. They vary in size, but consist of a strip of celluloid, rolled up at one end for the purpose of fixing the same to a stake or to the plant itself. The coil may be unrolled or partly opened with the fingers, to admit of the supporting object, after which the coil closes again elastically of its own accord. When fixed the label is always in a horizontal and readable position. Undoubtedly the label is very clean and neat, and described as permanent and dirt-proof as porcelain. It occasions no difficulty or loss of time in the matter of fixing. The label is said to be uninjured by heat, damp or time; and the clip to expand with the growth of a stem to which it may be attached. It should prove very neat and handy for Orchids. Only one side can be written upon, the other being as smooth as glass. A soft black pencil is said to be the only thing required for writing the name; but we can manage to write with a pen and ink, which might even be more permanent than pencil writing. If it will stand the damp of the stove and Orchid houses, all indoor plants might be furnished with it on the score of neatness alone.

A New Seed Sowing Machine.—There are many seed sowing machines, but in the present case we refer to a machine, for which patent rights have been granted to Mr. W. Evans and Mr. W. F. Hamilton. The invention is intended by means of suitable machinery to fix seeds of various sizes, both agricultural and horticultural, between sheets of specially prepared paper, the seeds being deposited at any required distance apart, in rows or special designs, and fixed there by some glutinous material. On the top of them another sheet is fixed. When the operation is completed the pieces of prepared paper may be circular, so as to fit into a flower pot, or they may be in strips suitable for laying along the bottom of the trenches taken out by the hoe in the usual way. The object of all this is to regulate the distance apart the seeds should be, and to ensure their being at an equal depth in the soil. The paper sheets or strips are covered with soil, and treated in the usual way. The seeds will also be protected from birds. Fertilising manures can also be placed between the sheets of paper, so as to be ready to hand for the germinating seedlings. Mr. A. Armfield is secretary for Evans' Seed Sowing Company, Ltd., 40, Chancery Lane, W.C.

Green Fly is now on the Hop in Kent. Where is it likely to hop to next?—*Snaggs*.

Orchids at the Sale Rooms.—At the Sale Rooms of Messrs. Protheroe & Morris, Cheapside, on the 15th inst., the strangely formed flowers of *Catasetum fimbriatum*, and the golden-yellow of *Mormodes leopardinum*, thickly spotted with crimson attracted considerable attention amongst those present. Two pieces of the former fetched £2 5s. and £2 respectively. A well-flowered piece of *Odontoglossum cristatellum*, carrying a long panicle of flowers, did not seem to find so many admirers, probably because less curious, but it was, nevertheless, a fine piece of its kind.

Dictionnaire Iconographique des Orchidees.—This work has been going on since October, 1896 and is intended to form a dictionary in which coloured plates of Orchids, each 7½ in. long by 5½ in. wide, are given. The plate is accompanied by text descriptive of the species. The description is in the French language. Twelve monthly deliveries, each containing thirteen coloured plates are sent to subscribers during the course of the year, that is, 156 plates annually. The subscription price is 48s. annually, commencing in October. The intention is to figure and describe all the genera, species and varieties that are of sufficient interest in the Orchid family. The special features of the work are that a portfolio bearing the title of a genus is delivered every month; that all the plates and text are left unbound so that the numbers belonging to any one genus may be brought together and arranged in alphabetical order, no matter what the time of their publication may be. The portfolios are to be arranged in the bookcase in alphabetical order. Whenever a species flowers in the collection of an owner or his gardener, who may not know the name, all that is necessary is to turn over the sheets in the portfolio till the plate representing the species is arrived at. This, it will be seen, affords an immense advantage in facility of reference compared with existing works on the subject, many volumes of which have often to be consulted before the right plate is found. The *Dictionnaire Iconographique des Orchidées* is managed and edited by A. Cogniaux, and the paintings are done by M. A. Goossens, Artiste-Peintre, Rue Quinaux, 24, Schaerbeek, Brussels, Belgium, to whom intending subscribers should apply.

The Fruit Tree Beetle.—A leaflet dealing with the peculiarities of this pest has lately been issued by the Board of Agriculture, which was moved to the investigation by frequent complaints of the destructiveness of this boring beetle which turns out to be *Scolytus rugulosus*. In the majority of cases brought to the notice of the Board, the larvae of the beetle had honeycombed the tips of small branches, whilst many of them were esconced in bark and wood that was dying or already dead. On the other hand they were seldom found in healthy bark, which fact confirms the statement made in Kollar's *Treatise on Insects* "that it is probable that this beetle only attacks trees which are sickly." The larvae have been frequently found in the tips of branches injured by frost, also near scars from canker, and knife cuts, and knots. It is not clear that the beetle attacks healthy trees, but it is certain that it greatly retards or prevents the recovery of sickly ones. It is partial not only to the Apple, but to the Plum, Cherry, Pear, and Peach, and its presence may be discovered by the existence of many round holes, not more than a pin's head in diameter, through the bark to the wood. The female beetle may be seen flying about towards the end of April. She bores holes in the bark, lays her eggs, and the larvae hatch out in a few days. After pupation the beetles bore other holes in the bark and escape, for there are at least two generations born in the year, while the larvae pass through the winter as they are, the active injury being thus unintermittent. The beetle is barely one-tenth of an inch in length, and black, while the larva is a little smaller, and milky-white with black mandibles. The only method of dealing with the beast is to cut down and burn all worthless trees; and holders of orchards should see to it that they keep old dead branches cut out regularly each year for this will materially lessen the risk of infection. Syringing with insecticides is of very little use for the larvae are out of their reach. The trapping of the female beetles would certainly be of service,

USEFUL HARDY PLANTS.

AMONG the most useful hardy plants for heavy damp soil we have found none to surpass *Doronicum caucasicum* and *D. plantagineum excelsum*. They are capital for forcing, and in the open ground they begin flowering in April, and now (middle of July) are very striking. These were plants which had been forced and stood out behind a wall in pots for some weeks. *Gaillardias* are continuous flowering, herbaceous plants, and grown in beds or borders in masses make a fine display, and are most useful for cutting. They stand well in rooms. They can be easily raised from seed, but it is more satisfactory to get proved varieties. I notice some old roots which have been in the same position (not by any means a choice one) for over a dozen years, and are now full of bloom. *Paeonies* do well on strong, firm soil. We have planted a new collection this season, but the old ones are by no means despicable. They have been in their quarters untouched for over twelve years, except when they have been reduced with a spade to get pieces to give to friends. *Coreopsis* (*C. grandiflora* appears to be the best) flowers very abundantly, coming in when many of the earlier species have ceased to flower for the season. It seems to do best when treated as a biennial, or, perhaps, it is best of all to sow some each spring and plant out during autumn for next year's use. *Pyrethrums* are most valuable on our heavy wet soil. They last long, and make a charming display. Ours have had little done to them for many years past, and they never flowered more freely than they have done this season. There are great numbers of new sorts added of late. A large collection of new named ones is before us, received as cut flowers from Mr. M. Cuthbertson, of Rothesay.—*M. Temple, Carron, N.B.*

GARDEN CROPS IN WEST LoTHIAN.

THE season has been a very backward one, in fact I think we will this year break the record in that respect.

At this date (July 18th), Strawberries are still green; it will be several days ere a first picking can be made. The crop is good, but for want of rain the fruit will be under average size. Cherries are plentiful, but small; Gooseberries, a fair average crop; Raspberries, light; Black Currants, an enormous crop; and the same may be said of Red Currants. Plums are practically a failure; as for Apples and Pears, they are, as usual with us, very thin, except on a south wall, where Apples are very good.

Vegetables have withstood the long drought wonderfully well. Peas look remarkably well, and carry heavy crops. Cauliflowers, and in fact all the Brassica tribe are quite healthy, but backward. Early Potatos are a very light crop, but the quality is excellent. Late Potatos look splendid. Kidney Beans have suffered more with drought than any other vegetable, all other vegetables being an average. Roses are first rate. Herbaceous plants of nearly all kinds have suffered very much. The bedding plants of all kinds have done fairly well, but most things have made very little growth. The long spell of dry weather broke yesterday, and we have had some fine genial showers, but would require twenty-four hours' continuous rain to fairly get to the roots.—*Black Watch*.

HARDY BAMBOOS.

(Continued from p. 731.)

BAMBUSA.

THIS generic name supplies both the popular name of the whole tribe and the tribal name itself. The *Genera Plantarum* reckons about twenty-four distinct species, but the names of ninety described as species are recorded in the *Index Kewensis*. More than fifty of them, however, have been placed under this genus provisionally, for the simple reason that neither flowers nor fruit have been seen by which to establish their identity and determine their proper classification. The better known species are natives of tropical and subtropical Asia, and one of them, widely distributed in tropical America, is very often cultivated. The botanical characters of *Bambusa* are a paniced inflorescence, with two to many

flowers in each spikelet, a two-keeled, ciliate pale, and six stamens, having their filaments free. The stems are arborescent, rarely shrubby, and more rarely climbing, though none of the latter appear to be hardy. The dwarf and shrubby species are best represented in gardens owing to their hardiness. The name Bamboo is a native one, coming from the Mahratta or the Malay *Bamboo* or *Bambu*, the English name being identical with the former spelling.

B. ANGUSTIFOLIA.—The specific name is here very appropriate, for the leaves are linear, 3 in. to 5 in. long, and light green on both surfaces. It is also known in gardens, however, as *B. Vilmorini*, and why the name should have been changed is not very apparent. The stems are very slender, erect, twiggy, densely crowded, and in the Kew collection at present about 2 ft. high. It is therefore a pretty Bamboo of dwarf and grassy habit, though not particularly striking. It comes from Japan.

B. DISTICHA—The plant now described under this name has been known in gardens for a number of years as *B. nana*, but it is not the plants to which Roxburgh affixed the appellation. Indeed, the origin of the plant under notice is rather obscure, but believed to be in Japan. The light green, lanceolate leaves vary in length from $1\frac{1}{2}$ in. to $2\frac{1}{2}$ in. The stems are only 30 in. high, very slender, intertwined and so numerous that they form a compact and dense bush, resembling a reedy grass.

B. MARMOREA.—Of the dwarfed Bamboos proper this is one of the most distinct and characteristic. The stems are 3 ft. to 4 ft. high, brown or purplish, and arching in different directions. The side branches or twiglets are very slender, short, ascending and crowded in dense clusters all round the stems. So short are the laterals, and so numerous are they, that the stems with their branches may be compared to a lady's feather boa. They are also densely clothed with light green leaves, $1\frac{1}{2}$ in. to $2\frac{1}{2}$ in. long, making the species both graceful and handsome, while it is quite distinct from any other. It is a native of Japan, where its garden name is *Kan-chiku*.

B. NAGASHIMA.—As the name would suggest, this is also a native of Japan. The stems are only 1 ft. to 2 ft. high, similar to those of *Arundinaria Fortunei*, but more decidedly of Bamboo or reedy habit, and not so dense as the last-named species. The leaves are 4 in. to 6 in. long, and of a rich green on both sides while still young, but later on they become of a uniform intense green as they reach maturity. It might be serviceable where taller subjects would be inadmissible, and could be utilised for decorative work in pots.

(To be continued.)

PEOPLE WE HAVE MET.

MR. JOSEPH KENT, F.R.H.S.

THE subject of this notice first saw the light at Penkull Nursery (Burgess and Kent), in 1845, and is now the well-known superintendent of Hanley Park, Hanley, Staffs., where the horticultural fête was held with such success recently, as recorded in our pages last week.

In 1864 Mr. Kent spent some time at Mr. William Bull's Establishment, King's Road, Chelsea, after which he returned to Penkull Nursery, which was then carried on by his uncle, Mr. J. Kent. In 1897 he was appointed Superintendent of the Borough of Hanley Cemetery. On the formation of the park he was called upon to purchase and superintend the planting of ornamental trees and shrubs. The park extends to eight acres, but the more ornamental portion of it, namely, the flower garden, consists of nine acres. This portion was first taken in hand, and completed, and was opened by his Worship the Mayor (Alderman Edwin John Hammersley) on the 26th July, 1894. It is known as the Cauldon Grounds, and contains a large winter garden open to the public every day. Other glass structures here consist of three span-roofed plant houses, each 40 ft. long, by 16 ft. wide; one lean-to, 50 ft. long, by 12 ft. wide; and one lean-to, 100 ft. long, by 18 ft. in width.

Mr. Kent carried out the work entrusted to him in an entirely satisfactory manner, with the result that he was appointed superintendent of parks, &c. The good work he commenced then has been continued ever since, and Hanley Park has now an ever-increasing circle of admirers both in the district and

amongst visitors from a distance. Some idea of the annual amount of labour that has to be accomplished may be gleaned from the fact that 150,000 bedding plants of various kinds have annually to be turned out of the houses in their proper season. The summer display is followed by that of Chrysanthemums in the autumn and early winter, say from October to December, inclusive. To accomplish



MR. JOSEPH KENT, F.R.H.S.

this with the success that attends Mr. Kent's labours is no small test of ability in the smoke laden atmosphere of Hanley, rendered worse by neighbouring chimney stacks clustered round it within a radius of a few miles.

The trees and shrubs selected for this smoky district are interesting from the fact that they not only survive but flourish in spite of the prejudicial influences of the atmosphere to vegetation generally. Hollies include Hodgin's Broad-leaved, *madeirensis*, and *laurifolia*, all in fine condition; also *Aucuba japonica*, *Skimmia japonica* (usually known as *S. oblata*), *Euonymus radicans*, *Olearia Haastii*, *Diervillas* (Weigelas) of sorts, *Lonicera Ledebouri*, *Ribes sanguineum*, *Ligustrum vulgare ovalifolium*, *Hydrangea paniculata grandiflora*, Golden and other Elders, Willows of all kinds, and *Cornus mas*. The evergreens amongst the above, it will be noticed, are smooth leaved; and the deciduous kinds are of course able to get rid of accumulated filth by throwing off their leaves in autumn. Other deciduous trees that do well are English and Siberian Elms, Sycamore, Ash, Thorns, Poplars of sorts, Laburnums, Lilacs and various other subjects of that character, than which few are more beautiful in any country, at their respective seasons of leafing and flowering. Concerning Rhododendrons, it is instructive as well as interesting to note that varieties of the Pontic type are quite useless under the conditions prevailing here. On the other hand, *Rhododendron Cunningham's White* and hybrids give entire satisfaction under the circumstances. *Azalea pontica*, *A. mollis* and its varieties also grow and flower well.

A flower show at Hanley is now one of the institutions that be, and though one of the youngest is one of the most successful in the country. It is held in the park, and naturally enough Mr. Kent is the hon. secretary. Groups of plants arranged for effect are a strong feature of nearly every provincial show nowadays, and they are strongly in evidence at Hanley, where the annual show will now be looked forward to as something to be attended by thousands of visitors. On the evening of the Thursday, the second day of the recent show, the park appeared to be completely packed with people, making the show a glorious success. The difficulty that cropped up at the last Temple Show, and at most other shows, when the tents are being cleared of their contents, was entirely circumvented at Hanley by the genius

of its secretary. To prevent confusion and pilfering the tents were entirely cleared at 8 p.m., and only exhibitors and their assistants, who wore a certain badge, were re-admitted to clear away the exhibits. No one but those in authority knew what the colour of the badge was to be till late in the afternoon of the closing day, so that the whole scheme was an entire success, and a well-known exhibitor stated that he never before packed up his plants with such comfort and despatch. Other societies might copy the plan to their advantage. The organisation, arrangement and the success of the show was mainly due to the energy and abilities of Mr. Joseph Kent, the superintendent of the park, and hon. secretary, whose portrait we have much pleasure in placing before our readers.

BLACKBERRIES.

Well, what about them? Are they worth growing? Many who have tried them will say no, in a most unhesitating manner, but not all. The introduction of the American varieties induced many to take up their culture, who met with very varying degrees of success, and in many instances their culture has been abandoned as useless. Not so, however, a friend of mine who went in for Blackberry growing, and who has a covered wire archway some fifty yards in length by six in width, from which he gathers fruit by the bushel, much finer and more luscious than that grown out on a neighbouring common. Though just the same variety, cultivation makes all the difference. He commenced with the best American varieties, growing some of our English ones with them, but has at length discarded all the Americans, finding that our humble Bramble gives far better results under the same conditions. This method of culture is most simple. After fruiting, the old canes are cut down to the ground. Meanwhile the current year's growth is lightly looped up just to keep it out of the way, and tied into position after those which have fruited are cut out. If some one would only take to raising seedlings from cultivated plants, selecting the best for a few years, we might see some grand results follow.—*W. B. G.*

PLANTS RECENTLY CERTIFICATED.

THE awards mentioned hereunder were made by the Royal Horticultural Society on the 12th inst.

Orchid Committee.

ONCIDIUM ALBO-VERrucosum.—The sepals of this *Oncidium* are linear, keeled and yellow. The petals are oblong and yellow, transversely blotched with brown at the base. The three-lobed lip is yellow, faintly tinted with brown on the lower portion; the terminal lobe is transverse and reniform. Botanical Certificate. Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking.

Floral Committee.

ASPLENIUM ORNATUM.—This may be described as a handsomely cut, garden form of *A. Baptisti*. The fronds are usually about 1 ft. long and of an intense dark green colour. They are bipinnate at the base and pinnate upwards with a long, terminal, deeply toothed segment. The pinnae, but particularly the lowermost ones are again pinnate, and they are further cut into unusually long, comb-like, linear, teeth, which gives to the plant its characteristic and graceful appearance. The fronds are tufted, arching and handsome. First-class Certificate. Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton.

PICEA PUNGENS GLAUCA PENDULA.—In this we have a pendulous variety of the Colorado Blue Spruce, and a distinct and handsome thing it is. The habit of the plant is very much like that of *Sequoia gigantea pendula*. First-class Certificate. A tree, 9 ft. high was exhibited by Messrs. Koster & Co., Hollandia Nurseries, Boskoop, Holland.

POLYSTICHUM MARSHALLII.—This is a supposed natural hybrid between *P. angulare* and *P. aculeatum*. The fronds are bipinnate, $3\frac{1}{2}$ ft. long, sharply ascending, and then spreading towards the top. The pinnules are deeply serrate and terminate in long, bristly points. The lowest pinnule on the posterior side of each of the pinnae projects forward so that in looking down the frond there is a prominent line of them on either side of the rachis,

as if the pinnae were showing a tendency to become cruciate. Award of Merit. William Marshall, Esq., Auchinraith, Bexley.

CARNATION NELL GWYNNE (Martin R. Smith).—The flowers of this Malmaison variety are of moderate size, pure white, moderately fragrant, and having the petals slightly toothed at the edges. Its value lies in its being a pure white Malmaison variety. Award of Merit. Mr. James Douglas, Edenside, Great Bookham, Surrey.

ROSE EDITH TURNER.—This hybrid perpetual Rose is conical in the centre, firm, and of beautiful shape generally. The central portion is of a delicate silvery-pink, with the petals revolute at the edges, but the outer ones are much more rolled back, and of a pale blush. Award of Merit. Mr. C. Turner, Slough.

CARNATION SUNDRIDGE.—Here we have a tree variety about 3 ft. high, with narrow, glaucous leaves, and large flowers of fine form, and brilliant scarlet. The petals are slightly involute at the edges. Award of Merit. Mr. F. Tapper, gardener to Lady Scott, Sundridge Park, Bromley, Kent.

ROSE PERLE DES ROUGES.—The flowers of this Polyantha variety are produced in great abundance, in flat or corymbose trusses, and are crimson and of moderate size. Having considerable resemblance to the old monthly Rose, this has evidently some affinity with *Rosa indica*, as well as *R. multiflora*. Award of Merit. Messrs. Wm. Paul & Son, Waltham Cross.

CARNATION MRS. MARTIN SMITH (M. R. Smith).—The soft, silvery-rose flowers of this Malmaison Carnation are of great size and handsome appearance. They are very fragrant, and the petals are much involute at the edges. The leaves are broad and glaucous. Award of Merit. Martin R. Smith, Esq. (gardener, Mr. C. Blick), The Warren, Hayes, Kent.

CARNATION CALYPSO (M. R. Smith).—Here again the flowers are of immense size, but the petals are more erect, and not involute at the edges. They are of a charming silvery-blush, and deliciously fragrant. Award of Merit. Martin R. Smith, Esq.

SWEET PEA AURORA.—This is one of the most handsome of the striped varieties, being attractively streaked and marbled with rose on a white ground. Award of Merit. Mr. F. G. Foster, F.N.C.S., Brockhampton Nurseries, Havant, Hants.

SWEET PEA GOLDEN GATE.—The name has no reference to the colour, but is stated to take its rise from the way the wings unfold. The standard is mauve, shaded with deep purple on the back. The wings are paler mauve, and tinted violet at the edges. Award of Merit. Mr. F. G. Foster.

Fruit and Vegetable Committee.

STRAWBERRY VEITCH'S PROLIFIC.—This new variety was derived from Empress of India, crossed with the pollen of British Queen. The fruits are conical or occasionally slightly compressed, of medium size, bright scarlet, and possessing the aromatic and delicious flavour of British Queen, with the colour of the fruits of the mother plant. Some plants consisting of last year's runners, and a great heap of the gathered trusses, showed how prolific a bearer the variety is. First-Class Certificate. Messrs. Veitch & Sons, Ltd., Chelsea.

CUCUMBER SENSATION.—The fruits of this variety are about 18 in. long, straight as a gun-barrel, and but slightly tapered to each end. They are smooth or faintly ridged, and of a rich dark green colour. First-class Certificate. Mr. S. Mortimer, Rowledge, Farnham, Surrey.

EDIBLE PEAS.

A LARGE and interested audience assembled on the 12th inst. to hear Mr. N. N. Sherwood's lecture on "Edible Peas." Mr. A. W. Sutton, of Reading, occupied the chair. Mr. Sherwood treated his subject under two heads, the first relating to the ancient history of the garden Pea, and the second dealing with the development of the culinary Pea within the last fifty years. Under the first head Mr. Sherwood had collected a mass of interesting detail such as is only to be gleaned from old and rare books, and the information thus got together could only have been collected by much careful and painstaking research.

The garden Pea, said the lecturer, was of very ancient origin, and probably its true ancestor was not now in existence, nor was its native country

known. Evidences of its existence had been found in the remains of the Lake Dwellers in Switzerland, in the Bronze Age, and also in the relics of the stone age. There were no records of its existence among the early Egyptians and Hebrews, unless, indeed, the Lentils eaten by various biblical celebrities were Peas, but the plant was cultivated in India at a very early age, and is mentioned in the Sanscrit under various names. It was introduced into China at an early date, and was afterwards known there as the Mahomet Pea. With the migration of Aryan races westward the Pea was supposed to have been introduced to Europe. *Pisum sativum* was, according to A. de Candolle, cultivated by the Greeks 300 or 400 years B.C. Pliny mentioned in his writings that the Greeks sowed their Peas in November, but that the Romans did not sow until spring.

The word *Pisum* was taken from Pisa, near Olympia. Gerarde in 1597 spoke of "Peasen," and the word subsequently became Pease. "Peasen" were said to be one of the chief crops in England in 1066, and between the years 1403 and 1538 there were numerous entries in the accounts belonging to old monastic establishments for pottage or porridge Peas. They afterwards became a delicacy, and were regarded as dainties for ladies, for in the reign of Charles II. a guinea a pottle was paid on October 28th for Peas. Gerarde enumerated diverse sorts of shelling and edible podded or sugar Peas, and gave a good deal of information about their cultivation. In the *Historie of Plants* four photographs of the forms cultivated were given. They comprised representations of *P. majus*, *P. minus*, *P. umbellatum* and *P. excorticatum*. These Mr. Sherwood had obtained permission from the authorities at the British Museum to copy, and some excellent photographs of these forms were handed round.

Proceeding, the lecturer said that in 1629, Parkinson, in his *Paradisus Terrestris*, enumerated several of the following varieties of Peas:—Runcifal, Spotted, Gray, Sugar and the Fulham or Early French Pea. Gardeners at that time were, judging from the accounts given, very eager to sow early, but they did not always succeed in getting a crop. *Miller's Gardeners' Dictionary*, in 1737, mentioned seventeen varieties of Peas. The varieties with white flowers and bluish seeds were supposed to come from *P. sativum*, and those with coloured flowers and dun, grey or speckled seeds from *P. arvense*, the Field Pea, which had been regarded by botanists as a variety of *P. sativum*.

Passing to the recent development of the garden Pea, Mr. Sherwood remarked that all the old varieties were round-seeded. The introduction of the wrinkled type, for which they were indebted to Mr. T. A. Knight, of Elton, near Ludlow, some time president of the Royal Horticultural Society of London, marked a great step in advance. From Knight's Tall Wrinkled Pea, afterwards sent out as British Queen, came a numerous family of wrinkled varieties. In 1850 Dr. McLean took up systematic cross fertilisation of the Pea, and the first fruits of his labours appeared in 1859. Little Gem was the first dwarf wrinkled Pea ever sent out. Its height was from 15 in. to 20 in. Mr. Laxton, Mr. Henry Eckford, of Wem, Shropshire, Mr. Culverwell, and Messrs. Sutton & Sons, of Reading, had all done much to improve the Pea, and as the result they had numbers of grand varieties far superior to anything in existence before.

In the year 1877-78 there were offered in nurserymen's catalogues 97 varieties of Peas. In 1897-98 only 46 of these varieties were still offered, although the number of varieties was constantly increasing, for there were now 625 names. These he could safely aver might be easily reduced to a quarter of that number. During the present year his own house (Messrs. Hurst & Son) were growing 700 rows of Peas at the trial grounds in Essex for the sake of comparison.

The chief supplies of Peas for the London markets came from Surrey, Middlesex and Essex, but large quantities were grown at Selby, in Yorkshire, and in the Evesham district.

The lecturer then went on to speak of the great vigilance that was required to keep stocks pure and true to name. Roguing and selection had to be carried on year after year with thoroughness and consistency. He also gave a practical description of the methods that should be adopted in cross-fertilising. The flowers on the plant selected as the seed

parent had to be operated on some time before they were open, and the anthers removed before they shed their pollen. One pod of six seeds would produce a number of varieties from which selections had to be made; indeed, both wrinkled and round-seeded sorts had been obtained from the same pod. The selections made in the fourth or fifth year generally gave the best results.

Mr. Sherwood had on view a number of baskets of Peas, both green pods and ripe seeds of each being shown for purposes of illustration. He showed by reference to these how the work of improvement gradually went on, each variety being an improvement upon those preceding it. He concluded by saying that probably the garden Pea had made greater progress than any other vegetable during the 60 years of the Queen's reign.

At the close of the lecture, Mr. H. J. Veitch, Mr. A. Dean, Mr. H. Eckford and the chairman commented upon the subject of the lecture, and all agreed that full justice had been done to it by Mr. Sherwood.

Kitchen Garden Calendar.

THE hot weather of the last few weeks has brought many of the garden crops to a standstill, particularly where water is scarce. Peas, for example, were very late this year and now the hot, dry weather is playing sad havoc with main crop varieties. Where water can be supplied, this should be given without stint, for if the plants are once allowed to flag mildew soon sets in, which carries off the plants very quickly. The advantage of their sowing, will, in such weather, be very apparent, particularly where the ground is not in the best of heart.

At this time of the year, when the weather is hot and dry evaporation is very great, therefore, mere drippings of water are useless, nothing less than a thorough soaking will suffice to keep plants in the best of health. Some vegetables, however, require more water than others, the softer and larger foliaged kinds usually take the most. Cauliflower, for example, during such weather not only requires plenty of moisture but there must be added such acids that will build up the plant. Lime and sulphuric acid are two of these, therefore, to keep them in a flourishing condition during such weather these constituents must be present to be taken up. Watering is often so carelessly done, that instead of the plants benefitting thereby, much injury is effected. In the case of small plants, instead of putting on the water through a rough rose watering pot use one with smaller holes. The same amount of water will certainly not be used, but if a second dose be given it will go deeper into the soil. Has it never been noticed that the water penetrates further after a gentle shower than during a heavy storm? In the first case the water soaks in as it falls, while in the latter much of it runs away on to places not requiring to be watered.

There is always much difficulty in growing first-class vegetables where there is only a scanty supply of water, as it is next to impossible during hot weather to keep them growing if sufficient moisture cannot be afforded. Much, however, may be done by husbanding the moisture, as it were, by keeping the surface loose and fine. Ground that is left rough will dry much faster than if broken down. It stands to reason that late digging does much to deprive the soil of some moisture. Mulching again should be resorted to in good time. Many of the crops which now lack nourishment might have been kept in a healthy condition with far less labour had this been attended to in the early part of the summer.

As the land is cleared of the crops others should be got in whenever the weather is favourable. It is useless to plant while the ground is in a parched condition, or has not been properly prepared, therefore, as the crops are cleared away break up the clods and render the ground ready for the next. Do not neglect such things as Lettuce, Endive, Radishes and other salads, as these are now much in request; and to have them in the finest possible condition every attention must be paid to planting out and watering. In all cases take time by the forelock, as it is far better to have a surplus than a dearth. Cooks, as a rule, are extravagant creatures, and unless their wants are kept well supplied there is sure to be some unpleasantness.—*Kitchen Gardener*.

HINTS FOR AMATEURS.

THE month of July is one of the most important of all the months of the year to the fruit grower, for at this season of the year hardy fruit trees are calling for special attention, upon the proper performance of which will be very largely determined their future career. Experience has shown most conclusively that the summer pruning or pinching cannot be neglected with impunity, and that if it is carelessly or ignorantly performed the trees are bound to suffer. The whole object of a fruit-tree's existence is to produce fruit of good quality and in abundance. Everything else is subordinate to this, although the cultivator soon finds out that in the case of wall trees closely trained according to a particular system there is a very close connection between symmetry of shape and fruitfulness.

Different trees must, of course, be treated in different ways, but in every case the summer pruning or pinching is directed towards assisting the trees to develop fruit buds, by turning their energies into the proper channel and preventing the waste of material that would otherwise ensue were this restraining and directing influence not brought to bear. Besides this husbanding of the tree's resources another advantage accrues from timely pruning, viz., that the removal of superfluous branches and portions of branches lets in the light to all parts of the tree, and firmer, better ripened, wood is forthcoming.

Cordon Pears.—The cordon system of training Pears is a very popular and successful one, and has, moreover, given rise to a number of styles, all of which are to be recommended according to what is required. Thus we have single cordons, in which the plant is confined to a single stem which is allowed to lengthen as it lists, and which may be trained either vertically or at some angle to the ground, usually from 45° to 60°. Then again we have the multiple cordon, in which each tree has several branches, all of which, however, are looked after in exactly the same way as the single cordon. These, too, may be either trained vertically or at an angle. The fruit is borne upon the spurs, which clothe these main branches along their whole length, and in order to get fruit we must endeavour to induce the trees to develop blossom or fruit buds upon all the spurs. The lateral growths will now need to be stopped, say between the fifth and sixth leaves. Very weak shoots may be pinched closer, but it is not advisable to pinch or cut back the strong growths too closely, for to do so would cause the now dormant buds to break into growth this season, and produce a lot of whip-like shoots, and this is not at all what is wanted. This is the usual system of pinching. Another plan that is both safe and effective is to pinch all the strongest shoots at the fifth leaf rather earlier in the season, say about the end of June in an ordinary year, leaving all the weaker ones untouched; then in October to follow this up by cutting all the shoots down to three buds. The only disadvantage attaching to this method is that the trees look rather untidy during the summer months.

Horizontally Trained and Espalier Pears.—There is no difference in the treatment required by these to that recommended for the cordons. The trees are really multifold cordons with their branches trained horizontally. Allow the leaders of main branches to lengthen as they will. The laterals towards the end of the branches should be pinched rather early in the season, and before any of the others have been touched. With espaliers a good deal of care is necessary. The laterals on the upper main boughs should be pinched some days before those on the lower ones, for the lower branches have always a tendency to be weak, as the sap rushes in its greatest force to the highest point. If the growths on the lower boughs are observed to be very weak allow them to remain as they are for a few weeks. They will be all the better without the check of pinching. By following this plan the balance of strength between the main branches will be preserved, and the cultivator will not have to deplore undue strength in one and undue weakness in another.

Pyramidal Pears.—Here again the top boughs have a tendency to appropriate the sap that should go to the nourishment of the lower ones, and thus the practice of stopping the upper laterals some

days before the lower ones should be carried out. Pinch back to the fourth or fifth leaf according to the strength of the shoot, but leave the leader of each branch at its full length for the present.

Horizontally Trained Apples.—Here also the fruit is borne upon spurs, and summer pinching to the fourth or fifth leaf must be practised in order to induce the development of fruit instead of simply wood bulbs at the bases of these shoots.

Cup-shaped Apples.—This system of training has been exceedingly popular, and the old-fashioned kitchen garden had usually a row of cup-shaped Apple trees all round the sides of the walks. In this case also the aim is to have fruitful spurs along the whole length of the branches. Stop all the growths upon these spurs at the fourth or fifth leaf, but leave the leader of each branch at its full length to be dealt with at the winter pruning. Trees of this sort will not infrequently make a great deal of strong growth in their leaders, but there is little to fear from this as far as the welfare of the fruiting spurs goes.

Dwarf Bush and Pyramid Apples on the Paradise stock are invaluable for small gardens, inasmuch as they commence to fruit while they are yet small, and the trees can be easily looked after without using a step-ladder. The object with these is to keep the centre of the tree from becoming crowded with sucker-like shoots and thus to admit the light and air to all parts of it. Any thinning of centre shoots that may be necessary should therefore be looked after, but those shoots that need stopping should not be cut back at all closely, for these dwarf trees are not inclined to make nearly such rank growth as others on the Crab stock. After the requisite thinning has been done the other shoots may be left at their full length for the present, and shortened back to half their length in October.

Morello Cherries.—These are distinct from the ordinary sweet Cherry in their manner of growth and bearing, for they produce their fruit on wood of the previous season's growth. Hence it will be necessary to lay in at full length a sufficiency of shoots to keep up next year's fruit supply. In "laying," or tying in, take care that the growths are not too crowded. The thin and weak ones may be cut clean out if neatness is desired, or they may be allowed to remain to keep the nets pushed away from the wall, and thus prevent the birds from getting at the fruit. After the fruit is gathered the old wood, as far as it is not wanted to carry the young, may be cut out in order to give more room, but this will not require attention until at least the middle of August.

Sweet Cherries on Walls.—Here the fruit is borne on spurs from fruit buds formed the previous summer. Accordingly, the usual pinching must be resorted to in order to induce the formation of these buds. The leaders of the main branches should not be shortened, but left at their full length.

Plums.—On wall trees Plums generally send out a lot of breastwood—probably the extra heat and shelter they obtain from the wall is the cause of this—but it is dangerous to pinch too early or too closely, for the now dormant buds at the base are very quick to answer to any stimulus, and would soon break into growth if supplied too freely with sap. The fruit is borne on spurs on growth from one to three years of age. The general instructions given for spur pruning will apply here, with the caution above given not to pinch too close or too early.

Peaches and Nectarines.—With these, the chief part of the pruning should have been done in Spring with the finger and thumb, only instead of calling it pruning then we called it disbudding. From the buds then selected to be left strong young shoots have sprung, and these must be laid in to form succession shoots for bearing next year. A few of them may need to be cut out, but this will depend upon the state of the tree, whether crowded or not. It must therefore be left to the operator's own discretion, with the caution to avoid crowding as far as is possible. More room will, of course, be given these succession shoots when the gathering of the fruit renders it possible to take out many of the shoots bearing it.—*Rex.*

The Common Bindweed, *Convolvulus arvensis*, also a native of this country, is a great pest in Canadian farms and gardens. It has been discovered that common salt is the best thing for killing it.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Raspberries.—*C. P.*: You might increase the size of the fruit to some extent by watering with liquid farmyard manure as you suggest, but this would only be temporary relief. The plants are evidently run out and the ground poor and exhausted. Next autumn, therefore, we should strongly advise you to root the whole lot out, and make a plantation in another part of the garden, when special attention may be given to the preparation of the soil. If you decide to do this write later on and we will give you what hints you may need. We may say at once, however, that it would be advisable to get fresh plants from the nurseryman, and it would probably be mere waste of time troubling to replant pieces of the old stools.

Aspidistra lurida.—*Craft*: We should scarcely term the plant hardy, although it will pass comparatively unhurt through mild winters out-of-doors in the south of England. It is true the constitution of the plant is vigorous and enables it to withstand a fairly low temperature as well as conditions of aridity and drought that are almost equally fatal with most other plants, but this does not render it "hardy," as gardeners understand the term. The variegated form is a little more tender than the type, but for all practical purposes is fully as easy to grow as the green one.

Tree Lupine.—*Carolus*: The Tree Lupine, *Lupinus arboreus*, although perhaps not seen so frequently in gardens as it ought to be, is not at all a rare plant. It does very well in the herbaceous border, or in a shrubbery, but likes a light rich soil, and a sheltered position. Its habit is that of a dense bush with long branches that sweep the ground, whilst the racemes of flower stand up all over in very conspicuous fashion. The best method of propagation is by seed, which may be obtained at a very reasonable price. The seed should be sown in Spring, either out-of-doors in the position in which the plants are to remain, or in pots or pans placed in a cold frame. Cuttings will root if they are taken off with a small heel, inserted in very sandy soil, placed in a frame and covered with a bell glass, but seed-sowing is the much easier way.

Hanging Basket for Front Door.—*Geo. Henson*: We think you cannot do better than go in for one of the fine varieties of Ivy-leaf Pelargonium for your hanging basket. You will find Souvenir de Charles Turner one of the best varieties for your purpose. The plant is naturally of pendant habit, and the trusses of deep pink flowers are large and showy. For a basket, one of the ordinary wire ones to be met with at oil shops, will suit well enough if you must have a basket. It should be lined with moss to keep the soil from being washed through during watering. If there is any difficulty in getting a basket to suit why not suspend an ordinary pot? It would be even less trouble.

Azaleas.—*S. L. C.*: If the plants are making growth freely we should keep them under glass for another fortnight, when they may be put out-of-doors to harden and mature their growth.

Fuchsia not Flowering.—*Fuchsia*: Probably your Fuchsias are of some nearly worthless variety that is very shy in flowering. Plants picked up at the door at a penny each are not to be trusted. We assume the plants are yet small and weak. They may flower later on in the summer.

Herbaceous Calceolarias.—*C. P.*: It is not too late to sow seed of herbaceous Calceolarias but you should not delay a day longer in doing it. Do not put the seed pan into heat; a cold frame will be the best place for it.

Peaches.—*C. P.*: The lateral growths of Peaches should be pinched, and not allowed to run on. The dropping of the fruits that often and in fact usually takes places to some extent when the stones are being formed in the fruits is often due to imperfect fertill-

sation of the flower. Irritation of the stigmatic surface of the flower is occasionally sufficient to cause the fruit to swell to some extent, but when the stones should be formed the fruit is at a loss to proceed further and the tree shakes it off.

Bedding Calceolarias not Flowering—*Why*.: The position you have given your plants is not a good one. It is too hot and dry, whereas Calceolarias love a cool and shaded spot, although it should not be overhung with trees.

Sweet Peas.—*Enquirer*: The formation of seed pods will undoubtedly lessen the production of flowers. You must either sacrifice the seed or a great part of the flower crop

CLIVIA MINIATA SUPERBA.

COMPARATIVELY a few years ago this richly coloured variety was the best of the genus in gardens; but notwithstanding the large number of fine varieties, bearing massive flowers, that have been raised and put into commerce since then, the old favourite still finds many cultivators and admirers. The size and vigour of the leaves are fairly moderate, and the bright orange-scarlet flowers are produced in great profusion upon well grown plants. The only respect in which it differs from the best of modern types is in the relative width of the segments, which do not overlap one another owing to their narrowness, but the brightness of their colour and freedom of flowering amply compensate the grower for his careful, cultural attention. The accompanying illustration shows a specimen which has been grown to splendid proportions by Mr. R. W. Saunders, gardener to J. Leadbetter, Esq., Lismore, Broughty Ferry, N.B., as will be seen by the number of trusses of bloom which the plant carries. The plant was raised from a cutting about five or six years ago, so that the number of crowns which it possesses is an indication of the kindly cultural treatment to which it has been subjected during that short period by Mr. Saunders, who is also a successful grower of other members of the same family, including *Eucharis grandiflorum*, and *Pancreatium fragrans*, of which we measured bulbs, 3 in. to 4 in. in diameter. The *Clivia* carried twenty trusses of bloom in 1897, and the photograph was taken this year.

FLOWERING SHRUBS IN SEASON.

PHILADELPHUS LEMOINEI (hybrid) is a charming bush when in full bloom. The flowers are pure white, delightfully fragrant, and last a good time on the plants. The scent is neither so overpowering as the common Mock Orange (*P. coronarius*) nor is the plant such a strong grower, and it is more fitting for mixed beds.

P. GRANDIFLORUS is another good species now expanding its flowers. It is of the purest white, and sweetly scented. The growth is more after the style of *P. coronarius*, so should be planted well back, and given plenty of room. The Mock Oranges require pruning annually after flowering, especially the strong-growing kinds; the first-named species merely requires the strongest shoots pinched to keep the plants symmetrical.

ESCALLONIA PHILIPPIANA is another excellent shrub, now in flower, of the purest white, and the fragrance it emits is not unlike the Hawthorn. The foliage is very much smaller than in the other species.

LEPTOSPERMUM BACCATUM, so named here, but I think it must be *L. laevigatum*, is a pretty little white-flowering shrub. We have it in the open as well as on the wall, and in both positions is flowering well this year. On the bush in the open could be cut pieces from 4 ft. to 5 ft. long, laden with small, tiny blossoms, not at all unlike the *Escallonia* just mentioned. It is a shrub rarely met with now.

LESPEDEZA BICOLOR, otherwise known as *Desmodium penduliflorum*, is a pretty little pea-shaped flower, purplish in colour, not very showy, still pretty, and the foliage is finely cut, not unlike the *Acacia*, and closes up in the evening similar to the sensitive plant.

CYTISUS CAPITATA is another useful flowering shrub for the month of July. The foliage is good,

and the flowers yellow. *Potentilla fruticosa*, too, is very pretty, with yellow flowers of cup shape. *Jasminum revolutum*, with yellow flowers, sweetly scented, does well in the open in this part. It also makes a good climber.

OLEARIA STELLULATA is a charming little bush with pure white flowers, far in advance of *O. Haastii*. The former is planted near the dark flowered *Weigela floribunda* or *W. Stelzneri*, and has been greatly admired. These have just passed out of flower, and were at their best the third week in June.

Then there are several of the bush-growing Rock Roses or Gum Cistus, some of them most handsome and distinct, and their many colours of the richest. Most of them are just now at their best, but will continue to expand, more or less, flowers for several weeks yet. They thrive luxuriantly in our genial climate in almost any position, while in cold localities a southern aspect should be chosen. The majority of the species, especially the dwarf ones, revel on the rockery overhanging the stones; the varieties are numerous. I append a few that I consider good:—*Cistus Creticus*, purple petals, with yellow at the

gets badly nipped when severe frost occurs. The flowers are produced at the end of the branches in long, drooping racemes of white, thickly studded with purple, bracts not unlike a spike of *Medinilla magnifica* in shape, though not in colour. It is a most interesting plant, and not so often met with as it deserves.

Very soon the hardy Fuchsias, corallina and *Riccartoni* will be in full flower, as well as several kinds of *Hydrangea*, whose flowers will carry us well into the autumn. I could enumerate many more useful flowering shrubs, but am already afraid I have taken up too much of your valuable space; but before closing my remarks I would like to mention one other good thing in *Viburnum plicatum*, a beautiful white, ball-shaped flower, similar to *V. Opulus* (Guelder Rose), but far prettier. The plant attains to 8 ft. or 10 ft., and when well flowered is one mass of snowy whiteness. This was at its best about the middle of June.—*J. Mayne, Bickton, Devon.*

MELVILLE CASTLE IN JULY.

A RUN out from Edinburgh to Melville, the seat of



CLIVIA MINIATA SUPERBA.

base; an established plant of *C. crispus*, making a grand show, petal almost red; *C. ladaniferus* has white flowers of large size; *C. l. maculatus*, very similar, but petals marked at the base with dark velvet-like spots; *C. laurifolius*, a white flower with yellow spots at the base of the petals, is a charming flower, so taking in appearance. While all the varieties are more or less pretty, in yellow, purple, rose, red, chocolate, etc., no garden of any dimension should be without some of this genus.

STUARTIA VIRGINICA is another rather tall-growing shrub not often met with outside, but flowering with us just now, and well worthy a place where not too much frost is experienced. It should be given a sheltered nook where plenty of sun can reach it, and assist in ripening its wood. It bears a creamy-white, cup-shaped flower, with many stamens of a purple hue.

The double-flowered *Deutzia scabra* is very pretty just now in the background of the shrubbery border, and so is *Leycesteria formosa* in a like position. The latter requires plenty of room, as it is a strong grower, and should be planted in a fairly open position, or, I find, the growth made during the summer

Viscount Melville, is a very interesting as well as pleasing experience. Melville is a charming place at any season, but on a bright July day it is perfectly paradisaical. The valley of the Esk, in which it lies, affords one of the sweetest bits of idyllic seclusion to be found in Midlothian. Nature and man never conspired so successfully to improve the capabilities of any spot, is the involuntary impression borne in upon the mind as the eye surveys the scene from some wooded eminence like Nancie's Knowe.

A peep at the gardens suffices to show that Melville is still equal to its past reputation for excellent crops, both inside and out. The Peach and Nectarine houses present quite a phenomenal picture of which a carefully reared article of this kind can become. They are simply magnificent in size and finish. The same compliment might be paid to the vineries, with crops at all stages, late and early, bespeaking thorough knowledge of viticulture. There is, too, in another part of the range a magnificent crop of Apples and Pears in pots, a feature of Melville horticulture which deserves appreciative mention.

Passing out of the houses through the kitchen garden—prolific in healthy and heavy growth this

year, as usual—we take a glance at the flower garden. The Rhododendrons are slightly past their best, but there is still enough of gorgeous colour, beautifully blended, to charm the eye. They are skilfully mingled with other decorative shrubs, not to speak of the floral devices that intersperse the lovely lawn. Many of the beds contain collections of Roses just about to burst into bloom, and to take the place of the fading Rhododendrons with striking effects.

Passing onwards, the visitor is next led down a sloping avenue flanked with a blaze of Rhododendrons to the Castle. There has been a good deal of thinning and replanting of valuable shrubs in accordance with Lord Melville's tasteful dispositions; and if the environs of the Castle were beautiful before, they have now been improved almost as near to perfection as it is possible to come. Next we have a stroll over the home farm, which shows excellent results under Mr. Mackinnon's enlightened management; and it is with sincere pleasure that we drink his lordship's health, as an enthusiastic agriculturist and horticulturist, before taking leave of his manager and bringing to a close a most delightful afternoon.—*Caledonia*.

HORTICULTURE IN ROTHERHAM.

THE WOODLANDS.

As a not unfitting commencement to my notes under this heading as promised, I will go through the items of interest as grown at the Woodlands, Doncaster Road, the residence of James Rhodes, Esq. Charmingly situated on the north side of this beautiful suburban road, and close to the town from whence is copiously emitted sulphur fumes to discount the efforts of the gardener, is the profession in question carried on to the credit of the aforesaid and the delight of his generous employer.

The main entrance abuts immediately on the road, and the greenhouses and mansion are gained by a charming asphalted drive, about 60 yards long, the banks being thickly bedded with healthy Aucubas, which lend to the entrance a sylvan beauty that is in happy contrast with the smoky town one has just left behind. Emerging from this drive one may discern the homely residential retreat, immediately on the left; whereas on the direct right hand are the glass structures that do duty under the guidance of the able gardener, Mr. Stocks, to disseminate amongst the horticultural world, such specimens of deft culture that have "many a time and oft" made the triumph of horticulture in some particular branch better than he found it. A well constructed vinery helps to make up the small total of the glass structures, and in it a week ago were to be seen some handsome Grapes, comprising such varieties as Black Hamburgh and Gros Colmar, with Muscat of Alexandria divided off at the further end.

Mr. Stocks cleared the decks at Sheffield show four years ago, being first in the open and the same in the district class. The length of the vinery is about 48 ft., and the Vines are exceedingly well done. But it is in the little Chrysanthemum world that comprises the district that Mr. Stocks has proved such a terror, having shown groups at the Rotherham Show seven years in succession, and not having once been beaten, as he says. First for five years, also for miscellaneous groups at the same show, in rotation, make up a very enviable record. The Chrysanthemums were standing out in their final pots at the time I called, and were the picture of health and good culture. Good wood and fine healthy foliage were the characteristics, the plants being well covered with leaves down to the pot.

About 400 plants were in evidence, and comprised such varieties as Mrs. Weeks, Edith Tabor, Phoebus, Mme. Carnot, Pride of Madford, M. Chénon de Léché, and, of course, many others old and up-to-date. For exhibition blooms the cuttings are taken in December and January, whilst to grow plants for grouping April and May are preferred. They are then pinched back and not cut, as Mr. Stocks prefers this method to produce stronger breaks.

The stove was full of healthy, richly-coloured, well grown Crotons, embracing such sorts as B. Rothschild, Warreni (best for grouping), Intimidalis, Improved Queen Victoria, &c; also a grand batch in 3 in. pots of Caladium argyrites that would tempt many a London nurseryman, fine specimen Cocos weddeliana, Chamaerops, Kentias, Seafortias, Phoenix, and other useful Palms without which any

aspirant for grouping honours would be placed at a discount. Dracanas, in many varieties, Orchids, including Cattleyas, Dendrobis, Coelogynes, Cypripediums, &c., go to make up an excellent stove collection well done. It was Mr. Stocks who raised the Empress of India Carnation, and he has now a large number of plants of a decided improvement on this variety.

In a large lean-to house adjacent were some extraordinary blooms of this variety, not showing any sign of bursting. In the same house were some luxuriant Roses in bloom, embracing Gloire de Dijon, Niphetos, W. A. Richardson, Grace Darling, and Perle des Jardins varieties.

Nor should the large conservatory escape some passing remarks, some fine red and white Lapagerias covering the roof, large Camellias, a fine strain of Celosias, equally good Calceolarias, a fine Eucalyptus flanking the entrance to the house, with an adjacent large plant of Genista fragrans in full bloom. Coleus and some up-to-date zonal Pelargoniums vied with each other to excel in what was a beautiful all-round display. Some Sweet Peas trained close to the glass had a happy effect. A glance at the bedding outside, which did not detract from Mr. Stocks' ability, and a few moments' gaze at the beautiful Clifton Park, of which a grand view is obtained from the drawing-room windows, and I closed my pocket book.

Mr. James Rhodes, the worthy employer, is a liberal contributor to many charities in the neighbourhood, having but recently, I am informed, topped the subscriptions towards the new wing for a children's ward at the Rotherham Hospital; but he is a gentleman who consistently hides such deeds under a bushel.

His enthusiastic and able gardener has been with him eleven years, his father having been gardener to the late Mr. H. J. Dixon, at Stumperlowe Hall, near Sheffield, nearly thirty years. To take second prize for the best cultivated cottage garden at fifteen years of age is the earliest triumph that Mr. Rhodes' gardener can boast of, this having occurred at the Hallamshire Show, at Ranmoor, Sheffield.—*Albert Upstone*.

MALMAISON CARNATIONS.

It has been my good fortune just recently to have had opportunity of visiting several establishments in the neighbourhood of the Metropolis, and whilst interested in many things that came under my notice, I gladly admit that progress characterises much that I saw. I think, however, the fact that struck me more than anything else during the past few weeks has been the immense quantities of these Carnations now cultivated; the general healthy condition of the plants, and the size and excellence of the flowers. The first lot that came under my notice was at the Round Oak, Englefield Green, where Mr. A. Sturt, gardener to N. L. Cohen, Esq., had a good portion of the greenhouse filled with them. These were remarkable for health and vigour, the blooms of large size, not flat as is sometimes the case, but globular and full, almost reminding one of blooms of Paeonies. The varieties here were Rangemore Pink, Churchwarden, Prime Minister, Sir Evelyn Wood, Princess May, and Mrs. Eva Hambro. The first named was the one chiefly grown; the others were much less in number, one or two kinds being represented by just a single plant. It is evident that at Round Oak their culture is understood.

Another wonderful lot that came under my notice was at Hatfield, where Mr. Norman has the best varieties represented by hundreds of strong and vigorous plants. The group, too, he exhibited at the Drill Hall recently was an evidence of the quality and quantity he had at home. Again, at the Richmond Show, the wonderful display of Messrs. W. Cutbush & Son, Highgate, was very meritorious, and much admired. Again, at Gunnersbury Park, Acton, Mr. G. Reynolds has a most extensive and meritorious display; whilst I think the house, perhaps, that took my fancy was that at Spring Grove House, Isleworth. Here Mr. Farr has a Carnation house, just 50 ft. long, with a stage on either side, the broadest one being at the back. Here some hundreds of plants were staged in the very pink of health and floriferousness. In straight running lines the flesh-coloured variety, and the lovely Princess of Wales were carried right the length of the house. Just standing on a slightly raised eminence, I could see

the whole at a glance, and a most charming sight it certainly was. Horace Trelawny is a variety also grown here; but however good some of the deep scarlets may prove, so far the pale flesh-colour and the deep rose seem to be the varieties chiefly grown.

The layering process has already commenced in some establishments. To propagate some hundreds of plants, in a few cases, thousands, is no mean addition to a gardener's labours. To keep them in health and free from disease, and present them during the summer in such grand form and quantity is surely evidence of skill and attention, such as few other things demand.—*Wilson*.

OSTERLEY PARK.

THIS fine estate is situated in West Middlesex, and is about equi-distant from the severely practical, not to say odoriferous, town of Brentford, and the utilitarian, but highly necessary institution at Hanwell, whose inmates are said to be in some way affected by the "Queen of the Night." Notwithstanding, however, the somewhat unfavourable position thereby created, it contains within itself the elements of a rustic life. It possesses fine trees, extensive lakes, gentle undulations, umbrageous glades, ornamental buildings, modern horticultural requisites, the peace and quietude of a certain isolation, a good gardener, and a noble proprietor. It is, in fact, an epitome of the country, so near to and yet so far from the modern Babylon, by reason of its undulations and diversified scenes, that the visitor is not quite sure of his location. It is, of course, quite independent of its neighbours, although it is in nowise exclusive of their welfare, the Earl and Countess of Jersey being noted for their kindness and consideration toward their poorer brethren. Here, during the summer months, not only do the *élite* of the land promenade its classic shades, comment on its sylvan beauties, or discuss its historic halls; but the poor and the ragged, also, are invited to witness its ways; to gambol, it may be, on the grass; to watch the rabbits run about; to hear the songs of birds; or to partake of the wholesome fare which is spread out for their enjoyment.

Thither, it was, a small but interested party of gardeners and amateurs from the Ealing Society went, by invitation, on the 30th ult. The evening was a very fine one, and the time of year such that the park, the gardens, and the vegetation, generally, looked at their very best. The mansion, too, is quite a study. It is a solid quadrangular structure of cheerful red brick and stone, with a tower at each angle; a spacious courtyard, which is approached by a magnificent flight of stone steps, surmounted by six huge columns of the same material, and which, it is said, was the result of a suggestion by Queen Elizabeth during a visit to Sir Thomas Gresham in 1573. Whatever our forefathers took in hand appears to have been done with spirit and vigour; no cost was spared to obtain strength and solidity—in fact, they appeared to fight against time; thus, it is, we are in possession of a goodly number of remarkable buildings of the present type.

The interior, we were given to understand, is elaborately fitted up, and the picture gallery contains some choice and rare productions. These things, however, like ancient trees, appear to be considered more in relation to their age than to their utility—links in the chain of time. So long ago as 1596, Norden, in his "Survey of Middlesex," quaintly writes:—"Osterley, the house now of the Lady Gresham, a faire and stately building of bricke, erected by Sir Thomas Gresham, knight, citizen, and marchant adventurer of London, and finished about anno 1577. It standeth in a parke by him also impaled, well wooded, and garnished with manie faire ponds, which affordeth not only fish and fowle, as swanes and other water-fowle, but also a great rise for milles," and so on, the description being applicable even at the present day. The Park comprises about 700 acres, and if the "ponds" were "faire" in Norden's day they are surely fairer in ours, inasmuch as they now contain many aquatic plants, such as Water Lilies, Amphibious Persicaria, Richardia Africana, etc.

The soil, as might be expected in so large an area, varies considerably; it is, however, generally of good quality, judging by the vigorous condition of the common and Portugal varieties of the Laurel, the Irish Yews, and other ornamental trees and shrubs.

The Portugal Laurels exhibited a robustness and beauty seldom seen, for they were literally smothered in blooms. A large bed of Paul's new Carmine Pillar Rose excited surprise, and advertised itself with flaunting flowers. These are of a pleasing colour, as the name implies, and Mr. Hawkes speaks favourably of their usefulness and value in a cut state. The flowers are large and single, and so are in demand by those who love nature unsophisticated so to speak, in place of nature with a modern touch of abnormality about her. Turner's Crimson Rambler is also done well here, and although not yet in bloom—the season being late—the buds are there in myriads and promise a fine effect. This Rose should prove a *via media* to those who love not single and yet are averse to double forms of the type and size of Paul Neron. But—whether single or double, mid-way or between exotic or British, the Rose must be queen. Turner's Rambler as seen here, is a rampant grower, and six large plants cover completely six separate trellises 12 ft. high and 4 ft. through. These had to be devised by Mr. Hawkes, of strong material, to resist the force of the wind which sometimes sweeps across the park in hurricanes. The uprights have each three prongs in trident fashion, firmly fixed in the ground, the upper portions being braced together by cross-pieces, which give the necessary strength and stability. It is needless to say that these Roses, when in bloom, are worth going a long way to see, and form a feature in the pleasure grounds of no mean order.

Herbaceous plants are likewise used with much effect in front of the shrubs and ornamental trees; and annuals, too, come in for a share of culture and attention; while the greensward is, just now, of the loveliest colour and character. The lawns, in fact, are most extensive, and in the best of texture, which circumstance reflects the greatest credit on all concerned. The lawn is an English institution; and where kept in perfect order, it cannot be superseded.

(To be continued.)

DYSON'S LANE NURSERIES.

IN a recent issue we mentioned some of the most noteworthy features of the magnificent collection of Ferns that Mr. H. B. May has got together at his establishment at Dyson's Lane, Upper Edmon-ton. Not only Ferns, however, but all sorts of plants for which the public has signified its appreciation are taken up, and most of them are cultivated on a very extensive scale. Mr. May's motto evidently is that "a thing that is worth doing at all is worth doing well," and the visitor to the nurseries cannot fail to be impressed with the painstaking thoroughness that is displayed in dealing with each class of plants. Perhaps one of the best instances of this thoroughness of system is that handsome winter-flowering Begonia, Gloire de Lorraine. Soon after it was brought out it was fixed upon by Mr. May as a good thing, and a grand stock of it was worked up. The superb specimens of it that made their appearance at the Drill Hall and other shows from the Dyson's Lane Nurseries must still be fresh in the minds of our readers who had the pleasure of seeing them. This Begonia undoubtedly owes not a little of its present popularity to these exhibits.

When dealing with the Ferns we spoke of the disposition and arrangement of the houses in blocks, with potting sheds attached to each block. This plan is followed not only for the houses devoted to Ferns, but also for the thousands of Palms, Crotons, Dracaenas and other foliage plants that are grown. There really seems no end to the houses, and yet everywhere neatness and order reigns, although the work of looking after the contents of even one of these long houses must be immense.

The collection of Crotons is one of the best in the country, and although there is nothing absolutely new to chronicle the rarer and finer varieties receive special attention. Golden Ring, Aigburth Gem, and Reidii are especially in demand, and good plants fetch a high price.

Dracaenas, too, are grown in large quantity, as their importance as decorative subjects would demand. Such forms as Lord Wolseley, Lindenii, Sidneyi, and Elegatissima find a ready sale, and include some of the most useful members of the genus. The distinct *D. sanderiana* is also in request, and when it is not suffered to become too leggy, but

is kept dwarf by continual propagation, it is a showy thing.

Aralia Veitchii, *A. gracillima*, and *A. elegantissima* occupy an important place amongst stove plants, and hence we were not surprised to find that Mr. May goes in for them heavily. Plants in all sizes were to be seen, from the lately grafted one just starting freely into growth to comparative veterans several feet in height.

In passing we may mention the pretty but comparatively uncommon *Alpinia vittata*, which was represented by some finely variegated plants.

Crossing over to the other side of the road to that on which the offices are situated, the visitor finds scores of houses filled with various subjects. Palms, of course, form a staple feature, and we found Kentias, Cocoses, Phoenixes, and Arecas in overwhelming numbers, and yet these legions have been called together in response to a demand. One can only ask where do all the Palms go? And what becomes of them that the demand goes on increasing thus, year by year?

Lapagerias, both red and white, are largely grown, upwards of a thousand layers being rooted each year.

Of Asparagus *A. tenuissimus* is perhaps the favourite, but *A. retroflexus*, *A. r. arboreus*, and *A. Sprengeri* all find a home. As a basket plant *A. Sprengeri* should have a great future before it, although it is at present much better known in the States than on this side of the herring pond.

Bedding plants of all descriptions, Bamboos, Carnations, Cyclamen, Coleuses, Gloxinias, and many other things which find favour with the public are each accorded a share of attention, and all are well done.

SOCIETIES.

WOODBIDGE FLOWER SHOW.—July 7th.

THIS show has attained the first place in the county for some years past; and the forty-seventh exhibition, which was held on Thursday, July 7th, far exceeded any previous year in exhibits and novelties in flowers, fruits, &c. One new feature was a class for decorated bicycles, which were greatly admired. The general arrangements were under the superintendence of Mr. John Andrews, the hon. secretary, to whom good praise is due. The town was beautifully decorated with bunting, as was also the Abbey grounds, where the full band of the York and Lancaster Regiment, under the command of Mr. E. W. Wood, gave great satisfaction with their performances.

The judging commenced about 11 o'clock, when the following gentlemen and ladies undertook the different tasks before them:—Roses, open, and cut flowers: Mr. J. Burrell, Cambridge; Rev. Page Roberts, Scole; and Rev. J. H. Pemberton, Havering. Amateurs: Mr. E. B. Cant and Mr. D. Prior, Colchester; and Mr. Ambrose, Cheshunt. Local amateurs, growing less than 1,000 plants: Mr. F. Cant, Colchester; Mr. O. G. Orpen, West Bergholt. Pot plants: Mr. J. Wright, of the *Journal of Horticulture*, and Mr. James Hudson, gardener to Mr. Leopold de Rothschild. Subscribers' classes: Miss Howey, Miss Pemberton, Miss G. Smith, Havering; Mr. J. H. Wrinch, Ipswich; and Rev. Page Roberts. Fruit: Mr. Allen, Gunton Park; Mr. J. Wright and Mr. J. Hudson. Cottagers' Classes: Mr. J. Fincham, Nacton. Allotments: Mr. A. Andrews, Campsey Ash.

The fruit was not so good or so large a class as usual, being a little too early for many things. The unique and most interesting feature of the whole show was a display of Water Lilies, in different varieties and colour, never before known in this class of plants. The specimens on view were grown in a pond in the garden of Mr. Leopold de Rothschild, at Gunnersbury Park, Acton, and brought to the show by his gardener, Mr. James Hudson. Some of them were very rare and scarce and could not be bought under twenty guineas a piece.

One large tent was devoted to Roses, which were declared by competent judges to have been superior to those shown at the Crystal Palace on the 2nd inst. In the open class for thirty-six varieties Messrs. D. Prior & Son stood first, and Mr. B. Cant, second. Great interest was manifested in the result of the judging of the open class for Teas. The prize was a cup, value twenty-five guineas, and won by Mr. B.

Cant, with a wonderfully fine display. Messrs. D. Prior & Son stood second. In the amateur classes the Rev. J. H. Pemberton won the cup for the third time, so it becomes his. A new exhibitor was the Right Hon. Lord Battersea, who won a third prize for bunches of garden Roses.

Several other tents contained herbaceous flowers, table decorations (which were a very large class), bouquets, baskets, and other flowers and fruits much too numerous to mention. Messrs. Fred. Smith & Co., of the Suffolk Seed Establishment, had a tent on the ground, in which they exhibited amongst many other things fifty varieties of Sweet Peas. In another tent, under the charge of Mr. R. Ennals, the Ichthemic Guano Co., Ipswich, had a good show of their largely used and Ichthemic Guano; and the handsome prize offered by the firm for produce grown by this fertiliser was won by Mr. Martin, gardener to Gen. Sir Richard T. Farren, Bealings.

In the evening a promenade concert and musical fête was held, the grounds being beautifully illuminated. A grand display of fireworks by Messrs. Brock brought a most successful day to a close.

WOLVERHAMPTON FLORAL FETE.

July 12th, 13th, and 14th.

For the past ten years the Wolverhampton Horticultural Society has enjoyed an unbroken run of successes in their series of Annual Floral Fêtes, and it is gratifying to note that this high standard of merit has been more than realised this year, for the show, which was opened on the 12th inst., was far ahead of anything that has gone before it. The West Park, Wolverhampton, presented a scene of great animation during the three days of the fête, the number of visitors being very great.

No fewer than six large tents were requisitioned to accommodate the exhibits, which all round were of high quality.

ROSES.—These are always a prime feature at Wolverhampton, and this occasion was no exception to the rule. Mr. B. R. Cant, of Colchester, had a brilliant win in the class for the seventy-two blooms, staging the fresh, bright flowers we expect to see from him. Catherine Mermet, Helen Keller, Mrs. W. J. Grant, Madame de Watteville, Golden Gate, and Countess were his strongest varieties. Amongst the three other competitors the second prize fell to the lot of Messrs. Harkness & Sons, Bedale, Yorks., and the third to Messrs. Frank Cant & Co., Braiswick Nursery, Colchester.

Messrs. Harkness & Sons scored first for the forty-eight blooms, distinct, Messrs. F. Cant & Co. being second, and Mr. B. R. Cant third. Mr. B. R. Cant obtained another first for three blooms each of eight distinct varieties, with capital samples of Mrs. John Laing, Ulrich Brunner, and Mrs. W. J. Grant. Messrs. Harkness & Sons were second, and Messrs. F. Cant & Co. third.

Messrs. J. Townsend & Son, Coventry, staged the winning stand of twenty-four blooms, distinct, Mr. J. Mattock, of Oxford, falling into the second place. Messrs. F. Cant & Co. led in the class for twelve varieties introduced during the last three years. Helen Keller, Countess of Caledon, Ellen Drew and Lawrence Allen were the most noteworthy varieties; Messrs. A. Dickson & Sons, were second; and Mr. B. R. Cant, third.

Messrs. J. Townsend & Son were first for twelve blooms of a dark Rose, with Gustave Piganeau; whilst Mr. B. R. Cant won a similar honour for twelve trusses of a light variety with Mrs. John Laing.

Messrs. Perkins & Sons, of Coventry, received first prize amongst the four competitors for a decorative exhibit of Roses.

PLANTS.—Mr. J. Cypher, of Cheltenham, was by far the most successful competitor in this section. In the leading class for sixteen specimens, he was an easy first with magnificent Palms and Crotons amongst the foliage subjects and *Phaenocoma prolifera Barnesii*, *Allamanda nobilis* and *Bougainvillea glabra* amongst the flowering element; Mr. W. Finch, of Coventry, was second; and Mr. Vause, of Leamington, third.

Mr. Cypher was also first for six stove and greenhouse flowering plants, eight exotic Orchids, six Palms, and six fine foliage plants, showing capital material in each case.

The groups arranged for effect were a most popular feature. For the one occupying 450 sq. ft. Mr. Cypher distanced all competitors with a magnificent exhibit, which must be regarded as one of the finest

efforts he has ever made. Not only were the plants composing the group good, but the arrangement was excellent.

The first prize for six stove and greenhouse plants shown by amateurs, went to Mr. H. Fewkes, gardener to T. Clayton, Esq.

MISCELLANEOUS CUT FLOWERS.—Mr. J. Cypher put another first to his credit in this section for a grand display of stove and greenhouse flowers, Orchids being a conspicuous part of his exhibit. For bouquets, Messrs. M. Jenkinson & Sons, Newcastle, Staffs., and Messrs. Perkins & Sons well sustained their reputation, being the most successful competitors.

The class for collections of cut hardy herbaceous flowers brought out some showy exhibits, that coming from Messrs. W. F. Gunn & Co., Sunderland, being accorded the place of honour. The second award was carried off by Messrs. Barr & Sons, King Street, Covent Garden.

Amongst the competition for floral dinner tables, one sent by Messrs. Jenkinson & Son, was the most meritorious. The Hawley Silver Challenge Cup, offered for a mixed exhibit of flowers and plants was won by Messrs. Dickson, Ltd., of Chester, who now claim ownership of this interesting trophy. A collection of cut blooms of varieties of *Nymphaea marliacea* was not the least meritorious part of the Chester firm's display.

FRUIT AND VEGETABLES.—Fruit, especially, was in capital condition. The premier collection of nine dishes was contributed by Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby. Black Hamburg and White Muscat Grapes, The Queen Pineapple, Apple Lady Sudeley, Strawberries, Peaches and Nectarines were all in the best of trim here.

Mr. Goodacre also won for four bunches of Grapes, showing Gros Maroc, Madresfield Court, Black Hamburg and Muscat Hamburg, all of them well ripened. Two bunches of Muscat Hamburg, shown by Mr. Goodacre, received first prize in the class for black Grapes; whilst a similar number of bunches of white Grapes were best shown by Mr. T. Jordan, The Gardens, Impney Hall, who had Muscat of Alexandria.

Mr. Bannerman, Blithefield Gardens, Rugeley, won for a dish of Peaches, showing grand samples of Royal George. Mr. Barnes, gardener to the Duke of Westminster, Eaton Hall, Chester, led for Nectarines with Elruge.

For the collection of vegetables, for which prizes were offered by Messrs. Sutton & Sons, of Reading, the Lady Theodora Guest, Blanford, was first; also for the collection in which Messrs. Webb & Sons, of Stourbridge, found the prizes.

NON-COMPETITIVE EXHIBITS.—These included contributions from a considerable number of eminent houses. Mr. Henry Eckford, of Wem, Shropshire, sent a grand lot of cut Sweet Peas. From Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., came a splendid lot of *Caladiums* and tuberous *Begonias*. Messrs. John Laing & Sons, of Forest Hill, staged some of their celebrated *Begonias*. Messrs. W. & J. Birkenhead, Sale, Manchester, had Ferns in variety; whilst cut flowers came from Mr. Henry Deverill, of Banbury; Messrs. Thompson & Co., of Birmingham; and Messrs. Hewett & Co., also of Birmingham.

READING HORTICULTURAL SHOW.—July 13th.

THE unfortunate weather which has for some years tracked the steps of the above society has, we are pleased to say, entirely disappeared, for the day of the show was one of the loveliest the summer has presented to the town this season.

The show in quality was quite equal to any ever seen in this centre of horticulture, the whole of the exhibits being of first-class order, and must have caused considerable trouble to the judges, the exhibits being so closely allied one to the other. One of the principle features was the magnificent groups exhibited by Miss Todd, Shirley, Southampton; and Mr. Alfred Palmer, of Easthorpe, Reading, both composed of lovely flowers and Ferns, and exquisitely arranged, the first and second prizes having been awarded to these two. The specimen Palms and Tree Ferns were very good and well furnished, some of the largest and best having been sent by Caversham Simonds, Esq., of Caversham.

A lovelier effect has seldom been produced than

that by the Roses here to-day, well-shaped, large and full. The season has evidently suited this lovely class of flowers. In the class for six Ferns, Mr. A. Palmer was again first with such sterling varieties as *Davallia mooreana*, *Davallia fijensis*, *Microlepia hirta cristata*, and a grand specimen of *Adiantum*, a seedling of his own raising, which is certainly one of the best of its class for exhibition purposes. We have never at any show seen a better collection of Sweet Peas than those exhibited here by Mr. J. G. Foster, Rockhampton Nurseries, Hants. The colours in this arrangement were beautifully blended and extremely well arranged.

Twelve grand specimen Fuchsias were exhibited by Mr. Bright, Whiteknights Park, Reading, and Major Bottiscombe, of Reading. The show would seem to have been arranged for the day at which they were at their best; but, at any rate, the growers of these are deserving of great praise. Mr. G. Phippen, the celebrated florist at Reading, arranged a charming group of designs in flowers of wreaths, crosses, lyres, hearts, and other lovely floral emblems, on a beautiful background of black velvet, draped with gold silk, which greatly assisted to produce the grand display of this charming group. In front were noticeable bouquets of Sweet Peas and *Scabiosa caucasica*, and a lovely bridal bouquet, the whole finished off with lovely exotics.

The vegetables and fruit were exceedingly good. The competitors were not so numerous in this class. A new feature was two pastoral plays by a theatrical company in the grounds.

IPSWICH.—July 13th.

The committee of the Ipswich Society have just cause for congratulation upon their summer show, held on Wednesday the 13th inst., in the Upper Arboretum in Christchurch Park. All previous records have been broken with regard to the number of entries, which exceeded by 122 those received on any previous occasion. The weather turned out fine, and the day was a most enjoyable one. A difference in the method of tent arrangement was effected, and instead of several scattered tents a large cruciform shaped marquee was provided. Music was discoursed at intervals throughout the day by the band of the Royal Engineers. The number of visitors was estimated at 4,000, and the total receipts at £104 15s. 6d.

Roses were particularly fine. The first prize in the open class for thirty-six blooms went to Messrs. D. Prior & Sons, of Colchester, who had a splendid lot, in which were especially commendable samples of such varieties as Helen Keller, White Lady, Margaret Dickson, Mrs. John Laing, and Duke of Edinburgh. The second award fell to the lot of Messrs. Frank Cant & Co., Braiswick Nursery, Colchester. Amongst the classes for Roses open to amateurs only the Rev. Foster-Melliard, Sproughton Rectory, Ipswich, scored a number of successes. He was first for the twenty-four blooms, and his stand included grand trusses of *Madame de Watteville*, *Her Majesty*, and *The Bride*. His blooms of *Catharine Mermet* also received first prize in their class, and his first prize stand of twelve Tea varieties was a still further exemplification of the reverend gentleman's Rose growing capabilities.

There were three exhibitors of groups of plants, Mr. R. C. Notcutt leading, with Messrs. Clover & Sons, second.

The cut hardy flowers were a specially attractive feature. Mr. C. Jacobi, Ipswich, scored a great success in the class for forty-eight bunches of herbaceous flowers in as many varieties. Mr. R. C. Notcutt occupied the second place.

In the local classes Mr. G. E. Moberley won for a light and graceful arrangement of Sweet Peas, in which many of Eckford's best varieties were to be seen. Mr. D. C. Warnes scored for a smaller group of herbaceous flowers.

The fruit shown was of uniform excellence and good finish. In this section Mr. W. Messenger, gardener to C. H. Berners, Esq., Wolverstone Park, Ipswich, greatly distinguished himself. He won many firsts, the most important being for the collection of six dishes of fruit, black Grapes, Peaches, Nectarines and black Cherries. Mr. A. Creet, gardener to Mrs. Skinner, The Chantry, Ipswich, staged the best white Grapes.

Mr. H. Rogers, Rendlesham Hall; Mr. T. W. Sanders, Lewisham; the Rev. Page Roberts; Mr. W. Allan, Gunton Park Gardens; Mr. J. Wallis,

Ormeil Park Gardens; Rev. H. A. Berners, Mr. F. Cant, and Mr. D. Prior officiated as judges.

THE DURHAM, NORTHUMBERLAND AND NEWCASTLE BOTANICAL AND HORTICULTURAL.—July 13th, 14th and 15th.

THE annual summer exhibition at Newcastle is one of the most important horticultural fixtures of the year, but on this occasion it received an additional importance, owing to the visit of a deputation from the Royal Horticultural Society of London, with which the Newcastle Society is affiliated. The deputation consisted of Sir Trevor Lawrence (president), Mr. Philip Crowley (treasurer), the Rev. W. Wilks, M.A. (secretary), and Messrs. C. Shea, A. Pearson, G. Paul, G. Anson Yeld, J. Wright, A. Turner and J. O'Brien. These gentlemen were entertained at luncheon at the conclusion of the judging, when Riley Lord, Esq., J.P., of Highfield Hall, Gosforth, presided, and Sir Trevor Lawrence gave thanks for the very hearty welcome accorded them by the people of Newcastle. He advised the Newcastle Society to stick to horticulture in their exhibitions, and assured them that it was only by so doing that the R.H.S. was to-day in such a strong position. Mr. C. E. Shea proposed prosperity to the Newcastle Society, and endorsed Sir Trevor's remarks and advice.

The show was favoured with real Queen's weather, an agreeable change from past years, when wind and rain have done their best to mar the success of the fixture. No fewer than 10,382 people passed through the turnstiles on the first day, the takings amounting to £558 plus £104 taken at the grandstand.

The exhibits, which came up to a high standard of excellence, were all accommodated in one huge marquee, a very colossus of canvas. The judges were Mr. James Douglas, Edenside, Great Bookham, Surrey; Mr. James Hudson, Gunnersbury House Gardens, Acton, Middlesex; Mr. Malcolm McIntyre, the Glen, Inverleithen, Peeblesshire; and Mr. George Paul, The Old Nurseries, Cheshunt, Herts.

PLANTS.—The first prize for a group of miscellaneous plants, set up for effect, was won by Mr. J. McIntyre, gardener to Mrs. Gurney Pease, Woodside, Darlington, whose exhibit was largely composed of foliage subjects, *Anthuriums*, *Crotons*, *Coleuses*, *Dracaenas* and *Caladiums* being especially good. The second award fell to the lot of Mr. J. Farquharson, gardener to R. O. Lamb, Esq., West Denton, Scotswood.

Mr. F. Nichols, gardener to the Marquis of Zetland, Upleatham, led for the half-dozen flowering plants, *Stephanotis floribunda* being his strongest subject. Mr. J. McIntyre led for six foliage plants, and three *Crotons*, while Mr. F. Nicholas scored another well-deserved point for six table plants in 6-in. pots.

ROSES.—Messrs. Harkness & Sons, of Bedale, added to their already numerous honours of this season by coming out an easy first for the seventy-two Roses in twenty-four distinct varieties, also first for four dozen distinct. The blooms were of even size and capital colouring throughout, Mrs. John Laing, Suzanne Marie Rodocanachi, Her Majesty, Horace Vernet, Fisher Holmes, Ulrich Brunner, Caroline Testout, Helen Keller, Marie Baumann, Mrs. Harkness, and Duke of Edinburgh being a few of the best samples. Messrs. R. Mack & Sons, Catterick, were second, and Messrs. D. and W. Croll, Dundee, third, in the latter class.

Yet another first went to Messrs. Harkness & Sons for twelve blooms, of equally as good quality as those staged in the larger and more important classes. Messrs. R. Mack & Sons were second here. The leading award for twelve blooms of one variety was well won by the Bedale firm with Mrs. John Laing.

CUT FLOWERS.—The class for twenty-four bunches of hardy herbaceous flowers brought out some splendid material. Messrs. J. Cocker & Sons, Aberdeen, took pride of place here with a handsome selection, in which *Delphiniums*, *Irises*, *Liliums*, and *Aquilegias* were remarkably fine. Messrs. Harkness & Sons were second. Messrs. J. Cocker & Sons scored again in the smaller class for eighteen bunches. The winning exhibit of forty-eight show Pansies, distinct, came from Mr. M. Campbell, High Blantyre, N.B. Messrs. A. Lister & Son won for twenty-four show

Pansies, distinct, and for twenty-four sprays of six blooms each of Violas.

Messrs. Perkins & Sons, of Coventry, were as usual very successful in the section for floral designs.

FRUIT was remarkably well shown, Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, had the best collection of eight dishes; Mr. J. McIndoe, gardener to Sir Joseph Pease, Bart., M.P., Hutton Hall, Guisborough, was second. Mr. Goodacre also won for the smaller collection of four dishes. Mr. McIndoe was first for two bunches of white, and Mr. Goodacre for two bunches of black Grapes, and also for Peaches.

VEGETABLES.—Mr. J. McIndoe staged a splendid collection of vegetables in both Messrs. Sutton & Sons', and Messrs. Webb & Sons' special classes, winning the first award in each case.

NON-COMPETITIVE EXHIBITS.—Messrs. Jas. Veitch & Sons, Ltd., Chelsea, had a magnificent display of miscellaneous plants, including Orchids and stove and greenhouse plants in variety. The exhibit occupied 500 sq. ft. Messrs. H. Cannell & Sons, Swanley, Kent, sent a handsome lot of Cannas. Messrs. William Paul & Son, Waltham Cross, had an extensive array of Roses. Mr. J. Forbes, of Hawick, had a grand lot of Phloxes and Pentstemons, of which he makes a speciality.

The miniature rockery erected by Messrs. J. Backhouse & Son, of York, was an exceedingly pretty feature, and was greatly admired by visitors. Messrs. Little and Ballantyne, of Carlisle, showed a handsome group of Palms, Crotons and other foliage plants, enlivened with Sweet Peas, also the new Holly Golden King. The cut hardy flowers sent by Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester, comprised Lilliums and Calochortuses in variety. Messrs. W. Yell & Co., of Hexham, had another charming collection of hardy flowers. Mr. S. Pye, of Caterall, Garstang, showed some grand Pansies and Violas, as did also Mr. A. Lister, of Rothesay.

Mr. Jas. Hudson showed a handsome lot of hardy Water Lilies, varieties of *Nymphaea marliacea*. Mr. Jas. Douglas showed some of his choice Carnations. A comprehensive group of Conifers and other ornamental shrubs was put up by Messrs. J. Robson & Sons, of Hexham. Messrs. Laing and Mather, of Kelso, sent Carnations, and Messrs. J. Cocker & Sons, Aberdeen, had a fine lot of Irises.

R.H.S. AWARDS.—The following awards were made by the deputation of the R.H.S. in addition to the prizes and awards given by the Newcastle society:—Gold Medal to Messrs. J. Veitch & Sons, Ltd.; Silver Gilt Flora Medals to Messrs. Wm. Paul & Son, J. Backhouse & Son, and J. Forbes; Silver Gilt Banksian Medal to Messrs. R. Wallace & Co.; Silver Flora Medal to Messrs. J. Cocker & Sons, H. Cannell & Sons, and Perkins & Sons; Silver Banksian Medals to Messrs. J. Hudson, A. Lister, Harkness & Sons, J. H. Goodacre, J. McIndoe, J. McIntyre, and S. Pye; and a Bronze Flora Medal to Messrs. Harkness & Sons.

NOTTS HORTICULTURAL AND BOTANICAL.—

July 14th.

LAST year the summer show of this influential society found accommodation after a number of unsettled years, in the Arboretum at Nottingham. This year the same privilege was accorded, and thanks to the admirable arrangements of the indefatigable hon. secretary, Mr. C. J. Mee, the enthusiastic support of the townspeople, and glorious weather, the fixture has been an unqualified success. The exhibits were about 200 strong, and with one or two minor exceptions were, in both number and quality, fully up to the standard of former occasions. Lord Henry Bentinck, M.P., performed the opening ceremony.

PLANTS.—In the open class for a group of plants covering 200 square feet, there were four competitors, the first prize going to Mr. Joseph Ward, gardener to Mr. T. H. Oakes, Riddings House, Alfreton, Derby, who had some richly coloured Crotons and *Dracaenas* in his exhibit. The second prize went to Mr. A. Wagg, gardener to S. Chanler, Esq., Ossington Hall, Newark, Notts. There were also four competitors for the smaller group occupying 100 square feet. Here Mr. R. J. Watters, gardener to Mrs. J. W. Leavers, The Park, was first, as he also was in

the class for six stove and greenhouse plants. Mr. E. H. Eccleston, gardener to J. T. Forman, Esq., J.P., Wilford House, was first for a fine flowering stove plant. Mr. J. Ward was second in this class, but scored an easy first for table plants.

ROSES.—There were six entries of twelve blooms, dissimilar, the first prize going to Mr. Lowe. Mr. J. Meller carried off the premier award for the decorative exhibit of Roses.

FRUIT.—In this section the competition was especially keen. Mr. A. Wagg won the first award and the Mayor's five guinea cup for the 6 ft. by 4 ft. table of fruit. He had handsome, excellent Figs, Peaches, Nectarines, Melons, Grapes and Pine-apples. The second award fell to Mr. J. Read, gardener to the Earl of Carnarvon, Bretby Park, Staffs. The collections of outdoor fruit were also good, Mr. J. Baker, of Bastford, being the most successful exhibitor.

Mr. J. Ward led for two bunches of Black Hamburg Grapes, showing large and well-finished samples. Mr. A. Wagg obtained similar honours for two bunches of Muscat of Alexandria Grapes, Mr. J. Read making a good second. Royal Sovereign Strawberry, shown by the City Asylum Committee, Mapperley, was first in the class for a dish of this popular fruit.

VEGETABLES were all up to the mark, with the exception of Potatos, which were much affected with scab. The first award in the most important class, that for twelve kinds, was well won by Mr. J. Read.

The judges were Messrs. A. Outram, W. Elphinstone, and A. Weeks for plants, groups, and cut flowers; Messrs. N. H. Pownall and A. Parr for vegetables; and Messrs. H. Merryweather, and W. English for fruit.

NATIONAL ROSE AT HALIFAX.—July 14th.

IT is now four years since the National Rose Society fixed its northern provincial show at Halifax, and its return to that town, under the auspices of the Satterhebble Rose Society, was warmly received by Rosarians, both local and at a distance. The event, as usual, came off in the grounds of Spring Hall, kindly lent by Mr. Clement Holdsworth for the occasion. The weather was fortunately bright and warm, and the attendance large, whilst competitors found a keen struggle awaiting them.

NURSERYMEN'S CLASSES.

GENERAL SECTION.—The first award for thirty-six blooms, distinct, which carries with it the nurserymen's Jubilee Challenge Trophy and a memorial gold medal, went to Messrs. Harkness & Sons, Bedale, Yorks. Mr. B. R. Cant, of Colchester, and Messrs. Frank Cant & Co., Braiswick Nursery, Colchester, were second and third respectively. Messrs. Harkness & Sons were first in the large class for seventy-two blooms, distinct, and for three blooms each of thirty-six varieties. Mr. B. R. Cant took second place in the former class, and Messrs. Alex. Dickson & Sons, Newtownards, Ireland, second in the latter.

Eighteen blooms, distinct, were best shown by Messrs. James Townsend & Sons, Worcester, Messrs. J. Burrell & Co., Howe House Nurseries, Cambridge, being second. Messrs. J. Townsend & Sons likewise staged the best lot of three blooms each of eighteen varieties, Messrs. G. Cooling & Sons, Bath, following in the second place.

TEAS AND NOISETTES.—Mr. Geo. Prince, of Oxford, staged the premier stand of eighteen blooms, distinct; Mr. B. R. Cant was second. Mr. J. Mattock, of Oxford, had the winning twelve.

OPEN CLASSES.

GENERAL SECTION.—Messrs. A. Dickson & Sons had the winning stand of twelve new Roses. Messrs. F. Cant & Co. were second, and Mr. B. R. Cant, third. There were no fewer than ten entries in this class. Mr. Geo. Prince was first for twelve blooms of any light Rose, Messrs. Harkness & Sons were first for twelve trusses of a pink variety, and Messrs. J. Townsend & Sons led for twelve blooms of a dark crimson sort.

Messrs. Paul & Son, of Cheshunt, took the premier place for eighteen bunches of garden Roses, while the best table of Roses, from a decorative point of view, was contributed by Mr. Geo. Prince.

TEAS AND NOISETTES.—The first award in the most important class for blooms of three sections went to Mr. Geo. Prince, Mr. J. Mattock being second and Messrs. F. Cant & Co., third.

AMATEURS' CLASSES.

GENERAL SECTION.—Mr. E. B. Lindsell, Hitchin, came to the front with his stand of twenty-four trusses, distinct, thus carrying off the coveted trophy Gold Medal. The Rev. J. H. Pemberton, Havering, fell into the second position. Mr. E. B. Lindsell scored other noteworthy successes for the thirty-six trusses, distinct, and three blooms each of eight varieties.

Mr. O. G. Orpen, West Bergholt, secured the first award for eighteen blooms, distinct, Mr. Conway Jones, Hucclecote, Gloucester, being second. Mr. Orpen likewise won for three blooms each of six varieties, and six blooms of one variety. Mr. Georg Moules, of Hitchin, led for twelve blooms distinct.

TEAS AND NOISETTES.—Mr. A. H. Gray, of Bath, distanced all other competitors for twelve blooms, distinct. Mr. O. G. Orpen was first with nine blooms of one variety, and Mr. G. Moules for six blooms of one variety. Mr. H. V. Machin had the winning stand of twelve distinct varieties, not less than six trusses of each to be shown. The Rev. J. H. Pemberton scored for nine trusses in as many varieties.

MEDAL ROSES.

Gold Medals were offered in open competition for three trusses each of a new seedling. Here Messrs. A. Dickson & Sons were the most successful, winning two Medals, Mildred Grant (H.T.) and Mrs. E. Mawley (T.) being the selected varieties. Messrs. Jas. Cocker & Sons, of Aberdeen, received a Gold Medal for the H.P. Mrs. J. Cocker.

In the nurserymen's classes Mrs. John Laing, shown by Mr. B. R. Cant, obtained a Medal as the best H. P., a similar award going to Bessie Brown, shown by Messrs. A. Dickson & Sons, and to Comtesse de Nadaillac, shown by Mr. Geo. Prince as the leading Tea.

In the amateurs' classes Silver Medals were awarded to Her Majesty, exhibited by Mr. M. Whittle, Leicester; Lady B. F. William (H.T.) shown by Mr. W. Boyles, Derby; and Catharine Mermet, sent by Mr. E. B. Lindsell.

LOCAL CLASSES.

These were well patronised, and some excellent material was shown in them. The most successful exhibitor was Mr. H. V. Machin, and his most important win was for twenty-four blooms, distinct.

MILDENHALL HORTICULTURAL—July 14th.

THE twenty-sixth annual show of this society was held on Thursday, July 14th, and taken as a whole certainly proved one of the most successful ever held by this enterprising society. There was an excellent and varied collection of groups and cut blooms, in addition to a magnificent display of fruit; and in the vegetable classes special mention should be made of the Potatos staged, which were far above the average usually seen. A noticeable and attractive feature of the exhibition was a grand display of plants and fruit staged by Mr. A. C. Jessup, Jun., of the Red House Nurseries, conspicuous amongst which were some splendid Roses and Strawberries of grand size and quality, and this gentleman also had on view some special plants grown with the world-famed Ichthemic Guano of which he is the local agent.

KENILWORTH HORTICULTURAL.—July 14th.

THE Earl of Clarendon performed the opening ceremony of this show, which was held in The Castle grounds at Kenilworth on the above date. His lordship, in his speech, said that he should be only too willing to continue to lend The Castle grounds to the show committee, whose labours deserved to be crowned with success.

Two large tents were devoted to the exhibits, which were not only more numerous than, but of superior quality to, those forthcoming on previous occasions. The judges were Mr. W. B. Latham, Botanical Gardens, Edgbaston; Mr. F. Perkins, Leamington; Mr. W. H. Dyer, Northfield; and Mr. Thos. Pritchard, Umberslade. In the classes for plants, Mr. F. B. Wright was a very heavy winner. He was placed first for six and four specimens, six Ferns, Fuchsias, a single Fern, one flowering plant, a group of plants, and table plants.

This exhibitor won other firsts for a collection of cut Roses, and a bouquet of the same handsome flowers.

Amongst the exhibitors of fruit, Mr. G. Beard distinguished himself by winning the first awards for

the collection of six dishes, and Black Grapes. The second awards in many of the plant classes also fell to him.

Mr. W. H. Swan led for the collection of vegetables, and Mr. J. Murdock for a collection of hardy fruits.

The cottagers' classes provided were well patronised, and some really good material was shown in them.

Amongst the honorary exhibits appeared a fine group of cut hardy flowers from Mr. Deverill, of Banbury.

GARDENING MISCELLANY.

PLUMS UNDER GLASS.

IN view of the frequent failures among fruit crops on walls, it was frequently urged many years back, "Why not put up glass houses, which would be cheaper than walls in which to grow Plums, &c, where they would not suffer so much as they frequently do from climatic conditions?" They would also be more under command, and could be kept free from injury from insect pests. Even now to find a house some 200 ft. in length, entirely devoted to Plums, is somewhat of a rarity. I saw one recently, the trees being trained fan-fashion, about 9 in. from the glass, in a span-roofed house, in splendid condition, and carrying a heavy crop of fruit, which they never fail to do, and such fruit as is but seldom obtained outside.—W. B. G.

LINARIA MACEDONICA.

AMONGST the species of Linaria, both annual and perennial, many of them are particularly pretty and interesting. *L. macedonica* is one of the boldest and strongest growing of them all, easily attaining a height of 3 ft. under suitable conditions. Mr. W. Bain, gardener to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking, considers it one of the best of the species of Toad-flax he has seen. It is now very fine with him, the stems being clothed with an abundance of ovate and lanceolate, glaucous leaves, and terminating in long spikes of large flowers. The upper segments of the corolla are creamy-yellow, but the large palate is of a rich orange. The spur is long, curved and more conspicuous than in many other species. The foliage alone makes it distinct from most other species with which we are acquainted.

QUESTIONS AND ANSWERS.

Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Vine Leaves rusted.—*J. M. F.*: The leaves you sent were not affected with any rust caused by a fungus; and, what is more, the red colour could only have been assumed sometime after the fruit was ripe and the leaves commenced to ripen. The lower surface of the leaves has got what are termed warts, which are small excrescences or swellings caused by an excessive amount of moisture in the atmosphere during the early stages of growth. You say that they have been well looked after as regards watering, and we do not doubt it; but, most likely, what happened was that during the cold and sunless early part of the season you kept the house very close to maintain the temperature at the required height, with the result that the atmosphere of theinery was kept in a saturated condition, it might have been, for days together. The fact that the Vines carry a fair crop of well-ripened fruit shows that there is little the matter with them, though the presence of the warts is also evidence that the Vines are not in the best of health. An excessive amount of watering would be injurious, because the foliage could not perform its functions properly. Next year you can prevent it by giving the Vines more air, so as to dry up the atmosphere about the middle of each day. Give a little more fire-heat to maintain the requisite temperature while the house is open, provided the weather is cold and sunless. The ventilation will harden the foliage, thus making it able to resist various ailments.

Peas Diseased.—*W. B. G.*: You were correct in your surmise, and others with whom you were conversing were also right. We should say, however, that thrips (*Thrips pisivora*) were the chief cause of the evil. Nearly white, pale yellow and deep yellow forms, that is, different stages of the insect may be

found secreted in the buds, doing irreparable damage before the latter expand. The leaves were very much punctured, and the extent can only be seen after they have expanded. Green fly has also been at work, namely, *Siphonophora Pisi*, and when plentiful it is very harmful, crippling the buds and flowers. A mildew was also present. The specimens sent were too far advanced and too much injured for any remedy to be effective. Some good might be done by syringing with a strong solution of soft soap or Gishurst Compound, with the addition of some tobacco juice, in the very earliest stages, but the thrips are so sheltered in the bud that it is difficult to get at them. The dry weather is favouring the multiplication of the pest.

Watering Bedding Plants Overhead.—*Omega*: During the present excessive dryness of the weather it is often necessary to water bedding plants overhead, but if you do not water after eight or nine o'clock in the morning till four in the afternoon no harm will result. We should avoid wetting them during the middle of the day if the sun is bright and hot, because some tender-leaved bedding subjects are liable to suffer scorching or scalding, owing to the excessive evaporation and radiation while the atmosphere is in a dry and heated condition. If you do the watering after four or five p.m. no harm will result from the practice.

Pelargoniums not growing.—*R. Andrews*: The dry weather is the chief cause of the slow progress made, and the cold weather after they were put out checked them greatly, thus causing great retardation of growth till they had been sufficiently hardened. Loosen the surface soil with a small hand fork, and mulch the trees with cocoanut fibre or partly decayed horse droppings so as not to be conspicuous. This mulching will prevent evaporation to a considerable extent, and enable the Pelargoniums to progress more rapidly.

Soft Soap and Green Fly.—*Omega*: Soft soap is a good thing for destroying green fly, as well as thrips and other vermin. The usual method of making it is to dissolve 8 oz. to 10 oz. of soft soap in a gallon of hot water. When this gets cold add about two-thirds of a pint of tobacco water. This will be strong, and it may be advisable to dilute it with water for tender foliage. You do not mention the plants you intend syringing with this insecticide, so that you will have to use your discretion about the strength to be used. The addition of the tobacco water will make the mixture more effective, and the soap will make the tobacco adhere. In the case of tender plants they may be washed with clean water an hour afterwards. In the case of hard leaves the washing is not necessary except to make them look clean. If you lay a plank over the mouth of a tub, and stand the plants on this, the insecticide may be caught and used over again.

Gooseberries dying off.—*Black Watch*: You do not mention the age or probable age of your bushes. It is of common occurrence for old bushes to die off one by one or in pieces every year, particularly in heavy clayey soil, as yours is. In light or poor soil the bushes would sooner become exhausted and cease to bear much fruit, though they might continue to live for many years afterwards. We have noted their behaviour in various soils, but think that all things considered, a heavy or substantial loamy soil is the most productive. The bushes as they get old may get into cold, ungenial soil, and the roots gradually decay till they succumb. Heavy soils also become inert after being left undisturbed, except on the surface, for years. Under these circumstances we consider it a good plan always to be growing on young bushes from cuttings of the best sorts. This could be done in the reserve garden or in some out of the way border, so as to be at hand when planted. The gaps might be filled up after trenching up the soil and manuring it. This, however, is only a temporary make shift. A piece of ground may be trenched and well manured in another part of the garden, and some rows of young bushes planted. This might be continued the following and succeeding years, planting as many rows as you like either at once or in after years according to necessity. When the young plantation is well into bearing the old may be rooted up. See that the drainage is good.

Names of Plants—*M. W.*: 1, *Anchusa italica*; 2, *Valeriana officinalis*.—*D. W. D.*: 17, *Iris virginica* var. A bud of the specimen you sent expanded after being put into water, showing the plant to be a very pale variety of *I. virginica*.—*Omega*: The Tawny Day Lily (*Hemerocallis fulva*).—*R. M.*: 1, *Thalictrum glaucum*; 2, *Thalictrum angustifolium*; 3, *Althaea officinalis*; 4, *Malope trifida*; 5, *Veronica Teucrium latifolia*; 6, *Lychnis chalcidonica*.—*W. B.*: 1, *Corydalis lutea*; 2, *Spiraea palmata*; 3, *Potentilla argyrophylla*; 4, *Daboecia polifolia*; 5, *Lilium Martagon*; 6, *Lilium candidum*.—*A. G.*: 1, *Oncidium maculatum*; 2, *Oncidium sphacelatum*; 3, *Dendrobium pulchellum*; 4, *Oncidium longipes*; 5, *Begonia glaucophylla splendens*.—*H. C.*: 1, *Taxus adpressa*; 2, *Diervilla rosea*; 3, *Pernettya mucronata* var.—*A. J. L.*: 1, *Geranium sanguineum*; 2, *Kerria japonica flore pleno*; 1, *Rosa rugosa rubra*; 4, *Elaeagnus pungens variegata*.

Communications Received.—*W. B. Hartland*.—*J. Veitch & Sons, Ltd.*—*H. C. P.*—*Wm. Garton, Junr.*—*C. Bray*.—*James Douglas*.—*John Forbes.*

Omega.—*Darlington & Co.*—*H. H.*—*Tyro.*—*A. G.*—*F. H.*—*Allan.*—*T. Read.*—*W. G.*—*J. H.*—*A. West.*—*R. G.*—*X.*

TRADE CATALOGUES RECEIVED.

HERD BROS., Seed and Bulb Merchants, Penrith. —Dutch Bulb List.
LAXTON BROTHERS, Bedford. —Catalogue of Laxtons' Strawberries and Small Fruits.

COVENT GARDEN MARKET.

July 14th, 1898.

FRUIT.—AVERAGE WHOLESALE PRICES.

| s. d. s. d. | | s. d. s. d. | | |
|-----------------------|---------|-----------------------|----------------|---------|
| Apples ... per bushel | 0 0 0 0 | Red Currants, per | half sieve | 5 0 |
| Cobbs | 0 0 0 0 | Cherrles, per half | sieve | 4 0 9 6 |
| Grapes, per lb. | 1 6 3 6 | Raspberries, per cwt. | 40 0 | |
| Pine-apples | | Ripe Gooseberries, | per half sieve | 2 6 3 0 |
| —St. Michael's each | 2 6 7 6 | | | |
| Strawberries per lb. | 0 4 1 3 | | | |
| Black Currants, per | | | | |
| half sieve | 6 6 | | | |

VEGETABLES.—AVERAGE WHOLESALE PRICES

| s. d. s. d. | | s. d. s. d. | | |
|------------------------|---------|------------------------|-----------|-----|
| Articbokes Globe doz. | 2 0 4 0 | Herbs | per bunch | 0 2 |
| Asparagus, per bundle | 3 0 8 0 | Horse Radish, bundle | 1 0 2 0 | |
| Bsans, French, per | | Letneces ... per dozen | 1 3 1 6 | |
| per lb. | 0 9 1 6 | Mnshrooms, p. basket | 1 0 1 6 | |
| Beet..... per dozen | 1 0 | Onions..... per bunch | 0 4 0 6 | |
| Brussels Sprouts | | Parsley ... per bunch | 0 3 | |
| per half sieve | 1 0 1 6 | Radshes... per dozen | 1 0 1 3 | |
| Cabbages ... per doz. | 1 0 1 3 | Seakale... per basket | 1 6 2 0 | |
| Carrots ... per bunch | 0 3 | Small salad, pnnnet | 0 4 | |
| Canlfowers..... doz. | 2 0 3 0 | Splnach per bushel | 2 0 3 0 | |
| Celery..... per bundle | 1 0 1 6 | Tomatos..... per lb. | 0 6 1 0 | |
| Cncnbers per doz. | 2 6 3 6 | Trnrpls per bun. | 0 3 | |
| Endive, French, doz. | 1 6 2 0 | | | |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| s. d. s. d. | | s. d. s. d. | | |
|-------------------------|---------|------------------------|---------|--|
| Arum Lilles, 12 blms. | 3 0 4 0 | Maidenhair Fern, 12bs. | 4 0 6 0 | |
| Asparagus Fern, bun. | 2 0 3 0 | Mignonette, 12 bun. | 1 6 3 0 | |
| Bonvardias, per bun. | 0 6 0 8 | Orchids, doz. blooms | 1 0 8 0 | |
| Carnations doz. blms. | 1 0 3 0 | Pelargoniums, 12 bun. | 3 0 6 0 | |
| doz. bun. | 4 0 8 0 | Red Roses, per doz. | 1 0 1 0 | |
| Eneharls ... per doz. | 2 0 4 0 | Roses (Indoor), doz. | 0 6 1 0 | |
| Gardenias ... per doz. | 1 0 3 0 | Tea, white, doz. | 1 0 0 0 | |
| Geranium, scarlet, | | Perle | 1 0 2 0 | |
| doz. bunches | 3 0 6 0 | Safrano | 1 0 2 0 | |
| Lilium longiflorum | | (English), | | |
| per doz. | 3 0 4 0 | Pink Roses, doz. | 1 6 3 0 | |
| Lily of the Valley doz. | | Smlax, per bunch ... | 1 6 2 0 | |
| sprays | 1 0 2 0 | Tberoses, doz. | | |
| Merguerites, 12 bun. | 1 6 3 0 | blooms ... | 1 0 1 6 | |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES.

| s. d. s. d. | | s. d. s. d. | | |
|-------------------------|-----------|------------------------|-----------|--|
| Arbor Vitae, per doz. | 12 0 36 0 | Hydrangeas, per doz. | 8 0 10 0 | |
| Aspidistra, doz..... | 18 0 36 0 | Ivy Geraniums, | | |
| specimen | 5 0 10 0 | per doz. | 4 0 6 0 | |
| Calceolarias, per doz. | 4 0 6 0 | Lilium Harrlssii, | | |
| Coleus, per doz. | 3 0 0 0 | per pot | 1 6 2 0 | |
| Dracaena, varions, | | Lycopodiums, doz. | 3 0 4 0 | |
| per doz. | 12 0 30 0 | Lobelias, per doz. ... | 3 0 5 0 | |
| Dracaena viridis, doz. | 9 0 18 0 | Margnerite Daisy doz. | 4 0 9 0 | |
| Euonymus, var. doz. | 6 0 18 0 | Mignonette, per doz. | 4 0 6 0 | |
| Evergreens, invar. doz. | 6 0 24 0 | Myrtles, doz. | 6 0 9 0 | |
| Ferns, invar. per doz. | 4 0 12 0 | Palms in variety, each | 1 0 15 0 | |
| Ferns, small, per 100 | 4 0 6 0 | Palms, Specimen ... | 21 0 63 0 | |
| Ficus elastica, each | 1 0 5 0 | Pelargoniums ... | 9 0 12 0 | |
| Foliage Plants, var., | | Rhodanthe... per doz. | 4 0 5 0 | |
| each | 1 0 5 0 | Scarlets | 2 6 6 0 | |
| Fuchsia, per doz..... | 5 0 8 0 | Splraea, per doz.... | 6 0 9 0 | |
| Heliotrope, per dozen | 4 0 6 0 | | | |

INDEX TO ADVERTISEMENTS.

| | |
|---------------------------------|-----------------------------|
| Bulbs. | Insecticides. |
| C. G. Van Tubergen737 | Corry & Co.737 |
| Catalogues. | Gishurst Compound737 |
| Barr & Sons737 | XL All.....738 |
| Bunyard & Co.....737 | Lawn Mowers. |
| J. Forbes.....739 | A Shanks & Son, Ltd....738 |
| Kelway & Son737 | Manures. |
| J. Peed & Sons.....739 | Anglo-Continental737 |
| Simpson & Son.....737 | C. Beeson737 |
| W. Wood & Son, Ltd.739 | Chemical Union737 |
| Chrysanthemums. | Clay & Son.....752 |
| Devon Nursery.....737 | W. Colchester752 |
| Florists' Flowers. | Meggitt's737 |
| T. Jannoch.....739 | Standens'752 |
| Kelway & Son737 | W. Thomson & Sons.....738 |
| R. Owen737 | Miscellaneous. |
| J. Peed & Sons.....739 | Corry & Co., Ltd.....752 |
| J. Stevens.....737 | Frosteen739 |
| Flower Pots. | Gishurstsine737 |
| Sankey & Sons, Ltd.752 | Juno Cycles752 |
| Fruit Trees. | Smyth's Baskets737 |
| G. Bunyard & Co.737 | Netting. |
| Garden Sundries, &c. | H. J. Gasson737 |
| J. Arnold737 | A. Potter.....737 |
| Corry & Co.737 | Orchids. |
| Eveson Coal & Coke Co. 737 | J. Cyphe739 |
| Hirst, Brooke & Hirst.739 | P. McArthur739 |
| A. Outram751 | F. Sander & Co737 |
| Porter's Stakes.....738 | Stanley-Mobbs & Ashton 737 |
| G. H. Richards.....738 | Publications. |
| H. G. Snyth737 | Darlington.....751 |
| Heating Apparatus. | GARDENING WORLD.....751 |
| W. Cooper, Limited738 | Midland Cos' Herald.....751 |
| Richardson & Co.752 | Ogilvie751 |
| Thames Bank Iron Co .. 737 | J. S. Virtue & Co.....751 |
| Horticultural Builders. | W. Wood & Son, Ltd.739 |
| J. Boyd & Sons.....737 | Seeds. |
| W. Cooper, Ltd.738 | Simpson & Son.....737 |
| J. Gray.....737 | Suton & Sons737 |
| W. Richardson & Co.752 | Webb & Sons739 |
| J. Weeks & Co., Ltd. ... 737 | Shows. |
| Hose. | 751 |
| F. Reddaway & Co., Ltd. 738 | Strawberries. |
| | Bunyard & Co.....739 |
| | Laxton Bros.....737 |
| | Tents. |
| | A. Potter.....738 |

THE ROYAL NURSERIES, MAIDSTONE, KENT.

GEORGE BUNYARD & CO.

ARE NOW BOOKING ORDERS FOR EARLY DELIVERY OF THE VERY BEST

NEW & OLD STRAWBERRIES

For Crop 1899, or for Forcing.

THEY OFFER THE LARGEST STOCK AND THE BEST PLANTS IN THE TRADE.

CATALOGUES of STRAWBERRIES and SUMMER FRUITS NOW READY.

WEBBS' SEEDS

WEBBS' EMEROR CABBAGE.

The Earliest and Best.

6d. and 1s. per packet; 1s. 6d. per oz.

From Mr. J. TURNBULL, The School House.

JULY 9TH, 1898.

"I sowed some seed of Webbs' 'Emperor Cabbage' and the Cabbages have been simply grand; they get better each time we have them."

WEBBS', WORDSLEY, STOURBRIDGE.

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER,

Exotic Nurseries, CHELTENHAM.

GLOXINIAS FINEST MEDAL COLLECTION

* IN THE WORLD. *

Send for CATALOGUE to JOHN PEED & SONS, West Norwood, London

The Royal Nurseries, Maidstone, Kent.

GEORGE BUNYARD & CO.,

Are now booking orders for early delivery of the very best

NEW AND OLD STRAWBERRIES.

For crop 1899, or for forcing.

They offer the largest stock and the best plants in the trade. Change of stock pays.

Catalogue of Strawberries and Summer Fruits now ready.

Caladiums FINEST COLLECTION

in the World. We make a speciality of CALADIUMS. Gold Medals Manchester & Leicester. Silver Cup, R.H.S., &c.

Satisfaction guaranteed. JOHN PEED AND SONS, West Norwood, London.

RETARDED LILY OF THE VALLEY CROWNS.

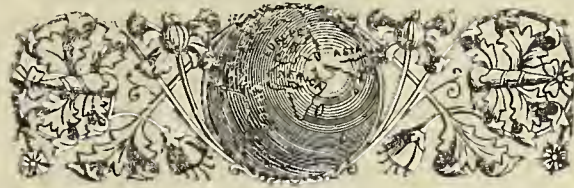
Headquarters at Dersingham.

For prices &c., apply to—

T. JANNOCH,

Lily Nursery, Dersingham, King's Lynn, Norfolk.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Malda Vale, London W.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JULY 30th, 1898.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, August 1st.—Atherstone Show. Beddington, Carshalton and Wallington Show. Leicester Show (2 days). Northampton Horticultural Society's Show (2 days). FRIDAY, August 5th.—Midland Carnation and Picotee Society's Show (2 days).

THE FLAVOUR OF APPLES AND PEARS.—

In private establishments this is a matter of leading importance, and every energetic gardener does his best to solve the problem as best he can. He is limited, however, in many ways, by the nature of the circumstances, and the varieties under his care. The task of making a proper test as to the best and most useful annuals might at great expense be accomplished in the course of a single year; but the task becomes formidable and even prohibitive for any single gardener to test the hundreds of Apples and Pears in cultivation to discover which were the best flavoured and most suitable for table use during the twelve months of the year. A plebiscite, so to speak, has been taken by the Royal Horticultural Society during practically two years extending from July 14th, 1896 to May 10th, 1898, and the facts resulting have been tabulated in the *Journal* of the society issued the other week. The general custom of sending circulars to be filled up by gardeners in different parts of the country has not been followed, but prizes were offered for competition at the ordinary meetings of the society, so that the samples adjudicated upon have been open to the inspection and instruction of the public.

When this work has been continued for the space of time indicated, one should be in a position to base a general opinion upon the subject. In looking down the list of exhibitors it would seem that most or all of the prize winners belong to the southern half of England. This might give rise to various suggestions and reasons for the results, and no doubt several things would have to be taken into consideration in basing a hypothesis that would be fair both to exhibitors and exhibitors alike. The southern exhibitors are favoured by climate, and locally in some cases by the nature of the soil. By climate alone the earliness of

any particular variety would be determined so that an exhibitor at a distance, that is, from a northern country would be unduly handicapped by climate alone in entering the lists against a southern grower. The latter would be able to get the best varieties, during any particular month, properly matured before his northern rival could possibly do so. This idea would suggest that a similar competition should be held at some northern centre in order to determine which were the best flavoured Apples and Pears for the district or division of the country under consideration. No doubt many of the varieties at the top of the list in the North would correspond with the selections made in the South. We could hardly imagine that the varieties would be the same in both cases, for they vary widely under different conditions of soil and climate, some varieties giving great satisfaction in northern latitudes that are practically indifferent for culture in the south. Then it follows that while the varieties awarded the palm at London might hold good to some considerable extent for the whole of Britain, there would be defects of detail that would have to be remedied by making similar tests, say at, York, Edinburgh, Aberdeen and Inverness.

In the case of the competition at the meetings of the R.H.S., those who are conversant with the facts know that some of the varieties taking the first award at one meeting were placed second at the following or some subsequent meeting, or got no prize at all. This is obviously due to the fact that varieties remain in perfection during a certain period only, after which they lose flavour and practically become useless for table purposes. That of course applies to all Apples and Pears. Admitting these facts and their general application, we note that some varieties remain in excellent table form for a long period. Cox's Orange Pippin Apple took the first prize at 7 consecutive meetings, namely, from October 1st, 1896 to January 12th, 1897, that is, for five months of the year. It was not shown at all in February, and the premier award at the meeting on the 9th of that month went to Blenheim Orange. During the following year it had a checkered career, its place on several occasions being taken by such old favourites as American Mother, Cockle's Pippin, Adam's Pearmain, and Margil, the latter being shown on January 11th, 1898. Curiously enough it took a leading position on February 8th, the samples coming from Lincoln; and on March 8th it again proved the best out of twelve popular varieties shown. In different parts of the country then, this variety is the best flavoured Apple during seven out of the twelve months of the year. No other Apple can show such a record.

When the competition was first started, Pears made their appearance at the Drill Hall, a month in advance of the Apples, but they were represented only by Citron

A NEW SHADING.

FROSTEEN SHADING.

Heat, but not light proof. Easily applied. No heating required; no mess, no trouble; the latest scientific discovery; beautifies the greenhouse, inexpensive and won't wash off; entirely superseding old fashioned methods and preparations. Can be ordered through all seedsmen and florists, or direct from the makers, price 1s. FROSTEEN AZO must be used in addition to make it permanent, price 1s. 6d. Both sent carriage paid for P.O. 2s. 6d.

FROSTEEN SYNDICATE, LTD., 341, Argyle Street, Glasgow.

As Cool as a Cucumber.

des Carmes on the July 14th, 1896, and by Little William on the 28th of that month. A second prize only was awarded to the first named, and none to the other variety. The earliest Pear recognised with a first prize was Jargonelle, on August 11th. At the succeeding meeting, out of five Pears the first award was given to Beurré de l'Assomption, and during succeeding meetings of the same year similar awards were made in succession to Souvenir du Congrès, Thompson's, Doyenné du Comice, at two successive meetings, Beurré d'Anjou, Beurré de Buisson, Winter Nelis, (on two separate occasions), Passe Crassanne, and Beurré Rance. The latter was shown on March 9th, 1897, after which no more first prizes were awarded till Jargonelle appeared on August 10th following. It will thus be seen that no Pear got more than one first prize, with the exception of Doyenné du Comice and Winter Nelis. This is probably explainable by the fact that they are of short duration after they become fit for use. Possibly this also explains why Williams' Bon Chrétien only managed to secure one first prize during the two years' competition. For market work it enjoys a greater popularity than any other Pear, and is grown in corresponding quantity, but is of very short duration. Competition was briskest during September, October and November, after which, as is well known to every gardener, Pears rapidly disappear from the show boards.

Midland Carnation and Picotee Show.—Owing to the lateness of the season the annual exhibition of the Midland Carnation and Picotee Society has been postponed from July 27th and 28th to August 5th and 6th.

Mr. Douglas at Southampton.—At the Southern Counties Carnation and Picotee Society's show on the 22nd inst., Mr. James Douglas, of Edenside, Great Bookham, Surrey, was a very successful competitor. He won the Challenge Cup for bunches of undressed Carnations. He also secured the first prizes for twelve bizarres and flakes, twelve Picotees, and for twelve yellow ground Picotees, for which he can hold his own against anybody. Out of five premier blooms for which prizes are given in different classes of Carnations, he was the winner of three, namely, the premier flake or bizarre, with Phoebe; the premier yellow-ground Picotee with Mohican; and the premier white-ground Picotee, with Fortrose.

Jedburgh Amateur Horticultural Society.—The summer show of this enterprising little society took place at the Corn Exchange, Jedburgh, on Saturday last when an excellent all round display of flowers, fruit and vegetables was staged; and taken as a whole the exhibition was most successful, and compared very favourably with previous years. Amongst the exhibits not for competition may be specially mentioned that of Mr. William Neil, Jedburgh who had a fine collection of plants grown with pure Ichthemic Guano for which he is the local agent. Messrs. Laing and Mathers, Kelso, and C. Irvine, Jedburgh, had also an exhibition of a first-class assortment of Roses, etc.

Table decorations at Tiverton.—At the recent show at Tiverton the most effective arrangement in the dinner table competitions was made by using white and pink Carnations, with Sweet Peas of pale pink, the whole lightened with grasses, light Ferns and Asparagus plumosa. This first prize table was much admired. The second was also very well done; in this case, however, white Carnations were intermixed with a bright scarlet, and was not nearly so pleasing. In the vase or basket competition the winning stand was a most light and charming arrangement, and as it stood was doubtless a lesson to many in the way of making a little go a long way. One gilded basket with Pyrethrum uliginosum, grasses and an immense scarlet silk bow among the blooms did not meet with many admirers.

The Maze.—Probably the best example of the maze, with its closely clipped hedges and its sinuous and mysterious paths, apparently never-ending, is at Hotel del Monte, Monterey, Cal., U.S.A. As an instance of topiary art, now gone out of fashion, the maze was at one time a popular feature in English public gardens. The one at Hampton Court is the best living example in this country of a past craze.

International Horticultural Exhibition at Lyons.—The programme of this exhibition, which the city of Lyons is organising for September 1st next, has just appeared. It will be sent to anyone asking for it by M., the president of the commission of organisation, 16, Rue d'Algerie, Lyons. The exhibition is considered to have an exceptional importance. From September 1st—4th, Lyons will be the rendezvous of all who have a name in horticulture.

Messrs. Alex. Lister & Son, at Newcastle.—The special Silver Banksian Medal of the R.H.S., awarded to this firm at the Newcastle show on the 13th, 14th and 15th inst. was for twenty-four sprays of Violas, for which they also had the first prize. The same firm took the first awards for forty-eight Pansies, distinct; and twenty-four show Pansies, distinct; and the second award for twenty-four fancy Pansies also went to them. The heavy loamy soil of the Meadowbank Nurseries, Barone Road, Rothesay, where Messrs. A. Lister & Son grow so many florists' flowers, must be highly suitable for Pansies and Violas.

Oxford Cottager's Garden and Allotment Show Society.—The fourth annual exhibition of this society was held on July 21st in Cockfield Hall Park. There was an excellent and varied display of flowers, fruit and vegetables, and a nice collection of plants, not for competition, was staged by Mr. R. W. Dalby, local agent to the Ichthemic Guano Co. The classes for vegetables were by far the most numerous, as is natural in the case of a show for cottagers and allotment holders, and the prizes were in many cases well contested. Mostly all the prizes consisted of money, but for a collection of vegetables, six varieties, the first prize consisted of a pair of trousers, and the third of 2½ cwt. of coal, which will be more appreciated after the hot weather is gone.

The Palm Swindlers.—Some ingenious scoundrels in the United States have been making a good thing of it of late. Their particular "lay" is to give orders for Palms to be delivered at the houses of well known residents of the various towns and cities they have chosen for their nefarious enterprise, and then under some pretext to get these plants into their own hands, afterwards selling them at ridiculously low prices. The favourite dodge is for the man who ordered the plants to obtain the permission of the servants of the houses at which the plants are to be delivered to stand a few plants in the background for a time. He then meets the delivery van and indicates the place at which the plants are to be set down. After the van has gone he then removes his plunder at his convenience. A number of such cases have been reported.

Bulb Prospects for 1898.—At the last meeting of the "Verzendersbond" (an association of Holland bulb-growers and exporters to the U. S. A. consisting of twenty-one of the leading firms in Holland) held at Lisse, Holland, on July 6th, 1898, the following report about the crop of bulbs for the season 1898 has been made out:—As already reported to many trade papers in Europe and the U. S. America, this season will be a very disappointing one for all engaged in the cultivation and sale of bulbs. From Japan and France reports say that good stock is scarce, and every grower in our country reports a poor crop. As known, this was caused by an abnormally mild winter, followed by one of the worst springs we ever had, and frost, winds and cold, wet weather have shattered the outlook for a good, even for a moderate crop. Hyacinths have suffered, most of all, for they especially need, fine, warm weather, and the results are that the size of Hyacinths is very small, and that fine, well shaped bulbs are hard to find. Tulips have not suffered quite as much but still enough to bring mostly medium sized bulbs. Narcissus being more hardy came out best of all, but even here we can only expect fair, medium sized bulbs, and fine stock will not be plentiful.

A new Explosive.—A serious but rather curious accident occurred recently at Bovey Tracey to a servant at the King of Prussia Inn. He threw on the fire in an American stove a quantity of old French Beans. The result was that they exploded and blew off the top of the stove, whilst the servant and the aunt of the inn proprietor were both badly burnt about the face and arms. Both the victims of the accident are progressing favourably.

Trifolium resupinatum.—This Clover is a native of Western Continental Europe and of the Mediterranean Region, yet it has found its way by some occult means or other to the banks of the upper, tidal Thames and above it. The tufted stems are about 6 in. long, and lie all round the central rootstock, rising somewhat at their tips, and producing their bright rose heads of sprightly flowers poised on short, slender stalks. The standards are beautifully striped with a darker colour; and the flowers are quite as deliciously scented as Melilot. If it should become thoroughly naturalised it will be an interesting addition to the Thames Valley flora.

The Consumption of Coffee.—The inhabitants of the United States are the greatest Coffee drinkers in the world, for they consume more than all the people of Europe put together. In 1897 Europeans used 305,150 tons, as against 318,170 tons in the United States, according to the table quoted by the *Board of Trade Journal*. This is the first year that the balance has inclined to America in comparison with the whole of Europe, for in 1896 Europeans used about 27,000 tons in excess of the Yankees. Amongst the nations of Europe, Germany, with 136,390 tons, and France, with 77,310 tons, consumed the most Coffee. Britishers account for only 12,420 tons, and Italians for 12,500 tons.

Carnations that do not split the calyx.—It is satisfactory to note that amongst the hundreds of Carnations being raised at the present day special attention is given to those which do not burst the calyx. This desirable quality is not the sole recommendation of the varieties selected, but it is one of them; and the gardener or raiser, who would discard an otherwise good flower, but deficient in this respect, deserves well of his fellow gardeners. Quite recently we noted a number of varieties having this recommendation amongst those raised by Martin R. Smith, Esq. (gardener, Mr. C. Blick), The Warren, Hayes, Kent. The varieties we refer to are all Malmaison Carnations, specially liable, as a rule, to split the calyx if not prevented from doing so by tying. The under-mentioned require no such artificial assistance to expand properly. Nautilus is a delicately pale or blush form; The Geisha is rosy-salmon; and Mrs. de Satge, that recently received an Award of Merit from the Royal Horticultural Society, comes into the same category. Calypso is flesh-coloured and white, the outer petals being ultimately pure white; the form is very fine and the flower fragrant, as are all, or most, of the Malmaison varieties. Iolanthe is the most fragrant of all the above varieties, and is bright scarlet with a rosy reverse.

A Wonderful Beech Hedge.—On the Perth and Blairgowrie road, a little over a mile from Cargill railway station, and about half a mile from the village of Meikleour on some property belonging to the Marquis of Lansdowne, is what is probably the finest Beech hedge in the country. The trees composing it average about 80 ft. in height, and they are clothed with leaves and branches right to the ground. Local tradition has it that the trees were planted in the year 1746, a critical time in Scottish history. A dyke runs along the front of the hedge, and it is said that a number of the men employed in building it left to take up their claymores and follow Bonnie Prince Charlie to the fatal battle of Culloden in 1746. At this rate the hedge is 152 years old. For many years it was allowed to grow as it liked, and as the result the branches spread across the high-road, and greatly impeded the traffic. This caused the cutting back of the branches, and steps were subsequently taken by the proprietor to have the hedge pruned every five or six years. The operation is performed by men mounted on ladders furnished with wheels which can be easily moved from one end of the hedge to the other, a distance of 480 yards. Large numbers of tourists annually visit the place in order to see this remarkable wall of green, which again in the autumn puts on the loveliest tints.

Churchyard Bottom Wood, Highgate, was opened to the public on Saturday last, the 23rd inst., by the Duchess of Albany. The new name of this "breathing space" is to be 'Queen's Wood.'

The Dahlia was introduced from Mexico to Spain in 1789, and Lord Bute, who was representing Britain diplomatically at Madrid, sent it to England that same year. It was named in compliment to Dahl, the Swedish botanist; but Professor Willdenow, of Berlin, by mistake renamed it Georgina in compliment to Professor Georgi, the Russian botanist. It bore that name for some time in Britain, and to the present day in some Continental countries; but Dahlia by right of priority has been recognised in this country since 1832.

The Grounds of Tresco Abbey.—The mild climate of the Scilly Isles enables Dorrien-Smith, Esq., the lord proprietor of the Isles, to plant many trees, shrubs and other subjects on his estate, which could not outlive the winter on the mainland, except in the most favoured spots. Amongst rare or striking exotics in the open are the Dragon Tree of Teneriffe (*Dracaena Draco*), *Dasylyrion acrotrichum*, the strange *Puya lanuginosa*, Prickly Pears (*Opuntia*), *Fourcroya longaeava*, and many others. It is less surprising to find *Clethra arborea*, *Eucalyptus globulus* and other species, and the golden-yellow *Cassia corymbosa*; but the privilege of growing them in the open air, except in summer, is seldom enjoyed by gardeners on the mainland of England. Mr. Jenkins, the gardener at Tresco Abbey, is proud of his charge amongst these exotic subjects. Bamboos and Himalayan *Rhododendrons* also augment the list, together with *Araucaria excelsa*, *A. Bidwillii* and *A. Cookii*. A great number of species and varieties of *Mesembryanthemum* are grown in various parts of the grounds, and in this respect the Scilly Isles are comparable to the Channel Islands, where a few species are grown in exposed positions on rocks and walls.

Nitragin and Alinite.—The former name is meant to include all the microbes which are concerned in the fixation of free nitrogen from the atmosphere in the roots of various plants belonging to the order Leguminosae. While speaking of these microbes generally Dr. Aikman discusses a pure culture of *Bacillus megatherium*, under the name of alinite in the Nineteenth Century. This organism is also one that fixes the free nitrogen. As far as nitrogenous manures are concerned, it seems like contracting the subject into the compass of a nutshell, when the writer speaks of putting sufficient alinite into a phial, a little under 2 in. in length, and less than $\frac{1}{2}$ in. in width, for inoculating a whole acre of ground. This would, of course, ensure only the nitrogenous wants of plants, but even then it will mean a great saving of labour in the distribution of bulky and weighty manures over the land. In the preparation of food fit for the nourishment of the higher plants it seems that there is a considerable amount of co-operation amongst the microbes of the soil, which effect the respective stages of the chemical process. This is a well known characteristic amongst microbes in other fields of human industry. A second microbe takes up the work of decomposition, where its predecessor left the same, and beyond which it could not go.

OSTERLEY PARK.

(Concluded from p. 747.)

THE bedding-out at this establishment also calls for a brief notice. The beds which face the upper lake are pre-ordained—they must consist of three colours, red, white, and blue. That is a standing order. These colours are brought about by the use of scarlet *Pelargoniums*, like Harry Jacoby, and *Violas*, Cliveden Blue, and Countess of Hopetoun; and these have to be planted freely so that an immediate effect may be produced.

There are, of course, various other beds which are not restricted, but one which took our fancy was of a triangular shape, the base of each side projecting inwards in the form of an arc.

The centre is decorated with *Eucalyptus globulus*, round which are ranged *Grevillea robusta*, *Abutilons*, *Marguerites*, *Lilium Harrisii*, etc., with dwarfier subjects for a foil. *Pelargoniums* in variety, *Lobelia*, Golden Feather, and similar bedders find a place, the

whole constituting a very telling group. Sutton's new crested *Feverfew* is very pretty, resembling somewhat a miniature lacerated *Pteris* Fern, minus the colour.

With trees Osterley is well furnished, the Cedars being fine specimens. *Cedrus Libani*, *C. Deodora*, and *C. atlantica* attain grand proportions. There is also another quite distinct Cedar, which is probably a variety of *C. atlantica*, the growth being stiff and upright, after the manner of that species. *Pinus sylvestris* is there too—there is no mistaking that. Then there are fine specimens of *Platanus orientalis* and *P. o. acerifolia*, with an old-fashioned Cork Oak (*Quercus Suber*), containing enough material to stopper many thousand bottles. The purple Beech, the stately Elm, the hardy Oak, the graceful Birch, the massive Chestnut, the common Hornbeam, and a host of other trees display their various charms. An Arboretum, too, of choice Conifers is being planted, some of which, we may mention, on account of their beauty and at-home-like appearance. These are *Picea orientalis* (very fine), *P. pungens* var. *argentea*, *P. p.* var. *glauca*, *Abies grandis*, *A. lasiocarpa*, *Cupressus lawsoniana* var. *aurea*, etc. Palms, Myrtles and Oranges stand about in huge boxes, and are now enjoying their annual outing; while a fine *Rhododendron ponticum* measures about 100 ft. in circumference. Mr. Hawkes is a true arboriculturist, and takes great interest in the annual planting, which occupies a good deal of time in the winter season.

In the fruit and vegetable departments, Mr. Hawkes can also score some successes. Under glass the Peaches Royal George and Hale's Early, have been exceedingly prolific; while the Vines, Black Hamburg, Foster's Seedling and Madresfield Court, were colouring well. Outside the Strawberries were a promising crop, more especially Royal Sovereign and the new Leader, which took the visitors' taste—metaphorically, not literally.

The Kitchen garden was in good order, Carter's Early Morn Pea being not only ready for the table, but also just right for the photographer. *Caladiums*, *Crotons*, *Carnations*, *Begonias*, *Pelargoniums*, *Gloxinias*, *Celosias*, Sweet Peas in variety, *Roses* and many other things were much in evidence—were standing witnesses, in fact, to the multiple duties which devolve upon the modern professional man.

The visitors concluded an agreeable visit by returning by way of the "long walk," which sweeps round the park for over a mile amidst trees and shrubs of a very varied and interesting character. The new mown hay in the park also lent a fragrance; and this, combined with other scents of early summer, had their full significance. It was, therefore, lastly agreed that not "good bye" should be said, but "*au revoir*."—C. B. G., *Acton, W.*

HARDY BAMBOOS.

(Continued from page 742.)

BAMBUSA PALMATA.—The stems of this species are erect, 3 ft. to 6 ft. high and furnished with a few erect branches very nearly as strong as themselves. They are about as thick as a goose quill, and in their younger stages are covered with glaucous sheaths. Underground suckers ramble widely, so that new stems arise at some distance from the parent bush and soon form a large patch or clump. At Kew these young stems had already attained a height of 2 ft. to 3 ft. by the beginning of June. The huge leaves are mostly crowded towards the ends of the stem and branches; and assuming a horizontal or declining direction, as well as radiating to one side they present a somewhat palmate appearance. They are 6 in. to 12 in. in length, by 2 in. to $3\frac{1}{2}$ in. in width, with very prominent ribbed nerves; and are dark green with a whitish midrib above, and glaucous beneath. Undoubtedly this is one of the finest of the hardy Bamboos proper; and makes a striking tropical-looking bush or mass. It comes from Japan, in the gardens of which it is known as *Kumasasa*, and is perfectly hardy here.

B. PYGMAEA.—This is of dense, spreading habit, with stems about $1\frac{1}{2}$ ft. to 2 ft. high. The leaves are lanceolate, 4 in. to 6 in. long, by $\frac{3}{4}$ in. to 1 in. wide, of a rich dark green, and retained throughout the winter in excellent condition. Originally a small piece of it was grown in a 6-in. pot at Kew; but now there are two or more huge clumps of it which have

to be restrained within due bounds by lifting pieces with the spade. It is one of the best dwarf species of *Bambusa*, and though less elegant than *Arundinaria Fortunei*, it is superior to *A. humilis* in tidiness after having passed through the winter. It might be grown in suitable positions in the rock garden, or elsewhere in proximity to shrubbery. Japan is its native home.

B. QUADRANGULARIS.—The specific name refers to the square stems, but only the largest ones exhibit this peculiarity. They vary from 3 ft. to 8 ft. in height, and besides being brown are notable for the warty little elevations or hard points, which cover them. The lateral branches consist of numerous, short, slender twigs. The pale green, lanceolate and drooping leaves are graceful, and 3 in. to 6 in. long. In severe winters this Bamboo is liable to get injured, but generally recovers during the following season. Japan, and probably China are its native countries. The native Japanese name for it is *Shiho-chiku*.

B. TESSELLATA.—Though, perhaps, less strikingly ornamental than *B. palmata*, this is notwithstanding a very bold and distinct subject, forming a dense and tangled bush or mass, 3 ft. to $3\frac{1}{2}$ ft. high. The stems are also spreading and more or less branched. The leaves alone make this worthy of a place in collections, for they are oblong, 12 in. to 16 in. long by 3 in. to 4 in. in width, varying from light to dark green, with a whitish midrib and slightly glaucous beneath. The underground stems spread as widely as in *B. palmata*, to which it may be compared; but it lacks the elegance of the latter owing to its denser habit. Both are highly desirable in collections, and of the easiest culture after being once well established. Various garden names have been given it, including *B. Ragowski* and *Arundo Ragowski*. It inhabits China and Japan, proving very hardy in this country.

This concludes the genus *Bambusa* in the Bamboo garden at Kew. The finest of all of them are *B. palmata*, *B. tessellata*, *B. pygmaea* and *B. marmorea*.

(To be continued.)

VIOLAS FROM HAWICK.

A BOX containing flowers of a large number of varieties of *Viola* has reached us from Mr. John Forbes, Buccleuch Nurseries, Hawick, Scotland. All the leading types used for bedding and similar purposes were represented, including fine varieties belonging to the rayed, rayless, miniature, edged and parti-coloured groups.

Taking the rayless sorts first, we note the pure white *Marchioness* and Mr. Daniels, the former being sometimes slightly rayed, but one of the best for bedding purposes, and the latter being sweetly scented. *White Empress* and *Cordelia* are beautiful creamy-white sorts, the latter throwing its flowers well above the foliage. From the delicately pale *Blush Queen* to *Florizel* and *Blue Gown* there is a great jump in the intensity of colour. The habit of the two latter is faultless. *Pembroke* is one of the finest of new yellows, the flower being shapely and the lip golden.

Among miniature varieties *Lyric* is several shades darker than *Florizel*, being of a soft lilac. *Queen of the Year* is a beautiful soft blue; and *Seedling No. 2* is intense blue. The light yellow *Gnome* and the dark *Gold Crest* are good for this section.

Rayed *Violas* included such vigorous bedders as *Lord Elcho*, *True Blue*, *Stephen*, of better form than *Bullion*; the sky-blue and white *Diana*; the soft lilac and robust growing *Cherry Park*; *Lord Salisbury*, clear yellow, and *Lady Salisbury*, creamy-white, this and the previous one being very prominently rayed. *J. B. Riding* is now well known, being one of the best dark purple sorts for bedding, easily grown and very profuse. *Sir Robert Puller* is a large and bold deep blue flower, and was sent out from the Hawick nursery last year. *Buccleuch Gem* is a splendid bedder with white flowers and very prominent purple rays, the blooms being well elevated on tall, stout stalks.

Although *Ardwell Gem* is not usually an edged flower, some specimens sent had sported that way. We place it here, however, in connection with its named sports, all of which are gems of the first water, both on account of their combinations of

colour, and their excellent habit. We refer to Duchess of Fife, White Duchess and Goldfinch, which should be in every collection. Jeannie P. Robertson, a lovely cream, rayless flower, with a sky-blue edge is the finest of the new edged sorts we have seen. In the same category we should place Mayflower and Colleen Bawn, but both of these are rayed, with much more blue on the edges. The former is an early bloomer, and the latter has long flower stalks which make it suitable for cutting. Border Maid is the best yellow ground, with a deep blue edge, and differing from Blue Cloud only in respect of the white ground of the latter. We like Border Maid much better than J. Tullett, which has broader blue margins, and is otherwise different. The soft mauve and broad border to Cecilia is delicate and handsome. Hamlet is a yellow ground with a broad bronzy-purple margin, and very distinct. It was awarded a First-class Certificate by the Glasgow Pansy Society a few years ago. Mrs. R. K. Mitchell is a dark crimson-purple, with a white centre.

Parti-coloured or variegated flowers included several well known sorts and others that are just feeling their way. James P. Robertson is a large, exhibition flower of a dark, shaded purple, with rose top petals. It is new for this year, and was accorded a First-class Certificate by the National Viola Society last year. Maggie is a rosy flower with paler top petals. Mrs. F. C. Gordon and J. W. Moonman are blackish-violet flowers, with pale blue-white top petals and edges, something in the same line as Iona and the old Magpie. Lady Reay is a gem in this section with a bright violet centre and broad white margins. Craigie is maroon-violet with blue-white edges to the top petals. Jackanapes is a development upon Vernon Lee, with dark mahogany top petals, the rest being golden-yellow and rayed. It is a very conspicuous and free flowering hedder. W. H. Stewart is blackish-maroon, striped with rose and white.

SWEET PEAS FROM WORTON HALL.

A BOX of cut flowers of eighteen varieties of Sweet Peas has reached us from Mr. A. Pentney, gardener to A. J. Howard, Esq., Worton Hall, Isleworth. Taking the lighter varieties first we were particularly charmed with Venus, a lovely cream, shaded with soft salmon. Golden Gleam, a new American variety, has soft yellow flowers with a well-shaped standard coming up to the Sweet Pea specialists' ideal. The footstalks are about a foot long. Countess of Aberdeen and Prima Donna are lovely pink varieties, the latter being slightly the darker on the back of the standard. Another that may be placed in the same category is Lovely; the centre of the standard is darker than that of either of the previous ones, but the wings are much paler, being of a silvery bluish. All of the above are well worthy of cultivation. Amongst the collection were some beautiful rosy bicolor varieties. Royal Rose has deep rose standards and silvery-rose, netted wings, and is handsome for cut flowers, although the notched standards will hardly appeal to the specialist. The standard of Prince Edward of York is of a rich red, shaded with rose, while the wings are of a deep rich rose. We have always regarded it as a handsome variety, in spite of the notched standard. Blanche Ferry is a larger flower, and an improvement upon the old Painted Lady, the standards being scarlet-red, and the wings silvery-lilac, the two colours or combinations of colours being well marked. Countess of Powis seems to have done better than last year, the standards being of a rich salmon-orange, better defined than in Adonis and Orange Prince, and the wings of a rich rosy-pink, like Lady Penzance. No — we do not like Red Ridinghood, having now seen it several times, but we readily admit it is a great curiosity, with its rose flowers and far too short a hood, made apparently for a much smaller flower.

Of the blue or mauve types, Lady Nina Balfour is amongst the palest, being of a soft mauve, and a determined variety to run to seed. If the flowers sent are strictly representative Creole is decidedly a creole, for the deep mauve or lavender flowers had sometimes darker standards, sometimes deeply tinted with purple, and at other times with salmon-purple. The best of the blues is New Countess, being several shades darker than we usually see Countess of

Radnor. Gray Friar is finely mottled or dusted with purple on a white ground. A bold flower is Captain of the Blues, which has dark blue flowers, though the standards are heavily tinted with purple during most of their period of duration. The rich crimson standards and the dark carmine wings of Salopian are very handsome; but the former are liable to become tinted with black under certain conditions, and then there is an outcry against it. All the same it is very handsome when in its best character. The older variety Ignea is liable to the same changes, the veins of the standards becoming slaty black. Climatic conditions, soil and environment are responsible for great variations even in the same variety in all parts of the world where they can be grown. Mars comes into the same group as the two previous sorts, being a large and richly coloured flower. One of the darkest of its class is Shahzada, with dark maroon standards.

CURE FOR THE LILY DISEASE.

IN common with many other amateur horticulturists I have long been troubled with that widely prevailing pest known as the *Lily Disease*, and the yearly disappointment of seeing my Lilies come up merely to blacken and wither away before they reach the stage of bloom, has led me to investigate the matter with a view to the eradication, or, at least, the mitigation of the evil.

Some few years ago I took up the whole of my bulbs of *Lilium candidum* to the extent of about two bushels, for I thought that by a judicious selection of the strongest among them, and by replanting in the most favourable positions, I might be able to improve the then gradually degenerating blossoms. In spite of this the disease made rapid headway, so that of late I have had but a few poor sickly stems in the whole of my garden.

I consulted the County Council lecturers of this district, both of them Fellows of the Royal Horticultural Society, only to receive the discouraging information that this mysterious disease had defied all research, and all efforts for its cure; and I have read a recent article in the *Standard* to the same effect. The several attempts made to procure a healthier stock by the importation of fresh bulbs from Holland have not met with the success they deserved; for the new arrivals have been quickly reduced to the state of the old, apparently worn out bulbs, by the ravages of the same disease. Hence this strange visitation has been practically stated to be an *incurable disease*.

I have given the subject some thought for a considerable time past, and from what is exemplified at the present in my own garden, I believe I may state that I have discovered a cure for this persistent evil; which is remarkable at once for its simplicity and its effectiveness. My final experiment dates back to the autumn of 1896, and was confined to three groups of the bulbs. Last season they showed a marked improvement in the blossom heads, which appeared to be entirely free from the disease, though still evidently somewhat weak from its effects in previous years.

This summer I have the pleasure of seeing them perfectly healthy and well grown, with fine green stems and leaves, and the promise of large heads of bloom. Other groups in my garden, which have not been treated, have not a single blossom stem, and some of them are so far diseased that they have almost disappeared. Disease and health could not be more clearly exemplified than here, and I shall be pleased for anyone to see and compare them.

And now for the remedy, which anyone may try, I hope with the same pleasing success which has attended my own efforts. In the autumn of 1896, I removed the bulbs from the ground, and after they had dried somewhat, I put them into a large brown paper bag in which was a supply of *flowers of sulphur*; they were then well shaken up, until the sulphur had been worked thoroughly into the crevices; after this, and while still well smothered with the powder, they were planted straight away, with the result which I have described. I feel disposed to give the credit of my investigations to the Royal Horticultural Society's lecturers of the West Sussex County Council, who first aroused my attention to this subject.

From the nature of the disease I felt sure it must emanate from the bulb; for the bulb leaves are the first to be attacked, and it then proceeds upwards

through the stem to the flower, which is the last to be affected. This season I propose to treat more in the same way, and I shall be pleased to hear that others, whose plants are affected with the disease, have also tried this simple remedy with success.—*Horace Byatt, M. A., The Grammar School, Midhurst, Sussex, June, 1898.*

CARNATIONS AT CHELSEA.

THE grime and fogs of the Metropolis are blamed for many things, but while there is not a shadow of a doubt that the conditions that obtain in it at various seasons of the year are inimical and even fatal to many forms of plant life, it is not so certain that in every case these conditions might not be ameliorated by the skilful gardener, and some elements, at least, of success snatched from the desolation. We are led to make these remarks because we think the town gardener is apt to lose heart at repeated failures to get some favourite plants to do, and to give up attempting to do so. One of the most notable instances of success under atmospheric difficulties that has come to our notice is the Carnations at Chelsea. The nurseries of Messrs. Jas. Veitch & Sons, Limited, are not situated in the most suitable spot for the successful flowering of Carnations, and yet, year by year, they continue to overcome the difficulties and to furnish visitors with an admirable object lesson of what may be done with Carnations in London, and even in the low-lying district of Chelsea.

This season the display is much better than it has been for several years past. The plants are healthier, there is more "grass" upon them, and the flowers are more numerous, of larger size, and the colours show higher development. Whether the cold summer weather is responsible or not is only a matter of conjecture, but at any rate, the marked improvement is a fact, and one upon which the Messrs. Veitch's capable foreman, Mr. Weeks, may well congratulate himself.

The plants are located, as usual, in the series of oblong beds close to the Fulham Road entrance to the nursery, where they enjoy a fair amount of light and air. The effects of the late drought have been minimised by a mulching with cocoanut fibre refuse which, besides checking evaporation from the soil, has kept the roots of the plants cool, and has thus tended to keep down insect pests.

The influx of new varieties still continues, and there have been some exceedingly pretty things sent out in 1897 and 1898. Cassandra is one of the best of these. The flower is almost as large as that of a Malmaison, while the colour is a delicate flesh-pink, very much like that of Waterwitch, although here the likeness ceases. Boadicea, another huge self is a great acquisition. The colour is a rich rose-scarlet, very bright and attractive.

We have now quite a number of good white forms, but there is plenty of room for the new one named Sir Wilfred Laurier. The flower is of great size, and of the best form, whilst the petals are stout and smooth. The depth of the flower is another remarkable point. A bed filled with this variety is a conspicuous feature of the Veitchian collection. Mr. James Douglas exhibits a brilliant shade of rose-carmine. Like the other varieties raised and sent out by Mr. Jas. Douglas, the calyx is stout and does not burst. Mr. Douglas regards this as the best Carnation he ever raised, which is a sufficiently high recommendation for it. That fine old self variety, Hayes' Scarlet, has now a serious rival in Mrs. MacRae, which is a larger and a finer flower, the plants apparently being fully as floriferous and vigorous in constitution. Pandelli Ralli is a new self yellow that is of great size and merit. Nox holds the field as the darkest hued Carnation yet raised. The colour may be described as dark maroon-crimson, and this when the sun is shining full upon it gives an exceedingly rich effect. Mopsa is the best of the new fancy varieties to our way of thinking. The colour is a clear apricot-yellow, of fine form, with smooth petals—a very refined flower.

The ranks of the yellow ground Picotees have received decided acquisitions in Badminton, Stanley Wrightson, Wanderer and Miss Alice Mills, all of which have done remarkably well at Chelsea. The last named variety is especially noteworthy. The ground colour is a clear rich yellow with a

heavy scarlet margin. Wanderer has a rosy red, well defined margin, and Badminton a deep red margin of medium width. All three are varieties of great merit, and may be regarded as the best of those grouped in this section.

Amongst recent introductions we noticed a fine bed of Bendigo, the plants being particularly healthy and floriferous. The distinct shade of bluish-purple or heliotrope exhibited by this variety is still the nearest approach to the much longed-for but still unattained blue. As a bedding plant this is exceedingly showy, although the price is perhaps rather high to admit of its being employed in quantity. That lovely pair Seagull and Her Grace have also done very well. The only difference between the two is that Seagull is a deeper shade of blush, which difference can readily be seen on comparison of the two flowers. Little John, a large, scarlet self, of excellent form should not be overlooked. It belongs to one of the best types of border Carnations.

The comparatively new yellow ground Picotees likewise include several forms that have not yet been surpassed. Mr. Nigel forms one of the most notable examples. The ground colour is deep yellow, and the edge a heavy crimson one. Golden Eagle, El Dorado, Voltaire and Xerxes are other fine flowers, but we were particularly struck with May Queen as it has turned out this season. The margin is narrow and light rose in colour, the ground work being a very bright yellow. The size is above the average and the form of the flower excellent.

Old standard varieties are still grown in quantity and it is interesting to see how some of these old stagers hold their own against the newcomers, even although the latter may be more refined, and represent the florist's ideal more correctly. As bedding varieties Mrs. Fred Watts, white, and Joe Willet, scarlet, are a fine pair, for they are the counterparts of each other with regard to height and habit. Both are dwarf, vigorous, and free flowering, Miss Audrey Campbell is grand a yellow, and Mrs. Eric Hambro a grand white. Such fancy forms as Alice Ayres, George Cruickshanks, Chameleon, Cardinal Wolsey and The Dey are still to the fore, and we cannot yet do without them. The same may be said of such Picotees as Norma Carr, Stadrath Bail, Mrs. Henwood, J. B. Bryant, Mrs. Gorton and Little Phil, all of which, together with many others have won many, and will probably win many more, prizes upon the show boards.

Besides the collection of plants growing in the open ground there is a considerable quantity flowering under glass in pots in a house hard by. These plants, too, are doing splendidly, the flowers being abundant as well as brilliant in hue, and symmetrical in form. They are all replicas of those growing in the open, and there is little to choose between them save that, the under-glass flowers having been shaded exhibit rather better colour development, for they have not been bleached by the sun.

THE SWANLEY HORTICULTURAL COLLEGE.

THE Annual distribution of prizes to the various students of the unique horticultural training establishment at Swanley brought together a more than usually enthusiastic gathering on Wednesday, the 20th inst. The weather was beautifully fine, and this, no doubt, added to the high spirits of the students. Their bright faces literally glowed with happiness, and this apart from the natural exultation of the prize-winners; indeed, we never remember to have seen a better example of healthful, physical and mental training than these young disciples of Adam evidenced.

The prizes were given away in the lecture hall by Sir Trevor Lawrence, Bart., the president of the Royal Horticultural Society. The Hon. Dudley Fortescue occupied the chair. The resident principal, F. Graham Powell, Esq., first of all presented his report upon the year's working of the college. He was pleased, he said, to be able to give such a satisfactory account, for both students and teachers had done their very best, and had worked well together. He drew attention to the fact that the college was the only purely horticultural college in Britain. They claimed to be able to teach a man or woman a large percentage of practical and theoretical gardening at the college in the course of two years, two thirds of practical, and one third of

theory being the prescription. That this system was a good one was proved by the successes obtained by students, for the college had for the third time in the last four years, twice with a woman and once with a man, won the first place in the examinations in horticulture held by the Royal Horticultural Society. Of the twenty-nine students who entered for this examination twenty-four were placed in the first and only four in the second class. Miss Olive Harrison took the first place, Miss Lutley and Mr. Wilson were bracketed second, and the two Misses Graves third. Messrs. Goodlet and Flower had won the diploma of the college, one with 907, and the other with 864 marks out of a possible 1,100. Thirteen students had obtained 3rd class bee-keeping certificates from the Berks Bee Keepers' Association, whilst the only lady bee expert in existence was an old pupil of the college. In presenting the prizes to their respective recipients Sir Trevor Lawrence spoke a few kindly words of encouragement and congratulation to each student as he or she advanced in turn to the platform. The following is the list of prize-winners in their respective sections:—

College Diplomas—Messrs. Goodlet and Flower; Silver Gilt Medal of the Royal Horticultural Society—Miss Olive Harrison; Principles of Horticulture, advanced—Mr. Goodlet; Elementary—Mr. Benians; Practical Horticulture, advanced—Miss O. Harrison; elementary, Miss Lutley; Botany, advanced—Miss Deane; elementary, Mr. Wilson; Physics—Miss Young; Geology, advanced, Mr. Pickford; Elementary—Miss Deane; Microscopic Botany, advanced—Mr. Flower; elementary—Miss Young; Chemistry—Mr. Benians; Physiological Botany, advanced—Mr. Goodlet; elementary—Miss Lutley; Best Kept Lady's Diary—Miss Harrison; Man's Diary—Mr. Goodlet; Practical Work, 1st year, ladies—Miss Malins; 2nd year—Miss Petty; 1st year, men—Mr. Mitchell; 2nd year, Mr. Jeffrey.

Sir Trevor also gave away the R. H. S. Certificates, and the certificates from the Berks Bee Keepers' Association. In a subsequent speech, he said, that in looking round the grounds of the college he had found a marked improvement manifest. He would not pretend that there was not room for further improvement, but the fact remained that the college was doing useful work in the direction of horticultural education. In this direction he deplored the lack of the State aid which was given in other countries. The problem of how far a woman was suited for the occupation of gardening had been solved by Mr. Dyer, at Kew, where the women gardeners employed had given every satisfaction. The 'costume' difficulty had, among other things, been easily got over. He thought Kew was in many respects a model garden, and not simply a botanical institution. Sir Trevor impressed upon his audience the need there was for increased facilities for education if the Britisher was to keep up sides with the foreigner. He instance d the thoroughness of the system adopted by other countries by the action of a German firm who supply large quantities of agricultural seeds, particularly sugar Beet. Before planting the roots selected for seed bearing a small piece was cut out of each, and subjected to analysis in the laboratory in order to see if it contained the proper quantity of sugar. He did not know whether women would ever beat the men as gardeners; for his own part he should back the men. He assured his audience that he had done and would continue to do all that lay in his power to forward such institutions as the Swanley College.

A vote of thanks to Sir Trevor was proposed by Miss Cons, seconded by Dr. Beverley, and very heartily received by the company. The vote of thanks to the chairman was moved by Mr. Shea, and supported by Miss Goodrich-Freer. As hon. secretary of both the men's and women's branches, Miss Goodrich-Freer gave some interesting details of the work of the college, and spoke of the way she had approached the various county councils with regard to the scholarships which were really going begging. Miss Harrison, of whom they were all proud, was a county council scholar.

A competition for wild flowers, wreaths, floral decorations, etc., had been devised, and the prizes were allotted as follows:—A collection of wild flowers, Mr. Pickford; a collection of dried wild plants, Mr. Collard, who had 324 specimens; bouquets and sprays, Miss Cassidy; wreaths, Miss

Rands; wreath of wild flowers, first, Mrs. Lowther; second, Miss Lutley; table decorations, Miss Worland (in this case the judging seemed to us entirely wrong, for this exhibit was inferior to at least three others); packing competition, Mr. Hales; extracted honey, Mr. O'Hara; and honey in sections, Miss Ault. The gathering then resolved itself into a sort of garden party with an *al fresco* tea.

We inspected the gardens and glasshouses attached to the college, and were pleased to find a marked improvement all round. Mr. Budworth, the gardener, has some excellent results to show for the work performed by his mixed staff of men and women. Tomatos and Cucumbers are exceedingly good, and remarkably heavy crops, Tomato Up-to-Date being the favourite one. The Vines have all been lifted and replanted in fresh material, and insect pests have been carefully kept down. The apiary is another noticeable feature, and we noticed that a very handy bar-framed hive of rather large size is employed.

The lawns and flower gardens are all clean and well kept, and the whole establishment has smartened up wonderfully since last we had the pleasure of visiting it. Congratulations to Mr. Powell and his able assistants.

The Orchid Grower's Calendar.

CATTLEYA HOUSE.—I notice that the beautiful and free-flowering *Cattleya Mendelii* is breaking away unusually strong again after carrying a good crop of flowers; and as we believe in the principle of affording fresh material for them to root into each season, we shall run through them at once. Our experience teaches us that if done carefully and well—as it should be—when the roots are most active there is no fear of any check whatever. This can hardly be said of plants that are allowed to remain in the same pot two or three seasons until the compost has become sour and the plants weakened through the want of the little nourishment supplied in the sweet new compost.

Again, where there is a great number of species it is impossible to get through them all during the spring months, as is generally advised. Neither is it wise to do so. Some plants root after flowering; others there are which make up their growths and take a slight rest prior to pushing up their flower spikes. It is, therefore, patent to those that closely observe the habits of the various species that what is sauce for the goose, &c., does not apply to all Orchids. There are other advantages in potting plants during the summer months, and that is you avoid the drying influences of the hot-water pipes.

The compost we use for *Cattleyas* is of the best possible description. The peat, which is termed No. 1, is very fibrous, and the sphagnum moss fresh and green. The pots and crocks too are clean and dry. Plants that have done well, when turned out of their pots, will be found plentifully provided with white roots, so much so that it is with difficulty you can get away much of the old compost; neither is it necessary if in good condition, for by affording a pot one size larger you can afford them just that little fillip they require to keep them in good condition. After potting very little water will be wanted, the moisture in the air by the frequent syringing amongst the pots which is practised at this season of the year keeps the compost, moist until the growths are well up and the roots have fairly got hold of the new material. More *Cattleyas* are killed by over-watering than by any other cause: remember that.

COOL HOUSE.—*Odontoglossum Rossii majus* has growth, about half made up with us, and is pushing new roots from the base. We like to catch them in this state when affording new rooting material. This pretty, dwarf-growing, *Odontoglossum* detests anything stagnant about its roots. It quickly shows this by the foliage going off at the tips. A stuffy house, too, will do it.

ONCIDIUM TIGRINUM.—Look out for plants that are strong enough to flower, and protect the spikes, as they push up, from the ravages of slugs. We hang ours up, besides placing some cotton wool, rough side outwards around the spikes, and then we have to keep a sharp look out or a whole season is lost.—C.

HINTS FOR AMATEURS.

STRAWBERRIES.

THE crop of Strawberries has not been so heavy this year as was anticipated, owing to the spell of dry weather that we have had ever since the fruit commenced to ripen. This has caused all but the earliest fruits to be rather small, although we have to a certain extent been compensated for this by firmness of flesh and richness of flavour. The crop has also been later than usual this season, although it seems to have lasted fully as long as it does in an ordinary season. In the South of England, at all events, the crop is practically over, although, of course, up North people are still enjoying the favourite "berry." There is no crop that gives a better return than the Strawberry, and in addition to this no great amount of labour has to be expended upon getting it to do well. It is true the plant likes a rich, deep, loamy soil, but any ordinary garden soil will suit and bear crops.

The length of time during which a Strawberry plantation will continue to bear good crops of fruit varies from three to five years. Four years, as a rule, is quite long enough, and in many cases it is not advisable to allow the plants to remain for more than three years. Excellent results are obtained by some cultivators who treat the Strawberry as an annual, that is, they root out the plants after they have fruited once. This system, however, entails a great deal of work, and we should not recommend it to the ordinary amateur, as although the fruit borne in the second and third years is not perhaps so large as in the first, the aggregate of the crop is heavier.

Still, now and again, it is necessary to have a change, and a stock of plants must be worked up to do it. Besides this, there are plants wanted for forcing in pots next Spring.

Layering should therefore be commenced directly the crop of fruit has been removed from the plants. Not a few cultivators have special stock plants from which their supply of runners is obtained. The stock plants are not allowed to fruit, the flower trusses being cut out as fast as they make their appearance. The removal of the flower trusses gives an impetus to the production of runners, for if Nature's children cannot reproduce themselves in one way they will in another. Runners are thus forthcoming very early in the season, and have an extra long period of growth before them, wherein they may form good plump crowns and ripen the same thoroughly before the winter. This system is all very well for those who, unlike the majority of amateur cultivators, have plenty of space and labour to spare, and who want extra big and fine fruits, but for all ordinary purposes it entails a lot of needless trouble. Layers obtained from plants that have borne fruit will, if pegged down before the end of July, make strong plants by Autumn.

A number of pots of the size known as small sixties should be obtained. A single crock should be placed in the bottom of each of these, and the pots filled with soil. The latter may consist of any rough material that is handy. We always go to the old soil heap for ours, where a very decent compost may be had by just passing some of the contents of the heap through a rough riddle. Make the soil in the pots fairly firm.

The next requisite is a supply of pegs for fastening down the runners. In private gardens a stock of these is worked up in the dull days when work is slack, but the amateur is scarcely likely to be so provided for the future as that. Pegs of sufficient strength may be cut in abundance from the fronds of the common Bracken, and a few old birch brooms also come in handy in this respect. If any of my readers live in the country where hedgerows and copses are to be seen instead of shops and chimneys, a visit to some of the aforesaid hedges will yield plenty of material to go on with.

If pegs cannot be got the runners may be fastened down by placing stones upon the stems, but this is not so good a method of keeping them in place as the pegs, for if the pots happen to be turned over the young plants are disturbed. In selecting the runners choose the strongest. Fix the rosette of leaves to the soil in the pot by means of a peg, and cut off all beyond this rosette leaving the communi-

cation with the parent plant undisturbed. Where there is a whole bed to choose from layer only three or four runners from each plant and cut the rest away.

As watering will be a daily task if the weather turns out hot and dry, the pots containing the layers should be stood level and close together in batches between the rows, so that it will be fairly easy to water a lot of them at once by means of a rose-can.

Trimming the Old Plants.—If no layers are wanted, and it is desired to leave the plants in the beds for another year or two, some tidying up will be necessary. The old plants should be gone over, and all the runners cut off close to the stool with a sharp knife. To do this will mean sacrificing some of the lower leaves as well, but this will not matter. At one time it used to be a very common practice to see the old stools cut over until they were bare all but for a few straggling leaves, which were left, apparently, to mourn the disappearance of the rest. Common sense, however, has taught the gardener that it is too drastic to trim up the stools in this fashion, so a middle course is adopted, whereby only the lower leaves are sacrificed, and the check received by the plants is accordingly not nearly so great.

After the preliminary cutting over has been seen to all the prunnings, together with the mulching of straw or hay that was given to prevent the fruit from being splashed with mud, should be raked together, carted off to the rubbish heap or a piece of vacant ground, the latter for preference, and burnt out of the way. The ashes, by the way, will form a valuable dressing for a new plantation.

The rubbish removed, the hoe should be set to work between the rows and the plants, both to destroy the weeds and break up the surface of the soil which has become rather hard by constant treading upon it during the fruiting season. A light raking over will then take off the half dead weeds, and leave the ground clean and tidy.

If the soil is very dry, which it certainly is at the moment of ripening, the old stools should receive a thorough soaking with clear water. This will start them into growth, and should be repeated subsequently if the drought continues. Even if rain comes after the watering, the plants will be in a much better condition to make the best use of it, and the preliminary watering will be by no means wasted labour. It is important that the old plants should be given as much assistance as possible, for, like the young plants, they have their growth to make for next year.

Destruction of Old Plantations.—In making away with old plantations it is very necessary that the old stools should be got clean out of the ground, and not simply chopped off just below the surface. These old stools, if left in the ground, serve as a refuge for all sorts of vermin, especially wireworms. I remember seeing, not many years back, an old plantation in which the stools had been chopped off in this way. The ground was cropped the next year with Carrots, but it was so infested with wireworm that the Carrots were of very little use, for the roots were bored and eaten in all directions.

Varieties.—Each year sees the introduction of a number of new varieties, very few of which, however, come to stay. That time-honoured favourite, Sir Joseph Paxton, is still one of the very best in cultivation, its only rival being Royal Sovereign, which is now extensively grown both by private and market growers. Both these varieties are thoroughly to be depended on although Royal Sovereign gains somewhat in the matter of earliness, being from four to six days earlier than Paxton. Of the new varieties Prolific, obtained by Messrs. Jas. Veitch & Sons, Ltd., of Chelsea, as the result of a cross between Empress of India and British Queen, is well worthy of attention. It is a remarkably heavy bearer, and the deep crimson fruits are of delicious flavour, resembling British Queen in this respect, but ripening right to the tips in a way that that variety very seldom does.—*Rex.*

America Wants Country Gentlemen.—We notice that an American contemporary advises its readers "to sow 'Country Gentleman' up to the first of July." The species is getting rare in the old country now, but we have not yet attempted to propagate it in this way.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Grass to Name.—*Geo. T. T.*: The grass you enclose is called *Stipa pennata*, or Feather Grass. It has been grown in gardens for many years, for in Gerarde's time, as far back as the 16th century, the ladies are said to have worn it as feathers. The plant is perfectly hardy, and will grow in any ordinary garden soil. It may be increased either by dividing up the old plants or by sowing seed. If the flowering stems are required for decorative purposes they should be cut before they have been too much knocked about by the weather.

Asplenium marginatum.—*M.*: This *Asplenium* is exceedingly difficult to grow, and it is very rare indeed that even a respectable looking plant of it is to be seen. We are not at all surprised at your failure in getting it to grow; indeed, we should have been surprised had it grown in your greenhouse, which is too dry and draughty for it. Even if you get another plant it will be sure to die under such conditions. The plant, being a native of tropical America, requires stove heat, together with an atmosphere as near saturation point as possible, and plenty of water at the root. Unless you can give it all these it will never grow.

Cinerarias.—*L. K.*: From the description you give of your plants, and the conditions under which they have been placed, it seems very evident to us that it is far too hot and dry for them. Cinerarias love a cool, moist place, and do not like a hot, dry one. If you can shift the frame to a position under the shelter of a north or east wall, the former preferably, you will find that the plants will do much better. If you can stand them on a bottom of clean ashes, so much the better. Over-watering may have been the ultimate cause of the death of some of the plants, but the primary weakness was undoubtedly due to the reason we have indicated.

Lettuce Bolting.—*Lettuce*: It is not at all an uncommon thing for Lettuces to "run" or "bolt" in the way yours have done, although the "Cabbage" varieties are not any more liable to do it than the "Cos"; indeed, as far as our experience goes, the reverse of this is the case. There are several things that will cause wholesale "bolting." First, poor or old seed—this is a frequent cause. Then there is very poor soil. This is not so frequently the cause of bolting, because in most gardens the soil is up to, at least, a fair standard. The third reason is the hot, dry weather, which, more than anything else, causes Lettuces to run. It is this which has most likely brought about the evil in your case, probably assisted by the partial or complete action of the other causes mentioned. Probably, the later crops of plants raised from the same seed will turn out a 1 right.

Watering Flower Beds.—*Tyro*: If you once begin to water your flower beds you will have to keep on if the weather continues dry. The water draws the roots to the surface, and then, unless the supplies are kept up, the roots are burnt up and the plants suffer more than they would have done had no water at all been given.

Thrips in a Vinery.—*Reader*: Sponge the leaves with Tobacco water, and persist in the practice until the pests have been got rid of. It would be a serious matter to vapourise or fumigate the vinery, especially as it is attached to your dwelling-house, which makes it almost out of the question.

Celery Fly.—*R.*: The Celery plants are badly attacked with Celery fly (*Tephritis onopordinis*), which causes all those brown blisters on the leaves that you speak about. Seeing that all the plants are affected, it will not be possible to get rid of the pest by picking off the leaves. You should go over them, however, and pinch all the blisters between the finger and thumb, thereby killing the grubs that are eating their way between the epidermides of the leaf. You may dust the plants with soot or tobacco powder, in order to prevent the mature fly from lay-

ing its eggs upon the leaves. There is an Ichneumon fly that preys upon the Celery fly by laying its eggs in the body of the larvae of the latter. These eggs hatch into grubs which eat the grub of the Celery fly.

PHOENIX ROEBELINI.

FROM the very first time this graceful Phoenix made its appearance in public, everybody recognised its distinctness and light, elegant appearance; but fears were entertained that its growth would be too slow to meet the requirements expected of Palms at the present day. It is still a rare plant in this country, and likely to remain so unless seeds of it can be imported in quantity, as in the case of popular varieties which are grown by the thousand. Under cultivation, it has increased in size more rapidly than it was deemed capable of doing. The accompanying illustration represents a plant that was for some time in the keeping of Messrs. R. B. Laird & Sons, Pinkill Nursery, Murrayfield, Midlothian, and with whom we saw it some months ago. It was one of three that found their way into Scotland, and at the time we speak of it was one of two in the northern capital. It was certainly the best specimen of its kind in Scotland, and we believe was the best in the British Isles, being a perfect specimen. The leaves were very numerous, long for the species, and gracefully arching. The rigidity common to many of the species more generally cultivated was quite absent here. The plant, we learn, has since passed into the possession of Messrs. F. Sander & Co., St. Albans.

CARNATIONS AT EDENSIDE.

WITHIN the past few years Carnations have acquired a meaning and a name amongst the masses of the horticultural public. Previous to that the show Carnations and Picotees, with the Old Clove in the open garden held sway, but their monarchy, so to speak, was a very limited one. The show flowers still remain but their principal use is the exhibition table. It was a happy conception, both in the interests of the whole race of Carnations, and in that of the public, when the idea first dawned of raising varieties of hardy and vigorous constitution, in no way hampered by the canons of the florist proper, but which should in every way be suited for culture in the open border. A race aptly termed "border Carnations" is now a reality, and any one who is at all conversant with the requirements of plant life can grow these Carnations with ease and success. Thanks to the initiative and untiring perseverance of such men as Martin R. Smith, Esq., and Mr. James Douglas, who have already entirely revolutionised Carnation culture, and still carry on the good work with great vigour and earnestness.

It was our pleasure at the end of last week to examine the splendid collection of Mr. James Douglas, Edenside, Great Bookham, Surrey. His nursery is within five minutes' walk of Bookham Station on the South-Western Railway. All the sections of Carnations are well represented here and we devoted our attention chiefly to the newer and more popular types replete with the varieties that are rousing public attention everywhere.

MALMAISON CARNATIONS.

As is now widely known this race is best adapted for pot culture; and though the older varieties are still grown in the greatest quantity, the newer ones are being received by cultivators with open arms. The colours are already extremely varied. Prime Minister (M. R. Smith) is considered the finest scarlet Malmaison, and it is certainly of handsome form and beautifully refined. Another new variety, named Lord Rosebery (M. R. Smith), is a crimson-scarlet of rich and splendid colour and refined form. The first pure white Malmaison ever raised is Nell Gwynne (M. R. Smith) which does not burst its calyx. An Award of Merit was recently granted it by the R.H.S. The rosy-scarlet of Mrs. Everard Hambro is quite in another vein from either of the above; and the rich salmon-rose or bright rosy-pink (we have difficulty in naming the exact shade) of Princess May is almost certain to take the public fancy, for it is really charming. Those who like a striped flower will find it in the fragrant Lady Grimston, finely flaked and striped with scarlet and rose on a white ground. Trumpeter is of remarkably vigorous habit, and furnished with broad leaves; the

huge flowers are of a brilliant crimson-scarlet. The leaves of the variety just named, however, must give place to the remarkably broad and deep glaucous hue or almost steel-blue of the foliage of Churchwarden. Independently of the flowers, the leaves are a feature of the variety. The large flowers are of a brilliant crimson-scarlet. The largest flower in the whole collection of Malmaisons is Sir Charles Freemantle, the blooms being of fine form and rich rosy-pink. All of the above are practically new varieties, of which Mr. Douglas has a large and healthy stock now being layered. All the Malmaisons are delightfully fragrant.

TREE CARNATIONS.

The claims of this class are by no means ignored at Edenside, where progress is the order of the day. The finest scarlet is Patrocles (Douglas), being of very refined form, rich scarlet and floriferous. The blooms are carried erect on stout stalks and the calyx does not burst. By way of contrast Comus

Individual blooms last about a fortnight in perfection and are well worthy of inspection. They are grown in the full sun without any shading whatever, plenty of ventilation being kept on at all times. So numerous are the varieties that we can only mention a few of the best, all of which are grown in large batches, so that an excellent conception of their capabilities is obtained. The yellow ground Picotees are the acme of all that is lovely in this highly favoured race. Miss Violet is a heavy and bright rose-edged sort of leading merit and distinctness. So also is Dervish, which is lined with rose and has a beautiful lilac tint. The rosy margin of Empress Eugenie is taking and the form excellent. The bright rosy-red edge of Mohican (M. R. Smith) is almost confined to the margin, not a common occurrence in a yellow ground. Effie Deans (M. R. Smith) is a lovely and distinct thing even in its last stages when the pale yellow ground shows off the lilac margin. Mrs. Tremayne (M. R. Smith) is heavily



PHOENIX ROEBELINI.

(Douglas) may be described as the finest pure white tree Carnation, the form being neat, and the blooms carried erect on stout flower stalks. Being very floriferous this is a safe investment for winter work. Julia is a very dark maroon-crimson, and truly handsome in this particular shade of colour. It was granted an Award of Merit in 1896 by the R.H.S. The blossoms of Regalia are of a clear, attractive rose, as large as those of a Malmaison, and most abundantly produced. Sylvanus stands about 3½ ft. high and carries an abundance of dark purple flowers. It was raised from Royal Purple and Duke of York. All of these tree varieties are new and of Mr. Douglas' own raising. He never disbuds them, as they are grown for seed, the best of which is borne by the smaller flowers on the side shoots.

YELLOW GROUND PICOTEES.

A houseful of these is a magnificent sight, and sufficient to fill the mind of the grower in private establishments with invidious sentiments. The weight of bloom will be sufficient presently to hide the foliage.

edged with bright scarlet and strikingly distinct. A sport on one of the plants carried a fiery scarlet self-coloured flower. The vigorous growing Badminton (M. R. Smith) is a narrow red-edged variety of great beauty. His Excellency (M. R. Smith) is the best bright rose narrow-edged variety. Voltaire (M. R. Smith) is a huge flower lined with bright rose, and as a result of the plebiscite was placed at the top of the list of yellow ground Picotees in the second edition of the Carnation Manual. A sport from it is almost self yellow. The edge of Mr. Nigel is maroon-crimson, and the variety is one of the finest of the true yellow grounds. The narrow rose edge of Wanderer (M. R. Smith) is very handsome, and the flowers are produced in great abundance. The rose and deep purple of Harlequin justifies the name that has been given. Golden Eagle (M. R. Smith) used to be the best rosy-red edged sort, and it is certainly good yet. Fancy yellow grounds are not neglected and certainly some of them are marvellous and curious developments of colour. Dragon is

edged, barred, and mottled with purple. Cardinal Wolsey has been placed at the top of the yellow ground fancy Carnations, the scarlet and orange stripes showing a remarkable combination.

All the best of the show varieties, bizarre, flaked and self Carnations, as well as the white ground Carnations are grown and tended with great care at Edenside, but as few of them are really new we need not further mention them on this occasion, as they are well known to the specialists in this particular line.

WHITE GROUND PICOTEES.

As already mentioned, the exhibition types proper are grown along with the more modern races. We felt constrained to note some of the varieties of the white ground Picotees, on account of their refined and beautiful forms. In this latter respect, Harry Kenyon is one of the finest, and has a light purple edge. The lively rose edge of Mrs. Beswick is very heavy, being both conspicuous and attractive. Charlotte Brontë and Fortrose are really handsome, the one forming a fine contrast to the other. While both have broad and evenly rounded petals, the first named has a heavy red edge, and Fortrose a light rose edge on a clear white ground. All of the above are gems of the first water and new.

BORDER CARNATIONS.

For general cultivation we now come to the most interesting class, which has given such an impetus to the cause within the past decade. The selfs are the most generally useful though many of the fancy varieties have an attraction to the unsophisticated and unbiassed or unprejudiced mind, that their beauty cannot be resisted. Whether for border decoration or cut flowers they are unrivalled. Owing to the vigour of their constitution there is no difficulty in getting grass (leafy shoots) for layering, and their hardiness in well drained, firm ground is now a well established fact. The bulk of all the sorts at Edenside are grown in pots for convenience, with the exception of the seedlings which are grown and flowered in the open.

The maroon-crimson flowers and broad entire petals of Sir Henry Irving place it in the first rank of importance. The same may be said of the rich terra cotta of Mrs. Colby Sharpin, which carries its flowers erect. It is a great improvement upon Mrs. Reynolds Hole. Equally good in habit is Hampden, a shade or two lighter than the previous one. The huge white flowers of Delightful are slightly flaked with rose and very aptly named. Miss Florence comes into the same category, but the large and showy white flowers have a cluster of rose flakes generally about the middle of each petal. Both are great favourites with the ladies. A gorgeous and beautiful flower is Francis Wellesley, the flowers being of a most attractive shade of rich carmine-rose. Equally distinct in their way are Druid, bluish-mauve; Lady Hindlip, a fiery-scarlet of most refined form; and Bendigo, a most remarkable shade of blue-purple, being in fact the nearest approach to blue we have yet seen amongst Carnations. The Cadi is a rich scarlet and beautifully formed flower, with refined petals. The salmon-pink Endymion is the finest yet raised of this colour, and the growth is splendid. Mrs. Grey Buchanan is a finely formed flower of a rich and dark apricot. Queen of Sheba (Smith) is a masterpiece in delicacy, for it is pale yellow with an apricot centre.

White varieties are very numerous in the collection, and many of them are really acquisitions. The Briton is one of them, being a huge white flower with entire edges, and carried erect on stout stalks. The grass is also vigorous. Elfin is snowy white, and at one time was the best of its class; it flowers profusely. Saul is a clear, rich yellow; and Diana is paler, but much larger. The huge, rich rose flowers of Sapho never burst their calyx. Of dark varieties the richest are here, including the large maroon-crimson Mephisto, and Nox, a smaller, nearly black flower. A very pretty light colour is the rosy-pink Mrs. Gascoigne. Exile is of a rich rose, and was the premier self Carnation at the Southampton show. Mrs. James Douglas is a dwarf, free, early flowering variety of handsome form and rich scarlet.

Fancy border varieties are not neglected. A bold flower is Perseus, which is irregularly striped with heliotrope and orange on a yellow ground. Beautiful of its kind is Artemis, which is barred and striped with heliotrope and scarlet; but the finest of this type we have seen is Pelegia. The dark heliotrope and scarlet are well defined and regularly distri-

buted; the flower is also full and regularly formed. This as well as Sir Henry Irving, Miss Florence, Delightful, and Francis Wellesley belong to a set of nine, raised by Mr. Douglas for 1898-99.

Many of the above have been honoured with Awards of Merit and First-class Certificates at various London and provincial shows, and mark progress in the race that will quite revolutionise Carnation culture in the near future. These fine varieties are just as easy to grow, yes, easier than the bulk of the old types which they are bound to supersede. More than 150 of the varieties raised by M. R. Smith, Esq., are grown at Edenside, besides 100 raised by Mr. Douglas himself. He has 12,000 plants in pots under glass.

THE VIOLET AND THE TULIP.

AN ALLEGORY.

Down in a little silent dell
A simple Violet loved to dwell—
To plain and rustic manners bred,
She still hung down her bashful head;
Unfond to meet the gazer's eye—
For rural Nymphs are ever shy:
Yet still among the homely crowd,
'Twas universally allowed
That she had charms which well may vie
With many a flower of gaudier dye.
The Daisy at a distance sighed,
While Primrose dangled at her side,
Constant as any modern beau
That feigns a pang he ne'er can know.
The Bluebell, from a noble race
Descended, own'd the flower had pace,
And might, if polished in the town,
Put many a boasted flow'ret down.
Poor Periwinkle praised her air,
And "DAFFODILS" confessed her fair.
It happened, as the story goes,
That near the spot a TULIP rose,
A haughty DUTCHMAN of high birth,
And used to grow in "sifted earth";
But Time, that lays the proudest low,
Had here condemned the flow'r to blow;
By some rude gard'ner cast away,
And doomed to dwell in "humbler clay."
And like some vapoured city fair,
Ordered into the country air,
The TULIP plays off many a grace,
And proudly shews her painted face.
The neighbour plants, amazed, behold
Her purple petals streaked with gold;
Her slender stalk of tenderest green;
Her graceful form and courtly mein;
And gape as folks are wont to do
(Poor country folk) at objects new;
While she despises this and that,
Calls some "disgusting," others "flat."
But most the Violet she disdained,
And of her insolence complained.
"I wonder such a minx," said she,
"Could push thus into company;
Or with her little awkward ways,
Can think (poor silly wretch) to please.
Pray know your betters, miss," she cries,
"And keep your distance if you're wise;
'Tis pretty time o' day indeed,
When I must talk to such a weed,
That thus so impudently grows
Beneath, forsooth, my very nose."
"Madam," replied the modest flower,
"WE ALL CONFESS YOUR SOVEREIGN POWER,
And own that with so rich a dye
'Twere vain for Violets to vie,
And humbly make but this request—
Your ladyship may let us rest."
Just then a bee came buzzing by,
And on the Violet cast his eye,
Thrice humm'd around her azure breast,
Then on her lip a kiss impressed,
Whilst Tulip all neglected lay,
Tho' blazing in her proud array.

Hence humbled vanity may see
'Tis only sweets attract the bee:
—Richard Alfred Milikin, Cork; born, 1767; died, 1815.

Mountain Ashes are very plentiful on Vesuvius, yet strange to say, it is practically treeless.

BELGIAN NURSERIES.

IX.—MESSRS. F. SANDER & CO., BRUGES.

IN England the leading feature of this firm is the Orchids at St. Albans; but at Bruges, Belgium, the two leading specialities are Palms and Indian Azaleas. Several houses are also entirely devoted to Orchids; and a good many others are occupied with fine foliage plants generally, including new plants. The establishment at Bruges is only of two or three years standing, yet it has already developed to vast proportions, and a great block of houses was being added on the occasion of our visit in April last. The nursery or village of glass consisted of eighty houses besides the addition since made, and is easily reached from the station at Bruges, just outside one of the ports of the ancient city.

FINE FOLIAGE PLANTS.

Under this heading Palms easily take the leading place as far as numbers or quantity are concerned, but other subjects probably take precedence in number of species. The head quarters of the Sweet Bay (*Laurus nobilis*) are at Bruges, and on the occasion of our visit they were in the open air. There are thirty to forty Palm houses, and the first two entered were occupied with *Latania* and *Coryphas*, 12 in. to 18 in. high, the former being plunged in tan. The Palms are taken out of this and hardened off before being sent away. For economy of heating and in construction the Palm houses are all built in great blocks, the area continuous, and the roofs supported by brick arches. One centrally situated boiler heats a great number of these houses. A houseful of *Aspidistra lurida* and *A. l. variegata* was in first-rate order. We next entered a house of *Dracaenas*, consisting chiefly of *D. Bruantii* with bronzy young foliage, and very useful for decorative work. *Ficus elastica* was grown in thumb pots, plunged in leaves to root them. Numerous varieties of *Dracaenas* were being raised from seeds. Other occupants of this house were tuberous *Begonias*, *Phoenix canariensis* and *Cocos flexuosa* in quantity.

Kentias by the thousand engaged our attention in another house. The most popular are *K. belmoreana* and *K. fosteriana*. Less common are *K. rupicola* and *K. mooreana*, red petioled forms. *K. canterburyana* is not so popular. All these vary in height from 6 in. to 18 in., and seedlings were germinating under the benches. *Kentias* are grown cool, with plenty of air, and are never plunged, as are the *Latania*s which require more heat.

A cool house contained a fine batch of dwarf and sturdy *Coryphas*. Slender and graceful was *Phoenix rupicola*. *P. canariensis* consisted of sturdy plants 3 ft. high; and the Wax Palm (*Ceroxylon niveum*) stood 3 ft. to 4 ft. high. Next to this came *Kentias*, 2 ft. high; and the central beds were occupied with fine specimens of *Latania*, 3 ft. high, clean, healthy, and consisting of eight to ten leaves. The palmate or fan-shaped leaves of *Brahea glauca* were fringed with filaments on the edges, and the plants stood 5 ft. high. Plants of *Cocos Bonetti* were to be seen of various sizes up to 6 ft. and 8 ft., the pinnate leaves being glaucous and handsome. Outside the vestibules of some of these houses *Bambos* in tubs were represented by *Phyllostachys aurea*, 10 ft. high.

Elsewhere we came upon *Kentias* 18 in. to 2 ft. high in 48-size pots; and others 5 ft. to 6 ft. high carried about seven fine leaves. *Livistonas* in fine form were being got ready for despatch for the purchasers. Some huge houses were filled with *Phoenix canariensis*, with twelve to fourteen leaves; *Corypha australis*, 2½ ft. to 3½ ft. high, and bearing ten to fifteen leaves; *Seaforthias*, 18 in. high; *Phoenix rupicola*, in fine form; and *Cocos romanzoffiana*, 12 ft. to 14 ft. high, for furnishing. A magnificent specimen of *Encephalartos Altensteinii*, had a stem 4 ft. in girth; and a head of sixty leaves, with a spread of 12 ft. to 14 ft.

In another block we noted *Cocos romanzoffiana* already 5 ft. to 6 ft. high, although only yet in the juvenile state with undivided leaves. *Latania*s in tubs carried from twelve to fifteen leaves, and were 6 ft. to 7 ft. high, and as far through. Three or more seedlings of *Areca lutescens* are put in each of 48 and 32-size pots for decorative purposes. These Palm houses were shaded, some by means of paint and others by lath blinds. *Areca sapida* stood 3 ft. high. Tree Ferns were represented by *Dicksonias* 12 ft. to 14 ft. high. *Ophiopogon* is also grown in quantity. A magnificent specimen of *Kentia australis*, standing 14 ft. high, carried fifteen leaves. *Cocos plumosa*, *C. flexuosa* and *C. romanzoffiana* (the

latter being much bolder than *C. flexuosa*) stood 12 ft. to 14 ft. high. A rarer Palm than either was *Kentia Victoriae*, represented by the only known specimen, 14 ft. high and carried twenty-one leaves. The arching leaves and decurved pinnae resembled the wings of a gull half open and flying. *Raphis flabelliformis*, 3 ft. to 6 ft. high, was in excellent form.

A series of houses consisting of a mixed assemblage next engaged our attention. The beautiful and graceful leaves of *Daemonorops pyracantha* and *D. palambarica* were set off by batches of various *Dracaenas*, shapely plants of *Vriesia hieroglyphica*, with their strangely marked leaves, *Areca lutescens*, and the useful old *Pandanus utilis*. *Smilax*, *Pandanus utilis*, *Dracaena sanderiana*, *Geonoma gracilis* and *Kentia sanderiana* were all useful decorative subjects, here in fine marketable condition. The last-named species is a new plant, with light and graceful foliage, as fine as that of *Cocos weddelliana*. In one of the propagating houses we noted a remarkable *Kentia* of dwarf habit, with very much congested or crowded pinnae.

A huge house with a latticed roof, supported on iron pillars and open at the sides, was intended for housing *Araucarias* in summer. Such a house is always cooler in summer and warmer in winter than the outside air would be for such plants. Here we noted some curious tanks built or constructed with cement held together by wire netting embedded in it. Another gigantic building with an iron roof is intended for housing *Bays* and *Araucarias* in winter. Pyramid and standard *Bays* in excellent health stood in the open, some of the latter having stems 8 ft. high and heads 5 ft. through. Stems of 4 ft. to 4½ ft. high are more common, however, for standards. Pyramids 14 ft. high had a diameter of 5 ft. at the base.

Many new plants occupy the propagating houses, and amongst them we noted *Corypha Wogowii*. The obovate leaves of *Geonoma pynaertiana* are strikingly distinct. *Nepenthes* were plentifully represented. A graceful and handsome, fan Palm, seldom seen in private establishments was *Thrinax radiata*. The young leaves of *Areca Hsemanni* are purple and bronze coloured. Both this and *Licuala Jeananceyi* have recently been honoured with certificates from the Royal Horticultural Society. Better known are *Dracaena goldiana*, *Tillandsia Lindenii* and *Licuala horrida*. Very distinct and handsome is *Kentia Wendlandii*, having large, pinnate leaves. Graceful and slender are epithets we should apply to *Chamaedorea graminifolia*, which has all the characteristic beauty of *Cocos weddelliana*.

(To be continued.)

NATIONAL CHRYSANTHEMUM SOCIETY.

ANNUAL OUTING.

ABOUT this time last year, the National Chrysanthemum Society—parent of the many local organisations of this character—adopted a wise resolution which was on Monday successfully carried into effect. Like all well-constituted societies, that of the "Mums," hold an annual picnic or outing; twelve months ago, they had a most enjoyable excursion to Greenlands, the seat of the Hon. F. W. D. Smith, M.P., at Henley, and it was then and there decided, by the placid waters of the Thames, that the next trip should be to Harwich and Ipswich, with the view principally of obtaining a breezy sea and river excursion. The plan thus roughly sketched out was, in due course, very completely elaborated. The Great Eastern Railway Company lent every assistance, placing at the disposal of the party special saloon cars for the railway journey from London, and reserving for their use the fine steambot "Essex," where all arrangements were under the genial personal direction of Mr. Jackson, superintendent of the Ipswich District, and an attractive programme was provided. The only part of the original intention which had to be abandoned was a visit to Wolverstone Park; this was found to be impossible because there is no landing-stage.

The party reached Harwich shortly after half-past twelve o'clock, and proceeded straight to the Great Eastern Hotel. Dinner had here been provided in a large tent at the rear of the building, and the members lost no time in sitting down to the sub-

stantial repast. Some two hundred were present, including a large number of ladies. Mr. T. W. Sanders, Chairman of the Council (also President of the National Amateur Gardeners' Association), presided at the head table, and amongst those present were Mr. R. Ballantine (treasurer), Mr. T. Bevan (chairman of the Floral Committee; Mr. H. J. Jones, Lewisham; Mr. D. Ingamells, Covent Garden; Mr. Richard Dean, the general secretary of the Society, whose name is a household word amongst gardeners; Mr. W. A. Holmes, Puney, son of the first secretary of the Society; Mr. G. Langdon, Mr. J. F. Simpson, Mr. J. W. Moorman (superintendent of Victoria Park, London), and Mr. G. Stevens, members of the Executive Committee; Mr. A. E. Stubbs, one of the auditors; Mr. W. Seaward, of Hanwell, raiser of some of the finest Japanese *Chrysanthemums*; Mr. J. H. Witty, Mr. J. T. Anderson, Mr. T. J. Berridge, Mr. S. Mortimer, Mr. A. Bertoli, Mr. G. T. Evans, Mr. J. Emberson, Mr. Leonard Brown (secretary of the Amateur Gardeners' Association), Mr. Lawford (Finchley), Mr. H. T. Wooderson (Tooting), Mr. H. C. Prinsep (Buxted Park), Mr. Ennals (Stowmarket), Mr. G. W. Comfort, Mr. A. Robinson, F.R.H.S. (of Bishopsgate and Brentwood), Mr. G. Hayward (Brockley), Mr. G. P. Lingford, Mr. B. Wynne, editor of the *Nurseryman and Seedsman*, Mr. Ewens (of the Albert Hall), Mr. Middlebrook (Maidstone), Mr. Reeves (Hadley), Mr. A. Bishop (London C.C., chairman of the Forest Gate Society), Mr. James Tyler, East Ham Chrysanthemum Society, and many others.

After dinner the toast of "The Queen," to whom special reference was made as a great friend of horticulture, was proposed from the chair, and duly honoured. The toast list that followed was pleasantly informal.—Mr. H. J. Jones proposed the health of the ladies, and Mr. W. A. Holmes responded, both gentlemen protesting their inability, of course, to render justice to the subject, but nevertheless saying something "nice" and complimentary. The Chairman, in toasting "The Visitors," gave a quotation from some distinguished poet in favour of short speeches—a quotation which will not rhyme, anyhow—"Be brief, for it is with words as with sunbeams. The more they condense, the deeper they burn." In accordance with this maxim, he acknowledged in a short speech the excellent arrangements made for the pleasure of the party by Mr. F. Jackson and Mr. Ridgwell, and gave a very hearty welcome to Mr. John Andrews, as representative of the highly-successful Woodbridge Horticultural Society. Mr. Ridgwell responded in clever and humorous terms, which excited much laughter; Mr. Jackson and Mr. Andrews briefly returned thanks; and Mr. Stubbs was so repeatedly called that he was compelled to speak. After returning thanks for the cordial reception accorded him, he proposed the toast of "The Press," which was responded to by the representative of the *East Anglian Daily Times* and Mr. B. Wynne. The health of the Chairman, submitted by Mr. R. Ballantine, closed this part of the proceedings. The party afterwards formed up in a group outside the Hotel, and were photographed. It should be said that there were present some representatives of the Ipswich and East of England, Stowmarket, Colchester, Chelmsford, and other East Anglian Horticultural Societies.

The company embarked at three o'clock on board the good ship "Essex." It was a dull afternoon, with rather a keen touch of east in the wind; but the tide was full, and in the short run out round the Bell Buoy and back again up the river to Ipswich, the visitors enjoyed a splendid view of the scenery, with which residents are so familiar that they hardly realise its beauty, except on hearing the admiration expressed by strangers. Leaving Landguard and Felixstowe on the right, the splendidly wooded slopes of Orwell Park with the mansion and observatory could be seen, and on the opposite banks of the river with the trees in magnificent foliage down to the water's edge, and the park and mansion of Wolverstone on the high ground beyond, go far to maintain the reputation of the Orwell as one of the most picturesque of our English rivers. Various objects of special interest were noted in the famous obelisk at Wolverstone, and further up the lofty Frestan Tower. The quaint little hamlet of Pinmill with its snug position in a bend of the river was passed, and as the steamship neared Ipswich speed was slackened

in passing the considerable quantity of shipping, which the business of the water way engaged. The programme of instruction was "go as you please" reaching Ipswich, and it pleased one section of visitors to take a stroll round the town. Some went for the antiquities, including Cardinal Wolsey's Gate in College Street, a reminder of its one time power of the great Cardinal, who was born here. The ancient house in the old butter market and the municipal buildings of much more modern date were objects of interest. Others again visited the extensive docks, but a large number accepted an invitation to inspect the Ichthemic Guano Company's works. They were received by Mr. Charles M. Colchester, and, after partaking of four o'clock tea (and other refreshments) proceeded to view the processes—not very savoury, in some stages—of artificial manure manufacture. To attempt any adequate description of what was seen would involve certain failure. The establishment covers nearly four acres of ground; every part was thrown open, from the laboratory, in which the products are tested and analyses are taken, both of soils and manures, down to the room in which sacks of all sizes are made with marvellous rapidity; and everybody was much impressed with the extent and variety of the operations brought under notice. As the party were being ferried over to the other side of the river, a serious accident very nearly happened. One of the boatmen, who was taking a number of passengers across, including several ladies, rowed right under the bows of the steamer "Stour," as she was coming down the river, and, but for the promptness and presence of mind of two or three gentlemen on board—notably of Mr. Middlebrook—the boat would certainly have been upset. The escape was so narrow that it gave a nervous shock not only to those who were in imminent danger, but also to those who were spectators of the incident.

At 5.15 the party re-embarked on the "Essex," and on its return to Harwich an excellent and substantial tea was discussed by appetites which had been considerably whetted by the keen breeze which, as the afternoon wore on, had freshened to a smart blow. After tea there was yet time for a stroll along the esplanade and breakwater, and finally when the train left for London at 8.20 it was generally expressed that a very enjoyable and diversified day had been spent.

SOCIETIES.

HAUGHLEY AND WESHERDEN HORTICULTURAL.—July 19th.

THE annual exhibition of the above society was held on the above date in the beautiful grounds of Plashwood Park, Haughley, the residence of B. B. Booth, Esq., J.P. The display of fruit and vegetables was a particularly good one, and the show all round was most successful.

One of the chief features was the stand of choice fruits, Roses, Carnations, Sweet Peas, herbaceous and pot plants, "not for competition," arranged by Messrs. Tresver Bros., Nurserymen, Stowmarket. This firm also gave a prominent place on their stand for a good display of the well-known Ichthemic Guano, manufactured by the Ichthemic Guano Co., Ipswich; and the arrangement of the pretty tins, &c., proved quite an attraction to the visitors, many of whom are well acquainted with this excellent fertiliser. The Combs Brass Band attended, and added greatly to the enjoyment of the company, which was a very numerous one.

The judges were Mr. Musgrave, Finsborough Hall; Mr. Parsey, Stowmarket; Mr. Gilby, Plashwood Park; and Mr. Brett, Haughley Park.

CARDIFF HORTICULTURAL.—July 20th and 21st.

WITH the Sophia Gardens at Cardiff looking their best, and the clerk of the weather in his most genial mood, this two days' fixture turned out a remarkable success. The standard of the Cardiff show has always been considerably above the average, but on this occasion the competition was keener than ever, and thus the task of the judges was anything but a sinecure. Mr. E. M. Battram, Parknewydd; the Rev. G. H. Engleheart, Appleshaw, Andover; and Mr. Alfred Outram, Fulham, pronounced upon the respective merits of the exhibits of plants and cut flowers; while Mr. W. Iggulden, Frome; Mr. A.

Pettigrew, The Castle Gardens, Cardiff; and Mr. Stephen Treseder, Pullcock Nursery, Cardiff, performed the same offices for the fruits and vegetables, as well as for the cottagers' section.

OPEN CLASSES.

PLANTS.—Mr. J. Cypher, of Cheltenham, scored a well-merited success for the group of miscellaneous plants. Mr. R. Gossling, Penarth, was second, and Messrs. Case Bros., Cardiff, were third. Mr. W. J. Buckley, Llanelly, staged the best six stove and greenhouse Ferns, Dr. Lynn Thomas being second. Mr. B. R. Davis, Yeovil, led for twelve tuberous Begonias, Dr. Lynn Thomas being second in this class likewise. The first prize lot of twelve Gloxinias came from Mr. W. Green, Penylan.

CUT FLOWERS.—Roses formed an important part of the cut flower section, and some first-class blooms were to be seen upon the show boards. The competition was very close and well sustained. Messrs. Townsend & Sons, of Worcester, scored a notable success for twelve varieties of H. Ps. in trebles. They had excellent samples of Mrs. John Laing, Caroline Testout, Merveille de Lyon and Marchioness of Londonderry in their stand. Messrs. Cooling & Sons, Bath, received the second prize.

In the corresponding class for three blooms each of twelve varieties of Tea Roses, Messrs. Townsend & Sons again came to the front. Their samples of Madame de Watteville, Comtesse de Nadaillac, The Bride, Ernest Metz and Francesca Kruger were particularly good. A. Hill Gray, Esq., Beaulieu, Bath, was second.

The best stand of twenty-four blooms, distinct, of H. Ps. also came from Messrs. Townsend & Sons, although Mr. Stephen Treseder was a close second. Eighteen blooms, distinct, of Tea varieties were best shown by Mr. John Mattock, of Oxford, Messrs. D. & W. Croll, of Dundee, being second. Twelve blooms of Horace Vervet, sent by Messrs. Townsend & Sons, obtained the first award as the best H. P., whilst a similar number of trusses of Comtesse de Nadaillac, shown by Mr. Mattock, took pride of place amongst the Teas.

The class for a collection of Roses shown with their own buds and foliage was an interesting one, Mr. Mattock being first, and Mr. R. Crossling, Penarth, second.

FLORAL DECORATIONS were well to the fore. Messrs. Case Bros. won for the dessert table, and Mrs. Austin, Cardiff, for the dinner table. Messrs. Case Bros. also had the premier hand bouquet, and likewise won the Royal Horticultural Society's Silver Medal for the best aggregate of exhibits. Messrs. Perkins & Sons, Coventry, won for the bridal bouquet, the buttonholes, and the sprays.

FRUIT was rather below the average, but there was some good material forthcoming in one or two exhibits. Mr. R. A. Bowring, The Heath, Cardiff, was first for six bunches of Grapes in three varieties. Mr. Hollingsworth, gardener to Miss Talbot, Morgam Park, was placed first for three bunches of any black Grape with Black Hamburgh. Mr. J. Howe, gardener to Geo. Rutherford, Esq., Dulwich House, Cardiff, taking similar honours for three bunches of white Grapes.

VEGETABLES.—Lady Theodore Guest, Henstridge, was first for the collection of vegetables, thus winning, in addition to the first award a bronze medal from the Royal Horticultural Society.

AMATEURS' AND GARDENERS' CLASSES.

PLANTS.—Mr. W. Carpenter, gardener to W. J. Buckley, Esq., Llanelly, had the first prize group of plants arranged for effect, and occupying a space of 50 sq. feet; Mr. J. Howe was second. For the smaller group occupying 25 sq. feet, Mr. H. Rea, gardener to C. Waldron, Esq., Llandaff, was first; and Mr. J. Howe, second. Mr. J. C. Hanbury, Pontypool, had the best six stove and greenhouse plants, whilst Mr. Howe gained yet another first for four exotic Ferns.

TRADE EXHIBITS.

There were comparatively few trade exhibits, but such as there were were good. Mr. W. Treseder staged a capital group of Cactus Dahlias, his best forms being Mrs. Wilson Noble, Starfish, Lady Penzance, and Cinderella. The cup offered by the Mayor of Cardiff was won with this exhibit.

From Mr. Henry Eckford, Wem, Shropshire, came a grand lot of Sweet Peas, in the culture and improvement of which Mr. Eckford has achieved such great success. Amongst the numerous fine forms that were on view Fascination, Duke of West-

minster, Lady Mary Currie, Othello, and Senator were very conspicuous by reason of their fine development.

Violas, Sweet Peas and Pelargoniums were sent by Messrs. Dobbie & Co., Rothesay, N.B., and Orpington, Kent.

Messrs. Garraway, Clifton, had a nice lot of stove and greenhouse plants, whilst from Mr. W. J. Godfrey, Exmouth, Devon, came Cannas, Sweet Peas, and a collection of cut hardy flowers. Mr. B. R. Davis, of Yeovil, had some first-rate tuberous Begonias. Messrs. Barr & Sons, King Street, Covent Garden, staged an extensive array of hardy flowers.

TIVERTON HORTICULTURAL.—July 21st.

FOR several years the annual exhibition in connection with the above society has been in abeyance, but recently a fresh effort has been made, and the result on this occasion was such as we trust will warrant the officials of the society in continuing the exhibition. The site of the Public Park in which the show was held is a most beautiful one, well adapted to the purpose, and within easy distance from the station. Beautiful weather and a numerous company made a scene of pleasure and enjoyment. The entries were numerous, and most competitors staged in the classes for which they had sent word in. An interesting exhibition of bee handling and driving was announced to be given by Mr. John Tribble, of South Molton, under the auspices of the Devon Bee Keepers' Association. The lecture attracted a good muster. The demonstration was not altogether a success. The schedule contained just 100 classes, and several for honey, so that the work of the two judges was no light one.

For a group of miscellaneous plants, occupying a space of 80 sq. ft., Mrs. N. Row was first, the second being taken by Mr. L. Mackenzie. Mrs. Holland was first for four Orchids, showing very fine plants of *Oncidium phymatochilum*, *Sobralia xantholeuca*, full of its yellow flowers, *Epidendrum vitellinum majus*, a compact piece with over a dozen very tall spikes, and *D. suavisimum*. The second fell to T. Turner, who had *Cattleya gigas* and *Dendrobium densiflorum*, &c.

Some very fine Carnation blooms were shown by Mr. W. S. Clement, who was first for twelve, and had the special prize for best bloom in open class. R. B. Cullen, Esq., in the amateurs' division was first, and secured a special prize. Major Gardener and Mrs. Dickenson also secured prizes for these.

Capital Begonias, Fuchsias and zonal Pelargoniums were shown by Messrs. R. B. Cullen, L. Mackenzie and T. Turner. Roses were only moderate in the amateur classes, many of the Teas being small, and scarcely open. Plants for dinner-table decoration were shown by Mr. T. Turner, who was first, and Mr. J. R. Holland, second.

A tent was devoted to dinner table decorations arranged with fruit and flowers, laid for six persons, to be competed for by ladies only. Some five entered and made good displays, the first alternately falling to Mrs. E. H. Munford with a most beautiful and complete display, the second being taken by Miss L. Lock, Crediton, with one but slightly inferior. For a vase or basket for table decoration, with or without fruit, these two competitors were successful, but the position was reversed. For a collection of six dishes of fruit, the Rev. A. W. Hamilton-Gell, Exeter, was first, showing Black Hamburgh Grapes, Figs, Bananas, Peaches, and a Melon, in good form. The same exhibitor was first with Black Grapes and a Melon. For a dish of Peaches, T. Knapman was first; and Sir J. Davie, second. The latter exhibitor was successful with Nectarines.

The vegetable classes, both for amateurs and cottagers were well filled, and good exhibits mostly ruled. Mr. W. C. Cleave came first for a collection, W. A. Sanford, second, and Mrs. Norah Row, third. Many dishes of Potatos were shown, and were all of excellent quality. Peas, Beans, Onions, &c., numerous and good.

A separate tent was set apart for non-competitive groups, and here Messrs. R. Veitch & Sons, Exeter, had a large and varied collection of flowering plants, besides a number of choice varieties of Marliac's new Nymphaeas, and photographs of rock gardens recently erected by the firm, the one at Abbotsbury being largely represented. Messrs. Jarman & Co., Chard, had also a grand display of Roses, cut

blooms, &c. Messrs. G. Kerswell, and E. Sclater of Exeter, had capital groups of flowering plants, cut blooms, Ferns, &c. The committee and judges were entertained at lunch on the grounds, when the Mayor of Tiverton occupied the chair and several interesting little speeches were made. Hearty thanks were given to Mr. W. J. Pleass, the energetic secretary, who has worked hard to make the show successful. Doubtless the experience gained this first year will be of great service on future occasions. The judges were Mr. J. Mayne, Bickton, and Mr. W. Swan, Exmouth, whose decisions gave general satisfaction.

GLOUCESTER FLOWER SHOW.—July 21st.

THE Gloucester flower show was held in the Spa Cricket Field, and was in every sense a conspicuous success. The floral exhibits were by far the best ever got together in Gloucester. The marquee, which was over 66 yds. long by 25 yds. wide, was not large enough to display the wealth of floricultural exhibits sent for the occasion, and a second tent 22 yds. long had to be requisitioned for staging the table decorations and collections of Sweet Peas. The entries numbered close upon 270, while Mr. Colchester, of Ipswich, had a fine stand at the entrance to the large tent, on which were exhibited samples of the celebrated Ichthemic Guano, by the aid of which many of the fine specimens in the show were produced.

Messrs. J. House & Son showed specimen Pansies. Messrs. Webb & Sons, Wordsley, also set up a fine collection of flowers. The exhibitors in the nurserymen's class were Mr. J. Cypher, from Cheltenham, Mr. H. Whitehead, Heathville Nursery, Gloucester, and Mr. W. Vause, Leamington, who were awarded first, second and third prizes respectively.

The opening ceremony was to have been performed by Lord and Lady Fitzhardinge, but owing to the indisposition of the latter, the function was undertaken by the Hon. Maurice Gifford and Mrs. Gifford, nephew and niece of the aforesaid. They were accompanied by the Mayor (Ald. A. Estcourt), and the City High Sheriff. Mrs. Gifford was presented with a handsome shower bouquet by the grandson of the Mayor, Mr. Roy Estcourt.

SOUTHERN COUNTIES CARNATION.—July 22nd.

NOTWITHSTANDING the opposition which this society met with when it was first mooted, it evidently has made a good start, and seeing that it is held nearly a week in advance of the National Carnation Society's show at the Crystal Palace, it in no way interferes with that. Mr. William Garton, Argyll House, Woolston, has had the lion's share of the work upon his shoulders, as hon. secretary and treasurer, in organising the society, and he is determined that it shall enjoy a similar success to that attending other societies farther north. The society already numbers 200 members, which speaks volumes in favour of the good foundation which has been laid. It was only founded in August last, and the first show exceeded the most sanguine expectations as to its success. About seventy sat down to the luncheon provided and presided over by the Rev. G. W. Minns (Vicar of Weston) and having representatives from the Royal Southampton, Shirley and other horticultural bodies. The society also has the countenance of the Midland and National Carnation Societies. Messrs. John Ball and T. E. Henwood were the judges for the bizarres, flakes and white ground Picotees; and Messrs. James Douglas and Charles Blick for selfs, fancies, yellow grounds, cup competitions and bouquets.

For twelve varieties of flakes and bizarres the first award was taken by Mr. James Douglas, Edenside, Great Bookham, Surrey, who had blooms of excellent quality. He was followed by W. Garton, jun., Esq., Woolston. Mr. F. Hooper, Bath, took the leading place for six blooms, and was followed by Mr. J. J. Keen, Southampton, and two others. Mr. James Douglas again came to the front for twelve white ground Picotees, in which he is strong. Mr. S. A. Went, Thames Ditton, Surrey, took the first place for six varieties of the above type, followed by Mr. F. Hooper, and four other prize-takers.

As might have been anticipated Mr. Douglas led the way for twelve yellow ground Picotees, beating Mr. C. Turner, of Slough. For six yellow ground varieties Mr. F. Hooper came to the front, followed by Mr. C. Phillips, Bracknell, Berks, and four other prize-takers.

Mr. C. Turner came to the front for twelve yellow

ground and fancy Carnations, which were in fine form. Mr. W. Garton, jun., was second, and two others followed him. Mr. S. A. Went had the best six of this description; Mr. A. J. Rowberry, and four other successful competitors followed him. Mr. W. Garton, jun., and Mr. C. Turner took the two principal prizes in this order for twelve selfs; and the fact that they were ahead of four other winners in this class showed how keen the competition was.

Mr. F. Hooper took first and second for a single bloom of a bizarre Carnation; Mr. J. Douglas being third and fourth. Mr. E. Buckland, Winchester, had the best red-edged Picotee, Mr. F. Hooper being next. Mr. Douglas took the lead for a purple-edged variety; Mr. E. H. Buckland being second and fifth. Mr. Hooper came to the front for a rose-edged variety, competition being absent. He was first and second for a scarlet-edged Carnation, competition here being strong. Mr. C. Turner was first and third for a yellow ground Carnation; Mr. E. H. Buckland being second.

For a single bloom of a self of any colour Mr. J. Douglas took the first two prizes. He was second for a fancy, being beaten by Mr. C. Turner. For six mixed varieties, open to those who had never before won a prize, Mr. E. H. Buckland and Mrs. Whitely, Downton, scored in this order.

The premier bizarre or flake was won by Mr. J. Douglas, showing the crimson bizarre Phoebe. Mr. S. A. Went had the premier self; and Mr. C. Turner, the premier fancy. In the class for white ground Picotees Mr. J. Douglas led the way with Fortrose; and in the yellow ground class the premier bloom was Mohican, shown by Mr. J. Douglas.

The Silver Cup in the open class for twelve self or fancy blooms, undressed, was taken by Mr. J. Douglas. Mr. B. Ladhams, Shirley, had the best bouquet of Carnations. Mr. E. C. Goble was first for a spray of Carnations. Mr. A. J. Rowberry was first for three buttonholes. Miss E. Wadmore had the best vase of Carnations.

ROYAL HORTICULTURAL.—July 26th.

THE leading and most novel feature of the meeting on Tuesday last was the Bamboos, brought up to illustrate a lecture on the subject. Hardy herbaceous flowers, annuals, Sweet Peas, Caladiums, and other stove plants, Roses, Cacti, and Lilies were also shown in abundance. Fruit trees and bushes were abundantly represented and in a variety of forms.

W. G. Groves, Esq., Holehird, Windermere (gardener, Mr. Robertshaw), exhibited a huge piece of *Odontoglossum coronarium*, carrying two immense spikes having thirty-two and thirty-four flowers respectively. There were several pieces on a large raft, but the strongest pseudobulbs bore the flowers. A Silver Flora Medal was deservedly accorded it.

Messrs. J. Veitch & Sons, Limited, Chelsea, exhibited several hybrid *Cattleyas* and *Laelias*, including grand pieces of *Laeliocattleya calistoglossa ignescens*, *Lc. Zephyra*, the magnificent *Lc. Ingrami gigantea*, *Lc. amesiana*, *Lc. Lucilia*, *Cattleya Enid*, and the dark orange, mottled crimson *Masdevallia Imogen*.

Walter C. Clark, Esq. (gardener, Mr. Jones), Orleans House, Sefton Park, Liverpool, exhibited a grand piece of *Cypripedium Mrs. Walter Clark* (*C. Ashburtoniae* × *C. Stonei*). Messrs. F. Sander & Co., St. Albans, staged *Cypripedium Orion*. R. I. Measures, Esq. (gardener, Mr. H. J. Chapman), showed *Laeliocattleya schilleriana* Cambridge Lodge var.

Messrs. Hugh Low & Co., Bush Hill, Enfield, exhibited *Cattleya gigas*, *C. gaskelliana*, *C. g. alba*, a finely blotched *Odontoglossum crispum*, and a piece of *Vanda caerulea* bearing a large spike of flowers. (Silver Banksian Medal.) Norman C. Cookson, Esq. (gardener, Mr. William Murray), Oakwood, Wylam-on-Tyne, showed *Cattleya Lord Rothschild*. De B. Crawshaw, Esq. (Gardener, Mr. S. Cooke), Rosefield, Sevenoaks, exhibited *Cattleya gaskelliana* *crawshawiana*, a beautiful light coloured variety. G. W. Law-Schofield, Esq. (gardener, Mr. E. Shill), New Hall Hey, Rawtenstall, exhibited a richly coloured variety of *Cattleya Warscewiczii*.

Mr. H. B. May, of Dyson's Lane Nurseries, Upper Edmonton, continued the meritorious representative exhibits of Ferns which have been such an attractive feature of the Drill Hall meetings of the last twelve-month. On this occasion the genus *Pteris* was represented by a hundred species and varieties.

covering a considerable range of habit, colour, and cutting of the fronds. The noble *Pteris ludens* was especially good, whilst such variegated Ferns as *Pteris reginae*, *P. r. cristata*, *P. nivalis*, *P. tricolor*, *P. Victoria*, *P. cretica albo-lineata*, and *P. c. Mayii* were some of the best of these. Crested and tasselled forms of *P. serrulata* and *P. cretica*, the handsome and distinct *P. palmata*, and a number of varieties of *P. tremula* were all well shown. The plants were all in first-rate health. (Silver Gilt Banksian Medal.) Mr. May also had *Bouvardia jasminoides* and *B. Queen of Roses* in a remarkably floriferous condition.

On the left-hand side of the doorway a nice group of small but highly coloured *Caladiums* was set up upon the floor by Mr. T. Tomlinson, gardener to R. Hoffman, Esq., Thurlow Lodge, West Dulwich. The green fronds of Maidenhair Ferns appeared to advantage among the brightly hued leaves of the *Caladiums*. (Silver Flora Medal.)

An interesting group of new plants was contributed by Messrs. F. Sander & Co., St. Albans. Included in it were the much-talked-of *Acalypha Sanderi*, the pretty and distinct *A. godseffiana*, and the new *Caladium Ami Schwartz*. *Furcraea watsoniana* was another noteworthy plant.

A tray of Water Lilies grown in the open was sent by Mr. J. Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton. There were some superb flowers of *Nymphaea tuberosa* and *N. gloriosa*.

Roses were represented by several meritorious exhibits. The most important of these was a collection from Messrs. Wm. Paul & Son, Waltham Cross, Herts. It was largely composed of popular garden and *Polyantha* forms which were effectively shown in large baskets of each variety. Souvenir de Mme. Levet, Ma Capucine, Mme. Abel Chatenay, Mme. Cadeaw Ramey, Marquise de Sallsbury, Souvenir de Lady Ashburton, Perle d'Or, Little Pet, Mignonette and Gloire des *Polyantha* were some of the most noteworthy forms. (Silver Flora Medal.)

Four dozen capital cut blooms of *H. P's* and Teas mixed, came from Mr. C. J. Grahame, Leatherhead. There were some splendid trusses of *Comtesse de Nadaillac*, *Kaiserin Augusta Victoria*, *Maman Cochet*, *Alfred Colomb*, *A. K. Williams* and Mrs. John Laing in this exhibit. (Silver Banksian Medal.)

Cut sprays of *Crimson Rambler* came from Mr. J. Fitt, gardener to F. W. Champion, Esq., Colley Manor, Reigate. They were remarkably heavy and full of flower.

Cut hardy flowers constituted a large percentage of the display. They included contributions from a number of the leading houses, and, as usual, were replete with interest.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., had a collection in which *Liliums* and *Carnations* were the chief feature. Of the former, *L. odorum*, *L. dalmaticum*, *L. napaleensis*, *L. auratum platyphyllum*, *L. giganteum* and *L. pardalinum* were much in evidence. (Silver Banksian Medal.)

Messrs. Wm. Cutbush & Son, Highgate, N., had another pretty group in which the *Malmaison Carnation*, *Princess of Wales* occupied a central and conspicuous position. *Eryngium giganteum*, *Gypsophilas*, *Carnations* and *Sweet Peas* were all good. (Silver Banksian Medal.)

The *Liliums* sent by Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester, included *L. speciosum album novum*, *L. dalmaticum*, *L. pardalinum*, *L. Brownii* and *L. excelsum* and were all well shown. *Brodiaeas*, *Calochorti* and the curious *Michauxia campanuloides* were other notables. (Silver Gilt Banksian Medal.)

Messrs. Dobbie & Co., Rothesay and Orpington, Kent, made a grand display with bunches of *Sweet Peas*, sprays of bedding *Violas*. Many of the leading varieties by both these popular sections of flowers were shown, and all in capital condition. A number of bunches of hardy herbaceous flowers added to the display. (Silver Flora Medal.)

A very pretty exhibit of hardy herbaceous flowers was staged by Messrs. A. W. Young & Co., Stevenage, Herts, *Sweet Williams* being especially well shown.

The hardy flowers sent by Messrs. Barr & Sons, King Street, Covent Garden, were very bright and in great variety. *Phloxes*, *Eryngiums*, *Iris laevigata* and *Bocconia cordata carnea* were all good. (Silver Banksian Medal.)

Messrs. Jas. Carter & Co., High Holborn, staged upwards of 100 small bunches of *Sweet Peas* in as many varieties. The flowers were arranged in three lines, the back one being composed of shades of blue and purple, the middle one of shades of blush and white, and the front one of shades of rose and scarlet. (Silver Banksian Medal.)

The group of annuals, submitted by Messrs. Jas. Veitch & Sons, Ltd., in the Sherwood Cup competition were wonderfully strong, white and red varieties of *Lavatera*, the handsome *Malope grandiflora*, *Clarkia elegans rosea fl. pl.*, *Candytuft* and *Coreopses* being all good. From the same firm came a number of cut stems of the yellow *Althaea Primrose Queen*, also ten dozen large, handsome flowers of border *Carnations* and *Picotees*. *Sweetheart*, *Geo. Cruickshanks*, *Magpie*, *Pandelli Ralli*, *Voltaire*, *Little John* and *Cardinal Wolsey* were some of the best varieties.

Mr. Amos Perry, Winchmore Hill, sent a dozen bunches of hardy herbaceous flowers; and Mr. Eckford, of Wem, Salop, sent a small collection of new *Sweet Peas*.

BAMBOOS.

The subject of the afternoon's lecture being Bamboos, there were several groups of these noble grasses forthcoming from various sources. To the lecturer himself, A. B. Freeman-Mitford, Esq., C.B., Batsford Park, Moreton-in-Marsh, must be awarded the Palm, for his group, which was staged upon the floor of the hall and ran its whole length, comprised some magnificent Bamboos, and was of a most representative character. A Gold Medal was deservedly awarded for this fine effort. *Arundinaria aristata*, *Phyllostachys Quillioi*, *A. Simoni*, *P. nigro-punctata*, *A. Falconeri*, *P. aurea*, *P. boryana*, and *P. sulphurea* were all represented by some magnificent specimens that did infinite credit to their owner.

Messrs. James Veitch & Sons, Ltd., also staged a representative collection of these handsome plants. Fine masses of *Arundinaria nitida*, *A. fortunei* variegata and the noble *Bambusa palmata* were special features in this group. (Silver Gilt Flora Medal.)

On the right hand side of the doorway a small semi-circular group of Bamboos was staged by Mr. T. S. Ware.

A Silver Banksian Medal was awarded to Mr. V. N. Gauntlett, Redruth, Cornwall, for living canes of *Phyllostachys aurea* and *P. nigra*.

FRUIT AND VEGETABLES.

At a meeting of the fruit and vegetable committee a Silver Banksian Medal was awarded to Messrs. T. Rivers & Son, Sawbridgeworth, Herts, for a collection of sweet Cherries and Plums. Such Cherries as *Bigarreau Napoleon*, *Bigarreau de Schrecken*, *Large Black Bigarreau*, *May Duke*, and *Senu's de Burr* were especially good, and Plums, *Belgian Purple*, and *River's Early Transparent Gage* were likewise in splendid condition.

Mr. Owen Thomas, gardener to Her Majesty the Queen, Frogmore, sent eight fine fruits of a new Melon called *Lord E. Cavendish*, a huge, smooth yellow skinned, white fleshed variety of capital flavour.

Messrs. Jas. Veitch & Sons, Limited, sent trays of Strawberries, which included the new *Prolific*, *Waterloo*, *Oxonian*, and *Bicton Pine*. A number of trays of Cherries was also shown. The *Cordon*, fan-shaped, and standard *Gooseberries* and *Red Currants* shown by the Chelsea firm was the best example of this kind of culture that we have yet seen. All of the trees carried heavy crops. They were shown in large pots. Of the *Gooseberries*, *Sir Geo. Brown*, *Warrington*, *Early Red Hairy*, *Succeed*, *Early Green Hairy*, *Golden Drop*, and *Whitesmith*, were a few of the best in a collection which was remarkable for its high quality and comprehensiveness. (Silver Gilt Knightian Medal.)

Messrs. Laxton Bros., Bedford, showed a tray of fruits of the *Strawberry Trafalgar*, an exceedingly fine late sort, also plants of *Fillbasket*, a very heavy cropping late variety. *Strawberries* *Gunton Park*, *Waterloo* and *Dr. Hogg* were exhibited by Mr. H. Divers, gardener to His Grace the Duke of Rutland, Belvoir Castle, Grantham. Mr. W. Carmichael, 14, Pitt Street, Edinburgh, also showed some of his new *Strawberries*, several of which were of delicious flavour.

Mr. H. Eckford exhibited some of his new culinary Peas.

Messrs. W. Johnson & Son, Ltd., Boston, Lincs.,

received a Silver Banksian Medal for a collection of culinary Peas.

THE NATIONAL CACTUS SOCIETY.—July 26th. THE Cactus Society being affiliated to the R. H. S., its annual show was held as usual, in connection with a meeting of the latter society in the Westminster Drill Hall.

On this occasion the show was an exceedingly poor one, and although the schedule provided for six classes, only three were shown in, and only four exhibits in all.

The first award for six Cacti was won by P. Bodkin, Esq. (gardener, Mr. Crane), who had good specimens of *Mammillaria nogalensis*, *Melocactus communis*, *Opuntia Engelmanni cristata*, *Echinocactus Guisoni* and *E. Emoryi*. Mr. C. Aubry was first for a single specimen; and Mrs. L. Carter, second.

Messrs. H. Cannell & Sons, Swanley, Kent, had a remarkably fine lot of Cacti and succulent plants, but these were not staged for competition. *Opuntias*, *Mammillarias* and *Cereuses* were present in considerable numbers. There was also a grand batch of *Echinocactus Guisoni* and several good specimens of the Old Man Cactus, *Pilocereus senilis*. (Silver Flora Medal).

QUESTIONS AND ANSWERS.

Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as *Carnations*, *Pelargoniums*, *Chrysanthemums*, *Roses*, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Cox's Orange Apple Cracking.—W. Thom.: Many things might induce the fruit to crack, but we could only guess at the nature of the malady in the absence of specimens. It might be caused by the fungus *Cladosporium dendriticum*, or it might have been the sequel to a hailstorm. In any case, it would be due to injury to the skin, which, being unable to swell, must crack. You might send us specimens in a box, packed with a little damp moss, by post. The rusting of the leaves of *Blenheim Orange* and *New Hawthornden Apples* might be due to injury from hail in the early stages of their growth. The clay subsoil you mention, should have been trenched before planting, keeping the good soil on the surface and leaving the clay in the bottom, but thoroughly breaking it up. Supposing you had taken out holes in it for the purpose of putting in fresh soil about the roots of the trees, the chances are that the holes would have retained moisture, and that would have been greatly injurious to the roots of the trees. After trenching, it would have been advisable to plant the trees very shallowly, assisting them with fresh and good soil on the surface. The mulching with manure on the top is a good plan, provided the soil is properly drained. If water is stagnant in the subsoil you must put in drains at a moderate depth, and at short distances apart. You might send specimens of the rusted leaves, as well as fruit.

Pollard Trees.—G.R.M.: Various species of Willow are suitable for pollarding, including *Salix viminalis*, *S. alba*, *S. a. vitellina*, *S. Caprea*, *S. russelliana*, *S. fragilis*, and others. Several of the *Poplars* might be treated in the same way; also the *Hornbeam*, *Beech*, *Elm*, *Robinia Pseudacacia* *bessoniana*, and other varieties. We do not remember seeing the *Ash* pollarded, but think that young trees would answer the purpose well enough. The above would give you a good deal of variety, and you could add to the number by trying various other deciduous trees. We do not think that any of the *Conifers* would give you great satisfaction if pollarded. *Yews*, *Cupressus*, and *Retinospora*, would bear cutting, but they would always be too dense and mop-headed to be ornamental. Pollarding could be done with perfect safety during March, at the beginning rather than towards the end of the month. In any case it should be done sometime before the buds swell. There is little or no danger of their bleeding to do any harm, except in the case of *Vines* and *Birches*, so that no styptic is necessary.

How to get rid of Worms in Pots.—H. H.: Lime water may be used for most of the strong growing stove plants. The way to use it is to put some lumps of quicklime into a can of water. Allow it to stand for some hours till as much lime has been dissolved as to saturate the water. The latter cannot take up any more than sufficient to saturate it. Allow it to stand till the water is perfectly clear by the sediment falling to the bottom. Fill another can three-parts full, and make up the rest with lime water. Water the plants about once a week with this diluted solution till you have got rid of the worms. The latter usually come to the surface in a few minutes after the watering, when you may pick

up and destroy them. Always use weak rather than strong lime and water.

Manures for Stove Plants.—H. H.: With judgment and care you could use any of the manures you mention. None of them should be used more than twice a week, and then only in small quantities so as to form a weak solution. Use it only for the grosser and more vigorous growing plants. Thomson's would be an all round manure, and in moderate doses would be safe. *Ichthemic Guano* is rich in phosphates, but also contains other plant food, and should be used weak rather than strong. Nitrate of soda and sulphate of ammonia are nitrogenous manures, and should be used with great caution as they would burn the roots if too strong. Use about 1/2 oz. of the former to a gallon of water, and even less, say 1/4 of the sulphate to a gallon of water. These latter two supply nitrogen only and would stimulate the foliage, but should not be used to make coarse and rapid growth, otherwise the leaves will not be so durable. Neither of the above should be used more than twice a week in the weak state. Gross growing *Chrysanthemums* and similar things would, of course, take more. You might with advantage use all of the above alternately, as variety is often productive of good results. Use the first two by preference to the nitrate and sulphate, in case you do not intend getting all.

Black Fly on Cherry Trees.—Omega: The black *Aphis* of Cherry trees is a very troublesome pest, and has to be dealt with rather drastically. You may overcome it, however, by the use of various insecticides. You might steep 1/2 lb. of coarse shag tobacco in a gallon of hot water and add a quantity of strong soap suds, stirring the mixture well before syringing the trees with the liquid. Another insecticide consists of 8 ozs. to 10 ozs. of soft soap to a gallon of hot water, to which you might add half-a-pint of tobacco juice to make it more effective. Kerosene and petroleum emulsions are also excellent insecticides, if properly made so as to render the oil harmless to the foliage. The trees in either case could receive a good syringing with any of these mixtures just before leaving off work at night; then wash them with clean water in the morning. If there are Cherries on the trees you might wait till they are gathered before commencing operations on the black fly. The insecticides will help to remove the black matter on the leaves, and the clean water would wash it away. Repeat the operation at the end of a few days if the trees are not quite clean. See next week's issue for the remaining answers.

Insect in Vinery.—H. H.: The insect you sent was a very fine specimen of *Otiorynchus sulcatus*, or the *Black Vine Weevil*, which is very destructive to the foliage, fruit and young shoots of Vines if present in any large number. Take steps to eradicate them at once, laying some pieces of board on the borders of the vinery, but slightly elevated so that the weevils may crawl beneath them during the early morning, for they hide during the day, and come out at night. Examine the traps in the morning and kill all you can find.

"Hardy Ornamental Flowering Trees and Shrubs."—W. Borver, jun.: Your post card contained no address whatever, so that the sending of the book is impossible. Its price is 2s. 3d., post free, so that if you send the amount, together with your address, the book will be sent by post at once.

Names of Plants.—A. P.: 1, *Silene Armeria*; 2, the so-called American *Mignonette* is *Reseda alba*, a native of Europe and the Orient.—*Sigma*: *Sambucus nigra laciniata*, or cut-leaved Elder.—W. B. G.: It is the British plant *Chlora perfoliata*, often found on chalk downs.—C. M.: 1, *Neillia opulifolia*; 2, *Rosa blanda*; 3, *Amelanchier canadensis*.—A. B.: 1, *Lavatera trimestris*; 2, *Malope trifida*; 3, *Collinsia bicolor*; 4, *Linaria maroccana*; 5, *Eschscholtzia californica*; 6, *Nemophila insignis*; 7, *Clarkia pulchella*.—J. L.: 1, *Cattleya gaskelliana*; 2, *Oncidium macranthum*; 3, *Odontoglossum Pescatorei* var.—H. K.: 1, *Rubus nutkaensis*; 2, *Escallonia philippiana*; 3, *Spiraea salicifolia*; 4, *Cotoneaster nummularia*.—B. T.: 1, *Oxalis corniculata rubra*; 2, *Lysimachia vulgaris*; 3, *Veronica longifolia*; 4, *Gentiana lutea*; 5, *Asplenium Ceterach*; 6, *Choisya ternata*.—J. Mayne: *Bupleurum fruticosum*, the *Shrubby Hare's-ear*.—J. C. S.: 1, *Orchis maculata*; 2, *Agrostis vulgaris*; 3, *Draba (Erophila) verna*; 4, *Veronica arvensis*.—J. M.: *Lonicera sempervirens*, the *Trumpet Honeysuckle*. Your other question next week.

Communications Received.—W. S.—W. P. R., Preston.—W. T. Toogood.—J. M.—P. Murray Thomson.—J. T. Thurston, next week.—A. P.—A. C.—B. W.—Walker—J. A.—T. Wilson.—D. Bentley.—Nemo.—R. M.—A. H.—Tory.—Carnation.—X. Y. Z.—A. B.—Reader.

TRADE CATALOGUES RECEIVED.

DAVID W. THOMSON, 24, Frederick Street, Edinburgh.—Bulbs and Roots, 1898.
HERB & WULLE, Via Trivio, Naples, Italy.—General Catalogue of Bulbs.
J. C. SCHMIDT, Erfurt, Germany.—Wholesale Catalogue of made up Bouquets, Dried Flowers, Garden Sundries, &c.

K. P. KVEES, Tiflis, Caucasus, Russia.—Wholesale Catalogue of Caucasian Bulbs and Plants.

T. METHVEN & SONS, 15, Princes Street and Leith Walk, Edinburgh.—Bulb List.

WM. CUTBUSH & SON, Highgate, London, and Barnet, Herts.—Catalogue of Hyacinths, Tulips, and other Plants for early Forcing, &c.

PINEHURST NURSERIES, Pinehurst, North Carolina, U.S.A.—Seeds of Woody and Herbaceous Plants.

COVENT GARDEN MARKET.

July 26th, 1898.

FRUIT.—AVERAGE WHOLESALE PRICES.

| | s. | d. | s. d. | | s. | d. | s. d. |
|----------------------|----|----|-------|-----------------------|----|----|-------|
| Apples ...per hnshe | 0 | 0 | 0 | Red Currants, per | | | |
| Cobbs | 0 | 0 | 0 | half sieve | 5 | 0 | |
| per 100 lbs. | | | | Cherries, per half | | | |
| Grapes, per lb. | 1 | 6 | 3 | sieve | 4 | 0 | 9 |
| Pine-apples | | | | Raspberries, per cwt. | 40 | 0 | |
| —St. Michael's each | 2 | 6 | 7 | Ripe Gooseberries, | | | |
| Strawberries per lb. | 0 | 4 | 1 | per half sieve | 2 | 6 | 3 |
| Black Currants, per | | | | | | | |
| half sieve | 6 | 6 | | | | | |

VEGETABLES.—AVERAGE WHOLESALE PRICES

| | s. | d. | s. d. | | s. | d. | s. d. |
|-----------------------|----|----|-------|-----------------------|----|----|-------|
| Artichokes Globe doz. | 2 | 0 | 4 | Herbsper bunch | 0 | 2 | |
| Asparagus, per bundle | 3 | 0 | 8 | Horse Radish, bundle | 1 | 0 | 2 |
| Beans, French, per | | | | Lettuces ...per dozen | 1 | 3 | 1 |
| per lb. | 0 | 9 | 1 | Mushrooms, p. basket | 1 | 0 | 1 |
| Beet..... per dozen | 1 | 0 | | Onions.....per bunch | 0 | 4 | 0 |
| Brussels Sprouts | | | | Parsley ... per bunch | 0 | 3 | |
| per half sieve | 1 | 0 | 1 | Radishes... per dozen | 1 | 0 | 1 |
| Cabbages ... per doz. | 1 | 0 | 1 | Seakale...per basket | 1 | 6 | 2 |
| Carrots ... per bunch | 0 | 3 | | Small salad, pnnnet | 0 | 4 | |
| Cauliflowers.....doz. | 2 | 0 | 3 | Spinach per bushel | 2 | 0 | 3 |
| Celery.....per bundle | 1 | 0 | 1 | Tomatoes..... per lb. | 0 | 6 | 1 |
| Cucumbers per doz. | 2 | 6 | 3 | Turnips ...per hnn. | 0 | 3 | |
| Endive, French, doz. | 1 | 6 | 2 | | | | |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| | s. | d. | s. d. | | s. | d. | s. d. |
|-------------------------|----|----|-------|------------------------|----|----|-------|
| Ann Lilies, 12 blms. | 3 | 0 | 4 | Mardenhair Fern, 12hs. | 4 | 0 | 6 |
| Asparagus Fern, bun. | 2 | 0 | 3 | Mignonette, 12 bun. | 1 | 6 | 3 |
| Bonvardias, per bun. | 0 | 6 | 8 | Orchids, doz. blooms | 1 | 0 | 8 |
| Carnations doz. blms. | 1 | 0 | 3 | Pelargoniums, 12 bun. | 3 | 0 | 6 |
| doz. bun. | 4 | 0 | 8 | Red Roses, per doz. | 1 | 0 | 1 |
| Euobaris ...per doz. | 2 | 0 | 4 | Roses (Indoor), doz. | 0 | 6 | 1 |
| Gardenias ...per doz. | 1 | 0 | 3 | Tea, white, doz. | 1 | 0 | 0 |
| Geranium, scarlet, | | | | Perle 1 | 0 | 2 | 0 |
| doz. bunches | 3 | 0 | 6 | Safrano 1 | 0 | 2 | 0 |
| Lilium longiflorum | | | | (English), | | | |
| per doz. | 3 | 0 | 4 | Pink Roses, doz. | 1 | 6 | 3 |
| Lily of the Valley doz. | | | | Smllax, per bunch ... | 1 | 6 | 2 |
| sprays | 1 | 0 | 2 | Tuberose, doz. | | | |
| Marguerites, 12 bun. | 1 | 6 | 3 | blooms ... | 1 | 0 | 1 |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES.

| | s. | d. | s. d. | | s. | d. | s. d. |
|------------------------|----|----|-------|------------------------|----|----|-------|
| Arbor Vitae, per doz. | 12 | 0 | 36 | Hydrangeas, per doz. | 8 | 0 | 10 |
| Aspidistra, doz..... | 18 | 0 | 36 | Ivy Geraniums, | | | |
| specimen | 5 | 0 | 10 | per doz. | 4 | 0 | 6 |
| Calceolarias, per doz. | 4 | 0 | 6 | Lilium Harrissii, | | | |
| Coleus, per doz. | 3 | 0 | 0 | per pot | 1 | 6 | 2 |
| Dracaena, various, | | | | Lycopodiums, doz. | 3 | 0 | 4 |
| per doz. | 12 | 0 | 30 | Lobelias, per doz. ... | 3 | 0 | 5 |
| Dracaena viridis, doz. | 9 | 0 | 18 | Marguerite Daisy doz. | 4 | 0 | 9 |
| Eunymus, var. doz. | 6 | 0 | 18 | Mignonette, per doz. | 4 | 0 | 6 |
| Evergreens, invar. doz | 6 | 0 | 24 | Myrtles, doz. | 6 | 0 | 9 |
| Ferns, invar. per doz. | 4 | 0 | 12 | Palms in variety, each | 1 | 0 | 15 |
| Ferns, small, per 100 | 4 | 0 | 6 | Palms, Specimen ... | 2 | 0 | 63 |
| Ficus elastica, each | 1 | 0 | 5 | Pelargoniums ... | 9 | 0 | 12 |
| Foliage Plants, var., | | | | Rhodanthe...per doz. | 3 | 0 | 4 |
| each | 1 | 0 | 5 | Scarletsper doz | 2 | 6 | 6 |
| Fuchsia, per doz..... | 5 | 0 | 8 | Splraea, per doz.... | 6 | 0 | 9 |
| Heliotrope, per dozen | 4 | 0 | 6 | | | | |

WE OFFER YOU £10.

WILL YOU TAKE IT? If so, then solve the 15 Magic Square, purchase the SENG Song Book, and enter at once. Price 6d., post free 7d. The SENG Song Book contains the latest collection of new and old popular songs to suit all classes. Unanimous opinion of Press and Public. A marvellous and well-assorted contribution.

INSTRUCTIONS.
—The figures to be used are 1 2 3 4 5 6 7 8 9. Place one of these figures in each of the squares (keeping the 5 in the centre), to count 15 each way, from left to right, top to bottom, and corner to corner.

| | | | | |
|--|--|---|--|--|
| | | | | |
| | | 5 | | |
| | | | | |

CAN YOU MAKE 15 EACH WAY?

THE "SENG" WONDERFUL COLLECTION OF SONGS. PRICE 7d. POST FREE. Send 7d. postage stamps and stamped addressed envelope. Write address distinctly, enclose your solution of Magic Square and send at once.

WE OFFER £10 TO EVERY PERSON SOLVING THIS, on complying with our conditions. RESULT AND BOOK SENT WITHIN 3 DAYS. No Waiting. No Division. A Gigantic Offer. A GENUINE AND BONA-FIDE TRANSACTION.
This offer is open for three months.

THE **SENG PUBLISHING CO.,**
61, ROBERTSON STREET, HASTINGS,
This advertisement is cut from the Gardening World

National Telephone 60, Sydenham.

GRAND EXHIBITION

Telegrams: "Caladium," London.

OF

Tuberous Begonias, Caladiums, Gloxinias, & Streptocarpus, &c.

JOHN LAING & SONS

Respectfully invite your early inspection of their **Superb Collections** of these **Superb Flowering and Foliage Plants**, now at their best at their

STANSTEAD PARK NURSERIES, FOREST HILL.

Railway Stations: Catford L. C. & D. Rly., or Catford Bridge, S. E. Rly.

J. L. & SONS have been appointed **Garden Contractors and Floral Decorators** to the **International Universal Exhibition at Earl's Court**. Inspection should be made of our fine bedding there, also of our **Floral Peacock**.

WEBBS' SEEDS

WEBBS' EMPEROR CABBAGE.
The Earliest and Best.
6d. and 1s. per packet; 1s. 6d. per oz.

From Mr. J. TURNBULL, The School House, July 9th, 1898.

"I sowed some seed of Webbs' 'Emperor Cabbage' and the Cabbages have been simply grand; they get better each time we have them."

WEBBS', WORDSLEY, STOURBRIDGE.

ORCHIDS.

Clean Healthy Plants at Low Prices.
Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

GLOXINIAS

FINEST MEDAL COLLECTION
* IN THE WORLD. *

Send for CATALOGUE to
JOHN PEED & SONS, West Norwood, London

The Royal Nurseries, Maidstone, Kent.
GEORGE BUNYARD & CO.,

Are now booking orders for early delivery of the very best
NEW AND OLD STRAWBERRIES.
For crop 1899, or for forcing.
They offer the largest stock and the best plants in the trade.
Change of stock pays.
Catalogue of Strawberries and Summer Fruits now ready.

Caladiums

FINEST COLLECTION in the World. We make a speciality of CALADIUMS. Gold Medals Manchester & Leicester. Silver Cup, R.H.S., &c.

Satisfaction guaranteed. **JOHN PEED AND SONS,** West Norwood, London.

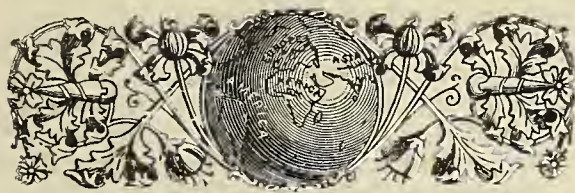
A NEW SHADING.

FROSTEEN SHADING.

Heat, but not light proof. Easily applied. No heating required; no mess, no trouble; the latest scientific discovery; beautifies the greenhouse, inexpensive and won't wash off; entirely superseding old fashioned methods and preparations. Can be ordered through all seedsmen and florists, or direct from the makers, price 1s. FROSTEEN AZO must be used in addition to make it permanent, price 1s. 6d. Both sent carriage paid for P.O. 2s. 6d.

As Cool as a Cucumber.

FROSTEEN SYNDICATE, LTD.,
341, Argyle Street, Glasgow.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, AUGUST 6th, 1898.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, August 9th.—Royal Horticultural Society; Meeting of committees at 12 noon.
WEDNESDAY, August 10th.—Bishop's Stortford Show. Hastings and St. Leonards Show. Salisbury Show. Etwall and District Show.

CARNATIONS AT THE CRYSTAL PALACE.—

Now that the most important of our southern Carnation shows is a matter of history, and a brilliant success, we are able to determine more exactly the progress that has been made in the culture of the Carnation during the past year. The abnormal climatal conditions that characterised the first half of the year naturally excited the fears of Carnation lovers that we were to have a bad year, and that good flowers would be scarce. This idea was strengthened when it was announced that owing to the lateness of the season the exhibition of the National Carnation and Picotee Society (Southern Section) at the Crystal Palace was postponed from the 20th to the 27th of July. However, all the fears happily proved groundless, for the exhibition turned out to be a brilliant success, both from the number of entries received, and the quality of the flowers themselves, which would have been considered first rate in a favourable season, but were nothing short of marvellously fine for such a year as 1898 has been. Picotees, particularly the white ground varieties, appear to have been the only ones to suffer, although in Mr. C. Turner's winning stand of twenty-four, in 12 varieties, there were some capital flowers. On the other hand the first-prize stand of twelve yellow ground flowers in six varieties sent by Martin R. Smith Esq., was by far the finest lot of blooms we have ever seen.

Self coloured and fancy Carnations were in really superb condition, and the merits of these sections were never more abundantly manifest. Mr. Martin Smith's successes in the most important classes in each of these sections were a remarkable feature, and he has certainly never shown finer, if such fine, flowers, at any show in any year. Flakes and bizarres were fairly well represented, but we opine that the interest they excite is gradually but surely waning. They are too

eccentric in their behaviour, too difficult to keep true according to the strict canons of the florist, and they do not yield a sufficient return for labour. We do not, however, wish to see them banished from the show board, for they possess an attraction and an individuality of their own

The general trend of modern taste is undoubtedly in favour of the self coloured varieties, and the advance made in this section in size, colour, and refinement of form during the last few years is nothing short of wonderful. Mr. Martin Smith's stand of twenty-four blooms comprising nineteen varieties showed conclusively that for general effect there is nothing to beat the 'self.' The grand yellow form Cecilia was adjudged to be the premier self in the show, and we may take it as typical of its class.

The classes for undressed blooms shown with their own foliage displayed a slight increase in popularity. The efforts of Mr. Martin Smith to bring home to flower lovers the value of the Carnation as a decorative subject are untiring, and find practical expression in the formation of classes for bunches of flowers from the open border set up with their own foliage, and not dressed or 'improved' in any way. These classes are due to his initiative and we may add, the prize money therein to his generosity. A full report of the show will be found on another page.

HARDY WATER LILIES AT GUNNERSBURY HOUSE.—

For many years past the common White Water Lily as well as Nymphaea odorata have been grown in the pond at Gunnersbury House, Acton, one of the residences of Leopold de Rothschild, Esq., and the former particularly occupies a considerable amount of space, flowering freely every year. When the crowns get crowded, however, the leaves rise above the water to a height of 6 in. to 12 in. thus largely hiding the flowers. The flowers of N. odorata attain an enormous size but otherwise closely resemble those of the common one. A small piece of the hybrid N. gloriosa was imported last year, and when we noted it recently, had 17 leaves and 7 flowers and buds. The blooms are massive when expanded and the rose and carmine colours are very effective. A First-class Certificate was recently awarded it by the R.H.S. At the same meeting a similar honour was accorded N. odorata rosacea, a most charming rosy-pink flower, of much larger size and more telling appearance than the old N. alba rosea, beautiful as it is. The intense carmine-red flowers of N. elliottiana are very telling, as they lie fully expanded just on the top of the water. There is now a well established patch of it at Gunnersbury House. Equally robust is N. robinsoniana, the medium sized bronzy leaves rising out of the water, but hitherto it has not flowered so freely as it did last year. The flowers of Sanguinea are only of moderate size, but intense crimson-red, with pink sepals that are green on the outer face. This striking hybrid is not yet in commerce owing to its not having had time to increase sufficiently to supply the public, so that Mr. James Hudson, the gardener, has been favoured by the raiser in advance of the public.

The lighter or intermediate shades of colour have not been neglected. The flowers of Seignourettii are rich light red, tinted with salmon and white on the back of the petals. The shade is such that some have described it as light yellow, tinted with carmine. The small, oval leaves are mottled with bronze on both surfaces. The silvery-pink flowers, and bronzy, ultimately splashed, leaves of N. lucida are also engaging. The Cape Cod Water Lily has also bronzy young leaves and silvery-rose flowers of considerable beauty. As seen here the

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Maida Vale, London W.

flowers of *N. marliacea carnea* and *N. m. rosea* do not differ appreciably but there are some slight differences in the foliage. Huge clumps of leaves rise out of the water, indicating their vigour and the large white flowers are tinted with flesh or pink at the base of the petals. There is often a suspicion of pink at the base of the petals of *N. m. albida*, but otherwise they are of huge size and white. A huge clump of leaves is attended by numerous massive flowers that testify to the effectiveness of this hybrid. Decidedly blue flowers have yet to be added to hardy Water Lilies, though that may be accomplished in the near future. We have a slight tendency in this direction in the soft lilac flowers of *N. Laydekeri lilacea*, with its soft lilac flowers, surrounded by small bronzy, floating leaves.

Large and massive flowers are the aim of most raisers and most acceptable to the general public; but is nevertheless a genuine pleasure to pass from the above giants to the tiny pale yellow flowers of *N. pygmaea helvola*, hovering like distant stars on the surface of the water. The orbicular leaves are also quite small, thus justifying the specific name, but those of the variety never get so large as those of the type. The mass of stamens is orange, and forms a fitting centre to the flower. From the pigmy we again pass to the giant in the soft sulphur petals and golden anthers of *N. aurora*, which differs from *N. marliacea chromatella* chiefly by having its leaves blotched with bronze, whereas the foliage of the latter is green. The huge flowers, of the latter more especially, bear a not inapt resemblance to Cactus Dahlias as they rise clear of the water and their own foliage, which also stands clear of the water, owing to their vigour, crowding and morphological differentiation, as always happens when Water Lily leaves rise out of the water. The petals of *N. m. chromatella* are rather more pointed than those of its rival. Another hybrid named *Exquisita* has bronzy young leaves, and white flowers about the size of those of *N. alba*. Altogether the collection is a most interesting one.

Royal Horticultural Society.—The next meeting of the society will be held in the Drill Hall on Tuesday, August 9th. The committee will meet at noon, and at three p.m. a paper on "Water Lilies" will be given by Mons. Latour Marliac.

Grammatophyllum Ellisii and Grumphyllum, described on p. 709 and p. 726 should have formed one article, and not disjointed as they were. The second part of the article had been written by mistake upon a sheet containing a description of two *Cypripediums*, and the fact was overlooked till the second part was read on the succeeding week.

A Locality Rich in Ferns.—In the issue of *The Fern Bulletin* for October last, Dr. Underwood reported the finding of thirty-four species of Ferns within a circle with a diameter of not more than three miles, the locality being near Jamesville, Onondaga County, New York. A contributor to the issue of the same publication for July of this year goes one better than this, for she (it is a woman) speaks of a triangular piece of ground, two sides of the triangle being each three miles in length, and the third one mile, in which thirty-nine species and eight varieties are to be found. This piece of ground includes some limestone cliffs and part of a swamp, and is situated near Pittsford, Rutland County, Vermont. A list of the Ferns is given, and amongst them are many that are well known under cultivation in this country, whilst a goodly number are natives of the British Isles. Of these we may mention *Pteris aquilina*, our commonest Fern, *Asplenium Trichomanes*, *A. Ruta-muraria*, *A. Felix-foemina*, *Ophioglossum vulgatum*, *Osmunda regalis*, *Polypodium vulgare*, *P. Dryopteris*, *Cystopteris fragilis*, and *Woodsia ilvensis*.

Euphorbia corollata.—The *Florists' Review* for the 26th ult., gives an illustration of this distinct *Euphorbia* which is found wild in great abundance on railroad banks and in dry open fields in Illinois. It is a plant of easy culture and is grown to some extent for supplying cut flowers in the States. Its stems branch freely, and these branches divide and sub-divide to form a bushy plant bearing multitudes of small white flowers. Its general appearance is, roughly speaking, not unlike that of a *Gypsophila*, although there are, of course, wide points of variance.

Royal Botanic Society.—At the annual meeting to be held in the gardens on the 10th inst. at 1 p.m., Mr. J. S. Rubinstein will recommend that the present system of electing the Members of the Council whereby they are practically elected and re-elected year after year by the Council itself, should be brought to an end; and further that the scientific and administrative branches of the society's work should be divided and that each branch should be supervised by a competent manager. He will also propose (1) the establishment of classes for the study of botany to be open to all students (2) the reorganisation of the refreshment department and the obtaining of a licence for the restaurant newly built in the gardens, and (3) the erection of a large floral hall to serve as a winter garden and wherein exhibitions, flower shows, receptions and musical promenades can be held in all seasons and in any weather, architects being invited to send in plans in competition.—*J. S. Rubinstein, F.R.B.S., West Cromwell Road, S.W. August 1st, 1898.*

The Asparagus Rust, which has long been known to gardeners in this country has commenced to plague the United States as well—up to quite recently it was unknown in North America. In a badly attacked crop the plants appear as if they were maturing early in the season, for the healthy green changes to a brown hue as if the work of the stems and leaves had naturally come to an end. Examined closely, the rusted plants are observed to have the epidermis of the stems lifted as if in blisters, with ruptures here and there showing the spores within. A series of experiments has been carried on of late at the New Jersey agricultural experiment station, and the spraying of the plants with Bordeaux mixture is now recommended. Burning the infected brush in autumn, according to the common practice in this country, was also found effective. Research has brought to light the existence of two other Fungi that attack that producing the rust. One *Tubercularia persicina* appears to attack the cluster-cup stage of the rust. Future investigation may result in the finding out of a system whereby these two hyper-parasites may be turned to account on behalf of the Asparagus.

Our Fruit Crops.—In this garden we have a heavy crop of Apples, Blenheim Orange, Golden Noble, King Pippin, Grenadier, and a local variety named Scotch Bridgett; but this is a notable exception in this district for which I cannot account as our best tree of Blenheim Orange is fully exposed. In looking through an eight acre orchard about two miles from here, the only kinds of Apples that had anything like a crop were Golden Spire, Gold Medal and Irish Peach; and the owner assured me that it was the worst fruit year he had experienced for a great number of years, and from what he gathered from his friends at market, matters were no better in the district. In fact, he said, if any one else had a good crop of fruit he himself was sure to have one. The crop of Pears was, if anything, worse still. Ours are fair, the best being Louise Bonne, Beurré d'Amanlis, and Beurré Bosc. Plums are almost a failure except Damsons, of which there is a sprinkling. Small fruit is an abundant crop here and elsewhere. Cherries are more than an average crop, whilst other fruit trees have been infested with insect pests. The Cherries have been free from their enemy, the black fly. Continuous cold winds are said to be responsible for the light crops, for we had no frost, and it is possible that our trees were a week or ten days later in coming into flower than the orchard referred to, and others; and as gardens not more than a mile from here are that much earlier with vegetables, Strawberries and Raspberries, it is possible that there might be that difference some years in the trees flowering.—*W. P. R., Preston, Lancs.*

A Seedling Bamboo.—Seeing that Bamboos rarely flower even in their own country, seedlings must be rare. *Arundinaria Laydekeri* must be an exception to the general rule, for it flowered at several places in this country in 1895, after which it died. A seedling shown at the last meeting of the Royal Horticultural Society by A. B. Freeman-Mitford, Esq., C.B., must have raised from seeds that ripened in the open air during that year on his plants at Batsford, Moreton-in-Marsh. Seedlings of Bamboos are evidently of slow growth during the first few years of their existence, for that under notice was much branched, but only 1 in. high, leaves and all.

Dutch Horticultural and Botanical Society.—At the floral committee meeting of July 13th, 1898, the committee awarded First-class Certificates to Mr. C. Kwint, of Bloemendaal, for *Begonia Tuberosa* fl. pl. cristata; to Messrs. E. H. Krelage & Son, of Haarlem, for *Begonia tuberosa* fl. pl. Orange ball, *Begonia tuberosa* fl. pl. Souvenir de Pierre Notting, *Calochortus Gunnisoni*, and *Petunia Sneeuwbal* (Snowball); and to Mr. C. G. van Dijk, of Zeist, for *Schubertia grandiflora*. Certificates of Merit were awarded to Messrs. E. H. Krelage & Son, of Haarlem, for *Ageratum Blue perfection*, and *Helenium Bigelowi*. Botanical Certificates were also accorded to Messrs. E. H. Krelage & Son, of Haarlem, for *Calochortus obispoensis* and *Lilium elegans Alice Wilson*.

Victoria Regia at Kew.—At the present time there are ten huge leaves on the *Victoria regia* in the tank of the house No. 10, where it is always grown. Some of the larger leaves measure between 7 ft. and 8 ft. in diameter, the rim included. The upturned edge is not so deep as that of last year's plant, the variety being different. The first flower this year opened on July 1st, and another bud was so prominent that it appeared fit to open on the 31st of that month. This would make the twelfth flower for the season, or within the calendar month. The flowers are creamy-white on the first day, and when fully expanded on the second day they are of a rich rose all over, with the exception of the tips of a few of the outer rows of petals. At this time they are very handsome. The flower in question stood about 6 in. above the surface of the water, which would indicate that the peduncle is much stronger than usual.

A State Model Forest for Scotland.—Some discussion has arisen anent the proposed establishment of a Scottish State Model Forest for the practical and scientific training of foresters, and the carrying on of experiments has lately arisen, and we notice that our esteemed contemporary, *The North British Agriculturist*, strongly backs the proposal. *The Land Agent's Record* has had something to say against such an institution, and, amongst other things, says "we fail to see why the county should be called upon to purchase an estate for this purpose before it utilises any of the Crown Lands of England." Again, "If gross mismanagement be the object to be aimed at, these Crown Lands in England are worthy of being called model forests." *The North British Agriculturist* effectively disposes of these argumentative sneers, rightly calls attention to the fact that Scotland has a much larger interest in the matter than England has, for she has a far greater acreage of land suitable for afforestation. Besides, England has already a finely equipped forestry school at Cooper's Hill. In Scotland there are three separate courses of classroom instruction in forestry; viz., one at the Edinburgh University, one at the Royal Botanic Gardens, and one at the Heriot-Watt College—all in Edinburgh. Attention is also drawn to the points urged by Mr. Mackenzie before the Board of Agriculture, when he suggested as methods of aiding the advancement of forestry—(1) "Freeing lands under plantations from all taxes until the timber has reached the stage for being realised; (2) loans at a low rate of interest to landowners for extensive planting; and, (3) Parliament taking over the lands for the purpose of such afforestation, leaving it in the option of the landlord or his heirs to redeem the lands so taken over on paying the initial costs and interest thereon." That afforestation of waste land would pay is proved by the fact that whereas the Germans are, according to Dr. Schlich, well satisfied if they can produce 1½ tons per acre per annum, in Scotland, in properly managed woods 2 or 2½ tons per acre can be obtained, whilst the quality is fully equal to the Germans'.

To Extract Perfume from Flowers, one of three methods is adopted—by maceration, enfleurage, or distillation.

The Sparrow Pest.—The sparrow is nothing if not cosmopolitan. It appears from a statement made by *The Farm and Fireside*, Toronto, British North America, that for some time the Provincial Game Department has been inundated with enquiries about English sparrows, and the best way of getting rid of them. The game warden has answered by calling attention to the delicacy of the birds for eating. He advises that they should be caught, (which reminds us very much of the old fashioned recipe for getting rid of fleas) placed in hot water, skinned, and then dressed like chicken. We can vouch from experience that the birds are very nice thus, but they are not the kind of food a hungry man would waste his time upon.

How the Flower Girls Work.—There is no more interesting sight than the flower girls of London as they troop in, in early morning, to the flower market of Covent Garden. They crowd round the salesman for bunches of this, sprays of that—in fact anything that their experience teaches them will make up to advantage. Having obtained their supply of flowers the girls seek a quiet doorstep where they sit down and proceed to evolve their stock of hutton-holes from the fresh flowers and greenery. How nimbly they work, with what taste they can turn out quite a "tricky" hutton-hole from very ordinary materials. Long practice makes them adepts at their work, of course, but there must be a considerable amount of initial taste and skill.

Cherry, Peach and Almond Slips.—Is it possible to grow Cherry, Peach and Almond trees from slips? M. Teret maintains that it is, and has found an old document on the subject, dated 1859, in the *Bulletin de la Société Nationale d'Agriculture*. It is therein stated that Cherry, Peach and Almond trees can easily be grown from slips, provided that the slips are put into water, as stone fruit trees take root with difficulty when planted as usual in the soil. It is, however, recommended—(1) To plant the slips as soon as the roots are one centimetre long, because they would certainly die if longer when planted in the earth; (2) To cut the slip short before putting it into water, so that the tender roots may be able to nourish it, and for this purpose only leave one eye; (3) Preserve the delicate roots intact as grown in the water, which is done by putting the slip in a hole, and then filling it with fine sifted sand slightly moistened, so that it will sink down itself; (4) Close the lower end of the slip with sealing wax before putting in water, thus to prevent much water cannot enter the wood, which might cause decay. — *Cosmos*.

Bamboos at Gunnersbury House.—With the limited space at command in the gardens of Gunnersbury House, Acton, W., the residence of Leopold de Rothschild, Esq., Mr. James Hudson endeavours, and that successfully, to import and cultivate some of the more important and newer of garden plants in which interest may be centred. On the banks of the pond where the hardy Water Lilies are grown, and on the grass in the vicinity he has got together some of the best of the hardy Bamboos. *Arundinaria japonica* is the largest and oldest plant, and was no doubt at first put out tentatively and with some misgivings as to its ultimate success. It has now grown into a great thicket several yards in diameter at the base, with a spread of much greater dimensions. Even to-day it is best known, perhaps, under the name of *Bambusa Metake*. The most graceful of all the *Arundinarias*, namely, *A. nitida*, has also found its way here. *Phyllostachys nigra punctata* has made excellent young growths, much taller than last year's ones, thus showing that it is firmly established. Another of the most handsome species of this genus is *P. aurea*, of which a young plant is 4 ft. high. *P. Henonis* is light green and graceful in character. *P. ruscifolia* resembles a hush of the Butcher's Broom, as the name not inaptly expresses. A young plant of *Bambusa Mazellii* stands 6 ft. high, and is characterised by greenish-yellow, slender stems, and light green foliage, though the latter may be due to exposure. There is also a small but healthy plant or two of *Bambusa palmata*, which has broader leaves than any of the above.

Co-operation in France.—In many districts of France the farmers have found it necessary to combine to protect their crops from insect and fungoid pests. Syndicates are formed, the destruction of the Cockchafer being the special objective of one. At Pontivy there is an association for keeping down the Apple blossom Weevil (*Anthonomus*) by spraying with sulphate of copper. The syndicates for the protection of the all-important Vine against Phylloxera are very numerous, and various fungoid diseases are met in the same way. The preservation of fruits and vegetables has likewise received communal treatment, especially in districts where the crops are heavy but unremunerative by reason of lack of markets. The manufacture of fruit pulp from Apricots has been adopted in Provence, the growers having combined to buy the necessary machinery, and thus do without the middleman. In the department of the Alpes Maritimes the distillation of perfumes from flowers has engaged the attention of a syndicate, whilst in Provence again the preparation of Capers is looked after. The preservation of Peas, Beans and Tomatos is taken up in various departments, and the co-operative system is in full swing all over the country.

GARDENING MISCELLANY.

BASKET TUBEROUS BEGONIAS.

So many Begonias are now raised and grown in pots for conservatory and house decoration, as well too for planting in the flower beds and borders, that one is apt to think these purposes are the only ones in which these glorious plants can be utilised. They are indeed most beautiful when used in this manner, but another type and method is so successfully used at Cliveden, that perhaps the mention of the fact may induce others to adopt the same plan. Mr. Wadds has secured a number of the double, canary coloured Alice Manning, which are growing in baskets, and as they are suspended in the greenhouse, their racemes of flower which hang round the basket are singularly beautiful. Some five and six flowers are open at one time on a single spray, and as these are numerous the whole of the basket is hidden by these lovely yellow rosettes. These forms are most assuredly worthy of a more extended use.—*W. S.*

BOUGAINVILLEA GLABRA.

AN immense specimen of this most useful plant covers the whole of the roof in one of the houses at Berry Hill, Maidenhead. The quantity of flowers this annually produces must be very great, and for dinner table decoration can be used in a variety of ways. *Lonicera sempervirens*, also on the roof, was covered with its orange-scarlet blossoms. In the house where this latter is so floriferous were capital plants of *Hydrangea Thomas Hogg*, whose large pure white heads were very prominent amongst other showy things, double *Petunias* being very numerous.

Of Tomatos, Grapes and Peaches, I would only say they were in excellent condition, good crops, and each ripening well. Passing outside we noticed a fine clump of *Akebia quinata* at the end of one of the houses. I was just too late to see this in its beauty; some few flowers remained, but the sprays of purple blooms had been many and interesting. The singular Mummy Pea, whose flowers come in tufts and clusters, was shown me in the garden, and as we proceeded in this direction we passed a splendid lot of fruit trees bearing good crops. A fine border of Roses and Pansies as well as choice herbaceous plants was in close proximity; then passing through this pathway we came to a magnificent archway of weeping Beech. This tree spreads over a large space, and the pendulous branches overhead as we passed along took our notice immediately.

In the pleasure grounds were some glorious trees, Elms, Oaks and Conifers; but those that riveted my attention were the immense specimens in perfect health of the Copper Beech. These had a beauty of their own than which nothing else could be compared. The rockery here is very interesting and extensive, full of plants, a cool shady and refreshing spot, as we proved, our visit having been made on a hot trying day.—*W. S.*

WORTON HALL, ISLEWORTH.

WORTON HALL is the residence of A. Howard, Esq., and is situated on rising ground in the vicinity of Isleworth. The little river Crane runs merrily along at the bottom of the hill on its eastern face, and is soon lost to identity in the larger volume of old Father Thames. The mansion itself is one of the old-fashioned sort, without much pretension to architecture, and painted a dead white. This lack of colour gives it a very bald appearance, which Mr. Arther Pentney, the enthusiastic young gardener, is striving to overcome. *Wistarias*, *Ivy*, *Roses* and other climbers are beginning to take effect, while variegated *Maples*, standard *Bays* and other ornamental subjects do much in the way of toning down the decorator's "Art." The view from the eastern front of the house has, we think, been much improved since Mr. Pentney's advent, for many unsightly objects have been removed, and others of a more natural, interesting and permanent value substituted, while some things have been entirely obliterated, much to the advantage of the remaining vegetation. The lawns, for instance, are on different levels. These have not only been relaid and otherwise improved, but a path which hounded the upper one, and was, therefore, a conspicuous object, has been dropped down to the lower, with the result that the two grass plots become one without an apparent line of demarcation between them.

Some fine old Cedars (*Cedrus Libani* and *C. atlantica*) adorn the grounds and lend an air of antiquity and importance not to be gainsaid. Mr. Pentney has planted ornamental trees and shrubs in great variety, some large heds being made up entirely with such things as *Cotoneaster Simonsii*, *C. microphylla*, *Viburnum plicatum*, etc. *Roses*, too, have a large share of attention and are planted in quantity. A bed of the beautiful *La France*—fifty in number—was exceedingly floriferous, many of them being quite up to exhibition standard. This is somewhat remarkable for the second week in July. *Reine Marie Henriette*, the red *Gloire de Dijon*, possesses all the free-flowering properties of its progenitor, and certainly maintains them here on a Rose arch. Hybrid perpetuals generally occupy a considerable amount of space and make a grand return for labour expended. Lord Penzance's hybrid Sweet Briers have a hed all to themselves, the foliage as well as the flowers being agreeably scented; while in the Rose garden proper *Aimie Vihert* and *Crimson Rambler* make a fine show. As to the latter Mr. Pentney is planting this alternatively with American Brambles with a view to cover an iron fence over 100 ft. long, this fence being merely a division between a broad border. On the one side bulbous plants are largely grown, edged with *Pansies*, the *Spanish Iris* being rather past their best. On the other side, which faces the vegetable department, a fine collection of *Sweet Peas* finds a place. These are just now in prime condition. They seem almost "on tiptoe for a flight," for they are such beautiful papilionaceous things that butterflies may well be said to pale before them. The colours, too, are very varied. *Ignea* is a fiery crimson-scarlet, with pale scarlet wings; *Captain of the Blues* is self-descriptive; *New Countess* is a delicate blue; *Venus*, salmon-pink, very chaste; *Prima Donna*, rich rose; *Countess of Powis* is reticulated and otherwise tinted with orange, pink and pigments indescribable. Who can depict the combination of colour in these emblems of "sweetness and light?" The poet possibly, not the practical man.

Carnations, another flower of immense value and beauty, receive special attention here; and, as a consequence, there are not only thousands of plants in various stages, but some fine things on view. Under glass, however, the harvest is nearly over; but *Germania* is still good and possesses large, fully-developed flowers of great merit. The *Malmaisons* likewise, have seen their best days, although their sweetness lingers yet. Not so can it be said of the white one, *Miss Ellen Terry*, and the red one, *King of the Reds*. They are there, but their fragrance never was. It is, perhaps, fortunate that all flowers are not perfumed, otherwise we might seriously suffer from aromatic pain; but as some flowers are indissolubly associated with fragrance, so, the *Carnation* being one, we naturally expect a nasal gratification in this particular flower.

The border varieties are making a fine show for bloom, *Ketton Rose* being especially promising. Mr. Pentney also has some satisfactory seedlings.

Pinks, Her Majesty, Mrs. Sinkins, and Ernest Ladhams are very free. Herbaceous plants are at their best.

The vegetable department is somewhat extensive, large breadths of Cabbages, Potatos, Strawberries, etc., are doing well, the soil being a good loam on a gravelly bottom. Veitch's Main Crop Pea is producing pods freely; it is an excellent cropper, and the quality is good.

The principal range of glass is known as the "Crystal Palace," it having a large dome-like centre about 30 ft. high. This canopy of glass practically constitutes the conservatories, where animals as well as plants do congregate. Begonias, Pelargoniums, Heliotropes, Roses, and such like plants adorn the house; the most interesting subject, perhaps, is a large Blue Gum tree, which has reached the top of the dome. This tree is a study in itself, and was raised from seed by Mr. Pentney four years ago. Eucalyptus coccinea also finds a place.

A step from here and we are in the midst of Cannas, which have been planted out, bordered by Hybrid Streptocarpus, and backed by the new climbing French Bean. These Beans have already attained a height of about 8 ft., the pods, however, are conspicuously absent, Mr. Pentney having treated them too kindly. A row in another house, minus rich soil, is fruiting freely.

Transferring ourselves to the corresponding arm of the dome range we come across Peaches, Nectarines, and other subjects trained to wire supports; fruit trees in pots, and some miscellaneous flowering plants. Other houses exhibited Tomatos, Mr. Pentney's own selection; Melons, Blenheim Orange; Gloxinias, Carnations, etc., and some remarkably fine Streptocarpaceae. These occupied 14-in. pans, and were large and healthy-looking, many of the flowers measuring 3 in. from lobe to lobe. They were in the germ condition fifteen months ago, the seed being obtained from a friend as "very choice." Many more things were noted than we can set down here; suffice it to say that seed-raising and subsequent selection, and hybridisation is not only an effective and economical means of obtaining quantity and quality, but one of the most interesting and intellectual processes in the world of plants.—C. B. G. Acton, W.

VEGETABLES IN THE NORTH.

AFTER a mild winter, with little sunshine during spring and early summer, July has come in fairly seasonable, but the nights are generally cold, the thermometer being often down to from 38° to 45° in the early morning, and some tender plants have suffered thereby, French Beans especially, but vegetable crops on the whole are good—Peas never were better. Veitch's Chelsea Gem takes the lead among a number of dwarfs for earliness, and as a heavy cropper. The flavour is good, and the pods are much larger than those of any other dwarf variety. Grajus has sustained its high character this year, being one of the earliest, with large, well-filled pods of fine flavour, and its bearing proclivity is excellent. We find this is the experience of others in the Stirling district (where vegetable culture has more attention than in most localities). The useful dwarf American Wonder, sown between the tall early sorts, gives a heavy return on the space. Criterion, Exonian and Laxton's Fillbasket are coming in close to those named, and they are each of much excellence. Late Peas are very promising, but if the drought continues, heavy mulchings of manure or grass mowings will be given to save watering. Many fail in Pea growing by watering the surface only instead of administering liberal soakings which will go beyond the roots.

Potatos are productive, but smaller in size than they often are. Sharpe's Victor is still the earliest, but was this season cut down with the severe frosts we experienced during the middle of June. Veitch's Ashleaf is one of the best of its class, especially for earliness and fine quality. Belvoir Castle comes much the same as Veitch's Ashleaf, and appears to be a good selection from the old Ashleaf. Beauty of Hebron is doing well, and is of fine quality. Sutton's Ringleader is a first-rate early Kidney Potato, and promises to give much satisfaction in this district. Sutton's Ar is a capital round Potato, and with us is one of the earliest we have tried. Mid-season and late Potatos are looking fairly well, but generally smaller in the tops than usual. This applies to a

large portion of Perthshire as well as nearer to ourselves.

This being one of the best seasons we have had for Cabbages, it may be interesting to some, who have a strong prejudice to planting on unbroken ground, to mention the old market-growing practice to plant Brassicas of all kinds to stand the winter on extra firm land. By this practice, extending over many years, we have had the finest Cabbages from plantations on firm ground from whence Onions have been removed and not dug, but never saw the fact so exemplified as it is this season. The prominent hearts with few outside leaves on the Cabbages are all we can desire, while on adjoining ground where deep digging was done for several sorts of Cabbage, the leaves are large in proportion to the hearts, and the crop can in no way compare with Cabbages which were inserted by means of an iron-pointed dibber into the hard soil. We are planting a border of Rosette Colworts on undug ground. Simply clearing the surface of weeds after winter Onions were removed. They will be of much more value during the autumn and winter than if they were grown on newly-dug land. The ground for the previous crop was turned up deeply with plenty of manure added to the soil.—M. Temple, Carron, N.B.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Orchids at Edenside.—Mr. James Douglas has not yet been able to shake off his old love for Orchids, but on the contrary has devoted a house to them at his new place, Edenside, Great Bookham, Surrey, where they will form a contrast to the Carnations. The house is an intermediate one, and contains a considerable number of Cattleyas and Laelias, several of which are now flowering. A very fine variety of Cattleya gigas was characterised by a rich crimson-purple lip, and conspicuous, circular eye-like spots. Several varieties of C. gaskelliana were also flowering, including a distinct variety, with a long, narrow tube to the lip, and a delicately-coloured, but handsome, lamina. The original plant, or a piece of it, of Cattleya Warneri figured in the Orchid Album is here, having been bought at Rucker's sale.

Dendrobium Victoriae Reginae has hitherto proved very refractory to cultivate, but Mr. Douglas' plants have made young stems 6 in. to 12 in. long, and stout for the species. D. wardianum has also made excellent and firm growth, hung up close to and often touching the glass, the wood being firm and well ripened. The new D. spectabile has made young growths entirely unlike the old, whatever it may mean by that. A fine batch of Calanthes is making excellent, or in some cases, extraordinary, growth, thus indicating that Mr. Douglas thoroughly understands their culture. Amongst them are C. Phoebe, C. burfordiense, and Cookson's hybrids. A very fine form of Coelogyne speciosa is that named C. s. superba, the brown of the lip being much darker and better defined than usual. This plant seems to flower in season and out of season. The finest of all the Pitcher Plants for general cultivation is Nepenthes Mastersii, being dwarf, easily grown, and here carrying pitchers of the largest size and richest colour for the type. While inspecting the Cattleyas we noted some recently-imported pieces that had been put in Sander's Orchid pan, and others that had been put in pots at the same time. Those in the pans had made a mass of healthy and vigorous roots, permeating the compost everywhere, and pushing out through the slits of the pans, and attaching themselves to the outside in abundance. Seedling hybrid Orchids are another hobby of Mr. Douglas. Already he has some in various stages of growth and promising something distinct; while others are on the point of germinating, and seeds are still ripening in the pots of other plants.

Coryanthes maculata.—For some ten days past or more this strange member of the Orchid family has been one of the chief wonders to the public, of the houses at Kew. It is located in the Nepenthes house, where it has more fascination to visitors than the Pitcher Plants themselves, so much so in fact that the plant has had to be protected against the handling of the curious. A large plant is grown in a basket, and carries six flower spikes,

the youngest only a couple of inches long, and the flowering ones for the time being about as many feet, and drooping perpendicularly.

The structure of the flower is marvellous, and the variety at Kew a very fine one. The sepals are very large, like those of a Stanhopea, reflexed, and after a time more or less folded or crumpled over the apex of the flower; the outer face is straw-yellow, but the inner one is bright, almost golden yellow, richly blotched with crimson. The petals are similar in colour but very much smaller. The lip has a long, curved claw, continuous with the base of the column; and its lateral lobes are connate about the middle of the claw, as it were, forming a structure like a fireman's helmet, below which the claw is continued to another, much larger, and inverted helmet, or bucket to which the claw seems the handle. The upper small helmet is yellow; but the inverted one is pale yellow, richly blotched with crimson internally, and finely mottled with the same colour externally. The apex of the large helmet is trifid and lies around the face of the column. Right and left of the base of the column are two short horns or nectaries projecting over the bucket and distilling a copious liquid into it, which is intended as a special bath for insect visitors, though entirely unbargained for on the part of the latter. The uninitiated would have great difficulty in recognising the various parts of the flower, the sepals, petals, lip and column being so disguised or masked by the remarkable forms they have assumed. Being a native of tropical America, the warm, moist atmosphere of the Nepenthes house must meet its requirements pretty closely.

PLANTS RECENTLY CERTIFICATED.

THE Royal Horticultural Society made the under-mentioned awards on the 26th ult.

Orchid Committee.

LAELIOCATTLEYA INGRAMI GIGANTEA. *Nov. hyb. bigen.*—This hybrid variety was derived from Laelia pumila crossed with the pollen of Cattleya dowiana, and the latter must be responsible for the huge size of the flower. The stems vary from 3 in. to 6 in. in height and recall what occurs in the seed parent. The sepals are remarkably broad for any Cattleya or Laelia, and of a warm rose. The large ovate petals are similar in hue. The lamina of the huge lip is orbicular, crisped and crimson-purple, the dark colour contracting to a purple band running to the base of the tube. The interior of the latter is otherwise soft purple, and so is the outer face. A First-class Certificate was deservedly awarded to this variety, which has much larger flowers than Lc. Ingrami. Messrs. J. Veitch & Sons, Ltd. Chelsea.

MASDEVALLIA IMOGEN. *Nov. hyb.*—The seed parent in this case was M. Schlimii and the pollen bearer M. Veitchi. The spatulate leaves are light green, and the flowers about the size of those of the seed parent. The scapes are about 9 in. high and carry three flowers. The latter are dark orange, densely mottled with crimson and covered with a violet plush, as in M. Veitchi. The tails are about 1 in. to 1½ in. long. Award of Merit. Messrs. J. Veitch & Sons.

LAELIOCATTLEYA SCHILLERIANA CAMBRIDGE LODGE VAR. *Nov. var.*—The supposed parentage of this imported plant is Laelia purpurata and Cattleya intermedia, crossed back again with L. purpurata. The sepals are of the palest lilac, and the petals oblong-elliptic, lined and veined with soft purple on a silvery-blush ground. The curved tube of the lip is deep purple, while the rounded and crisped lamina is intense crimson-purple, as are the side lobes. The lamina is not clawed. A band of purple runs down the white interior of the tube. Altogether it is an uncommon looking form. Award of Merit. R. I. Measures, Esq. (gardener, Mr. H. J. Chapman), Cambridge Lodge, Camberwell.

Floral Committee.

ARUNDINARIA NITIDA.—The dense, spray-like drooping twigs, the purple young shoots, and the rich and handsome green hue of the foliage of this Bamboo all entitle it to the First-class Certificate awarded it. Besides being useful for conservatory work, it is perfectly hardy and retains its foliage throughout the winter in excellent condition. Messrs. J. Veitch & Sons, and A. B. Freeman-Mitford, Esq., C.B., Batsford Park, Moreton-in-Marsh.

PHYLLOSTACHYS CASTILLONIS.—The lanceolate,

bright green leaves of this Bamboo are much the broader at the base, and striped with white lines. The stems are green on one side and variegated with pink, purple and yellow on the other. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

PHYLLOSTACHYS FULVA.—The leaves of this new Bamboo are lanceolate, 3 in. to 6 in. long, dark green above, glaucous beneath and bearded at the top of the sheaths. The stems are slender, and green, giving off a few spreading branches, at least in the earlier stages of growth. Award of Merit. A. B. Freeman-Mitford, Esq., C.B. (gardener, Mr. John Garrett).

ARUNDINARIA ARISTATA.—The round stems, carrying the persistent sheaths at the nodes must help separate this Bamboo from that previously named. The lanceolate, finger-like leaves are 3 in. to 7 in. long, bright glaucous green above, and glaucous beneath; their sheaths are slightly bearded. The main stems are yellow and bear ascending branches that ultimately become very numerous. It is new. Award of Merit. A. B. Freeman-Mitford, Esq., C.B.

ARUNDINARIA VEITCHI.—The young foliage of this Bamboo is very handsome, the species being one of the dwarfest of the broad leaved types, and therefore admirably adapted for conservatory work. It is also hardy, and has oblong, glaucous-green leaves. Award of Merit. A. B. Freeman-Mitford, Esq., C.B., and Messrs. J. Veitch & Sons, Limited.

ARUNDINARIA METALLICA.—The specimen of this Bamboo shown was 2½ ft. high. The leaves are oblong, 6 in. to 10 in. long, and 1½ in. to 2½ in. wide, deep green, with a pale midrib and prominent longitudinal veins, and glaucous beneath. At present it seems allied to *B. palmata* and *B. tessellata*, and if perfectly hardy will be a fine thing. Award of Merit. A. B. Freeman-Mitford, Esq., C.B.

NYMPHAEA ODORATA ROSACEA.—The flowers of this Water Lily are of great size, of a charming rosy-pink, darker in the bud stage, and fading from blush to white in the centre when open. The petals are very numerous, and the anthers golden-yellow. It is altogether a finer thing than *N. alba rosea*, with which it may be compared. First-class Certificate. Leopold de Rothschild, Esq. (gardener, Mr. J. Hudson), Gunnersbury House, Acton.

NYMPHAEA GLORIOSA.—The broad, outer petals of this garden hybrid are rosy, while the central petals deepen to a carmine-rose. The sepals are variegated with rose and green externally. When fully expanded the flowers are massive and handsome. First-class Certificate. Leopold de Rothschild, Esq.

CARNATION ISINGLASS.—The flowers of this border variety are fiery crimson, with broad petals, slightly toothed at the edges, and highly fragrant, so that they resemble those of a glorified Uriah Pike. It was raised by Mr. C. J. Salter, gardener to T. B. Haywood, Esq., Woodhatch Lodge, Reigate. Award of Merit.

CARNATION LADY SOPHIE.—This perpetual flowering variety has large, rich salmon-rose flowers, with broad rounded petals and does not split the calyx. Award of Merit. Mr. E. Tapper, The Gardens, Sundridge Park, Kent.

BUDDLEIA VARIABILIS.—The leaves of this hardy shrub are lanceolate, deep green above, and silvery beneath. The flowers are small and lilac, with an orange eye and produced in cymose clusters, covering 12 in. to 16 in. of the apex of the shoots. The shrub comes from Thibet. Award of Merit. Messrs. William Paul & Son, Waltham Cross.

ROSE SOUVENIR DE MME LEVET.—This is a Tea Rose of dwarf habit, bearing corymbose clusters of rich apricot flowers. The buds are conical, and open in the centre when fully expanded. Award of Merit. Messrs. Wm. Paul & Son.

ROSE CHARLOTTE GILLEMOT.—The flowers of this hybrid Tea are of large size and pure white, though the exterior of the young buds are tinted with red. Award of Merit. Messrs. Wm. Paul & Son.

Fruit and Vegetable Committee.

RASPBERRY GOLDEN QUEEN.—The fruits of this new variety are of huge size, rich amber-yellow and fine flavour. It was raised from the well-known Raspberry Superlative crossed with *Rubus laciniatus*, and is as productive as the former. The prolific character of the plant, and the fine appearance of the fruit will place this in the front rank of yellow Raspberries. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

PEA CONTINUITY.—The pods of this variety are 3 in. to 4 in. long, very broad, flattened, and of a light glaucous green. Each pod contains six to eight seeds of huge size, and fine flavour. This, as well as the five that follow, have been tried at Chiswick. Award of Merit. Messrs. Sutton & Sons, Reading.

PEA MANSFIELD SHOW.—The slightly curved pods are 3 in. to 5 in. long, dark, glaucous green, very full, with seeds of a rich green, and well flavoured. Award of Merit. Messrs. Wright Brothers.

PEA PRIOR.—This is a heavy bearer with straight, thick, but well filled pods, 3 in. to 5 in. long, and containing six to seven huge seeds. Award of Merit. Mr. Henry Eckford, Wem, Shropshire.

PEA THE BRUCE.—The nearly straight, light glaucous green pods are very full, and contain seven to nine seeds of good flavour. It has been tried for some years and is a prolific bearer. Award of Merit. Mr. Henry Eckford.

PEA SACCHARINE.—The straight, dark green pods are 3 in. to 5 in. long, and well filled with eight large seeds of fine appearance. Award of Merit. Mr. Sim, Fyvie, Aberdeenshire.

PEA HONEYDEW.—Here the pods are flattened, light glaucous green, and contain eight to nine seeds of great size and rich flavour. All of the above were selected at Chiswick for free bearing, as well as for the fine, well filled pods and flavour of the seeds. Award of Merit. Mr. Sim.

Kitchen Garden Calendar.

THE WEEK'S WORK.—In the southern districts most of the early Potatos will be sufficiently ripe for lifting. Where this is the case no time should be lost in getting them taken up. The larger ones ought not to be exposed to the sun longer than can be avoided, as this would cause the skins to become discoloured. Those intended for seed should be spread out, either in an open shed or on a hard path, until they are quite green. They should then be stored thinly in a cool, airy place. Sets so treated will not commence to grow so soon another season as those put away without hardening.

TURNIPS are an important winter crop, small, sweet roots of which are far more appreciated than those which have become overgrown and tough. A goodly patch should therefore be sown; and the roots may occupy the ground from which the early Potatos were lifted. If the soil is moist the seed will readily germinate at this time of the year, but if left loose and dry the plants will come up very irregularly. For this reason the soil should be made as fine as possible, and well watered previous to sowing. Sow thinly in drills about 18 in. apart, to prevent the foliage from becoming overcrowded, which it will do should the autumn be warm and moist; when, instead of nice shaped, close grained, sweet bulbs there will be a superabundance of foliage with coarse, ill-shaped roots, which will not withstand the severity of our winter should it prove unusually hard.

CABBAGE.—The last sowing of these should now be made, selecting some of the larger growing kinds, such as Enfield Market. Plants from the former sowings will soon be large enough for transplanting. They should not be left in the seed bed any longer than can possibly be avoided, for the more sturdily they are grown the finer the results. Tripoli Onions may now be sown. In cold districts choose a sheltered position, but as the plants, when properly grown, are usually hardy there is no necessity for any protection. We prefer getting them large enough to transplant in October, as, by so doing, the roots will take hold of the soil before frost sets in, and thus be the better able to withstand the winter. For early use there is no variety equal to the Queen, as this turns in so quickly.

GENERAL WORK.—At this time of the year, when there is so much watering, fruit gathering and other things requiring attention, many important items are apt to get neglected. It is well, therefore, to take stock, as it were, and see what will be required for winter and early spring before the season gets too far advanced; and should there be any doubt as to the quantity of any crop not being sufficient, see that more is planted. Weeds at this time of the year usually grow apace; the soil being warm, flower stems soon appear, and a crop of seed is the result

before one has time to realise they are there. When weeds reach this stage they should be pulled up and burnt, to prevent the seed from being scattered over other parts of the garden. Where it is possible to dig the ground, all such rubbish may be turned under out of the way, but it is not always possible to do this, therefore hurning is the next best remedy. Make another sowing of Radishes and other small salads, so as to keep up a constant supply.—*Kitchen Gardener.*

THE FLOWER GARDEN.

THE thunderstorms that have visited us during the past week have helped considerably, but they have not been nearly sufficient, for the ground had got very dry. The watering of such trees and shrubs, therefore, as are likely to need water, owing to their not having had sufficient time since they were planted to strike deep root, must be carried on as vigorously as ever.

The grass has revived wonderfully since the rain, and the same may be said of bedding plants, for they, at least, had a good soaking. Growth has been rather slow amongst the latter up to the present time, and this has given opportunity for keeping both beds and borders free from weeds; indeed, the season so far has been an exceptionally favourable one in this respect.

CARNATIONS.—Although the flowers are considerably later than usual, owing to the cold spring and early part of the summer, it will not do to defer layering on that account, for if this work is not completed by at least the end of the first week in August, the layers have a poor chance of becoming well rooted by autumn. If the operation of layering is entrusted to the younger hands it will be necessary to see that their knives are sharp and not too thick in the blades; also that the point of the layer is inserted in the ground in such a way that there is no possibility of the tongue closing, when a union will be formed with the other part of the stem, and the required roots will not be emitted. It is to these two causes, ragged cutting and closing of the tongue, that a very large percentage of the losses of layers are due. Pegs in sufficient quantity should have been got ready last winter during wet weather, and thus no time need now be lost in making them. After the layers are all neatly pegged down round the central stem of the parent plants give a good watering with clear water, and follow this up by subsequent waterings should occasion demand it.

CUT CARNATIONS.—Where large quantities of Carnations are grown for cut flowers they are usually of the older varieties, many of which are addicted more or less to "pod bursting." Before using these in decorations, therefore, it will be advisable to keep the petals of the flowers together by slipping a small elastic ring over the calyx. These elastic rings can be purchased in quantities very cheaply at the sundriesman's. The practice of putting the bands upon the buds as they open upon the plants should not be indiscriminately indulged in, for many malformed flowers are the result of undue compression of the half-grown petals.

BUDDING OF BRIERS.—Proceed with the budding of Briers as quickly as possible, so as to get the whole lot out of hand at an early date. If the bark will not lift readily do not attempt to force it, for to do so is only to court failure, but give the Briers a good soaking of water overnight. If this does not cause the bark to lift easier follow it up with another watering the next evening, and then everything will almost surely be well. In selecting the buds take plump dormant buds, borne by firm shoots, those that have borne flowers being preferable. A great deal depends upon this selection of buds, and they should never be taken from rank sappy wood.

HOLLYHOCKS.—The present occasion is favourable for the propagation, by eyes, of desirable varieties. The smaller side shoots just where they are getting firm should be cut up, a small heel of the wood, together with a leaf stalk being left attached to each eye.

The stalk is not only convenient for handling but is also the natural guardian of the bud in its axil. Insert these eyes in a bed of sandy soil in a cold frame. Keep the latter close, and shaded during the day, and sprinkle occasionally by means of a rose can or a fine spray from a syringe.—*A. S. G.*

HINTS FOR AMATEURS.

BORDER CARNATIONS.

WHEN Shakespeare wrote that "the fairest flowers of the season are our Carnations," he used words that would be as true if spoken to-day as they were in his own age. Other flowers too, have improved in the lapse of years since Shakespeare's day and this, the latter end of the nineteenth century, but the Carnation has also improved, and has moreover, distanced many other flowers in the race; indeed, it would not be too much to say that the Carnation of to-day holds a higher place amongst its contemporaries than did the flower of Shakespeare's time. True, he used the superlative "fairest," but this was only the expression of an individual opinion which may or may not have been endorsed by other writers and gardeners of his age.

Nowadays the month of July sees the Carnation, with which we include for the time being the Picotee, which is only a florist's variety, in a very flux of beauty in our gardens. Scarcely would it be possible to find a garden in which some plants are not grown, whilst in all establishments of any size a considerable amount of space is devoted to them.

As a rule the popular idea of a good flower and the florist's idea are two very distinct, and not infrequently opposite things, and the Carnation affords a case in point. The lay flower-lover does not go into ecstasies over the definiteness and regularity of a stripe, and the restriction of this stripe to a certain area. He does not, as a rule, care how many petals the flower has so long as it has enough to make a show; given this, he does not trouble whether the petals are notched or smooth, broad or narrow, thick or thin, but the next thing he asks for is colour. Generally speaking he likes a decided scarlet, a bright rose, a rich yellow, or a pure white. If he be of aesthetic tastes he finds time to admire some of the numerous half tones or shades of these colours, but there is no overwhelming note in favour of these as there is with the crimsons, the scarlets, the yellows and the whites.

The fancy varieties also take his fancy, more especially those in which shades of yellow mixed with purple, rose, scarlet and other almost indefinable hues exist. These are the flowers that puzzle the florist to classify. They will not be classified, for they will conform to none of the florist's rules, so for want of a better term the word "fancy" is applied, which may mean anything or nothing, and is in fact a sort of waste heap into which all non-descript forms are gathered. Possibly the unconventionality of the flotsam and jetsam of the florist attracts the man in the street, but it is a fact that he has a soft spot in his affection for them, and likes to grow them when he can.

Flakes and bizarres are the pets of the florist, the aristocrats amongst Carnations, but like other pampered pets they are exceedingly intractable. Their distinctive bars of colour will not keep true, but run into the ground colour, and become blurred and indistinct or disappear altogether. We do not know why they do it, or the exact conditions that cause them to behave in this way, we only know that it is a common practice and one that florists deeply deplore. At one time it was thought to be the soil, then the weather was blamed, and, of course, when we are reduced to this there is very little hope indeed of finding a reason for things. At one time the opinion was held that a very hot and dry season would cause a good many of the flowers to "run," but it was soon found that fully as many flowers went wrong in a wet year, and there was an end to that idea. Similarly other supposed causes were found, subjected to investigation and declared to be out of the question. The "running" of flakes and bizarres may therefore now be put into the same category as the rectifying of Tulips—it is a mystery. The man in the street, however, does not like mysteries. Give him a big flower with plenty of rich colour, and he can appreciate it, but he has not been educated up to the standpoint when he is able to appreciate the masterpieces of the florist.

It is in the direction of self coloured varieties that his tastes chiefly lie, and who will say that his choice is not a good one. Within the last few years such eminent florists as Mr. Martin Smith and Mr. Jas. Douglas have turned their attention specially in this direction, and the section of "selfs" is now not only

numerically the strongest but the most important from the gardener's point of view. Malmaison Carnations largely took the eye of the public by reason of their very size, but in the self-coloured border varieties we have many flowers that are almost as large as Malmaisons. Such sorts, for instance, as Cassandra, King Arthur, Miss Audrey Campbell, Exile, and Endymion, produce flowers of huge size when the plants are well grown. Of colours we have almost every conceivable shade, except the much sought after and still unattained blue. The rich purple Bendigo is, however, well on the way, and in a few years time we may be congratulating ourselves that the long sought for has been found at last, and the blue Carnation, the Ultima Thule of the hopes of the Carnation lover has been reached at last.

In several points the florist and the layman are in accord. We have already noticed the question of size. Next comes that of "pod bursting." The older forms were all of them much addicted to the bursting of the calyx, or "pod," as it is commonly called. This was a grave defect because the calyx once burst there was nothing to hold the petals together, they fell apart, and a straggling, ragged-looking flower was the result. Such flowers not only looked anything but handsome but they soon faded and withered. In order to do away with this defect at the time—to give temporary relief, as it were, the calyx of the flower had to be tied round before the bloom had yet fully expanded by pieces of string or raffia, until someone hit upon the idea of small elastic rings, which were not only neater but were far more expeditiously fixed on than the strings. But this was not striking at the root of matters, it was only temporising, and so the florists set to work to produce a race of plants with stouter calyces that would not break and would not therefore need to be supported by strings and rings. In this laudable enterprise they have abundantly succeeded, and the old varieties that used to split their "pods" have been entirely superseded with modern ones that do not except under exceptional circumstances. Of course when we get a very large and heavy flower the strain which the calyx has to bear as the result of the compression of a great number of petals within its tube is occasionally too great, and a split accordingly takes place. Despite this, however, we may, generally speaking, claim that "pod bursting" is now a thing of the past.

Improvement in the habit of the plants has also been kept constantly in view, and the modern forms are certainly taller and more vigorous than the old ones, whilst they are far and away ahead of them with regard to floriferousness. It is really astonishing to see how freely seedlings bloom, and this particular feature is sure to strike one who has had to do with layered plants all his life, and who looks upon a bed of seedlings for the first time.

The question of form is one over which the florist's ideal and the tastes of the layman do not entirely agree. The florist strives for a round petal of good substance with a margin smooth and entirely free from notches or cutting of any sort. The layman likes the bold substantial petals well enough, but the notching of the petals is to him a matter of no consequence, indeed some of his greatest favourites exhibit that characteristic. Take for instance the variety Waterwitch: here the notched petals add to rather than detract from the beauty of the flowers in many peoples' estimation, as a proof of which we find that the variety is very largely grown.

A most important advance has been made with regard to the lengthening of the flower stems. Formerly these were all short and dumpy, with the exception of those belonging to the central and primary flowers. Now we find that they are all much longer, even those of the secondary or side flowers, which are thrown out from the sides of the main stems after the first flowers are over. We, in this country, have not attached so much importance to this point as our American friends have done. There they insist on the flowers having long stalks, and a moment's reflection will convince anyone of the greatly increased value of a flower with a good stalk in all decorative undertakings. It is most likely that American ideas with regard to Carnations set an example to the Britisher, in the same way as was done with Chrysanthemums, for the practice of showing them with long stalks was a distinct following of American example.—*Ren.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Ficus radicans variegata.—*H. G.*: It was the variegated form of *Ficus radicans* received an Award of Merit in May, and a First-class Certificate in September of last year from the Royal Horticultural Society. If, however, it is the green form that you want, and not the variegated one, you would no doubt get it from Messrs. Jas. Veitch & Sons, Ltd., Royal Exotic Nursery, Chelsea. The variegated form could probably be obtained from the same firm, but if not, certainly from Mr. Wm. Bull, 536, King's Road, Chelsea.

Standard zonal Pelargoniums.—*Iris*: You ought to experience no difficulty in growing standard Pelargoniums. The most reliable method is to take seedlings from really good varieties, for seedlings are stronger growers than plants developed from cuttings, and it is thus easier to get a good stout stem, capable of carrying the weight of a head. The young plants may be allowed to grow away until they have reached the required height. In the meantime all lateral or side growths should be removed, cutting them back close to the stem; also all flowers after the first truss. It is necessary to allow the latter to develop in order that the quality of the flower may be seen, as it would be provoking to grow a plant on for two or three years to form a standard, only to find at the end of that time that it is a comparatively poor variety. A better plan is to graft a good variety on the top of the stock.

Araucaria excelsa.—*Conifer*: This handsome *Araucaria* does not need to be shifted very often. A comparatively small pot will carry a large plant with perfect safety. If your plant commences to show signs of starvation, which it usually does first of all by turning a very pale green, you may give it a little liquid cow manure about twice a week. If a little soot is mixed with the cow manure so much the better. Take the plant out of the window occasionally and sprinkle it overhead or syringe it with clear water. These washings will help it greatly. In giving the manure water it will be necessary for obvious reasons to stand the plant out of doors until the superfluous water has all drained away.

Tree Carnations.—*Llanely*: The plants are too small to flower during the coming winter, since they are only now in small thumb pots. You should pinch the points out of the plants, and then after they have commenced to throw out side shoots they may be potted up into large 60's.

Linaria Cymbalaria.—*C.T.*: Although this pretty little creeping plant, popularly known as Mother of Thousands, is a common British weed there are many subjects cultivated that are less beautiful. We have seen numbers grown in windows of London houses, and they not only resist the smoke and grow freely, but produce their lilac-coloured flowers in great abundance. There is a cultivated variety with white flowers, but in our estimation the lilac coloured one is the better of the two.

Peach Leaves Dropping.—The leaves on my Peach tree under glass have commenced to drop, although the fruit is not much more than half grown. The trees have, of course, plenty of leaves left yet, but is not the occurrence an unnatural one? The fallen leaves are all curled and twisted up as if they had been burnt.—*A.R.*

We do not doubt that red spider is the immediate cause of the trouble which if allowed to go on must inevitably do great damage to the tree. If you examine the leaves closely you will find the minute, red insects in considerable numbers, and they turn the leaves to that reddish-brown or brown hue that is followed by their fall. If the tree is very badly affected it will be well to syringe it with a solution of Nicotine Soap, following the instructions given on the label. After this give heavy syringings of clear water twice daily, that is morning and evening. If the pest has not attacked the whole of the tree the washings with clear water will probably be effectual without the agency of the insecticide. The syringings will be almost sure to bring down a lot of the leaves, but this will not matter as they would be sure

to fall in any case before long as their energies are crippled. The healthy leaves will not fall.

Grape Buckland's Sweetwater Splitting.—*G. L.*: The splitting of the Grapes is due to a rush of moisture, although we have found the variety, Buckland's Sweetwater, to be much given to cracking. Allow a moderate extension of the laterals so as to carry off some of the superfluous sap.

ORMISTON HOUSE.

THE half-hour's railway journey from Edinburgh to Ormiston carries the Saturday afternoon tourist through a very charming piece of East Lothian scenery.

Near Inveresk he turns off the main line and rises round Carberry Hill, the seat of Lord Elphinstone, and down into the valley of the upper Tyne, which

minutes further we reach the gate of Ormiston Grounds; in another couple of minutes we arrive at the house of Mr. Bannerman, the head gardener. Ormiston is not only a beautiful estate, it is a place with a history, and we are, therefore, glad to find so courteous and well-informed a guide. It was the home of the Cockburns, several of whom occupied conspicuous places in Scottish history, and distinguished themselves by their active and enlightened efforts to advance Scottish agriculture and horticulture in the days of their infancy. Moreover, it was in Ormiston House that George Wishart, one of the chief Martyrs of the Scottish reformation, was seized by the emissaries of Cardinal Beaton. Part of the old house is still standing where the Martyr slept on the night on which the mansion was surrounded by the Earl of Bothwell's men, and Wishart was arrested. Such facts quicken our interest in this historic spot, as Mr. Bannerman takes us round and

great Yew tree, one of the oldest, if not the oldest in Scotland. The tree was spoken of in an old lease in the possession of the Earl of Hopetoun as a remarkable one as early as the fifteenth century. It would be useless to hazard a guess as to its age, but its magnificent proportions incline one to be very generous indeed in reckoning, not merely the years, but the centuries. Its girth, when last measured at an elevation of 3 ft. above the ground, was 16 ft. 6 in.; its height 36 ft., and the circumference of the branches 250 ft. It is a glorious and graceful pile, but further comment is needless in presence of the accompanying photograph, which will speak for itself. The Yew tree, of course, bulks most in our eyes as we write these lines and must form the *Ne Plus Ultra* of the letter. We shall only add that Ormiston looks extremely well under Mr. MacDougall's enlightened tenancy. Seldom, in fact, does one see a tenant take such an interest in its proper upkeep. In Mr.



ANCIENT YEW AT ORMISTON HOUSE.

enters the Firth of Forth below Haddington. This sequestered vale is rich in pastoral beauties, consisting as it does of fertile agricultural ground along the Tyne banks, and magnificent woods along the higher ground. Among these woods those of Oxenford, Prestonhall, Ormiston, Winton, Salton, and several other fine estates are conspicuous. Our visit to-day is to Ormiston, one of the seats of the Earl of Hopetoun, and rented at present by Mr. MacDougall. On the way thither from the station you pass through the pretty village of that name, a quaint, pleasant little place with great shady trees lining either side of its one street and high gabled houses peeping out from behind them.

It is one of the most idyllic of Scottish villages, and the fine rich soil of the surrounding lands, which is used to produce splendid crops of fruits, vegetables, notably Strawberries and Raspberries, lends to the village an air of plenty and prosperity which does the heart good. Continuing our way for twenty

himself answers our enquiries as to the historical associations connected with it.

A stroll through the kitchen garden by way of preface is very enjoyable. The Portugal Laurels in full flower are particularly striking, and one magnificent old Holly tree deserves mentioning for its rare proportions. Excellent crops of fruit and vegetables with fine old-fashioned flower borders in full July blaze bespeak a charming blending of the practical and the pictorial in this fine old garden. From the kitchen garden we pass along a fine avenue of Beeches and Oaks, flanking a stately park to Ormiston House.

Here again there are more floral charms awaiting us, for there are two fine flower gardens in the rear of the mansion, one very old, near where the remnants of the old house stands, the other, more modern in style, alongside it. There are magnificent collections of Roses, Iris, etc., to arrest and delight the eye. But the feature of Ormiston flower gardens is the

Bannerman he has found an admirable practical man to direct the management of the gardens and beautiful grounds.—*Tyneside*.

BERRY HILL, MAIDENHEAD.

IN taking a hasty look through this pretty place a short time ago, I was impressed with two or three things that are grown here in a remarkably successful manner. Mr. Allen, the gardener, kindly acted as our guide, and our thanks are due to him for his kindness. The first, then, to which I would call attention were the grand flowering plants of *Begonia corallina*, and the newer form, *President Carnot*. These were specimens some six feet high, covered with clusters of large size of their distinct scarlet coloured flowers. They were just in splendid condition, a mass of colour, deserving in every respect the space they occupied. Another type equally meritorious was the seedling double *Begonias* that

were used as basket plants. Drooping spikes, on which I counted six and seven flowers, were hanging over the sides and presented a most interesting sight. Mr. Allen assured me he raised them readily from seed, and that the majority prove to be most beautiful and useful.

A grand lot of *Calanthe Veitchii* in pots on shelves was making strong shoots; last year's bulbs were some of them 6 in. and 8 in. high and stout in proportion. The display of flowers had been most satisfactory. Capital pots of *Browallia speciosa major*, more compact in growth than is often seen, were covered with their bright blue-purple flowers. In the stove was a fine plant of *Schubertia graveolens*, full of clusters of its sweet-scented white flowers. Certainly a useful flower for vases, &c., its milky juice would prevent its often being used for button-holes; though in many respects the blooms resemble a strong *Stephanotis*. I noticed, too, a fine lot of *Clerodendron fallax* in flower, raised from seed, and a later batch just coming on. These, I understood, were much appreciated, and it would seem deservedly so.—*W. S.*

THE HOME OF FLOWERS AND SOME OF ITS OCCUPANTS.

It was a happy inspiration that led Mr. H. Cannell, the head of the firm of Cannell & Sons, to call the establishment at Swanley the Home of Flowers. As the years pass on the absolute truthfulness of the title becomes more and more apparent, for the numerous plants taken up there grow and flower with an abandon that is unmistakable evidence that their requirements are fully known and attended to, and that they are, in very truth, "at home." It matters not at what season of the year the visitor makes the acquaintance of the nursery, there is always plenty to be seen, and to see is but to admire. Naturally, the distinctive features vary with the particular season of the year, for *Primulas*, *Cinerarias*, herbaceous *Calceolarias*, tuberous *Begonias*, *Cannas*, *Fuchsias* and *Chrysanthemums*, to mention a few of the most important classes, are all specialties for which the firm is justly renowned far and wide. But the ever perennial feature of the establishment, and one that always compels the admiration of the visitor at any season, is

THE PELARGONIUMS.

From January to December these plants are in bloom. The snows of winter, and the heat and drought of summer make but little difference to the display which is kept up by relays of plants. Mr. Cannell's name is written large upon the horticultural records of the nineteenth century, but in no direction has he achieved greater success than with the zonal *Pelargonium*. He has practically created a new race of plants suitable either for winter or summer flowering, in which the mere size of the trusses and individual pips is not only increased, but a wealth of new shades of colour is given. The contrast between some of the old forms and the modern ones is thus sufficiently striking. Amongst the former we noticed the curious variety *New-Life*, with its small pips and trusses, the colour being white striped with scarlet. This was a sport from the old favourite *Vesuvius*, a versatile variety to which we owe many of the best sorts now existing. *Black Vesuvius*, another old one, was remarkable for its very dark foliage, dwarf, sturdy habit, and the great freedom with which its rich orange-scarlet flowers are produced.

Of the modern varieties Swanley holds a magnificent collection, and the three or four houses filled with the flowering plants make a dazzling display of colour. The size of the flower trusses and pips is really wonderful, and the floriferousness of the plants equally so. Of the numerous varieties that claimed our attention the following are a few of the most noteworthy—it would obviously be impossible to mention all. *Beckwith's Pink* is one of the best of its colour, and the best of the *Master Christine* type. *Beauty of Poitevine* is practically the same as the *King of Denmark*, which has appeared at shows a good deal of late. *Mme. A. Bruneau* represents a charming section in which we hope to see still further progress. The pips are white, of capital form, and each petal has a narrow border of rose, very regular and well defined like that of a good *Picotee*. The flowers are double, and the truss of great size. Of the double whites *Hermine* is one of the very best, whilst

amongst the single varieties *Virginia* and *Snowdrop* represent the perfection of beauty. *Red Eagle* is a large showy flower of bright scarlet. *Sir James Kitson*, a comparatively new sort, is a grand orange-magenta variety, and *Mrs. Pole Routh* sent out at the same time (1897) is an equally good thing. The colour is salmon, several shades of which are apparent, for the flower is prettily mottled. *Mrs. Robert Cannell* is more particularly valuable for bedding purposes, and represents a bright shade of salmon that is very taking. Amongst the double crimsons there is no more useful thing than the double form of *Henry Jacoby*, itself a great favourite.

IVY-LEAVED VARIETIES constitute a very pleasing and valuable section. The old *Madame Crousse* is still one of the best for the filling of window boxes and hanging baskets, although there is a number of more refined and better flowers from a florist's point of view. *Cordens Glory* is bright scarlet, *Souvenir de Chas. Turner* is deep pink, feathered with maroon, and *Galilee* is soft rose-pink. All three of these varieties should be in every collection. The well-known *Ryecroft Surprise*, and the equally good *Beauty of Castle Hill* should likewise not be forgotten.

TRICOLOR AND VARIEGATED FORMS.—At one time these were more popular for bedding purposes than they now are. Probably the difficulty of keeping them through the winter is really responsible for this. Messrs. Cannell & Sons have a magnificent stock of them, and we have never had the beauty of this section of *Pelargoniums* so forcibly impressed upon us when looking over their collection. Of the showy golden tricolors *Mrs. Pollock* is still good, but *Mr. Henry Cox* and *William Sandy* are even better. In the ranks of the silver tricolors, *Mrs. Miller*, flushed deep crimson and black zone, is exceedingly handsome. *Mrs. Parker* is a striking variegated sort, much like *Flower of Spring* in foliage and habit, but with double pink flowers. Such old, and at one time popular, varieties as *Freak of Nature* and *Happy Thought* are kept in stock as well as the newer ones. The yellow-leaved section is not a strong one numerically, but it is an important one nevertheless, for to it belong *Crystal Palace Gem*, *Creed's Seedling* and *Robert Fish*, all three of which are much used as edging plants in summer bedding combinations.

TUBEROUS BEGONIAS.

The work of improving these already noble flowers is still going on year by year, and nowhere is the development more keenly watched than at Swanley. The strain of both singles and doubles is a remarkably fine one. From a spectacular point of view several houses which are devoted to the *Begonias* are just now one of the chief features of the establishment, and we have really never seen a finer display. The singles are characterised by tremendous flowers, which, stocky as the plants are, yet try them considerably by their weight. Many of the best of them have received distinctive names, and although this is a futile proceeding in the majority of cases when the next season probably sees the variety superseded by another, the forms that will supersede these will need to be something wonderful. *Lord Grosvenor*, orange-scarlet; *Golden Hind*, rich golden-yellow; *Paul Hardy*, deep crimson scarlet; *The Lady*, white; *Major Burke*, fiery scarlet; and *Mrs. Newman*, rose pink, were some of the best that we saw.

The doubles are fully up to the singles in point of merit, and we were particularly struck with a grand, new, pure white form named *Snowdrift*. The flowers are of great size, very regular in build, the margins of the segments being prettily frilled, and the segments themselves of great substance. *Commodore Dewey*, crimson; *Lord Sherborne*, scarlet-crimson; *Lady Roberts*, flesh-pink; *Miss Violet Kennard*, white; *Freda*, salmon; and *Miss Griffith*, blush pink, were all in fine condition, as were indeed a host of others that our space will only permit us to speak of in the mass. The *Begonias* are certainly the best that the Messrs. Cannell have ever had, and this is saying a good deal.

CANNAS.

Time was when huge pots were thought to be necessary to flower *Cannas* successfully, but this idea has been exploded, for the Messrs. Cannell have conclusively shown by their superb exhibits of *Cannas* at the London and provincial shows that the finest of flowers can be obtained from plants in 5-in. pots.

Cannas may be seen in flower at Swanley from the beginning of May till the end of November, and often into December and January, and in every case they are good from the earliest to the latest. At the present time one of the 100 ft. span-roofed houses is full of plants in flower. All the leading varieties are represented from the tall *Italia* and *Austria*, with their excessively wide but rather thin segments, down to dwarf, sturdy plants well under 2 ft. in height, but all carrying huge trusses of brilliant flowers. *Burgundia* is another of the tall, so-called *Orchid* flowering *Cannas*. It resembles *Italia* but the colours are a shade or two lighter. *Paul Bruant*, fiery orange-crimson; *Aurea*, pure golden yellow; *Konigen Charlotte*, bright red, edged with gold; *Partenope*, dark orange yellow; and *Leon Vassiliere*, scarlet-orange flowers, and handsome purple foliage, are a few of the cream of the collection. As the latter comprises upwards of 160 varieties, it is manifestly impossible to detail all.

Other houses were filled with young plants which had not yet reached the flowering stage. All of these were full of health and promise, and many of them are destined to make gay the dull months of winter.

THE ECONOMIC USES OF BAMBOOS.

MR. A. B. FREEMAN-MITFORD, C.B., is one of the greatest authorities upon all matters connected with Bamboos. His collection of living plants at his establishment at Batsford Park, Moreton-in-the-Mars, is one of the finest in existence, whilst in his travels he has had unique opportunities for studying the economic uses of these plants. A large audience listened with the greatest interest to his lecture on this phase of the subject which he delivered before the Royal Horticultural Society on the 26th ult. Sir J. T. D. Llewellyn, Bart., M.P. occupied the chair.

It was easy to see that Mr. Freeman-Mitford was an enthusiast, for from the commencement of his lecture until the end he was eloquent in the praises of the Bamboo. In China and Japan it was an absolute necessity, in support of which he quoted the old Chinese proverb—"Better a field without Wheat than a house without the Bamboo." "How shall I live for a day without this gentleman (referring to the Bamboo) was the expression of the common Chinese idea. The lecturer passed on to refer to the great height of the Burmese Bamboo, *Dendrocalamus giganteus*, and said that in the *Paradeniya* gardens in Ceylon there was nothing more striking. There were there to be seen huge clumps of as many as a hundred canes each, some of the canes running to a height of 135 ft., with a girth of from 25 to 27 inches. Apart from decorative effect the plant was of little value, for the culms were very hollow and the walls thin, whilst the fibres were spongy and liable to splitting. Water pipes and flower pots were often made from them. He showed a section of one of these gigantic culms which had been soaked in linseed oil, of which it had absorbed a large quantity, to prevent splitting. The only Bamboos planted in Ceylon were this giant, and *Bambusa vulgaris*.

Referring again to the usefulness to man of the Bamboo, the lecturer said that only the *Cocoonut Palm* (*Cocos nucifera*) could dispute with it pride of place. With regard to geographical distribution Europe was the only quarter of the globe in which some were not found. Asia and South America were probably the richest in species, but of the African forms little was known. *B. aristata* was found in abundance on the slopes of the Andes at a height of 13,000 ft. above sea level, whilst at 15,000 ft. altitude, and from thence nearly up to the limits of perpetual snow it formed a dense carpet covering the ground, and driving everything else out. *Dendrocalamus strictus* was to be found on dry hill tops and slopes in Central India and the Deccan, where the culms were solid and comparatively small. The same species, however, grew in the moister parts of Southern India and Ceylon, where the stems were larger and hollower.

In China the Bamboo entered very largely into all social functions. It was everything to a Chinaman, for it carried his mother as a bride to the altar, would carry him to his own grave, and in the meantime would provide him with a house and furnish it at a total cost of about \$5. From it he obtained paper, pens, clothing, fishing tackle, material for building boats, and rigging them with sails, whilst the tender

shoots were cooked and eaten as a vegetable. Here Mr. Freeman-Mitford spoke of a recently discovered quality of the Bamboo, discovered by a British officer stationed in one of the driest parts of India, for by stabbing the internodes of the culms, clear limpid water could be obtained. The blowpipes of Malaysians were obtained from the Bamboo, and shafts for assegais were supplied by the canes of *Arundinaria tessellata*. Five Indian species were largely used for fencing purposes, and the making of water pipes, fishing tackle, and house furniture. *Phyllostachys mitis*, which grew to a height of from 60 ft. to 70 ft. in China was very useful for many purposes, for the walls of the culm, although thin, were light and tough. *P. Quiloi* was employed in the same way. *P. nigra*, and *P. nigra punctata* were largely used for the making of house furniture. Samples of the curiously twisted canes of *P. heterocycla*, the tortoiseshell Bamboo, were also shown. He thought the curious "side to side" arrangement of the separating membranes was due to the plant growing in heavy compressed soil, for it was only the earlier formed nodes that showed the deformity, and it was not to be seen at all when the plant was growing in light soil. *P. aurea* showed the same peculiarity. This species could be easily distinguished from any other by the existence of swelling at the bases of the nodes, which were not found in any other form. He took *P. heterocycla* to be only a form of *P. mitis*, and *P. castillonis* to be a garden form of *P. Quiloi*.

The canes of *B. quadrangularis* were much in favour for fancy work in Japan. The species was not indigenous to Japan, but had been introduced to that country through China.

The lecturer thought that Bamboo growing for the canes would never become an important industry here, for, first of all, we lacked the steamy atmosphere and high temperature necessary to the quick development of the plants, and secondly, there was not sufficient demand for the canes. According to the Chinese from seven to ten years elapsed from the time of planting till the plantations were remunerative. He could find nothing reliable as to the costs and profits of the industry, but \$500 worth of canes had been sold annually from a plantation of two acres in area. He regretted that he could give no reliable information as to the importers' profits. He had applied to several large importers, but the accounts he received were variable and, in some cases, contradictory, one gentleman going so far as to say that Bamboos only came over here as ballast.

Mr. Freeman-Mitford concluded his very able and interesting lecture by an allusion to the fine decorative qualities of the Bamboo.

In the discussion which followed, the chairman strongly recommended all to visit the Bamboo Garden at Kew, which, he said, grew in grace and beauty year by year. He also urged each grower to experiment in his own garden with the different species and varieties. He had been agreeably surprised to see how well they adapted themselves to their changed conditions.

D. Masters put in a good word for *B. Metake*, which he described as a first-class town plant, suitable for planting in either South Kensington or Whitechapel.

Mr. Harry J. Veitch said that he had found that Bamboos would flourish in almost any soil, and their ability to resist drought had been remarkably shown during a period when many shrubs were dying for lack of water. He advised a mulching of good manure in the autumn.

In answer to a question Mr. Freeman-Mitford said that the most suitable Bamboos for planting for cover for pheasants were *Arundinaria Veitchii*, *B. palmata*, *B. tessellata* and *A. metallica*. The latter, which had been shown for the first time that day, in his own collection was more vigorous than either *A. Veitchii* or *Bambusa Metake*. It was needful, however, to protect it at first from rabbits, which were a great nuisance and very destructive.

Fagus sylvatica pendula, or the weeping Birch, is one of the most elegant trees of all those that the planter has at command. One of the finest specimens of it in existence is growing on the site of an old nursery at Flushing, N.Y., U.S.A. It is about forty years of age, is 48 ft. high, has a trunk girthing 10 ft. at 3 ft. from the ground, and the circle formed by the sweep of its branches is about 52 ft. in diameter. This fine tree was recently figured in *Gardening* (American).

HORTICULTURE IN ROTHERHAM.

OAKWOOD GRANGE.

SITUATED in a rectangular direction to the Woodlands, the subject of my previous notes, is the charming residence of G. Baker, Esq., horticulturally presided over by his capable gardener, Mr. A. Woodward. In upper Moorgate on the way to Whiston stands in bold relief the picturesque mansion alluded to, towering majestically above the surrounding country, which in this neighbourhood is somewhat undulated, and so a fine view is commanded of great rural beauty. Nor are the sulphur fumes so troublesome in this locality, consequently the kitchen garden department is worked with a large amount of success. A drive of about 150 yards from the Moorgate Road and the residence of Mr. Baker is open to view; so aptly, however, is the introduction of shrubs and banks intervened that the house is hidden, when walking up the drive, and so the pleasing revelation of this sightly mansion comes as an exceedingly pleasant surprise.

But away to the houses, six in number and of considerable dimensions, comprising large Peach house, vinery, greenhouse, Rose house, stove, &c., situated in the rear of the house, and suitably enclosed with the orthodox garden walls. In the vinery department general health was evident, plenty of good wood and vigorous bunches judiciously thinned. Alicantes, Gros Colmar, Lady Downes and Ham-burgh are the varieties grown. Two Peach houses (the one 28 yds. by 8 yds., the other 14 yds. by 4 yds.) showed a week ago a splendid crop; more really than they should have done, as Mr. Woodward said, to ensure a fair successive crop year by year. The varieties grown are Noblesse, Welbeck Seedling, Hale's Early and Royal George, with two or three Pitmaston Orange Nectarines introduced. The plentiful crop seemed in no way to affect the size of the fruit, which was everything to be desired.

In the stove were healthy Crotons in all the latest varieties, Marantas, *Ficus variegata*, *Dracaenas* of sorts, Cannas and choice Orchids, making grand breaks, and embracing such families as *Dendrobes*, *Cattleyas*, *Masdevallias*, and *Cypripediums* in many and choice varieties. The Exmouth variety of *Stephanotis* on the roof was in full bloom, and formed a glorious pendant.

A cool house which acts as conservatory was bright with good zonal and show *Pelargoniums*, the former including such varieties as *Amy Amphlett*, *Plutarch*, *Mrs. Leavers*, *Raspail*, *Golden Wedding*, &c. *Odontoglossum Rossi majus*, *O. Pescatorei*, and other species were identified, and apt dots of *Celosias*, *Gloxinias*, *Calceolarias*, *Streptocarpus*, and general foliage plants completed such a charm of culture and arrangement that could not, but please the most fastidious in horticulture.

In an adjoining span-roof house, 17 yds. by 7 yds. was a centre bed of fine specimen *Camellias*, surmounted on the entire roof by such *Roses* as the charming varieties *Anne Olivier* (a grand *Rose*), *Maréchal Niel*, *Jean Ducher*, *Homère*, *W. A. Richardson*, and *Gloire de Dijon*, all in perfect health and consequent vigour, and free from pests of any description. It was at this point that I found my wily chaperon (Mr. A. Woodward, the gardener), had by no means as yet shown me all the charming things at this establishment, for he had evidently kept till nearly the last what was undoubtedly one of the prettiest attempts at bedding I have as yet seen hereabouts.

A lawn and small intervening belts of shrubs, with flower borders comprising in all about an acre, situated in front of the mansion, was the scene of this latest development alluded to. Standing on the well kept sward facing the house the general effect was delightful. Access to the lawn is gained from the front entrance of the house either by a flight of steps or the slope of grass that prefaces, as it were, the entire front of Mr. Baker's residence. At the foot of this slope are laid out flower beds, serpent and circular shapes alternating. These are filled with *Calceolarias* *Golden Gem*, *Gold Cup*, and *Sultan*; zonal *Pelargoniums* *Harry Hieover*, *Flower of Spring*, *Princess Jacoby*, and *Crystal Palace Gem*, and last but not least, that irreproachable *Viola*, *The Tory*.

Around the borders generally in the pleasure grounds were some magnificent spikes of *Stocks*, charming *Roses*, mostly the hybrid perpetual, and in great variety, *Syringas*, *Buxus*, *Ilex*, the *Golden Yew* (*Taxus*), and the *Irish Yew*, *Retinospora*,

Cupressus and other *Conifers*, *Laurels*, *Aucubas*, &c.

To retrace our steps from this spot to the kitchen garden was an act of leaving the ornamental to observe the useful. Here were to be seen a magnificent lot of pink *Celery* (*Upstone's Superb*) that was absolutely fit for table if only earthed up and blanched. Following about four double rows of this were successive lines of *Duke of Albany*, *Sharpe's Queen* and *Prince of Wales Peas*, the latter full, fit and hanging about as thickly as they possibly could, with the other varieties promising equally as well. Early *Snowball Cauliflowers* were heading, with successive varieties well in advance of anything I have seen in South Yorkshire; *Beet*, bulbing nicely; *Carrots* of the *Intermediate* type, a fair size; *Parsnips* with wonderful tops, and almost as good bottoms; *Chelsea Gem Peas* with beautiful pods, and heavily laden (a grand stock); in fact, every nook and corner of this spacious kitchen garden was filled with grand examples of good culture, which undoubtedly will have much to owe to a copious supply of good manure, especially in such a dry season as we are experiencing. Thus is the moisture retained, and the season somewhat counteracted.—*Albert Upstone*.

MILLFIELD NURSERY, EDMONTON.

Nor only does Mr. H. B. May grow myriads of plants for market but he has taken up fruit culture to a considerable extent, and this branch of his business will probably largely increase in the course of the next few years. The Millfield Nursery, situated about a mile on the other side of Silver Street Station from that on which the Dyson's Lane establishment lies, is the nucleus of the fruit culture branch. The surroundings are open and breezy, for the ground lies fairly high, and everything is apparently conducive to success. The houses are much larger than those at Dyson's Lane, and are very substantially built.

Grapes and Tomatos are the chief subjects taken up, and under the capable management of Mr. Summers, excellent results are obtained. There are twelve established vineries each measuring about 160 ft. in length by 28 ft. in width. The canes are stout, healthy, and in full bearing. This year they are carrying exceptionally heavy crops, and we were very favourably impressed with the fine substance and rich green of the foliage, as well as the size and regularity of the bunches. *Gros. Colman* and *Muscat of Alexandria* are the chief varieties, and they are found to command a first-class sale. *Black Alicante* is grown to some extent, but *Canon Hall Muscat* is not touched at all; "it is too risky" said Mr. Summers to us in reply to the query.

In the early months of the year, up to and including May, the floor space in these vineries is utilised for the growing on of hordes of bedding plants, the zonal *Pelargonium West Brighton Gem* being an especial favourite both for flower beds and window boxes. *Spiraeas* and *Ferns* claim the space not occupied by the bedding plants and thus supplement to a very material degree the resources of the establishment at Dyson's Lane.

The two most recently constructed vineries are giants among their kind, for one measures 250 ft. in length by 26 ft. in width, and the other is 22 ft. longer. They are planted with *Vines*, and until these come into bearing the other part of the floor space is covered with *Tomatos*, *Chemin Rouge* being the favourite variety. When these two houses get into full swing they will indeed be magnificent vineries.

In the houses devoted to plants we were delighted with the grand batches of *Crimson Rambler Rose* in 48-sized pots. These plants were not only in vigorous health but were a mass of flower; indeed it is a wonder how they can be induced to do so well with such limited root space.

Clematises in 4-in. pots are another special feature during the spring months. They flower freely and make capital conservatory plants. Such varieties as *Miss Bateman* and *Fair Rosamond* take very kindly to this treatment. The white *C. Jackmani* also gives satisfaction thus, for although it is rather a weak grower it flowers freely and the flowers are of good size.

In the numerous pits and smaller houses zonal *Pelargoniums* were to be seen in great numbers at the time of our visit, and the fine new pink variety *Millfield Rival* was in splendid condition. *Tricolors*

are well looked after and the collection contains every form of note or merit.

In the open ground huge breaks of Roses and violas are to be seen, all the leading varieties of each being grown. Some of the Roses are induced to bloom early by enclosing large breaks with temporary glass. Light wooden frameworks are run up and these are covered with lights. The variety General Jacqueminot seems to be the favourite, and our guide informed us that it was by far the best of the dark varieties for market work. It can be got into bloom comparatively early in the season by the method mentioned above.

Both the establishment at Dyson's Lane and at Millfield are eloquent witnesses of the great business energy and executive ability possessed by Mr. May; and it is therefore not surprising that prosperity has crowned his efforts.

THE WEATHER AND THE CROPS.

In my rambles through the eastern part of Surrey I find that so far as culinary vegetables are concerned, in almost all instances with the exception of being later than usual, they present, at the present time, a more promising appearance than has been the case for several years past, this result being due to a more copious rainfall at the required time. Peas are in most luxuriant growth, some varieties being at least a third above their usual height. The various members of the Brassica family, with Lettuces and such like succulent subjects, simply delight in the showers. Potatoes, both in gardens and fields, are most promising. The hay crop is most abundant; some has been got in with very little rain upon it.

Those of our gardening friends who have this extra burden thrown upon them, and have a wet time in which to make it are much to be commiserated, but now that we have had a good spell of haymaking weather we hope they have been making hay while the sun has been shining. At the same time there are hundreds of acres still standing. A scarcity of labour is the plea with the procrastinators. I have been through some districts where a few heavy showers would be most welcome. Peas and Carrots are evidently suffering from a deficiency of moisture. Root crops generally would be much benefitted by a downpour. Should Wheat secure anything approaching present prices during the coming autumn the farmers will have a high time. Judging by the present condition of the crops the promise of harvest is splendid. I have passed through some of the best fields of Wheat I ever saw. The same holds good respecting Oats.

The fruit crop is very variable, with the exception of small fruits, which are generally abundant, Gooseberries and Strawberries remarkably so. Plums and Pears are almost a failure in some places, in others a moderate crop, and in a few, abundant. Apples are a poor crop in many places, and taking one variety with another, not more than a moderate crop anywhere. American blight seems to be in stronger force this year than it has been lately, the condition of young trees telling a sad tale of carelessness somewhere. Intending planters would do well to inspect the various nurseries and give those a wide berth where the pest exists.

It may be added that, with the exception of being a late season, owing to a low temperature with dull weather, while during the last few years there has been warmth and sunshine, should we be favoured with warm rain shortly, followed by warmer and brighter weather, 1898 seems likely as respects the fruits of the earth at home, to come out well at the close of the year. Outdoor Tomatoes will most likely prove an exception. They are everywhere in a too backward condition to inspire even the most sanguine with any bright hopes of success. Peaches and Apricots are a fair crop.—*W. B. G.*

SOCIETIES.

TIBSHELF FLORAL, HORTICULTURAL AND ROSE.—July 26th.

THE 23rd annual exhibition of this society was favoured by splendid weather, and an enormous attendance towards the close of the day. It was held in the Colliery Cricket Ground. The Tibshelf Society has

been a leading organisation of its kind in the Midland Counties for many years, and not only holds its own, but its recent show would seem to have inaugurated a new era of prosperity for the society. Sir Charles Seely, Bart., of the Tibshelf Collieries close by, was present at the show, and congratulated the society on the excellence of its exhibition. Mr. A. Outram, of London, who was one of the judges, averred that the groups were the finest he had seen this year, although he had judged at over thirty shows.

The groups in the open class had to be arranged for effect, and to occupy a space of 300 sq. ft. Eight competitors came forward and put the judges on their mettle to decide the relative merits of the exhibits. The prizes offered varied in value from £15 to £1. The premier honour was secured by Mr. Joseph Ward, gardener to T. H. Oakes, J.P., Riddings House, Alfreton, who is well known as an eminent and successful exhibitor, particularly at Tibshelf, where he has won the first prize for many years in succession. His group was remarkable for the light and graceful character of the plants and their arrangement, some of them being of great beauty and value. He won easily. Mr. J. T. Nelson, gardener to A. Barnes, Esq., won the second prize. Messrs. W. Arlingdale & Sons, were third; Mr. Wagg came in fourth; Mr. W. Haslam, of Hardstoft, fifth; and Mr. Vickers, the sixth.

The Roses were good and the competition keen. Messrs. Harkness & Son, Bedale, Yorks., were in good form, and took leading prizes for seventy-four, forty-eight, and thirty-six blooms, respectively, of hybrid perpetual, Tea and Noisette varieties. Other leading exhibitors in this division were Messrs. D. Prior & Sons, Colchester; Messrs. W. Boyes, Derby; and Mr. R. Mack, Catterick Bridge.

Fruit and vegetables made a very fine display, particularly the latter, notwithstanding the unfavourable character of the season generally. There was keen competition in the vegetable classes by cottagers residing in the parish of Tibshelf and the village of Newton. A large number of them are actually employed by Sir Charles Seely, Bart. The cottage gardens in the neighbourhood are a most interesting and wonderful sight. They are, in fact, pictures of high class or intense gardening. The cottagers may be seen by the dozen, each one trying to excel his neighbour with most commendable taste. The first class in the schedule, as usual, was devoted to the cottagers. The Potatoes were clean, smooth and shapely, and some of the earlier sorts were of great size. Flowers and fruits were also as good as last year. Some of the principal exhibitors were Messrs. J. Johnson, T. Draycott, C. Searston, W. Gibson, and T. Riley.

The class for amateurs was also well represented, and is always a feature of the show. The produce exhibited was considered superior to what it has been for some years past. The collections of fruit, particularly Gooseberries, were excellent. Everything passed off most satisfactorily and pleasantly, so that the society is to be congratulated on the holding of one of their most successful exhibitions.

NATIONAL CARNATION AND PICOTEE (Southern Section).—July 27th.

THERE was a splendid display of Carnations and Picotees at the Crystal Palace on the above date, and the wisdom of postponing the show from the 21st to the 27th was strikingly demonstrated for, owing to the lateness of the season many of the flowers would have been immature on the earlier date. Upwards of 500 entries were staged, from sixty-nine exhibitors. The show was a conspicuous success, for not only was it well patronised by exhibitors and visitors alike, but the quality of the flowers was much above the average, particularly self-coloured and fancy varieties.

CARNATIONS.

BIZARRES AND FLAKES.—Mr. M. Rowan, Clapham, staged the leading collection amongst the four exhibitors of twenty-four blooms of Flakes and Bizarres in not less than twelve varieties. J. S. Hadderly, Robert Lord, Wm. Skirving, Robert Houlgrave, Geo. Melville, Merton, Gordon Lewis, Constance Graham, Sarah Payne and Admiral Curzon were his premier varieties. Mr. J. Douglas, Edenside, Great Bookham, was a close second, Mr. Chas. Turner, Slough, was third; and Mr. Chas. Blick, gardener to Martin R. Smith, Esq., The Warren, Hayes, Kent, was fourth.

There were six competitors for twelve blooms of similar material in as many distinct varieties. Here the first award fell to the lot of Messrs. Thomson & Co., Birmingham, whose best flowers were Merton, Guardsman, Master Fred, Vulcan, Gordon Lewis and Magpie. Mr. F. A. Wellesley, Woking, was second; Mr. C. Phillips, Bracknell, third; and Mr. J. Walker, Thame, Oxon, fourth. There were six entries in this class.

Nine competitors entered for six blooms of Flakes and Bizarres, distinct. Here Mr. A. R. Brown, Handsworth, Birmingham, led. He was followed in order of mention by Mr. F. Hooper, Bath; Mr. G. Chaundy, Oxford; Mr. J. Loveder, Bristol; and Mr. A. Greenfield, Sutton.

SELFS.—There were fine stands of twenty-four blooms, in twelve varieties. Martin R. Smith, Esq., was first with a magnificent lot in which there were only five pairs of duplicates. Mrs. Geo. Buchanan, Cecilia, Falcon, Helmsman, Kelpie, Archie Norman, Hildegard, Sir Bevy's, Firebrand, Purity, Miss Judith Harbord, Bomba, Sir Francis Drake, Enchantress, Exile, Cordelia, Joan of Arc, Torfrida, and Friar Tuck were some of the best. Mr. Jas. Douglas was second with a capital lot of blooms. Mr. C. Turner was third; Mr. M. Rowan, fourth; and Mr. A. Smith, Downley, fifth.

Seven entries were staged of twelve blooms, distinct. Here the honours were won by Messrs. Thomson & Co., Sparkhill, Birmingham, who had a stand of very fine, even blooms. The varieties were Her Grace, Exile, Mr. E. Hambro, Percy, Seagull, Ruby, Germania, Lady Mary, Nabob, Britannia, James Douglas, and a seedling. Mr. C. Phillips was second with much smaller, but bright flowers. Mr. A. J. Rowberry, South Woodford, was third; Mr. F. A. Willesey, fourth.

No fewer than twenty competitors staged in the class for six blooms, distinct, the first award going to Mr. A. R. Brown, who had capital samples of Royalty, Mrs. Eric Hambro, Miss A. Campbell, Mrs. J. Douglas, Negress, and a seedling. Mr. W. Gorton, jun., Wolston, was second; Mr. R. C. Cartwright, Birmingham, third; Mr. A. Chatwin, Edgbaston, fourth; and Mr. C. Harden, Dover, was fifth.

For six selfs of any one variety there were seventeen entries. Martin R. Smith, Esq., was an easy first with the fine yellow Cecilia; Mr. Jas. Douglas, second, with Mrs. Eric Hambro; Mr. C. Phillips, third, with Regina; Mr. R. C. Cartwright, fourth, with Niphetos; and Mr. C. Harden, fifth, with Mrs. Eric Hambro.

FANCIES.—There were four entries for twenty-four fancy varieties. Here Martin R. Smith, Esq., added to his previous successes by winning the first award with a really magnificent lot. Aglaia, Muleteer, St. Gatien, The Cid, Merry Duchess, Elaine, Renegade, Maid of Honour, Goldylocks, Zingara, Alexander, Electra, Eothen, Allegra, Hidalgo, Don Carlos, Lord Lieutenant, Guinevere, Fairy, and Persimmon were the varieties. Mr. C. Turner was second with much smaller but bright and well shaped flowers, Mr. J. Douglas was third, and Mr. A. Smith, Downley, fourth.

Four stands, also of twelve fancies, were staged, the first award going to Mr. A. J. Rowberry, the second to Mr. C. Phillips, and the third to Mr. J. Walker.

Six fancies was a popular class, for fifteen competitors entered. Messrs. Thomson & Co. were first, a superb bloom of Cardinal Wolsey being a special attraction. The second, third and fourth prizes fell to the lot of Mr. J. W. Ffoulkes, Chester; Mr. S. A. Went, Thames Ditton; and Mr. F. Hooper respectively.

In the class for six blooms of one variety there were fifteen entries. Mr. Martin Smith was first with Hidalgo, and Mr. A. W. Jones, Handsworth, second, with Golden Eagle.

SINGLE SPECIMENS — BIZARRES.—Mr. Robert Sydenham, Birmingham, had the premier scarlet bizarre in Richard Monk; Mr. A. Chatwin being second with Robert Houlgrave; and Mr. C. Turner, third, with the same variety.

Mr. Sydenham had the best crimson bizarre in Master Fred, and was also second with the same variety; Mr. C. Phillips being third with J. S. Hedderly.

William Skirving, shown by Mr. Robert Sydenham, was adjudged to be the best pink bizarre; Mr.

Rowan being second and third with the same variety.

FLAKES.—Mr. Robert Sydenham was first and second for the scarlet flake with John Wormald, the third prize going to Mr. A. R. Brown for the same variety.

Mr. Rowan was first for the purple flakes with Gordon Lewis, and second with Geo. Melville; Mr. R. Sydenham being third and fourth with Magpie.

Mr. A. R. Brown was first and second for the rose flake with Merton. Mr. Rowan was third with Mrs. Rowan.

SELFS.—Mr. Robert Sydenham had the best white in Mrs. Eric Hambro; Mr. Jas. Douglas, second with The Briton; and Mr. R. Sydenham, third, with Crystohel.

Exile, shown by Mr. Robert Sydenham, was the leading rose variety; Mr. A. R. Brown taking second place with Royalty.

Mrs. James Douglas, shown by Mr. Weguelin, was the leading scarlet variety, and The Cadi, sent by Mr. Douglas, the second best.

Uncle Tom, shown by Mr. A. R. Brown, was the leading purple, the second prize going to Mercurian, also shown by Mr. Brown.

The first award for the yellow went to Mr. A. R. Brown, for Miss Audrey Campbell, and the second to Mr. J. Douglas, for Miss Willmott.

Mrs. Reynolds Hole, shown by Mr. C. Phillips, was the leading buff form, and the Dyak, from Mr. A. Spurling, received second prize.

Voltaire, shown by Messrs. Thomson & Co., won as the fancy variety.

PICOTEES.

There were four entries for twenty-four white ground Picotees in twelve varieties. Here Mr. C. Turner led, his best hlooms being Acme, Favourite, Mary, Brunette, Little Phil, Mrs. Gorton, and Mrs. Payne. Mr. J. Douglas was second, also with a good stand, and Mr. M. Rowan, third. Messrs. Thomson & Co. were first in the smaller class for twelve hlooms distinct. Brunette, Favourite, Medhurst's Seedling, Somerhill, Mrs. Sharp, and Mrs. Payne, being the strongest samples. Mr. F. A. Wellesley, was second. Mr. A. R. Brown led for six hlooms, and was followed by Messrs. R. C. Cartwright, and C. Phillips in the second and third places respectively.

Mr. Martin R. Smith came to the front again in the premier class for twelve hlooms of yellow ground varieties, of which he had Lily, Duchess, Badminton, Hygeia, Lady Bristol, His Excellency, and Duke of Ahoa, in grand condition. Mr. C. Turner was second, and Mr. J. Douglas, third, both of them with good stands. There were five entries.

Of the nine competitors for six hlooms, Mr. G. Chandy, Oxford, led, Messrs. Thomson & Co. being second, and Mr. S. A. Went, third.

SINGLE SPECIMENS.

The following exhibitors won first awards in their respective flowers:—Mr. Albert Chatwin for the heavy red Isabel Lakin; Messrs. Thomson, for the light, red edged Mrs. Gorton; Mr. R. Sydenham, for the heavy, purple edged Medhurst's Seedling; Mr. A. R. Brown, for the light purple edged Harry Kenyon; Mr. R. Sydenham, for the heavy rose edged Madoline, and for the light rose edged Rosie Sydenham; Messrs. Thomson & Co., for the heavy scarlet edged Mrs. Sharp; and Mr. Sydenham, for the light scarlet edged Favourite; Wanderer (no exhibitor's name) won as the best yellow ground.

UNDRESSED BLOOMS.

In this section the flowers were shown with their own foliage. Mr. W. Garton, junior, won for six flakes and hizarres. There were thirteen entries for twelve selfs and fancies, the first award going to Mr. J. W. Foulkes; and the second to Mr. M. V. Charrington, Chislehurst. In the smaller class for six selfs and fancies, Mr. S. F. Selley, Forest Hill, won. Six white ground Picotees were best shown by Mr. M. V. Charrington, and the same number of yellow ground Picotees by Mr. S. A. Went. Mr. M. V. Charrington was adjudged to have the most prominent seedling self in a fine scarlet form.

MISCELLANEOUS CLASSES.

Mr. J. King, Crondall, received first award for six Carnations and Picotees, distinct, in the class for maiden exhibitors.

POT PLANTS.—Mr. Martin Smith added yet another first to his list of successes by staging the best twelve Carnations in pots; Mr. J. Douglas was second. Mr. Martin Smith also had the best speci-

men plant, showing Golden Eagle; Mr. Douglas was second, with Saul.

The group of Carnations occupying 50 sq. feet, sent by Mr. Martin Smith, was awarded first prize, and deservedly so, for it contained some grand plants. For the smaller group occupying 30 sq. feet Mr. J. Douglas, scored.

TABLE DECORATIONS.

Two Carnation dinner tables were forthcoming, that sent by Mr. H. Rogers, Rendlesham, Woodbridge, receiving the first prize. This was an exceedingly pretty and effective table.

Mr. S. A. West scored for the vase of Carnations, Mr. H. Rogers being second. Mr. Martin Smith sent the winning three shoulder sprays, and also the six huttonholes of Carnations and Picotees arranged with suitable greenery.

THE MARTIN SMITH PRIZES.—Mr. H. G. Smyth, Clark's Mews, High Street, Bloomsbury, won the first for the hunch of horder Carnations of one variety, set up with their own foliage, showing Jem Smyth. Mr. J. Euston, gardener to Mrs. Whitbourne, Ilford, scored for six bunches of similar material. Mr. E. C. Gohle, Ryde, Isle of White, was second. Mr. H. W. Weguelin, Torquay, had the winning exhibit of nine hunches of any section of Carnations and Picotees.

PREMIER BLOOMS.

The prizes for the premier hlooms in the whole of the show were as follows:—Carnations—Flake—Flamingo, shown by Mr. J. Douglas; Bizarre—Admiral Curzon, from Mr. M. Rowan; Self—Cecilia, from Mr. M. Smith; Fancy—Hidalgo, from Mr. M. Smith.

Picotees—Clio, heavy scarlet edged, from Mr. C. Turner; Summerhill, light purple edged, from Messrs. Thomson & Co.; and Mrs. Douglas, yellow ground, shown by Mr. C. Turner.

MISCELLANEOUS EXHIBITS.

An exceedingly showy group of cut flowers was staged by Messrs. Wm. Cuthush & Son, Highgate, N. In it Sweet Peas, Carnations, both Malmaison and horder varieties, Liliums, and Eryngiums were displayed to great advantage.

Four dozen hunches of Sweet Peas in as many varieties were shown by Mr. Henry Eckford, Wem, Shropshire. Mrs. Joseph Chamberlain, Royal Rose, Blanche Burpee, Lady Nina Balfour, Venus, Lady Beaconsfield, Prince Edward of York, Prince of Wales, Othello, and Sadie Burpee were some of the best forms on view.

Mr. J. Douglas sent a table of bunches of new self and fancy seedling Carnations raised by himself and Mr. Martin Smith. There were some exceedingly fine things amongst these.

Mr. F. G. Foster, Brockhampton Nurseries, Havant, Hants, contributed a fine stand of Sweet Peas.

ST. MARY'S, LEAMINGTON.—July 28th.

In spite of the showery weather the annual show of the St. Mary's Horticultural Society, which took place in the cricket field, Leam Terrace, east, on the 28th ult., proved a great success. Three tents were allotted to the exhibits of fruits, flowers, vegetables, and the industrial exhibits—the latter form an important section of the show. Mr. W. Vause, of Leamington, staged a group of miscellaneous plants, not for competition, which was greatly admired by visitors, and added much to the attractiveness of the show. The groundwork was of Maidenhair Fern, and out of this rose a quantity of well-grown foliage plants, amongst which Caladiums and Crotons were very conspicuous. The pretty *Francoa ramosa* was also freely employed. There was a background of large Palms. Mr. R. Greenfield, Jun., had another handsome group of plants and cut flowers, including Cattleys and Statices. Samples of Ichthemic Guano were forthcoming from the same source. Messrs. Webb & Sons, of Stourhridge, and Messrs. Hinton, of Warwick, both had showy collections of cut hardy herbaceous plants and Sweet Peas.

The competitive classes were well patronised and there were some lively tussles for the prizes.

In the classes open only to gentlemen's gardeners the most important exhibit was the group of plants set up by Mr. J. Tompkins, gardener to the Rev. J. Beaumont. Not only was the material good but the arrangement was very skilfully and tastefully carried out. The first prize was rightly awarded it. Mr. Tompkins was also first for Fuchsias, a specimen plant, and zonal Pelargoniums.

In the nurserymen's classes Mr. R. Greenfield, jun., carried off premier honours for the hand houquet, Mr. W. Vause being second, and Messrs. Finch & Co., third. Mr. Greenfield's bouquet consisted largely of Tuheroses, Stephanotis and Orchids. Mr. W. Vause led for Roses, Messrs. Finch & Co. for the epergne. The first prize for foliage plants went to Mr. Vause. The exhibits contributed by local allotment holders contained some capital vegetables, especially when the effects of the drought are taken into consideration.

BEDDINGTON, CARSHALTON AND WALLINGTON HORTICULTURAL.—August 1st.

The annual show of this society was held in Beddington Park, by the kind permission of J. H. Bridges, Esq., and B. Thirlhy, Esq., on Monday last, under very favourable auspices as to weather, bringing great crowds of people. There was a poultry and a honey exhibition in connection with it, the whole show being organised chiefly in favour of the cottagers and allotment holders.

GARDENERS AND AMATEURS.—In the larger class for a group of plants, Mr. J. H. Stevens, gardener to E. G. Coles, Esq., The Lodge, Carshalton, secured the first prize for a group, in which the taller plants consisted of richly coloured Crotons, and the flowering plants of Lilies, Cannas, Orchids, *Browallia elatior speciosa*, *Francoa ramosa*, Chimney Bell-flowers, &c. Mr. H. E. Gates, gardener to R. W. Miller, Esq., Brighton Road, Sutton, took the second place, using the variegated Pineapple, *Streptosolen Jamesoni*, Abutilons, Fuchsias, &c. The leading award in the smaller class was taken by Mr. A. Etheridge, gardener to A. Z. C. Cressy, Esq., Hayesden, Wallington, who had a pretty arrangement of Lilies, Trachelium, *Francoa*, *Browallia*, and Gloxinias, set off with Ferns, Palms, and grasses. Mr. H. E. Gates again came in second with similar plants to those in his other group.

Mr. A. Etheridge had the best Caladiums, and was followed by Mr. H. Shoebridge, gardener to M. Beddington, Esq., J.P., The Limes, Carshalton. Mr. Shoebridge also had the best Coleuses, which were trained in dwarf, semi-globular form. Mr. George Lewry, gardener to Mrs. Blake, Duppas Hill, Croydon, was second. Mr. H. Shoebridge had large and floriferous Gloxinias, the finest we have seen for some time, taking the first prize. Mr. A. Etheridge had the best tuberous Begonias.

Mr. George Lewry received the first prize for a collection of flowering and ornamental plants. Mr. J. H. Stevens had the best table plants, followed by Mr. Geo. Lewry and Mr. H. Shoebridge in this order. Six hunches of hardy border flowers were shown by Mr. J. H. Stevens, Mr. A. Etheridge, and Mr. W. E. Humphreys in this order. All were very fine. Mr. Thos. Osman, gardener to L. J. Baker, Esq., Ottershaw Park, Chertsey, had the best stove and greenhouse flowers, and was followed by Mr. H. Sell, gardener to J. Wallis, Esq., The Banks, Beddington. Mr. H. Sell had the best garden annuals, Mr. H. Shoebridge being second, and Mr. J. H. Stevens, third. Mr. H. E. Gates had the best four tuberous Begonias. Mr. A. Etheridge was first for nine bunches of cut flowers. Mr. H. Shoebridge was first for four flowering plants. There were no less than ten tables set up as for dinner table decoration, several of them being very tastefully arranged. The pride of place went to Mrs. A. Robinson, Roma, Stafford Road, Wallington, with yellow Marguerites and Sweet Peas. Miss Lily Kirk, Honeywood, Carshalton, was a very good second, using pink and white Sweet Peas. Mrs. A. Robinson was first in another class for table decoration, using mauve and white Sweet Peas, &c. Mr. H. E. Gates was second.

Mr. G. P. Turner, gardener to H. W. Trollope Esq., Dover House, Woodcote, had the best collection of vegetables, having splendid Cauliflowers, Onions, &c. Mr. H. E. Gates was a good second; and Mr. James Cripps, gardener to F. Easterbrook, Esq., Park Hill House, Carshalton, was third.

Mr. G. P. Turner again came to the front for cooking and for dessert Apples. Mr. J. H. Stevens had the best six dishes of hardy fruit, showing Peach Alexander, &c. Mr. H. Shoebridge was second; and Mr. Thos. Osman, third. The latter came to the front for black Grapes, showing fine Black Hamburg. Mr. H. Shoebridge was second with smaller hunches. Mr. J. H. Stevens was first for Peaches.

THE COTTAGERS' CLASSES, chiefly devoted to vegetables, were located in a separate tent. Great care must have been exercised by the cultivators to get such good vegetables in a dry season. Mr. W. Ames, Beddington Corner, had the best collection, showing about twenty sorts. In another class Mr. J. H. Stevens led the way. Mr. H. Shoebridge had several of his vegetables in fine form, being second. Mr. Harvey Hopkins, 1, Ivy Cottages, The Writhe, Carshalton, was a good third, but was weak in some of his dishes. Mr. H. Sell took the fourth position, showing large Onions.

Potatos in most cases were fine. Mr. Harvey Hopkins was first for white varieties, followed by Mr. O. McRae, Beddington Corner. Mr. W. White, Westcroft Stables, was first for coloured Potatos, Mr. G. Bowditch, Wallington Corner, being second.

Mr. John Parfitt, William Street, Carshalton, had the best autumn sown Onions. Mr. W. White took the lead for spring sown Onions. Mr. F. Fuller, London Road, Wallington, had the best Shallots, followed by Mr. Harvey Hopkins. Mr. J. H. Stevens had the best eight dishes of Potatos, of which four dishes were hoiled and judged for quality. He also had the best dish of hoiled Potatos. Other vegetables were well shown.

Mr. Harvey Hopkins was first for three dishes of fruit, three other prizes being awarded. He was also first for Gooseberries. Mr. E. Bowditch had the best Black Currants; and Mr. W. Stedman, Penolver Cottage, Church Lane, Beddington, had the best Red Currants.

In the Champion class for the best kept allotment or cottage garden, the first prize was taken by Mr. Oliver McRae with 143 points. Mr. J. Parfitt had the best kept and cropped allotment ground. Mr. E. Bradley, Bandon Hill, had the best kept and cropped cottage garden. Mr. F. W. Eastland, Mitcham Junction, had the best kept and most tastefully arranged flower garden.

MISCELLANEOUS.—A triangular and pretty group of plants near the entrance of the large tent was set up by A. H. Smee, Esq., C.C. (gardener, Mr. W. E. Humphreys) "My Garden," The Grange, Wallington, Surrey. Two tall and well grown Humes, one either side of a Tree Fern, formed the background in front of which Trachelium caeruleum, Francoa ramosa, Statice Sewerzowi, Cattleyas, Cypripediums and other Orchids did much to brighten up a beautiful and tastefully arranged group. Palms, Ferns Caladiums and Begonias of the Rex type served as a set off to the flowers used. He also had another group at the far end of the tent.

A good length of side tahling was occupied by Mr. John R. Box, West Wickham and Croydon, who had hardy herbaceous plants, Sweet Peas and Roses. Amongst the Sweet Peas, Blanche Burpee, America, Countess of Aberdeen, Lovely, Mars, Mrs. Eckford, Prima Donna, Princess May and Royal Rose were some of his newer varieties. Mrs. John Laing, Victor Hugo, Alfred Colomb, Susanne Marie Rodocanachi and Marchioness of Londonderry were fresh amongst the Roses, notwithstanding the great heat.

The One and All Seed Company, Agar Street, Strand, London, had an exhibit of flowers, vegetables and seeds.

QUESTIONS AND ANSWERS.

Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Sir Joseph Paxton.—Omega: As far as we can make out from contemporary accounts of the death of Sir Joseph Paxton he retained his position at Chatsworth to the last. He was born at Milton Bryant, near Woburn, Beds., either in 1801, 1802, or 1803, most probably in the latter year, but all three dates are given in different books. He was foreman in the Chiswick artoretum in 1824, became superintendent at Chatsworth in 1826, and was knighted in 1851 after having built the Crystal Palace in Hyde Park for the great International Exhibition of that year. In 1853 he commenced reconstructing the Crystal Palace on Sydenham Hill and finished it in 1854, in which year he became Member of Parliament for Coventry and continued to represent this division of the county till he died. Sir Joseph did not give up

his lucrative position at Chatsworth after having designed the Crystal Palace, but at the same time he followed the profession of architect and civil engineer after that masterpiece of his life time. The Duke of Devonshire made Sir Joseph the manager of his large estate in Derhshire, and, dying some years in advance of the latter, left him a munificent legacy. Sir Joseph visited the flower show at the Crystal Palace shortly before his death, but was then very feeble, and continued to get weaker till he died at his residence, Rockhill, Sydenham, close to the Palace, on June 8th, 1865.

Apples and Gooseberries.—W. Thom: We had a suspicion that the nature of the ground was at the root of the evil in connection with the Apple trees. The land consists of heavy clay soil that would be greatly improved by draining, trenching and manuring. Land that is good for Gooseberries would also hear heavy crops of Apples provided it is improved in the manner we mention and well tilled by rough digging in winter and frequent hoeing in summer to keep down weeds, and keep the surface loose and open. Such soil is capable of yielding heavy crops and will continue to improve year after year. Apples would, of course, require shelter by means of trees outside the garden provided the position is at all leak and exposed. Gooseberries bear well, as you say, but are liable to die off when old. The best way to remedy this is to have a quantity of young bushes coming on in a reserved part of the garden and to trench a piece of ground every few years, when it becomes necessary, and make a young plantation of bushes, it may be only a few rows at a time. By this means you will always have them in good bearing order.

Pounds of Fruit in a Sieve.—J. M.: The weight varies somewhat in Covent Garden according to the kind of fruit. Thus a sieve of Black Currants, Red Currants or Cherries would be 24 lbs. nett. A sieve of Gooseberries (green or ripe), Plums, or Damsons would contain 28 lbs. nett. We cannot say whether these weights would hold good for other places, but think it would as far as the large centres are concerned, for they are now working much on the same lines. It might be worth while making enquiries locally in the case of other places in which you might be interested.

Publisher of Plant Lore of Shakespeare.—Omega: The book named "Plant Lore and Garden Craft of Shakespeare," by the Rev. Henry N. Ellacombe, M.A., was published in 1878, by William Pollard, North Street, Exeter; but as far as we can learn he merely printed it for the author, and does not sell it. You should, therefore, apply to the author at Bitton Vicarage, Bristol, Gloucestershire, who will no doubt be pleased to give you particulars concerning the price, which is not stated in the book itself.

Specimen to Name, &c.—J. T. Thurston: The name of the plant you sent is Sedum stoloniferum ibericum, a native of Asia Minor and other countries. It is not a native of Britain and can hardly, therefore, be reckoned a weed. There are several varieties of S. stoloniferum, some having dark, others pale, and the present variety white, flowers. It is a cultivated plant and interesting for the sake of contrast with dark varieties, such as S. s. splendens, which is the darkest and best form.

Fig Leaves Injured.—W. B. G.: The leaves you sent were very much infested with a fungus in those places where they were reddish-brown. The fungus seems to be confined to the surface of the leaf, the mycelium forming a close felt, and now covered with short, oblong spores, rounded at the ends and in myriads. The first precaution you should take is to keep the atmosphere of the house drier till you get rid of the fungus. You might first of all dew the leaves over with the syringe, and then dust them with flowers of sulphur. The worst of the leaves should be cut off at once and burned, for, judging from the enormous number of spores, we think that the fungus must spread very fast under the influence of heat and moisture. If the plants have done hearing, perhaps the best plan would be to stand the pots out-of-doors, which will dry up and harden the leaves, as well as ripen the wood, and, perhaps, prevent further spread of the fungus. If the first dusting of sulphur is not sufficient you might repeat the operation, making sure that all the affected leaves at least get dusted.

Names of Plants.—E. C. H. D.: 1, Verhena officinalis, known as Common Vervain, Holy Herb, Juno's Tears, Pigeon's Grass and Simpler's Joy; 2, Cichorium Intyhus, or Chicory.—Botan: 1, Lychnis flos-Jovis; 2, Polemonium caeruleum album; 3, Centaurea macrocephala (this had no number but as 3 was missing we suppose this was intended); 4, Hieracium aurantiacum; 5, Galega officinalis alba; 6, Campanula glomerata; 7, Anchusa italica; 8, Deutzia scabra flore pleno.—L. M.: 1, Vitis cinerea; 2, Malva moschata; 3, Deutzia scabra purpurea plena.—J. W.: 1, Lythrum Salicaria; 2, Nepeta Mussini teucrifolia; 3, Fentstemon barbatus; 4, Geranium Endressii; 5, Inula glanduligera.—W. H.: 1, Cattleya gaskelliana; 2, Collogyne speciosa; 3, Masdevallia harryana.—E. C. H. D.: 1, Equisetum arvense; 2, Origanum vulgare or Common Marjoram; 3, Caulalis Anthriscus.

Communications Received.—J. Mayne.—J. O'B.—Jas. Hawkes.—W. Swan.—Harrison, D.—G. R.—W. B.—H. C.—A. L. G.—T. B.—R. W.—A. G. M.—H. G.—J. K. S.—Mint.—Roh.—C. O. Stokes.—W. Haines.—Geo. T.—Menzies.—Dalziel.—K.

TRADE CATALOGUES RECEIVED.

LITTLE & BALLANTYNE, Carlisle.—Bulb Catalogue. DICKSON, BROWN & TAIT, 43 & 45, Corporation Street, Manchester.—Autumn Catalogue Bulbs, &c. WM. BAYLOR HARTLAND, Seedsman, Cork.—Well-ripened, Irish-grown Daffodils and Rare Tulips. E. H. KRELAGE & SON, Royal Bloemhof Nurseries, Haarlem, Holland.—Krelage's Dutch Bulbs, Cape, Californian, Asiatic, and other Bulbous and Tuberos-rooted Plants; also Novelties and Desirable Plants.

COVENT GARDEN MARKET.

August 3rd, 1898.

FRUIT.—AVERAGE WHOLESALE PRICES.

| | s. d. | s. d. | | s. d. s. d. |
|-----------------------|-------|-------|-----------------------|-------------|
| Apples ... per bushel | 0 0 | 0 0 | Red Currants, per | |
| Cobbs | 0 0 | 0 0 | half sieve | 5 0 |
| per 100 lbs. | | | Cherries, per half | |
| Grapes, per lb. | 1 6 | 3 6 | sieve | 4 0 9 6 |
| Pine-apples | | | Raspberries, per cwt. | 40 0 |
| —St. Michael's each | 2 6 | 7 6 | Ripe Gooseberries, | |
| Strawberries per lb. | 0 4 | 1 3 | per half sieve | 2 6 3 0 |
| Black Currants, per | | | | |
| half sieve | 6 6 | | | |

VEGETABLES.—AVERAGE WHOLESALE PRICES.

| | s. d. | s. d. | | s. d. s. d. |
|------------------------|-------|-------|------------------------|-------------|
| Artichokes Globe doz. | 2 0 | 4 0 | Herbs per bunch | 0 2 |
| Asparagus, per bundle | 3 0 | 8 0 | Horse Radish, bundle | 1 0 2 0 |
| Beans, French, per | | | Lettuces ... per dozen | 1 3 1 6 |
| per lb. | 0 9 | 1 6 | Mushrooms, p. basket | 1 0 1 6 |
| Beet..... per dozen | 1 0 | 1 0 | Onions..... per bunch | 0 4 0 6 |
| Brussels Sprouts | | | Parsley ... per bunch | 0 3 |
| per half sieve | 1 0 | 1 6 | Radishes... per dozen | 1 0 1 3 |
| Cabbages ... per doz. | 1 0 | 1 3 | Seakale... per basket | 1 6 2 0 |
| Carrots ... per bunch | 0 3 | | Small salad, p. net | 0 4 |
| Caniflowers..... doz. | 2 0 | 3 0 | Spinach per bushel | 2 0 3 0 |
| Celery..... per bundle | 1 0 | 1 6 | Tomatos..... per lb. | 0 6 1 0 |
| Cucumbers per doz. | 2 6 | 3 6 | Turnips per bun. | 0 3 |
| Endive, French, doz. | 1 6 | 2 0 | | |

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

| | s. d. | s. d. | | s. d. s. d. |
|-------------------------|-------|-------|------------------------|-------------|
| Atom Lilies, 12 blms. | 3 0 | 4 0 | Maidenhair Fern, 12bs. | 4 0 6 0 |
| Asparagus Fern, bun. | 2 0 | 3 0 | Mignonette, 12 bun. | 1 6 3 0 |
| Bonvardias, per bun. | 0 6 | 0 8 | Orobids, doz. blooms | 1 0 8 0 |
| Carnations doz. blms. | 1 0 | 3 0 | Pelargoniums, 12 bun. | 3 0 6 0 |
| doz. (bun.) | 4 0 | 8 0 | Red Roses, per doz. | 1 0 1 0 |
| Eucharis ... per doz. | 2 0 | 4 0 | Roses (indoor), doz. | 0 6 1 0 |
| Gardenias ... per doz. | 1 0 | 3 0 | Tea, white, doz. | 1 0 0 0 |
| Geranium, scarlet, | | | Perle doz. | 1 0 2 0 |
| doz. bunches | 3 0 | 6 0 | Safrano doz. | 1 0 2 0 |
| Lilium longiflorum | | | (English), | |
| per doz. | 3 0 | 4 0 | Pink Roses, doz. | 1 6 3 0 |
| Lily of the Valley doz. | | | Smilax, per bunch ... | 1 6 2 0 |
| sprays | 1 0 | 2 0 | Tuberose, doz. | |
| Marguerites, 12 bun. | 1 6 | 3 0 | blooms | 1 0 1 6 |

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES.

| | s. d. s. d. | | s. d. s. d. |
|-------------------------|-------------|-------------------------|-------------|
| Arbor Vitae, per doz. | 12 0 36 0 | Hydrangeas, per doz. | 8 0 10 0 |
| Aspidistra, doz..... | 18 0 36 0 | Ivy Geraniums, | |
| specimen | 5 0 10 0 | per doz. | 4 0 6 0 |
| Calceolarias, per doz. | 4 0 6 0 | Lilium Harrissii, | |
| Coleus, per doz. | 3 0 0 | per pot | 1 6 2 0 |
| Dracaena, various, | | Lycopodiums, doz. | 3 0 4 0 |
| per doz. | 12 0 30 0 | Lobelias, per doz. ... | 3 0 5 0 |
| Dracaena viridis, doz. | 9 0 18 0 | Marguerite Daisy doz. | 4 0 9 0 |
| Euonymus, var. doz. | 6 0 18 0 | Mignonette, per doz. | 4 0 6 0 |
| Evergreens, invar. doz. | 6 0 24 0 | Myrtles, doz. | 6 0 9 0 |
| Ferns, invar., per doz. | 4 0 12 0 | Palms in variety, each | 1 0 15 0 |
| Ferns, small, per 100 | 4 0 6 0 | Palms, Specimen ... | 21 0 63 0 |
| Ficus elastica, each | 1 0 5 0 | Pelargoniums ... | 9 0 12 0 |
| Foliage Plants, var., | | Rhodanthe... per doz. | 3 0 4 0 |
| each | 1 0 5 0 | Scarlets per doz. | 2 6 6 0 |
| Fuchsia, per doz..... | 5 0 8 0 | Spiraea, per doz.... | 6 0 9 0 |
| Heliotrope, per dozen | 4 0 6 0 | | |

INDEX TO ADVERTISEMENTS.

| | |
|---------------------------------|-----------------------------|
| Bulbs. | Hose. |
| C. G. Van Tubergen769 | F. Reddaway & Co., Ltd. 770 |
| Sutton & Sons769 | Insecticides. |
| Catalogues. | Corry & Co.769 |
| Barr & Sons769 | Gishurst Compound769 |
| Bunyard & Co.769 | Manures. |
| Kelway & Son769 | Aoglo Continental Guano 769 |
| J. Peed & Sons.....771 | C. Beeson769 |
| Simpson & Son.....769 | Chemical Union769 |
| Chrysanthemums. | Clay & Son.....769 |
| Devon Nursery.....769 | W. Colchester769 |
| Florists' Flowers. | Meggitt's.....769 |
| W. Cantbush & Son.....770 | Staddon's770 |
| Kelway & Son769 | W. Thomsons & Sons.....770 |
| J. Lalng & Sons771 | Miscellaneous. |
| R. Owen769 | Corry & Co., Ltd.....769 |
| J. Peed & Sons.....771 | Frosteen771 |
| J. Stevens769 | Gishurstine769 |
| Flower Pots. | Smyth's Baskets769 |
| Sankey & Sons, Ltd.783 | Netting. |
| Fruit Trees. | H. J. Gasson769 |
| G. Bunyard & Co.769 | A. Potter769 |
| Garden Sundries, &c. | Orchids. |
| J. Arnold769 | J. Cypher771 |
| Corry & Co.769 | P. McArthur771 |
| Eveson Coal & Coke Co. 769 | F. Sander & Co769 |
| Hirst, Brooke & Hirst. ...769 | Stanley-Mobbs & Ashton 769 |
| A. Outram783 | Publications. |
| Porter's Stakes.....769 | Darlington.....783 |
| H. G. Smyth769 | GARDENING WORLD.....783 |
| Summer Cloud783 | Orgville.....783 |
| Heating Apparatus. | Seeds. |
| W. Cooper, Limited ...770 | Evans' Seed Sowing Co. 784 |
| Messenger & Co.....770 | Simpson & Son.....769 |
| Richardson & Co.770 | Webb & Sons771 |
| Thames Bank Iron Co. ...769 | Shows. |
| Horticultural Builders. | 783 |
| J. Boyd & Sons.....769 | Strawberries. |
| W. Cooper, Ltd.771 | Bunyard & Co.....771 |
| J. Gray.....769 | Laxton Bros.....769 |
| W. Richardson & Co.770 | Tents. |
| J. Weeks & Co., Ltd.769 | A. Potter.....770 |

SUTTON'S BULB CATALOGUE

NOW READY.

SUTTON & SONS, READING. DIRECT FROM SUTTON'S BULBS GENUINE ONLY

Early White Roman Hyacinths,

Early Snowflake and Paper-white Narcissus.



JAMES VEITCH & SONS, Ltd.,

Beg to announce the arrival of, *in exceptionally fine condition,*

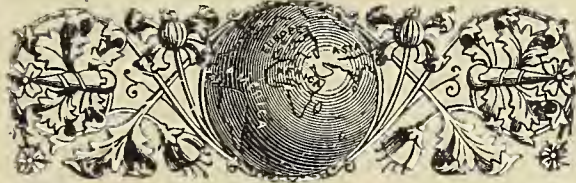
THE ABOVE VALUABLE BULBS FOR EARLY FORCING,

And will be pleased to receive Orders for immediate delivery.

BULB CATALOGUE FOR 1898

Has now been Posted to all their Customers. Anyone not having received the same, a Duplicate Copy will be forwarded, Post-Free, on application.

ROYAL EXOTIC NURSERY, KING'S ROAD, CHELSEA, S.W.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, AUGUST 13th, 1898.

NEXT WEEK'S ENGAGEMENTS.

WEDNESDAY, August 17th.—Shropshire Horticultural Society's Show (2 days).
 THURSDAY, August 18th.—Leighton Buzzard Show.
 FRIDAY, August 19th.—Devon and Exeter Horticultural Society's Show.
 National Co-operative Show at the Crystal Palace (2 days).
 SATURDAY, August 20th.—Leven and District Show.

WORK ON A KENTISH FRUIT FARM*.—Information concerning the routine of work on a fruit farm must needs be interesting to the public at large, but most of all to those who are cultivators or intend becoming so, and require information on such a burning question as fruit culture. The author has a wide and practical knowledge of fruit farming as well as vegetable culture, with a grasp of market ways and prices; and his notes possessed such merit and instruction that Messrs. George Bunyard & Co., Maidstone, secured the copyright of them, and had them reprinted in book form. The book runs to 83 pages, in double column; independently of a list of the best paying market fruits, and other useful information. The articles had been written weekly in the form of a calendar, sometimes of the operations that require to be effected during any given period, but generally of things accomplished, or what actually happened or prevailed in market circles during the time specified. The work is practically the doings of a fruit and vegetable farmer, from Christmas to Christmas, recorded as it were for the benefit of his fellow men.

Dipping into the notes at the beginning of March, we find a record of the unusually mild weather that had prevailed for a fortnight previously and its effect upon fruit trees generally, and the earlier ones in particular. Occasionally we have a few of the cultivator's speculations in doing certain

*A Year's Work on a Kentish Fruit Farm by a practical man. Being a Reprint, with a few additional notes, of a series of weekly articles in *The South Eastern Gazette*. Maidstone: Published by George Bunyard & Co., the Royal Nurseries. Printed at "The South Eastern Gazette" Office. Copyright.

things on the off chance of being prepared to meet the probable requirements of the market and profit thereby. Instructions are given as to the burning of prunings and similar rubbish which may harbour the eggs of the Winter Moth. Although this moth ascends the trees during the last three months of the old year, there are other allied species which ascend in early spring and have to be combated. Evidently the author has no time, or at all events, does not attempt counting the eggs which a single female moth may lay, so that he runs into a very high figure when mentioning the circumstance. That may be owing to the effect produced in his eyes by the appearance of so formidable an enemy. We quite agree, however, with him that every female caught saves a deal of trouble afterwards. The demand for fresh vegetables increases in spring but prices rule lower, owing to the greater quantity obtainable as a result of spring growth, and to the fact that the public now expect cheaper vegetables. The latter become dearer as a rule later on if the spring supplies do not bridge over the gap till the early summer crops are ready. British Apples by this time are scarce, Dumelows Seedling or Wellington being apparently the mainstay. The continued supply of American Apples and the forced Rhubarb now finding its way to the market in quantity have a depreciating effect on the Wellingtons. The ruling prices for all these products are given for each week.

About the third week of March preparations are made to combat the newly-hatched caterpillars of the Winter Moth. The spraying of fruit trees with Paris green or London purple is carefully described by a practical man, who has his eye upon all the contingencies at issue. British grown Apples at the same period are no longer on the market as a quotable commodity, though a few odd lots still continue to make their appearance. Passing on to the first week of August to learn what the author would be doing at present, we find that he has been extremely busy, as for weeks previously, gathering bush and other fruits to be sent for market. He does not particularly desire rain at the present time, as it retards the operations of harvesting perishable commodities. The majority of the growers are of the same opinion. Early Apples and Pears by this time are plentiful, and such dessert Apples as Quarrenden, Red and White Juneating and Julian, are eagerly sought for; but modern cooks turn up their nose at cooking Apples unless of respectable size. This would mean that the work of

preparing them is too great for the mistress of the kitchen. Lord Suffield, apparently, is the only available one at this period of the year. The nondescript Apples foisted upon the market during August fetch but a very low price, and should not be encouraged. Only the inexperienced grower, however, is likely to invest in them, to his own disadvantage be it said. The writer asserts, on the contrary, that a good farmer, who attends to the proper manuring and pruning of his trees, will produce fruit double the value of those grown by a poor or neglectful farmer. The markets are generally good for all kinds of bush fruits, and Raspberries are often too scarce to meet the demand.

By the first week in October most of the fruits have been gathered and safely stored under cover, only the latest of the Apples in Kent being still hanging on the trees. Much of the crop of cob-nuts would still hang on the trees waiting for dry weather and the progress of the workers to harvest them in suitable condition. The Apples had been rather thin than otherwise during last year, but that was an advantage rather than otherwise, for the fruits attained a fine size, and were richly coloured by the abundance of sunshine. The best Apples and Pears fetched good prices in the market, whereas poor samples were more in supply than demand. Information like the above is abundant throughout the book, and many valuable hints are given in an interesting way, so that we can heartily recommend it.

Mr. Thomas Humphreys, the assistant superintendent at Chiswick, has so far recovered from his recent illness as the result of an accident, that he has again resumed his accustomed duties.

Mr. W. J. Simpson, for some years past head gardener to C. T. Sutton, Esq., The Beeches, East Acton, has been appointed in a similar capacity to E. H. Watts, Esq., Levonhurst, Chiswick, the position vacated recently by Mr. J. Gibson as recorded in our pages. Mr. Simpson is a keen and successful gardener, usually taking the lion's share of the prizes at the local flower show.

Professor L. H. Bailey, of the horticultural department, Cornell University Agricultural Experiment Station, Ithaca, New York, is now in London; and having visited the Drill Hall, was quite delighted to find so many people with whose names he was familiar in his own country. Needless to say, a great many on this side of the Atlantic are also familiar with his name, and with his writings on important horticultural topics—the results of his researches, experiments and original work in the wide domain of horticulture. It was like a meeting of well-known friends rather than strangers, and altogether pleasant for both parties.

What is a Drummer?—Our esteemed contemporary, *The Florists' Exchange*, wishing to give us further information about the 'drummer,' and *Job* (not the saint of old) has turned the light of his wisdom upon the subject. Thus saith *Job*—"The drummer in America is one of the most interesting insitutions connected with the horticultural trade. His movements and habiliments, even to his polka dot tie, are of more significance to the horticultural world than are those of the President of the United States. His presence in village, hamlet, or city, is duly announced in the horticultural press, the smile he wore, and the honeyed words that fell from his lips being all deemed worthy of chronicle. True it is that he does look up business, but his progressive work does not end there. He is a prolific contributor to the horticultural press, filling column after column, and the familiarity with which he handles his subjects, the vastness of his resources, the ease and volubility with which he can comment on the merits or demerits of plants, new and otherwise, have made him a *sine qua non* in the business. His musical abilities will compare very favourably with those of Sims Reeves or De Wolf Hopper, his histrionic attainments are only a shade inferior to Irving's or Booth's, and his renditions never murder." Many thanks to *Job*; we are now fully enlightened.

An Incongruity.—Kew Green is brown.

Jock and Jim at the Flower Show.—Jock, after inspecting the leading classes: "Come awa', Jim, and let's have a look o' the maiden exhibitors." Jim: "Ay, ay, I wud like to see the lady gaird'ners. Do they wear breeks?"—After inspecting the Potatos and the cards—"Michty me, Jock, they style thirsels Mister! They leave naething a man can ca' his ain!" Jock: "There goes ane o' them." Jim: "G' 'wa noo, Jock, yer jokin'." Jock, feigning anger at the doubt expressed: "I say positively that is a maiden exhibitor." Jim: "Weel, I nivver saw a maiden wi' whiskers afore."

Ealing and District Gardeners' Society.—The tenth annual excursion of this society will take place on Tuesday, August 16th. The new sea route from Charing Cross to Ramsgate, via Port Victoria, has been selected. Luncheon will be supplied on board at 12 o'clock, and tea at 5 o'clock. According to the time table, the gardeners must be ready to start from Charing Cross at 9.15 a.m., going thence by train to Port Victoria. A reserve carriage will be provided. There they will meet the steamer at 10.40 a.m., which will take them to Margate at 1 p.m. and Ramsgate at 1.45 p.m. The return journey from Ramsgate will commence at 4.5 p.m., arriving at Margate at 4.40 p.m., and Charing Cross at 8.15 p.m. Thus by avoiding the river till the estuary of the Thames is reached and *vice versa* the journey is accomplished in much shorter time than formerly. The expenses of the journey will be entirely covered by 8s. Tickets may be had from the members of committee; from Mr. H. Burgess, of Messrs. Lee & Son's Nursery, who is to conduct the excursion; and from Mr. W. Roberts, hon. secretary, 55, Haven Lane, Ealing.

The Golder's Hill Estate.—A short time ago there was a meeting at the Mansion House, when the Lord Mayor took the chair at a meeting considering the advisability of securing the Golder's Hill Estate as an adjunct to Hampstead Heath, and to prevent its being built upon as it was in the market. The Marquis of Lorne, Q.T., said there was no place like the Heath in the neighbourhood of London for excellent air, and all Hampstead had been aroused to prevent further encroachments of the builder. The Lord Mayor announced subscriptions amounting to £12,841. A garden party was also arranged to take place at Golder's Hill, the estate of the late Sir Spencer Wells. A company, estimated at something like 5,000 to 6,000 people, assembled on the estate, which runs to thirty-six acres, to view the beauty of the umbrageous trees, park-like lawns and waters glittering in the sunlight. On the 21st ult. the Hampstead Vestry agreed to contribute £10,000 towards the purchase of the estate, and other large sums have been obtained from different subscribers, so that the estate is now safe to be laid open to the public for ever, and under the maintenance of the London County Council.

Insect Miners.—The August number of *Knowledge* contains a valuable contribution by Mr. Fred Enoch, F.L.S., the eminent entomologist upon the insects which "mine" the leaves of many plants, notably the Marguerite and the Chrysanthemum. The article is accompanied by some admirable illustrations of these laborious but harmful little creatures. The miner which selects the Marguerite as its especial prey is *Phytomyza affinis*. It is a minute, two-winged fly of about a twelfth of an inch in length, slaty-black in colour, with black bristles on head and thorax. After piercing the upper cuticle of the leaf, and inserting the oval-shaped egg, it seals up the aperture with saliva, numbers of eggs being inserted in each leaf. The egg hatches on the fourth or fifth day, and the maggot commences to bore between the cuticles of the leaf. Like all other insect pests, it has its parasites—minute and busy Hymenoptera—which are ever ready to seize an opportunity to insert their own eggs in the body of the miner. *Trypeta chrysanthemi* turns its special attention to the Chrysanthemum, as its specific name indicates. Squeezing the leaves between the finger and thumb is the best remedy, but an attempt should be made to catch the female insect, for one of them is capable of spoiling a number of plants, as she lays many eggs. Professor Enoch advises the use of a small, deep net of fine muslin, fixed on a ring of cane 4 in. in diameter. Several broods of each of the above-named flies are hatched in the year.

Seaweed is to be used by a Norwegian engineer for the purpose of making paper glue, dressing gum, and even soap.

The Potato Crop is a fairly good one this year, but, owing to the drought many of the tubers are well advanced towards maturity. The recent rain will be likely to cause a second growth to take place, and thus the crop will seriously deteriorate in quality.

Artificial Food.—Every now and again some sensational scientific discovery reaches us from Vienna. On the last day of the Chemists Congress Dr. Leo Liliensfeld, of Vienna, demonstrated before an astounded audience how artificial albumen could be produced by a simple synthetic process. He condensed phenol and amido-acetic acid with phosphoro-chloric oxide. The result was pepton, a substance which has hitherto been supposed only capable of being produced by organic beings only. It is said to possess the same nourishing properties as the naturally produced albumen. Human food will be cheapened, and meat as well as all other organic products will be readily replaced by the manufactured article.

Dr. Morris as Imperial Commissioner of Agriculture.—Some time ago a commission of enquiry was sent out by the Government to the West Indian Islands for the purpose of ascertaining their financial position, and to remedy if possible the present bad and entirely unsatisfactory conditions that prevail with regard to the produce of the islands. The commissioners were accompanied by Dr. Morris, Assistant-Director of Kew Gardens, who has already had a wide experience in several of the British colonies of the west, and is largely responsible for the betterment that is already visible in Jamaica. The outcome of the debate in the House of Commons on the 2nd inst. was that Government accepted the recommendations of the Commissioners to appoint Dr. Morris as Imperial Commissioner of Agriculture for the West Indies. He will take up his headquarters at Barbados. His duties will be to deal with all questions of economic botany, being in fact the director of this new and special public department. We understand that Mr. David Tannock, at present sub-foreman in the Palm house, will accompany Dr. Morris as his assistant in carrying out the duties of his new appointment. The scattered islands and isolated islanders of the West Indies, we feel sure, will benefit by this arrangement.

The Glasgow Public Parks.—The annual inspection of the Glasgow public parks took place on the 2nd inst. A large company of gentlemen accepted the invitation of Lord Provost Richmond and the Parks Committee, and the party was driven from the City Chambers to the parks on the south side of the river. Altogether the Corporation has charge of nineteen parks, representing a total acreage of 1,022½, and acquired at a cost of £660,000. The largest of the nineteen is Bellahouston, 178 acres in area, and purchased in 1895 for 50,000. Glasgow Green is the oldest, and including Polmadie Land is 180 acres. It has been obtained piece by piece since 1662. The other parks are Kelvingrove, 85 acres; Queen's Park and Camphill, 148 acres; Alexandra Park and lands of Kennyhill, 114 acres; Cathkin Braes, 49 acres; Botanic Gardens and Banks of Kelvin, 40 acres; Maxwell Park, 21 acres; Springburn Park, 56 acres; Maryhill Park, 5½ acres; Ruehill Park, 53 acres; Govanhill Grounds, 4 acres; Bunhouse Grounds, 6½ acres; and Tollcross Park, 82½ acres. In addition to these there are 13 open spaces in various parts of the city. The visitors drove first of all to Glasgow Green, where the winter garden is the chief point of interest. Thence they went to the Queen's Park, skirting Govanhill Grounds on their way. Camphill, Maxwell Park, and Bellahouston Park were subsequently visited. Luncheon was served at the City Chambers, the Lord Provost presiding. After the customary loyal toasts had been duly given and honoured, Sir John Muir gave the 'Lord Provost, Magistrates, and Corporation of Glasgow.' He praised their generous and far-sighted policy in acquiring land for the public use and good, and assured them that they would have his hearty support in further operations. It was subsequently mentioned by Bailie Bilsland that ex-Bailie A. G. Macdonald had offered to the Corporation as a gift his conservatories at Ardrossan, which were plentifully stocked with valuable plants. The generous donor expressed his hope that they would be removed to Tollcross Park, and that his offer would be accepted.

A Black Calla Lily.—Such is the description given of a dark-flowered *Richardia*, of which Mr. B. Labbe, Portland Heights, U.S.A., is the proud possessor. The spathe is about 20 in., and the spadix about 17 in. in length, so that the flower is a very large one. When it first opens it is said that it has the odour of tainted meat, and attracts all the blue-bottle flies within range. The leaves are stated to be lobed like those of the Fig, and thus to be quite distinct from those of the ordinary *Richardia*. Mr. Labbe has had the plant a number of years, but has so far been unable to propagate it.

A Year's Orchids at Kew.—It is seldom that any record is kept of the actual number of species of Orchids that bloom in any particular establishment during the course of a twelvemonth. This may partly be owing to the fact that quantities of showy things are of more importance in private establishments than species, it may be, characterised by small flowers. The latter may be both beautiful and interesting all the same. In 1891 it was recorded in the *Journal of the Kew Guild* that 766 species of Orchids were flowered at Kew in 1890. To ascertain this fact it is necessary to keep a record for twelve months in succession. From Christmas 1896 to Christmas 1897 another record was made showing that 854 species of the family were flowered. This is certainly a record, and shows what is being accomplished in the national garden.

Public Park for Widnes.—The Borough of Widnes is determined to be up-to-date in affording the means of recreation to its inhabitants. Instructions and conditions to competitors in preparing and submitting designs for the park have been sent out. A lake is to be included in the design, and a band stand, entrance gates, the construction and drainage of the roads and walks, fencing and appurtenances have all to be considered. Suitable provision is to be made for recreation; plantations are to be arranged with a view to general and detailed effect. Some of the existing houses are to be removed, and others to remain; and six perspective sketches of the principal features of the park are to be given showing the shrubberies, &c., as they will appear five years after completion. There is a prevailing opinion amongst some that five years' grace is too long, and that they will all want replenishing before then. Surprises may be in store, however, under a capable man. The cost of the entire scheme is not to exceed £4,000, and the submitted estimates must give particulars of everything. The premiums offered for the designs are £36 15s., £10 10s., and £5 5s.

Caterham Gardeners' Outing.—On Wednesday, August 3rd, Caterham gardeners, to the number of forty-seven, paid a visit to Boxhill and Burford Lodge, Dorking, where Sir Trevor Lawrence escorted them over his beautiful grounds, and through his glasshouses, in which are accommodated one of the finest collections of Orchids in existence, with many other rare and beautiful plants. Not many of the Orchids were in flower, but they were still interesting to those who know the value of many of the rarer forms which Mr. White, the Orchid grower, so well looks after. The mansion presents a pretty picture, swathed as it is in the green folds of *Ampelopsis Veitchii*. The Lily pond, which is in the centre of the lawn near to the house, is a very interesting feature, for Sir Trevor is there cultivating a number of the finer hybrids. The flower garden is gay with Syringas, Phloxes, Abutilons, Begonias, and a host of other plants. The kitchen gardens, with the flower department, are also in excellent trim, and a warm tribute to the skill and care lavished upon them by Mr. W. Bain and his staff. After the party had partaken of refreshment, Mr. Jeremiah Lyon addressed the company, and offered the best thanks of the Caterham Horticultural Society to Sir Trevor and Lady Lawrence for their kind reception. Mr. Lyon alluded humorously to the fact that Sir Trevor was the first president of a Royal Horticultural Society who had entertained his horticultural friends, the first having been King Solomon. In his reply, Sir Trevor said that to him it was a genuine pleasure to see there any one interested in gardens and gardening, and he was glad to be able to welcome them there. Mr. Jeremiah Lyon generously paid all the travelling expenses of the outing, which was both an enjoyable and a profitable one to those taking part in it.

Dracaena sanderiana is stated to do well out of doors in the United States. It makes plenty of strong growths, and these come in handily for cuttings in the autumn. It is probably rather too expensive as yet to be extensively employed in this country for sub-tropical bedding.

Orange Flowers in Paris.—There are 150 Orange trees in the garden of the Tuilleries. Luxembourg has nearly a hundred. Each tree yields about a demi-kilogramme of flowers, which are sold by auction each year. They fetch on an average three francs per kilogramme, the cost of harvesting being not less than one franc fifty. The chemists, druggists and perfumers are the purchasers. Nearly all these Orange trees are several hundred years old.

Canadian Fruit for British Markets.—Last year Canada tried her apprentice hand in sending fresh fruits to the mother country, and as might be expected, had a few successes and a few failures, from which she will no doubt largely profit by avoiding the mistakes of last year. Canadian Apples are particularly handsome, and her Peaches are said to be unrivalled. Pears, Tomatos and other fruits can also be grown to great perfection in Canada, and the Dominion fruit growers intend to compete with their rivals by the sheer quality of their products.

SUTTON'S BULBS FOR 1898.

ALTHOUGH summer bedding is now in the height of its beauty, we are reminded, by the receipt of "Sutton's Bulbs for 1898," that the present wealth of colour will shortly wane, and that preparations must be made for ensuring a succession of flowers during the gloomy days of winter and the opening months of spring. Both for the adornment of homes and for securing magnificent displays in the open ground, bulbs produce sheets of colour which are unmatched throughout the year. Abundant evidence of the great utility of these flowers is offered in the work before us. The numerous portraits of individual specimens and the photographs of beds and borders are of singular beauty. These illustrations are not merely interesting, but they indicate the many ways in which the flowers may be employed with striking effect for decorative purposes in conservatories and gardens.

Bulbs offer advantages that can be claimed for no other flowers. During the four or five years necessary to bring them to maturity their energies have been conserved by experts, and they have only to be properly potted or planted in the autumn months to ensure brilliant results. These flowers also meet the needs of all classes; they brighten the windows of cottagers, and are ornaments in the drawing-rooms and corridors of sumptuous homes. They bear forcing with impunity, yet in the open ground the roots are unharmed by our severest winters, and they can be brought to perfection even in smoky towns by those who possess no horticultural skill, and are destitute of the appliances requisite for other flowers.

The necessary cultural instructions are given by Messrs. Sutton in language free from technicalities, and the lists of Daffodils, Tulips and Hyacinths are so clear and terse as to render the task of selection easy. For those who do not wish to incur the trouble of making their own choice, collections adapted for many purposes are offered.

Those who are familiar with the land of bulbs will recognise several well-known scenes from the snapshots of Mr. Martin H. F. Sutton during his recent visit for the purpose of selecting the finest growths harvested in the present year.

Subjects such as Begonias, Cyclamens, Gloxinias, and a few others which can only be cultivated under glass, do not, of course, belong to the category of Dutch bulbs. They are specialities for which Messrs. Sutton & Sons have won a high reputation, and it would be difficult to imagine a finer display than their exhibit of Gloxinias which won the Royal Horticultural Society's Gold Medal at the great Temple Show in May. A very attractive illustration of the inspection of these flowers by the Princess of Wales appears on one of the pages. Her Royal Highness was so much impressed with their beauty that, by Royal consent, a selection was sent to Marlborough House.

An illustration of *Gladiolus Sutton's Queen of Pinks* reminds us of the many beautiful things amongst

the hybrid early flowering *Gladioli*, which are superbly beautiful for conservatory work in pots, for the decoration of the open bed or border, and as cut flowers, separately, or in mixture with other flowers in season. The plethora of flowers at their time of flowering must be held responsible in some degree to the neglect which they suffer. *Spiraeas*, *Deutzias*, *Lilacs*, *Christmas Roses* and similar things are not bulbs any more than *Lily of the Valley* and *Dielytra*, but they are fit associates for winter work, and respond to forcing with the greatest facility.

GARDENING MISCELLANY.

GALEGA OFFICINALIS.

JOURNEYING to Tiverton recently by the newly-opened line up the Exe Valley, we were much pleased going and coming in observing the bright and showy flower beds at the various stations through which we passed; at one, I think Bramford, was a fine clump of *Leycesteria formosa*, and a plant of this *Galega* full of its pale blue flowers. This is a capital plant for such a spot, and if more often grown in the herbaceous border would be found to be equally useful with the pure white form that everyone seems to patronise.—W.S.

RHODANTHE MANGLESII.

I HAVE no recollection of seeing this old annual growing in the open until I came to this part. Some years ago, having a number in pots, I planted them out, and the next season I sowed a few in the open and they did very well. Those sown the present season, having reached their best, have been pulled up and dried. I thought until a year ago that I was the only one in this part that had ventured sowing outside, when I saw a large breadth growing in a market garden near Preston. I was told that there is a good sale for it in the market. It does not do to sow it in the mixed border where slugs are prevalent, for they soon devour it.—W.P.R., Preston.

NATURAL BEAUTY.

ONE of the prettiest peeps of greenery to be found in the south of Ireland is in Valentia Harbour. On the road leading to the slate quarries, in the wood beside the road, and sloping down some 200 ft. to the private road leading to the lighthouse is a perfect wealth of greenery consisting mainly of *Lastreas*, *Osmundas*, &c. Looking down some 50 ft. the common *Lastreas* are charming; fronds 4 ft. to 5 ft. in length and standing boldly out, are like an inverted bell fully 4 ft. across. When one sees a picture such as this it must engender a greater love for our hardy Ferns and the beauty of British woods.—R. G. W.

THE HOME OF FLOWERS AND SOME MORE OF ITS OCCUPANTS.

LAST week we mentioned a few of the more important classes of plants that are done so well at the great nursery establishment at Swanley, and we now propose to deal with some of the other points of interest that cannot fail to impress a visitor who takes a peep at the nursery towards the end of July or the beginning of August.

CHRYSANTHEMUMS need not occupy us for long just now; in another couple of months they will be the all absorbing topic of the horticultural world. It must suffice for the present to say that the Swanley plants are looking first-class, and that both the bush subjects and those that are destined to produce large flowers are full of promise for the future. The collection is a huge one, as all comprehensive collections must necessarily be now-a-days, when we count our varieties by the hundreds, and each year sees more or less important additions made.

SUCCULENTS have been taken up enthusiastically of late years by the Messrs. Cannell, and the long, roomy span-roofed house in which they are accommodated furnishes an admirable representation of the curious forms which Nature has evolved in those plants which have to exist in hot and arid climes. *Cactuses*, *Opuntias*, *Mammillarias*, *Euphorbias*, *Aloes*, *Agaves*, and other genera are represented in great variety, and the collection is one of the most valuable in existence. Of *Stapelias* there is also

great store, and the plants right through are in admirable health and condition. In this large house the more tender plants are grouped at one end, for as at Kew one end of the house is kept considerably warmer than the other.

COCKSCOMBS.—Never have we seen a finer batch of these handsome subjects than on this occasion, for one side of one of the 100 ft. houses was filled with them. A word of praise is due to the condition of the plants themselves, for they were dwarf, sturdy, and carried "combs" of enormous size and spread from the first to the last. In addition to the old purple form there is now a multitude of varieties to be had in various shades of buff, purple and rose. Some of the combs display an almost bewildering network of golden lines upon a groundwork of another colour, the effect, although *bizarre*, being both striking and distinctly out of the common.

BALSAMS.—The Messrs. Cannell have long been famed for their fine strain of Balsams, and on the occasion of our visit we were delighted with the grand batch of plants that were on view. The colours range from pure white to deep rose, yellow, scarlet, and purple, with numerous intermediate shades of these. Some of the striped varieties, too, are exceedingly showy. Not only are the flowers large and very double, but they are produced in great quantities all along the central stem and lateral branches, so that we get a plant of highly decorative appearance, well able to hold its own in point of effect with any other subject available for the furnishing of the cool conservatory.

FUCHSIAS.—Right from the very commencement of his distinguished horticultural career, Mr. H. Cannell has excelled as a cultivator and raiser of Fuchsias, and he has now got together at Swanley all the finest varieties in existence both of his own and other growers' raising. The number of varieties catalogued closely approaches 200, so that it is manifestly impossible to go into detail concerning the merits of each. Such lovely forms as Countess of Aberdeen, Eynsford Gem, Frau Emma Topfer, Rose of Castille, Phenomenal, including its rose and white forms, and Monarch, claim a special mention, but in this case it can only be a very cursory one. The varieties with ornamental foliage, such as Cloth of Gold and Meteor, constitute a distinct section, for they are not only of service as pot plants but they are extensively used for bedding in our public parks, and the more up-to-date of the private establishments. *F. triphylla*, a West Indian species, is a striking plant, and fully as handsome in its own way with its long tubed, glowing cinnabar-red flowers as the more highly bred florists' varieties. It makes a handsome plant, and as it is to be seen at Swanley is quite sufficient to captivate one who sees it for the first time. It is a great pity that its merits are not more widely known.

ACHIMENES.—We were a little too late to see the Achimenes in their full beauty, but even the remains were splendid, and we were able to judge of the magnificent show they must have made a few weeks earlier in the season. Upwards of thirty forms are grown, and from amongst these a selection may be made to please even the most exacting. From the deep purple *A. longiflora* there has sprung a number of very handsome varieties. *A. l. major* bears larger and rather richer hued flowers than the type, whilst the varietal names of *A. l. alba* and *A. l. rosea* sufficiently indicate the shades of colour they represent. Admiration is a very showy variety with exceedingly rich purple flowers, and is certainly one of the best of this colour section. Mauve Queen has equally large flowers, which display a charming shade of mauve that is both distinct and beautiful.

The needs of a general nursery establishment demand that a quantity of Ferns and other subjects should be grown for cutting from. *Adiantum cuneatum* is an old favourite, and here, as in other places, it is in much request. The much boomed American *Asparagus Sprengeri* also finds favour. We were informed that long trails of the graceful growths are often asked for in dinner table and other decorations. A stock of plants is therefore kept to supply this demand.

On the open ground, surrounding the site occupied by the glasshouses, a grand array of Dahlias is planted out. The plants are all looking remarkably healthy but as the time of Dahlias is not yet we will refrain from further remark concerning them. Distinctly a unique feature, which is to be seen close to Mr. H. Cannell, senior's, pretty house, is a row of standard

zonal Pelargoniums, with clear stems from 3 ft. to 4 ft. in height, and a fine bushy head, full of flower. Here, too, is a row of that handsome biennial *Lavatera arborea variegata*, which is a great acquisition for the sub-tropical garden, although it is not often that we find it so much "at home" as it is at Swanley.

AUSTRALIAN HORTICULTURE.

PERHAPS no portion of the world (observes an experienced writer), of the same area, is better favoured than New South Wales, with its varied climates and soils, for the production of fruits, vegetables, and flowers. It is really surprising how great a variety can be grown to perfection and at a minimum expenditure of labour. Exotics from cold, temperate, and even tropical countries thrive equally well within the limits of this comparatively small area; and still more remarkable is the fact that so many of these plants from different climates will grow side by side in many favoured localities. With all these advantages it seems strange that comparatively little attention should be devoted to the raising of vegetables for home use, or to the cultivation of flowering and ornamental plants for the adornment of the homes of the settlers in the country districts.

Occasionally one may meet with a well-cared-for, beautiful garden, like an oasis in the wilderness, but, as a rule, few attempts are made even to grow the commonest vegetables for family requirements; and dependence for supplies is placed on Chinese gardeners, whose gardens are generally to be found dotted about the country, especially in the more largely populated districts. The raising of vegetables, the selling of fruit, and the hawking of goods would seem to be almost entirely in the hands of the Chinaman, the Italian, the Syrian, and the Indian; despite the fact that a considerable proportion of the white colonial population consists of unemployed men tramping through the country in search of work, and dependent on the hospitality of the settlers. Considering the little difficulty there is, in most seasons, in producing a sufficiency of fruits and vegetables for a family's requirements in most parts of the colony, it is incomprehensible that the settlers or farmers do not grow everything they need. Instances have been known where vegetables were brought hundreds of miles to localities in which the same kinds of vegetable could be grown to perfection with but little trouble. In some places Chinamen will travel from forty to fifty miles carting vegetables to settlers who have soil sufficiently rich to grow all they need, if they took the trouble to devote but an hour or two each day to the work.

In the neighbourhood of Sydney, flower-gardening has been made a remunerative occupation by reason of the growing demand for bouquets, wreaths, and floral ornaments, but the continual expansion of the metropolitan suburbs is driving the older nurseries farther afield. A considerable business is done by nurserymen and florists in Palms of various kinds, especially that known as *Kentia belmoreana*, which is indigenous to Lord Howe's Island, and succeeds admirably in gardens about Sydney, and when planted with Tree Ferns grows freely and quickly, and is wonderfully effective. The bush-house is one of the most useful of structures in connection with the garden in all the warm parts of New South Wales. In it a multitude of plants can be grown which would be liable to perish in the hot sun. It can be, and is, constructed of all sorts of material, sometimes tea-tree brush, laths, bamboo blinds, and indeed anything that will break the rays of the sun without altogether obstructing them. In numerous gardens about the metropolis and large towns there are glass buildings where tender exotics of climates warmer than that of New South Wales, are grown as successfully as in any part of the world.

Everything indicates that the colonial taste for floriculture is improving rapidly, and will continue to improve, a result due in some measure to the fact that there are many excellent gardeners, professional and amateur, in the colony. A large proportion of the Potatoes and other vegetables consumed in New South Wales is imported from Victoria, where market-gardening is more largely in the hands of white men than in the older colony. The vegetable products of Chinese gardens are mostly of poor quality, insipid and watery, owing to the peculiar method of over-watering and over-manuring adopted. Although these vegetables are of such inferior

character, they are absolute blessings in many places where the colonists either will not or cannot grow those they need. Vegetables of excellent quality can be produced, even in dry districts, with but little irrigation, if they be properly managed; but unless a Chinaman has a superabundance of water he is lost. With a fair supply of water and experienced labour, almost every description of vegetable known in Europe or America can be grown with ease, generally yielding abundant crops.

NOTICE OF BOOK.

PANSIES, VIOLAS AND VIOLETS, by Charles Jordan, F.R.H.S., Jessie M. Burnie, John Ballantine and William Cuthbertson. London: Macmillan & Co., Limited. New York: The Macmillan Company. Rothesay: Dobbie & Co. 1898.

This neat and handy little book of some 102 pages includes practically the three great groups of the genus *Viola* which have been materially improved by the hand of man, and along particular lines consonant with the ideas of beauty and perfection. This latter remark would apply to Pansies and Violas more particularly than to Violets.

The four writers above-named have devoted their respective talents to giving a historical account of these flowers, the botany of the subject, growing for exhibition, Violas for the flower garden, the poetry of these garden flowers, and the Sweet Violet. The Pansy (*Viola tricolor*) has been cultivated at least for something between 300 and 400 years, yet it does not seem that any systematic or artificial cross-fertilisation was attempted for effecting improvements till the beginning of the present century. There were relatively fine flowers, however, even in Philip Miller's time, and had originated, no doubt, as the result of cultivation and the work of insects upon an already very variable flower. The earliest recorded history of improvements wrought of set purpose, and here quoted, is both interesting and instructive, showing that the British gardener was even then something real and not unworthy of his modern successors.

The history of the show and fancy strains of Pansies as they struggled to take root in the heart of the florist, particularly fancy Pansies, shows what innovations have got to overcome. The British florist's idea that his home raised strains of fancy Pansies are better than the Continental ones is also correct and might be applied with equal truth to other highly developed races of garden flowers, though the Continental flowers have something to recommend them. Whenever a strain of flowers becomes very highly evolved, a condition of relative sterility steps in, thus preventing the finest flowers from being raised from seeds in a wholesale manner for bedding purposes.

Violas are here distinguished from Pansies by being more floriferous, more compact in habit, and more perennial in their nature. A little of the botany of the subject might have been added to this to show some evidence of *Viola lutea* and *V. cornuta*, which have had a considerable share in the parentage of many of the modern race. The short and deeply toothed stipules of *V. cornuta* might have been mentioned as well as the long spur, common to both of the above species. *Viola tricolor* (Pansy) has long, deeply divided stipules, and a short spur.

Portraits of some of the leading men that have been or still are connected with the raising of Violas are here given, thus adding largely to the value of the book as a reference to everything essential to an exhaustive knowledge of the subject. The illustrations of leading types of Violas are useful to beginners as well as a reliable reference for the student for all time coming. The botany or science of the subject is admirably dealt with by Mr. John Ballantine, the only botanist as far as we know in the island of Bute. The explanation of the various parts of the flower should be studied by gardeners who attempt cross-fertilisation as a means of improvement. Besides the insects mentioned as visiting Violas we have also noted *Pieris* (*Pontia*) *Brassicæ* and *Vanessa Atalanta* (Red Admiral). Other sections of the book are well done; paper and printing leave nothing to be desired, and we have no hesitation in recommending the book to all concerned.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Cypripedium winoqzianum.—The apparently difficult name to pronounce, here used to specify this hybrid, takes its derivation from M. Arnold Wincqz. The parents were *C. harrisianum*, itself a hybrid, and *C. haynaldianum*, the progeny being intermediate but showing strange and beautiful combinations of colour, judging from the coloured plate of it in the *Lindenia Pl.* 620. The dorsal sepal recalls *C. harrisianum* in form and colour, but is more oval, and the colours altogether brighter and even handsome; the centre is brown-purple, passing into bright red close to the pure white edge, the contrast being striking. The spathulate petals are very similar in colour to those of *C. haynaldianum*, though shorter and broader; the lower two-thirds are greenish-yellow, blotched with brown-black, while the apical portion is washed with rose having a slightly violet tint. The lip conforms to *C. harrisianum* in form, and is heavily shaded with reddish-brown in front. The seed was sown in the establishment of L'Horticulture Internationale, Brussels, five years ago.

Rare Orchids at Kew.—The public is most taken with the larger flowers, whether Orchids or otherwise; nevertheless, there are those who in looking more closely at the form and individuality of things can appreciate the beauty and structure of even the smallest flowers quite apart from decorative effect. Many amateur growers may be placed in this category, and that the same or even a greater amount of pleasure can often be derived from a contemplation of interesting little flowers we feel quite certain. Owing to the rebuilding of the Orchid house at Kew the collection is housed at present in the Cape and Begonia houses, as well as in the private pits. Though the former are not particularly adapted for Orchids, a considerable number is flowering even at the dullest period of the year. The small yellow flowers of *Lockhartia Weigettii* are followed by seed pods that open widely with three valves in the same manner as a Pansy. Other interesting subjects in flower at present are *Bifrenaria aurantiaca*, *Laelia xanthina*, *Odontoglossum Kramerii*, and *Polystachya Kirkii*, all except the latter being large enough and sufficiently showy for general cultivation. The rosy-flowered *Disa nervosa* is notable for the length of its spur, and the relatively narrow opening to the flower compared with that of the better known species. Very singular is the pale blue *Bartholina pectinata* having its lip cut into slender filaments, but standing out stiffly like the teeth of a comb. Curious and beautiful is the terrestrial *Cynorchis grandiflora*, with a purple and lobed lip. *Restrepia maculata* is also uncommon as well as pretty. The most curious and most interesting of all in our opinion is, that named *Cirrhia viridis-purpurea*, the lip of which resembles a wasp or some similarly venomous insect. The petals are brown on the back and purple on the face; but the lip is green, and transversely banded with dark purple bars, and with crimson-purple at the base. It is also narrow, sharply pointed at the end, and more or less convex on the surface, so that the resemblance to some uncanny insect is not inconsiderable.

The Orchid Grower's Calendar.

MANURE FOR ORCHIDS.—How and when to apply it. —This is the fourth season that I have had the pleasure to write the Orchid Calendar, and those that have been good enough to peruse my notes will know that at seasons of the year I have advocated the judicious use of some stimulant for this aristocratic family. My contention is and always has been that plants in a healthy state, and rooting freely are much benefited by generous treatment. Terrestrial Orchids we always have given weak doses of manure water at various periods, but not until the past few years have we been bold enough to try it on the epiphytal section. *Laelia anceps* was the first we paid attention to, our plan being, as soon as the spikes are in sight, to treat them to weak doses of manure water—just a pinch of guano that you can take with the thumb and finger in four gallons of

water. In this the baskets or pans are dipped up to the rims about once a week. To show that when used judiciously no possible harm will accrue, I may say that seeds have germinated on plants so treated, and not only so, but have made excellent headway under similar treatment, so much so that we hope to flower quite a good batch next season. We often get four-flowered spikes on the dark varieties. The colour of the flowers, too, is much more brilliant. Of course, unless the flowers are already formed, no amount of stimulants will put them there, but it helps to build up the constitution of the plant and thus ensure better results in the future. My advise is, do not overdo it, or the remedy will be worse than the disease.

COOL HOUSE.—Where a great quantity of *Odontoglossums* is grown, it will be necessary to commence overhauling some of the most forward of the plants at an early date, or it will be late before the whole can be got through, therefore it may be well to get in a good supply of peat and moss, for there is nothing so annoying as to have to wait for the material. Delays, too, are dangerous.

"Do you manure your *Odontos*?" I was asked the other day. Well, generally speaking, no. The only time we deem a little help in this way beneficial is when they are developing large spikes, and as our plants in this stage are hung up they are taken down and dipped similarly to the *Laelia anceps*. The water, therefore, does not quite reach the moss, which, in consequence, keeps green.

The great thing in keeping *Odontoglossums* thriving is, as we have frequently pointed out, to afford them some fresh material each season, and not let them (as is too often the case) remain until they begin to go back before doing it.

THRIPS.—During the summer months these little pests make great headway if left to themselves. It is, therefore, advisable to fumigate often.—C.

THE PLANT HOUSES.

The Stove.

Now that the month of August is here, and we are nearing the end of the summer, every effort should be made to put the occupants of the stove into training, so to speak, with a view to fitting them for passing through the dull season with the greatest comfort to themselves. This can only be done by hardening the tissues of the leaves and stems, and by maturing the wood as far as possible, and the best way to effect this is to give plenty of air both by night as well as day.

The advantages to the plants of a current of air passing through the house at night are not grasped by many gardeners, with the result that too often we find the stove kept closely shut up all night, and a high temperature and excessively moist atmosphere maintained, which things are conducive to rank, but correspondingly flabby, growth. The top ventilators may be closed at night, but the bottom trap doors should be left nearly wide open. As the nights have been occasionally cold, it is advisable to keep a little heat running through the pipes, and thus the air passing into the house will be warmed during its passage into the house. Keep the syringe plied vigorously morning and afternoon, taking care that the under surfaces of the leaves are washed as well as the upper ones. There is often very little time at this season of the year for sponging, and thus the bi-daily syringings, are of the greater importance.

ARISTOLOCHIAS.—Where the plants are in good health they are apt to make too much growth for the welfare of the plants standing on the stage below them, and hence it will be advisable to thin out these growths to some extent. This will not materially affect the *Aristolochias*, but will give the plants beneath a much better chance, and will, moreover, improve the appearance of the house. The growths that are allowed to remain should be allowed to hang nearly at their full length, only allowing room to pass beneath them.

STEPHANOTIS.—Keep a sharp look-out for mealy bug here, for this is very partial to the plants, and is apt to prove a great nuisance unless it is persistently kept under. About a tablespoonful of petroleum in a gill of warm water kept well stirred and applied with a soft brush will soon clear out the bug. It is a good plan to mix the petroleum with soft soap before adding the water—the soap forms a good vehicle for the oil.

BOUGAINVILLEA GLABRA.—As plants which are flowering freely have now a great strain upon them, constant and liberal feeding must be practised. There is nothing better than liquid cow or farmyard manure, and if they get plenty of this the plants will not hurt. Pull down the flowering branches from the glass, and allow them to hang down, which they will be made to do by their own weight. Growths which are not flowering, or have already bloomed, may be thinned out to make room for the others.

TABLE PLANTS.—*Crotons*, *Dracaenas*, *Aralias*, etc., that have been purposely kept in small pots in order that they may be available as table plants will need a great deal of water just now, and it is imperative that they should not be neglected, or they will inevitably lose their bottom leaves, and their appearance will be spoiled. Liquid cow manure and soot mixed is a capital stimulant for them, and it may be used with the greatest safety. If chemical manures are employed they should be dissolved in the water, for as the pots are full of roots, and many of these roots are close to the surface the application of chemicals in the powder form endangers them considerably.

DRACAENA SANDERIANA.—This distinct habited *Dracaena* is best when in a young state, for after a few months the plants begin to get leggy and scraggy looking, whilst the variegation becomes less pronounced. Take off the tops of any plants that have got to this stage, and insert them as cuttings.

STROBILANTHES DYERIANUS.—Like the above-named *Dracaena* this plant is only good in a young state. The foliage of the older plants is coarse, and the rich colouring that marks the leaves of the younger plants is absent. It is necessary, therefore, to keep up a continual stock of young stuff. In this stage it is one of the handsomest stove foliage plants we have.—A. S. G.

Gleanings from the World of Science.

THE following subjects were discussed at the Scientific Committee meeting of the Royal Horticultural Society on the 26th ult.

TOMATOS AND SLEEPY DISEASE.—Plants suffering from this now not uncommon complaint were forwarded to Dr. W. G. Smith for examination. He reports as follows—"My observations agree with those of Mr. Masee given in the *Gardeners' Chronicle*, June 8th, 1895. I have already seen several cases of this disease this season. I do not see an easy way of getting rid of the fungus. Mr. Masee's suggestion of liming the soil seems a good one, but I have had no experience."

OUTGROWTHS ON POTATOS.—Mr. Sutton sent some tubers having curious excrescences upon them, received from Mr. Kerr, of Dumfries. They were reserved for examination.

ASTERS DISEASED.—Mr. W. P. Wright, of Fairview, Willesborough, Ashford, Kent, sent some specimens, and observes that "Growers of Asters in East Kent, especially in the Dover district, are in trouble over an Aster disease, which destroys thousands of plants. Some go off directly they are put out, others at a later stage. I found small white grubs in the lower part of the stems, and I do not feel any doubt that they are the cause of mischief." In the *Naturalist*, the organ of the Yorkshire Naturalists' Union, there is a paper by Rev. Hilderic Friend on this subject. The worms in question are of the family of *Enchytraeidae*, a group of annelids. Mr. Friend discovered a presumably new form in China Asters, and named it *E. parvulus* on account of its minuteness. A full description of the worm is given in Mr. Friend's paper. There is nothing to be done but consign the plants attacked to the flames. An account of the Aster worm will be found in the *Gardeners' Chronicle* for August 14th, 1897, p. 89, with figure.

MELONS WITH SEEDS GERMINATING.—Mr. Veitch read a letter from Mr. A. McKeller, of The Gardens, Sandringham, describing a Melon sent to Marlborough House, which was full of young Melon plants, quite green. They were plunging their roots into the flesh of the Melon and feeding upon it. Similar growths have often been seen in Lemons and Oranges, as well as Cucumbers, Pumpkins, Papaws, and other fleshy fruits. The cause appears to be that the fruit has been kept some time in a warm atmosphere.

HINTS FOR AMATEURS.

FREESIAS.

THE amateur finds a number of strong favourites amongst bulbous subjects, plants which may be grown with very little trouble, and with a full measure of success, but amongst them all we know of nothing that can claim a higher place than the Freesias. With Hyacinths, a yearly outlay for bulbs is necessary, for more favourable climes than ours are alone able to furnish the material that will yield us good flowers; but with Freesias this is not the case, for once a stock of bulbs is procured the cultivator is self-supplying, and with ordinary care he can not only maintain his stock at its original numerical strength but considerably increase it as the years roll on.

The requirements of the Freesia are but few, and as simple as they are few. Their beauty is beyond question, and they respond readily to any care and attention that may be lavished upon them. The delicious fragrance of the flowers, moreover, appeals strongly to the susceptibilities of the ladies of the household, although they may declaim against the too powerful odour of the Hyacinth and the Lily.

It is well to call to mind just now the existence of the Freesias, for it is at this season of the year that they are needing the first attentions. As the spring wore on and they gradually sank to rest they were consigned, just as they were in the pots, to some sheltered corner in the storeroom, or in an odd corner in a north frame where they would be sheltered from the rain and where they would be out of the way, but not out of mind for the rest of the spring and summer.

Now the time has once more arrived when they must be awakened from their rest, and induced to quicken into vigorous life once more. The soil in which the plants grew last year, and in which the quiescent bulbs are still lying, is now, of course, quite dust dry, and hence there will be no difficulty in separating the bulbs from it. By the way, we may comment here on the smallness of the bulb that produces such a relatively large truss of flowers. There is nothing else that can vie with the Freesia in this respect.

A place on the potting bench should be cleared without delay, the soil knocked out of the pots, broken up with the fingers, and the bulbs, large and small, picked carefully out. Take care to search each potful of soil thoroughly before another one is tackled, for the bulblets of last season's production are but small and are easily missed. The soil may subsequently be put out in a heap in the open air for the weather to play upon it. In a few weeks' time a quantity of soil will be wanted for cuttings of Pelargoniums, Coleuses, Iresines, Heliotropes, Calceolarias, and other bedding plants, and as this soil will have probably become fairly moist by that time, it will come in exceedingly handy for cuttings, which do not need a rich compost.

Sorting the Bulbs will be the next operation. All the largest and the medium sized bulbs will flower next year without fail, so these should be placed by themselves. The small ones should also be placed in a heap together so that they may be potted up by themselves. It is advisable to thus separate the bulblets from the bulbs of flowering size, for finer pots of bloom can thus be obtained, and the flowering plants will have all the benefit of the room instead of being choked up with a mass of young growths.

The Soil should be light and rich. One half of good fibrous loam well chopped up, with a quarter of the whole bulk of leaf soil, and the other quarter of cow manure dried and rubbed through a sieve, to which may be added a nice sprinkling of coarse silver sand, make a capital compost. Mix the ingredients thoroughly together by turning over the heap several times.

Pots.—For general purposes 5-in. pots are the handiest size to use, for an effective mass of bloom can be had in them, and they are not too large for placing in ornamental stands and vases in the dwelling rooms. This sized pot will hold five or six good bulbs, although some growers, who want extra fine flowers, put only three of the largest in them.

The pots should be clean, and fairly well drained, that is, the single crock in the bottom should be placed concave side downwards, and upon it five or

six other pieces a little smaller, a layer of moss being placed over the crocks. In potting the rammer should not be brought into play at all, as the soil can be made firm enough by the pressure of the fingers and a few smart taps upon the bench. Keep the bulbs rather low in the pots, as a top dressing will do good a couple of months hence. The tops of the bulbs should just be covered with soil, so that it will be necessary to allow at least 1 in. when filling in the soil up to the level upon which the bulbs are placed.

Subsequent Treatment.—No water will be wanted for some time as the soil will be moist enough for the present needs of the bulbs. Clear out a corner in a cold frame, stand the pots as closely together as they will go, and cover them with cocoanut fibre so that the soil is covered to the depth of several inches. If cocoa nut fibre is scarce or lacking, ashes may be employed, but in this case it will be advisable to prevent them from coming into direct contact with the young growths, which are very tender and quickly sustain injury. An empty pot should therefore be inverted over each of the pots containing the bulbs.

After the lapse of four or five weeks the plants will be ready for removal from the plunging bed, and may then be transferred to another cold frame, where they must be gradually inured to the light.

The Bulblets that are too small and weak to flower next year may be "sown" thinly in pans in the same sort of soil as that given the larger bulbs, and also plunged. It will be worth paying them a little attention, as if they are kept growing on properly they will make strong flowering bulbs by the end of next season.

Another Method of Culture.—We have given the routine of cultural treatment that is adopted in the majority of cases, but in most things horticultural there is more than one way, and often several methods, of accomplishing the same end. Some growers do not take the trouble to pot up the bulbs each year but simply start the plants in the same soil and in the same pots which accommodated them the preceding season. About the middle of August the pots containing the bulbs are taken from the place in which they have been resting, and by repeated waterings the soil is reduced to a state of moistness. The pots are then plunged, taken out when roots have been freely formed, and the plants are then given a nice light place on a shelf near the glass in a cold pit, or in a frame. The strongest growths thrown up by the big bulbs are allowed to remain, but all the weaker ones, that is, those coming from the bulblets, which would not produce flower are cut off close to the surface of the soil, and the bulblets are thus killed. Liberal feeding from an early date and onwards till the flowers appear is resorted to, and the result is that very fine pots of flowers are frequently obtained. Of course the pursuance of this method gives no chance of increasing the stock of bulbs, as all the young ones are destroyed by the pinching process.

Seedlings.—The raising of plants from seed is quite an easy undertaking but the practice is not at all a common one. The seed should be sown about the same time as the bulbs are potted up, viz., near the middle of August. The young plants will not stand transplanting at all well, for the roots are very thin and delicate, so that the common treatment of seedlings will not do for them at all. The best way of getting over the difficulty is to sow in pots or pans, and thin the plants down until those that are allowed to remain have plenty of room to grow. These young plants will make good flowering bulbs for the second year. It will be seen, therefore, that such amateurs as do not imperatively want immediate results, but are willing to wait for a season, will do well to invest in a packet of seed at once, and sow it as advised. Seed should be easily obtainable from all good seed houses.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Seedling Carnations.—*F.E.B.*: The self-coloured crimson-scarlet variety is a fairly good flower, but is not so good as either King Arthur or the recently certificated Isinglass, so that it would be waste of time to give it a distinctive name. The fancy variety

is really first rate, and you will do well to name and propagate it.

Table Decorations.—*Dissatisfied*: It would be impossible for us to pass an opinion upon the respective merits of the floral tables you speak of without seeing them. We think it quite probable, however, that you made your vases look too heavy by putting too much in them, and that the judges gave the prize to the other competitor because of the lightness and gracefulness of his exhibit. It is a common mistake to put too many flowers in the vases, and you are not the first competitor who has been dissatisfied because the judges preferred something lighter. Of course, judges may have individual tastes that may not be in accordance with somebody else's ideas; thus it is policy when you know your man, to dress the table according to his ideas of what it should be if you want to stand a good chance. The fact that the flowers on your table were of higher class than those on the other may or may not have influenced the award. Strictly speaking, the test is not for the individual excellence of flowers—that is done in the other classes—but for the arrangement of the material, and the general effect of the decorative scheme.

Cypripedium spectabile.—*E.L.*: This *Cypripedium* is one of the prettiest of the hardy Orchids. It requires a damp place, and peaty soil to grow in. The corner of the rockery you mention will suit it very well, but not the soil that is there at present. You should clear that out and fill up with a compost of two-thirds of peat, one of good loam, and sand. If the peat is very sandy a further addition of sand may not be required. You need not use expensive peat for the operation. The quality sold by sundriesmen for Rhododendrons and Azalea beds will do capitally.

Wallflowers.—*Reader*: You are very late in sowing your Wallflower seed, and the plants will be correspondingly late in blooming next year. The seed should have been sown at the end of May or the beginning of June. The plants then have plenty of time to make good growth, and get hard and well matured before the winter. If you must have Wallflowers lose no time in getting the seed in, but the plants will be valueless for spring bedding.

Dahlias.—*Carlos*: Thin out the growths of the plants, and pinch out some of the buds. Give plenty of liquid manure—fresh farmyard manure for preference, if you can get hold of it—and you will then have flowers as large as you want them.

Single Scarlet Dahlia.—*Carlos*: The flower is fairly good, but there are plenty better. The colour is the best point about it.

Retarding *Lilium auratum*.—*Tenby*: Stand the plants in a shady corner where they will not get much sun, and do not excite them with too much manure water. They will then develop their flower buds very slowly.

Nertera depressa is the name of the pretty dwarf-berried plant that you refer to, *Excelsior*. It would do quite well with you in an ordinary greenhouse, and is, as you say, something quite out of the common run of plants. We do not know why it is so comparatively rarely met with; perhaps it is because they look upon it more as a curiosity than anything else. It may be raised easily enough from seed, but is generally increased by dividing up the old plants. Almost any soil will suit it, but it should not have too much soil given it, and should therefore be grown in shallow pans or deep saucers.

Lapageria leaves dropping.—*Suburbs*: From the leaves you send it is evident that the plant is badly attacked with thrips, a pest which is very partial to the Lapageria. Can you not manage to fumigate or vapourise the house with "XI All." This is the quickest and best way of getting rid of thrips. Syringing with Fir Tree Oil, or other insecticides is a tedious operation, and for a big plant a rather expensive one. Follow up the smoking by heavy and repeated syringings with clear water. Never mind about the few flowers that are now upon the plant, as it is important that the leaves should be cleansed

from the intruders and their filth at as early a date as possible.

Nerines.—*Rob*: If the bulbs are fairly strong they should be showing signs of throwing up their flower spikes. Until they do you may keep them dry at the root in the same way as you have done for the last three months.

White Strawberry.—*E. R. L.*: The best white Strawberry in cultivation is undoubtedly Bicton Pine. The fruit is of medium size and good flavour, although not up to some of the scarlet fruited varieties. The plant is a capital bearer, and carries heavy crops even on dry soils. You cannot do better than try it.

HARDY BAMBOOS.

(Continued from page 757.)

PHYLLOSTACHYS.

THE species of *Phyllostachys* have their flowers arranged in small spikes, generally numerous, and those again are collected in loose panicles terminating the stems; but botanists only occasionally have an opportunity of inspecting or beholding them, even

four or five species, natives of Japan and China; but the *Index Kewensis* records twelve that have been described. Seventeen are included in the Kew list, including a variety and a species that has proved too tender for open air culture. Even this number has some likelihood of being augmented by fresh introductions, which may or may not prove to be either distinct or hardy; but time will tell. *Phyllostachys* is the third and last of the genera under which all the hardy Bamboos are classified. Their culture is precisely similar to that of the species already described under *Arundinaria* and *Bambusa*. A substantial soil, capable of retaining moisture in summer is one of their mainstays, and shelter from gales of wind is another, calculated to retain the beauty of the foliage. All of the species of *Phyllostachys* are eminently adapted for the conservatory and for temporary decorative work in dwelling houses, halls and ballrooms, in company with Palms. They have a particular grace and character of their own, for which it would be impossible to find a substitute.

P. AUREA.—In this we have one of the most frequent in gardens and one of the most handsome. The stems grow 8 ft. to 12 ft. high in our climate, and

about 3 ft. high, and the branchlets are covered with lanceolate, rich green leaves, glaucous beneath, and bearded at the apex of the sheath. Japan is its native country, where it is known as *Ya-daké*.

P. BORYANA.—The stems of this graceful and handsome species are erect or ascending, slender, naked, and vary from green to olive-brown. At Kew they have attained a height of 8 ft. to 9 ft., and bear slender, ascending twiglets, thinly arranged at the nodes. The leaves are lanceolate and small, being only 2 in. to 3 in. in length, dark glaucous green and shining when mature, glaucous beneath, and very numerous. The sparse arrangement of the side branchlets and the small size of the leaves gives to this species a light and airy or graceful appearance, at least when grown in the open air. Its native country is Japan, and being as hardy as any should be liberally planted in suitable positions in the garden or pleasure ground. *Bambusa boryana* is a name given to it on the Continent.

P. CASTILLONIS.—The erect or ultimately arching stems of this Japanese Bamboo are flexuous, and 6 ft. to 8 ft. high. The ascending branches are thinly disposed, forming a leafy, twiggy, bush. Both stems and twigs are pink and yellow on one side, while the



PHYLLOSTACHYS AUREA.

in their own country, not to mention Britain. The plants themselves are grasses of arborescent habit, though we may regard them as grassy shrubs or shrubby grasses in this country. The sheaths on the main stems soon fall away, leaving the wood naked and polished, hence the stems constitute no mean feature of their ornamental value. Another characteristic is that they are semi-terete, that is, rounded on one side, and flattened or grooved on the other, from the axil of one leaf to the base of the next that comes above or perpendicular to it. Every second leaf is alternately on the opposite side of the stem to that next above or below it, so that this flattened or grooved portion of the stem shifts from one side of it to the other alternately. The joints are rather thickened, and the branches or twigs arising from them are generally numerous, slender and graceful. The species of *Phyllostachys* contain many of the princes of the Bamboo family as far as the hardy members are concerned. The leaves are nearly always of very moderate or even small size, so that well developed stems, with their myriads of graceful, leafy twigs, are ornaments of no small importance and beauty

The *Genera Plantarum* reckoned that there were

when well ripened assume a beautiful golden-yellow hue by which it may be readily recognised; but in our murky skies they seldom attain anything better than a greenish-yellow hue. Even then they are handsome, especially after their myriads of ascending, fascicled twigs and twiglets are developed. The lanceolate or oblong-lanceolate leaves are serrulated on one edge 2 in. to 5 in. long, finger-like, and light green. The sheaths are bearded at the apex. It is also generally known as *Bambusa aurea* in European gardens; and in its native country, Japan, it is either very popular or its identity often mistaken, for it has received several names such as *Hôrai-chiku*, *Taibo-chiku* and *Hotei-chiku*. This latter name recalls another well-known Japanese plant, often named *Hoteia japonica* in British gardens. The accompanying illustration shows one of the clumps of this popular Bamboo at Kew. There is a small portion of *Arundinaria auricoma* in the foreground, and behind it the Lily showing itself is *Lilium pardalinum*. The camera faithfully records everything coming within its scope, so that the wealth of greenery present makes it difficult to show the individuality of any one Bamboo distinctly

P. BAMBUSOIDES.—This species forms a bush

other is green. The green side arises in the axil of any leaf, and passes to the base of the leaf next above it, and then the colours change positions at each successive leaf. The leaves are lanceolate, much the broader at the base, serrulate light green, shining and often striped or lined with creamy yellow. In the more shady positions the leaves assume a much darker green hue. The variegation is best seen when the foliage is in its prime, whether grown in the open air or under glass. The apex of the sheath is bearded. In France the species is known as *Bambusa Castillonis* and *B. Castillonis*. The Japanese name of it is *Kimmei-chiku*. The channel or grooved side of the stem above mentioned as peculiar to the species of *Phyllostachys*, is the portion that is green.

P. FATUOSA.—Though this Japanese species is fairly hardy, the foliage seems liable to considerable injury during the winter months, but that may be due as much to a filthy atmosphere as to actual frost. The stems reach the fine dimensions of 10 ft., and are dark green, with ascending branches and twigs, and dark green, finger-like leaves, 4 in. to 6 in. in length. The withering and browning of the foliage of this species in winter are the greatest faults to be placed to the credit of an otherwise first-rate Bamboo. Its native home is Japan.

(To be continued.)

DALKEITH PALACE, N.B.

TWENTY-FIVE members of the Edinburgh Junior Horticultural Association, visited Dalkeith Palace gardens on June 25th. It being a bonnie afternoon, everybody from the Scottish metropolis seemed to be hurrying to country dells or meadows. Our heavy train soon reached Dalkeith. Mr. Dunn's general foreman, Mr. Palmer, there awaited us and lent the party courteous guidance throughout the "Palace" demesne.

This ducal estate is well-known. Probably each department of its horticultural section has been figured once and again in our literature. This granted, we yet compile our quota which refers mostly to landscape scenes.

A broad walk, having a high hedge to the south, and a large cottage on its north side, leads from the highway to the orchard entrance. Within the walls we found everything fresh and well-advanced. Standard Apple trees were abundant. The older ones are closely pruned. Other Apple trees, with Plum and Pear trees are grown as bushes or pyramids. Both Apples and Pears are represented in hundreds of varieties. Only good sorts are grown in quantity. The walls bear many cordon-trained trees. Morello Cherries were laden with fruits, and for bush fruits, Black Currants showed best. The ground becomes hot and dry in summer, which fact Mr. Dunn well knows and counteracts by mulching everything freely. Vegetable crops are raised from spaces between the fruit trees. The orchard lies to the sun, the ground being awfully steep.

By an east door we passed from the orchard to the "grounds." Being at a distance from the Palace, verdure is allowed to luxuriate in natural form. This is proper in the outlying grounds. Wide-spread beauties are pleasingly blended. Tall bowing grasses such as *Dactylis glomerata*, *Festuca loliacea*, straight and imposing Foxgloves and Mulleins, soft, lowly Ferns, and other subjects grow in profusion, all cast like a lovely quilt beneath mighty and handsome trees. Such giant Rhododendron clumps there were. The old *R. ponticum* is everywhere. Its flowers lend a colour not at all common. The Portugal Laurel (*Prunus lusitanicus*) is much utilised for screening and for clothing banks. Through the grounds flows the river Esk. For long distances its sides are hemmed by high banks. These rise slopingly back for hundreds of feet. Domestic ducks there enjoy themselves in many pools and shallows.

On the banks and near the stream were some specially well clothed Beech trees, draped indeed like a specimen Abies. We thought Beeches liked a dry situation. They were very decorative. Very interesting also was the view we had of the old Oaks—the remnant of our ancient Caledonian Forest. They stand at considerable elevation and have a full east exposure. Time has converted the once stout, and vigorous natural architecture, into twisted, knotty, and gouty looking, patriarchal relics. Cabinet makers offer large sums for such quaint memorials, knowing well the purity and hardness of the rugged warriors. At one point we looked over a wide valley to an abrupt bank, tellingly decorated. On its middle left side were some typical trees of *Cedrus atlantica* with their rigid horizontal arms. Higher on their right swayed in graceful lines the branches of Abies or Picea. Lower, and nearer the river were drooping Birches. Deciduous trees were well placed for effect and variety. Bushy Ivy formed a groundwork to the less thickly planted spaces.

Sunk fences are not common on estates, yet their appropriateness of use in presenting an unbroken sweep of lawns and meadows, cannot be denied. Many writers on landscape-gardening scorn them as ludicrous. The kept lawns around Dalkeith Palace merge into broad deer parks; and without having adopted an unseen obstruction such as this, an erection at once offensive to the eye of taste and deleterious to the view, must have been employed. Horse Chestnuts and Planes (Sycamore) stand as impressive and imposing front objects on the outskirts of the great lawns. We passed through tunnels in our survey, cut in sandstone rock. What the intention was for having these tunnels Mr. Palmer could not state. Perhaps Loudon's idea may have been adopted, viz., to hide walks crossing each other, by leading one below the other. This, however, is only used in small areas to deceive one as to extent of grounds.

At a distance from the palace, and alone, is a high circular conservatory. The circle of supporting pillars are elaborately and intricately carved from solid blocks. It was very costly. Large Palms, Tree Ferns, and a miscellaneous collection was housed. The tall shapely Salisburias (*Ginkgo biloba* or Madenhair tree) were close by. This tree is more generally grown on walls here in the north, but the said specimens were beautiful without such shelter. *Escallonia philippiana* and *Viburnum plicatum* are represented in cosy corners. These two flowering shrubs, though somewhat tender, do well in gardens about Edinburgh.

Our notes must conclude with mention of the glasshouses. These consist of vineries, Peach, Fig and Melon houses, Pineapple pits, &c. Vine rods and laterals were well apart, and carried finished bunches. The heating system was ample, the pipes being black, which colour looks nicer than either light blue or lead. A small span had a varied collection of beautiful Caladiums. The beautiful Cloth of Gold Fuchsia filled a string of baskets hung from an Azalea house. Bananas were fruiting fairly. Near their house was a fine fernery. The orchard house was filled with mixed fruit trees in pots, bearing well. *Stephanotis floribunda* was trained, and showed splendidly in large pots. But—exit and to fruit room, where Mr. Dunn has abundance of refreshments. Having partaken of them, various votes of thanks were rendered.

Passing homeward by the Kitchen garden central walk, the side borders of which are filled by squares of all the varieties of Violas certificated at Chiswick last year. Some were poor enough, though certificated, but most were grand. They were mulched by short stable dung. Dahlias, Pinks, Sweet Peas, Carnations, &c., found a home in beds or lines near the vegetable grounds. All kinds of rare and good Roses are everywhere. Long archways are covered with climbing sorts.

But now readers, adieu. Great gardens require lengthened descriptions, but we know our pen must halt. We enjoyed the pleasant trip, and were much wiser by it.—*Harrison D.*

BELGIAN NURSERIES.

IX.—MESSRS. F. SANDER & Co., BRUGES.

(Concluded from p. 763.)

ORCHIDS.

ON entering a large span-roofed house we noted a very curious form of *Odontoglossum Pescatorei*, with lacinated segments, not merely jagged, as is common amongst the best varieties of *O. crispum*, but deeply and finely fringed, in fact. *O. Pescatorei* also presented numerous varieties, spotted with violet on the lip, the plants being semi-established and flowering for the first time. The same may be said of *O. crispum*, *O. c. andersonianum*, *O. vexillarium* and *O. triumphans*. *Cattleya labiata*, also semi-established, was making vigorous young growths. Two whole benches in one compartment were devoted to *O. grande*. The central stage was occupied with *Laelia anceps*, while beneath it were great quantities of *Cattleyas* just imported. Another compartment was also occupied with *C. gaskelliana*, *C. Trianaei*, *C. Warneri* and *C. labiata* in the same stages as above recorded, thus showing great activity by the firm in its new establishment at Bruges.

The central stage in another large house was given up to *Cattleya Mossiae*. *Odontoglossum crispum* was also to be seen in all stages of growth and with shapely flowers, as well as boldly blotched varieties of *O. triumphans*. *O. luteo-purpureum*, *O. ruckerianum*, *O. cirrhosum* and *Oncidium marshallianum*, with its huge pinnacles of showy flowers. *O. concolor* and *O. sarcodes* carried large spikes of bloom.

In another cool house we met with such popular and useful subjects as *O. Rossii majus*, *O. R. albescens* (the sepals and petals having pale green blotches, the rest being white), *O. Cervantesi*, *O. crispum*, and others. The next compartment housed collections of *Oncidium sarcodes*, *Odontoglossum luteo-purpureum*, *O. crispum*, *O. c. guttatum*, *O. triumphans*, and many natural hybrids of the same genus, all bearing richly blotched flowers of their kind. The beautiful *Masdevallia Shuttleworthii* was in its prime. The whole of the central stage in the next compartment was occupied with *Laelia purpurata* in sheath. Not far off was a teak basket, 2 ft. by 2 ft., completely filled with one gigantic piece of that species. Next to this came grand batches of

Cattleya Mossiae and *C. citrina*, the latter suspended in pans and filling the house with the grateful aroma of its flowers.

Some idea of the contents of these houses may be gleaned from the fact that they are sixty-six metres in length, those having a vestibule being 70 metres long. One of the latter, measuring 35 ft. wide, and divided into four compartments was devoted to Orchids requiring a high temperature. A fine sight was presented by great quantities of *Dendrobium Phalaenopsis schroderiana* suspended from the roof in large pans. The fuscous-orange and yellow flowers of *Phaius Humblotii* were also conspicuous. Many plants of the beautiful *Cattleya intermedia*, with its soft blush flowers and purple lip also attracted attention. Others were *C. amethystoglossa* and *C. schilleriana*, the latter being suspended in pans. In company with these were *Dendrobium thyrsiflorum*, flowering freely and *Cypripedium villosum*. There was a compartment chiefly devoted to *Lycaste Skinneri*, in many of the best forms. Very choice were varieties having dark red sepals and petals; and that having rosy petals and a spotted white lip. *L. aromatica* was fragrant and free; while *Cypripedium mastersianum* was highly coloured. Ten houses in one block behind the bureau accommodated *Odontoglossums*, and the seedlings of various Orchids.

OTHER FLOWERING PLANTS.

Rhododendrons and Azaleas are extensively grown at Bruges, particularly Indian Azaleas. A pretty plant is *Tradescantia albo-striata*, having its leaves beautifully striped with silvery lines. The flowers are also pretty, being white and plentifully produced in terminal cymes.

Only the very best of the Indian Azaleas are grown, and seeing that their cultivation is as easy as the very worst varieties we see no use for the latter. *Le Flambeau* and *Pluto* are grand sorts of a rich crimson-red, glowing in the sunshine. Many of the very best and some of the newest and most highly developed double varieties were also at their best on the occasion of our visit. Very fine was John D. T. Llewellyn, the flowers being pink in the centre, blotched on the upper segments, fading to silvery-white at the edges, and very full. The salmon-pink and silvery-edged *Souv. de Mdlle. Marie Rosseel* was also extremely pretty. *Deutsche Perle* is too well known and appreciated to require further comment. The half expanded bulbs of the salmon and white *Vervaeneana* resembled to a remarkable degree a Tea Rose in miniature. The huge rose-coloured flowers, and wavy petals of *Memoire de Louis Van Houtte* were also handsome. The flowers of *Dr. Moore* were also of a soft rose hue. *Sacuntala*, like *Deutsche Perle*, was a choice pure white sort. With the exception of the first two mentioned above, all the rest were fully double, with flowers of the largest size and most refined form. *Souv. de Francois Vervaene* and *Empress of India* were semi-double forms having a rosette of small petals in the centre. The former had white, and the latter silvery-pink flowers, blotched with red on the upper petals.

Elsewhere the propagation of Azaleas by grafting was being accomplished. They are kept in cases while this is being done. Azalea stocks, 3 in. to 6 in. high, were being reared by the thousand in other houses, some planted out and others in pots. Nearly full grown specimens, that is, of saleable size, were planted out in leaf mould in the beds of the houses. Flowering plants in pots were stood between the rows. We counted twelve Azalea houses, each 140 ft. long. Five of these were in one block, built on the most modern principles, light and airy, with very wide panes of glass. Numerous pits were also more or less devoted to Azaleas. About an acre of ground was surrounded by a brick wall, the foundations of another block of six houses having a continuous internal area. This huge space was also meant for Azaleas. The summer quarters of the young Azaleas are very extensive; and planting out was being accomplished at the time. The dug out beds were being filled with Oak and Beech leaves, mixed with sand. Enormous quantities of water are required at Bruges during the summer months for Azaleas, notwithstanding the fact that the district is below the level of the sea. To meet this requirement a cement tank has been constructed, 2½ ft. deep, about 3 ft. wide, and running across the Azalea-ground for a distance of 250 yards.

Gloxinias and tuberous Begonias are also grown in this establishment to some extent to meet the necessities of their admirers. Two houses are

filled with the best varieties of *Camellia japonica*. One variety with dark claret flowers is here known as the black *Camellia*. Very pretty was a double variety of *Lady Banks' Camellia*, namely *C. Sasanqua plena*, with small, double pink flowers, and small leaves, being quite a distinct species from the Japanese one, so largely grown in some establishments here. All of the above are grown in 32 size pots and will be marketable this coming autumn. *Azaleas* and *Camellias* are also grown in houses near the office or bureau.

SCOTTISH HORTICULTURAL ASSOCIATION.

The monthly meeting of this society was held at 5, St. Andrew's Square, Edinburgh, August 2nd. The audience was treated to a remarkably fine exposition on "Orchids for Cut Flower and Decoration in Winter," by Mr. Boyd—late foreman at the Glen, Innerleithen, now head gardener at Bellisle, Ayrshire. Orchids as a rule require plenty of light and ventilation. Heating apparatus should be rather more than actually necessary and so save a forced drying heat. Afford copious supplies of water during growth. In watering, make sure of testing the compost below its surface. Potting material—sphagnum, peat, crocks—only keeps the plants in position and lends moisture, but no nourishment. Cleanliness is a great item. For late autumn, *Cattleya labiata* should be grown in baskets, near the glass of an intermediate house. It flowers on the current year's growth. Re-pot in February before the roots start.

C. bowringiana from Central America, remains for three months in flower. It is a long-bulbed species and must be given more rest than short-bulbed sorts. It loves copious waterings, with liquid manure at times.

Calanthe Veitchii is an attractive subject in the dull period. Shake out the old compost before roots are made, and in 6-in. pots put three bulbs. Use one-half fibrous loam, one-fourth of sphagnum, one-fourth of small crocks. Water carefully till fully established, then allow greater freedom, but withhold when growth is finishing.

Dendrobium Phalaenopsis, varieties varying from deepest purple to pure white, are from North Australia. Grown in a warm division, using shallow baskets, and having good light, they throw up long racemes of *Phalaenopsis*-like flowers.

Vanda caerulea sometimes has frost in its natural habitat. Pot in sphagnum and crocks, keeping the crown above the pot. Place it in the warm end of the East India House. *Sopbronitis*, so decorative, thrives in the cool parts of the *Cattleya* house. *Laelias* with two to five flowers are very useful during November and December. When various varieties are grown they can be used to much effect. Naturally they receive nightly drenchings and are under full sunshine during day. Never shade unless the sun be scorching. Give air when 45° of heat is reached outside. The *Trentham*, or long-bulbed sorts, are later than the others. *L. albida* is a good one, but rather straggling.

Coelogynes may be potted in peat and sphagnum shortly after flowering. Allow plenty of water and some liquid manure to established specimens. *Cattleya Trianaei* flowers in February or March in an intermediate house. It requires a long resting period. Never shade unless in very strong sun. Longer leaves and bulbs are got under shade, but such plants must lack bloom. Imported bulbs should be washed clean and hung base uppermost near the glass, being syringed daily till roots are emitted. They do better in baskets than in pots.

Dendrobium wardianum make growths 4½ ft. long, and covered with bloom, as a recompense to Mr. Boyd's care. Insert in well-drained pots, with sphagnum and peat, and plunge these in cocoa-nut fibre. Growth, 5 in. or 6 in. long, are pushed before roots are emitted. This necessitates care when watering. Syringe slightly overhead on warm days. When the last little leaf at the apex is seen, they are best taken to an early vinery with as much light as possible. From October till March afford only enough water to keep the pseudo-bulbs from shrivelling. They flower best when pot-bound. An annual top-dressing is mostly all that is needed. *D. nobile*, being evergreen, takes more water in the resting stage. Other details are as for *D. wardianum*. Its profusion of blooms renders it useful for decorations and for hybridising.

Cymbidium lowianum may be placed in an early vinery, and shifted to a later vinery when the first one becomes too cool. It goes to rest with the vines. *Odontoglossums* were summed up as requiring (a) an equable cool temperature, (b) abundance of moisture, (c) sweet air, and (d) good, clear light. They are impatient of pipe-heat. Use water no colder than night temperature, and damp the stages, paths, &c. Admit air when 40° Fahr. externally is registered. Shade when the sun raises the temperature to 60° externally. *O. citrosium* loves liberal waterings and a place at the cool end of the intermediate house. Xl all Vaporiser is the best eradicator of pests on Orchids. No harm accrues to blooms. *Adiantum farleyense* is the only subject Mr. Boyd ever injured with this patent vaporiser.

The exhibits forthcoming consisted of a dozen seedling *Violas* from Messrs. Dickson & Co., Waterloo Place. A brilliant yellow one—Walter Welsh—received certificate. They had also *Lady Glamis Pinks* (blood-red) and *Snowflake* (white). Messrs. James Grieve & Sons staged beautiful *Carnations* of great brightness. A seedling, named *Britannia*, was certificated. Its colour is deep salmon. Strawberry Richard Gilbert from Mr. Wm. Carmichael received a certificate. *Geraniums* came from Mr. Comfort; fine *Spiraeas*, in 6-in. pots, from another member; and a lovely truss of *Nerium candidum* from Mr. A. McKenzie, Trinity Grove. This *Nerium* is not described in "Nicholson's Dictionary of Gardening," and is a rare, pure white, large, semi-double. After some business and a vote of thanks to Mr. Boyd, the chairman announced next month's subject—"The Rose; Its History and hints on its cultivation."—*Harrison D.*

ALPINE AND ROCK PLANTS.

CORONILLA CAPPADOICA.—Several of the herbaceous species of *Coronilla* are well adapted for trailing over the stones and boulders of the rock-work, for which they are very well adapted. Their long, rather woody roots penetrate the soil deeply, so that they flower profusely when various other subjects are suffering through the dry weather. The large, golden-yellow, and Pea-shaped flowers of *C. cappadoica* are produced in circular umbels, that is, the flowers of the truss point in every direction of the sky, and are carried quite clear of the glaucous foliage as it trails over the ground. The tufts are, however, compact, and evergreen. When once established they will flower for many years in succession without further attention than keeping them free from weeds, and preventing tall subjects from overshadowing them, for they love the sun.

RAMONDIA PYRENAICA.—The hardiness of this European *Gesnerad* is now a well established fact. A suitable position must be selected for it amongst sandstone rocks, or other soft and porous material, in a position that is shaded from the direct rays of the sun for the greater part of the day. The woolly leaves are rather soft in texture, and lie close to the stones, so that the latter must never become dry and hot, or the *Ramondia* will be a failure. So long as the roots are in well-drained but moist soil, and squeezed in between cool and porous stones the plant will be happy and flower beautifully every summer. The purple flowers are in beautiful contrast with the pencil of golden stamens in the centre, and the orange spots at the base.

HELIANTHEMUM FIREBALL.—The long continued dry weather has been rather hard upon the perishable and ephemeral flowers of the Rock Roses. After a day's hot sunshine the ground has several times been carpeted with the bright orange-scarlet flowers of this variety of the British Rock Rose. Another relay of flowers takes the place of the fallen ones day after day for weeks together. Even now the hoary or gray foliage looks appropriate on the rockery. If young plants are desired, take cuttings presently, but particularly a week or ten days after we get a good fall of rain to encourage fresh growth, and the rooting of them will be easy in a frame.

SAXIFRAGA AIZOIDES.—Happy are those plants which have been planted near water, or where moisture is plentiful in summer. This *Saxifraga*, in a wild state, grows where water is constantly dripping down the rocks. The bright yellow flowers then look happy above a carpet of dark green, and, in fact, evergreen foliage.—*J. Effe.*

Amber is the fossilised resin exuded by the prehistoric Pine tree.

TRIALS AT CHISWICK.

The fruit and vegetable committee of the Royal Horticultural Society met at Chiswick on the 22nd ult. to examine the Peas and Potatoes submitted to trial. There were sixty-six stocks of the latter sent, but these were most of them passed over. Several varieties were considered promising, however, and it was decided that another examination should be made in August.

It is to be regretted that the meeting of the Floral Committee was called for Wednesday, July 27th, for this brought it into collision with the annual exhibition of the National Carnation and Picotee Society (Southern Section) at the Crystal Palace. A considerable amount of work was passed through hands, however, for there were many things to pronounce upon, and the list of awards was unusually long.

VIOLAS.

In addition to the fifteen varieties which received the XXX distinction at the examination made by the committee on the 5th ult., the three undermentioned varieties were honoured:—

MARCHIONESS.—In addition to the XXX given on the 5th ult., an Award of Merit was granted Messrs. Dobbie & Co., of Rothesay, for this fine variety.

THE MEARNS.—A showy flower of medium size and good form with light lavender-blue, upper petals, and deep purple lower ones. The eye is small, and rich yellow in hue. The habit is vigorous, and the plant free-flowering. XXX. Mr. John Forbes, Hawick, N.B.

BRIDEGROOM.—This is a charming, mauve-coloured, rayless variety of great beauty and refinement. The flowers are of medium size, first-class form, and are, moreover, produced in great numbers. The habit is distinctly 'tufted,' and the plant should make a good bedder. XXX. Mr. John Forbes.

CARNATIONS.

From a single packet of seed supplied by Mr. Jas. Douglas, of Edenside, Great Bookham, Surrey, a nice batch of seedlings has been raised at Chiswick. An award of XXX was made to several of the most promising of these varieties. They were:—

FIREFLY.—A rich scarlet self of great substance and broad smooth petal.

ROSY MORN.—A large bright rose self with lacinated petals of good substance, and an exceptionally free bloomer.

CYGNET.—A pure white form of great merit, the flowers, although only of medium size, being in first-rate form, and the petals smooth, and of excellent substance.

BLACK DOUGLAS.—A rich, deep crimson self of great beauty, with petals round and flat, but with notched margins.

LADY PRIMROSE.—A bright primrose-yellow self, and an acquisition to this colour section.

GOLETTA.—A fine flaked variety, the ground colour being clear white, and the stripes of carmine-rose.

All the foregoing varieties have especially stout calyces which do not burst, and they are all very free flowerers, and, in fact, constitute good examples of a high type of border Carnation.

ANNUALS.

The trial of "Annuals" has been one of the most extensive trials at Chiswick this year, and its usefulness is not to be questioned, seeing how much we owe to the brilliancy and beauty of this class of easily grown plants. No fewer than 109 distinct lots have been forthcoming from various sources, and the committee had thus a variety of claims to investigate and satisfy.

LEPTOSIPHON DENSIFLORUS ROSEUS.—This pretty little plant is from 4 in. to 6 in. in height, of tufted habit, and with leaves arranged in dense terminal whorls, or pseudo whorls, upon the dwarf upright stems. The flowers are about a third of an inch in diameter and bright rosy-pink in colour. Award of Merit. Messrs. J. Veitch & Sons, Ltd., Chelsea.

CLARKIA ELEGANS ROSEA FLORE PLENO.—This is rather a tall growing *Clarkia*, the plants being fully 18 in. in height, and inclined to be straggling in habit. The showy, bright rose, double flowers are produced in long sparsely flowered racemes. XXX. Messrs. J. Veitch & Sons, Ltd.

GODETIA ROSEA ALBA.—Here we have a tall-growing and distinct-habited *Godetia*. The plants are from 15 in. to 18 in. in height, the flowers being solitary in the axils of the leaves. The flowers themselves are of medium size, bright pink in colour,

with a central basal zone of carmine, and very showy. XXX. Messrs. James Veitch & Sons, Limited.

GODETIA LA BELLE.—This variety is bushy in habit, and about 10 in. in height and very free flowering. The blooms exhibit a shade of rich crimson-rose, and are large relatively to the size of the plant. XXX. Messrs. J. Veitch & Sons, Ltd.

GODETIA WHITNEYI.—The plant is from 1 ft. to 15 in. in height, the flowers being of medium size, and rich crimson-lake in hue, tipped with rose, and with a central basal zone of the same hue. XXX. Messrs. J. Veitch & Sons, Ltd.

GODETIA WHITNEYI BRILLIANT COMPACTA.—The plant bearing the burden of this sufficiently cumbersome name is much like the type in growth, but is also rather dwarfed. The flowers are rich rosy-carmine in hue, with a central zone of white, thus being exceedingly showy. XXX. Messrs. J. Veitch & Sons, Ltd.

GODETIA BUTTERFLY.—This is a very strong growing form with large flowers of a pale pink shade, a large blotch of carmine being a feature of each petal. The margins of the petals are more or less lacinated. XXX. Messrs. J. Veitch & Sons, Ltd.

GODETIA FAIRY QUEEN.—Here we have a dwarf form not more than 6 in. in height, of very bushy habit, and with small flowers and leaves. The former are white, with a carmine blotch on each petal. This is a pretty, dwarf, bedding plant. XXX. Messrs. Watkins & Simpson, Essex Street, Strand, W.C.

GODETIA DUCHESS OF ALBANY.—This favourite variety has done well at Chiswick this year, and its huge trusses of pink-white flowers have been and are much in evidence. XXX. Messrs. Watkins & Simpson.

GODETIA GLORIOSA.—A bushy form not more than 10 in. in height, with deep crimson, medium-sized flowers, a mauve blotch being at the base of each segment. XXX. Messrs. Jas. Veitch & Sons, Ltd.

VISCARIA CARDINALIS FULGENS.—In this we have a very bright and floriferous form of a popular subject. The flowers are above average size, and rich cardinal in hue, shading to rose with age. XXX. Messrs. Watkins & Simpson.

ALYSSUM MARITIMUM MINIMUM.—It would be difficult to imagine a more perfect sample than this of the kind of plant that is required for covering the ground under taller growing subjects. It makes a dense carpet not more than 2 in. or 3 in. in depth, and flowers so profusely as almost to hide the foliage with the relatively large corymbs of pure white flowers. XXX. Messrs. R. Veitch & Son, Exeter.

CANDYTUFT ROSE CARDINAL.—In this we have one of the very best forms of the coloured Candytufts. The umbels and individual flowers are small, but as they are freely produced and the plant is of bushy and symmetrical habit, a capital effect is obtained by a mass. The colour, as the varietal name suggests, is a bright rosy cardinal. XXX. Messrs. Watkins & Simpson.

ESCHSCHOLTZIA MANDARIN.—Here the flowers, which are rather small, present a distinctly stellate appearance, due to the fact that each petal is folded longitudinally upon itself. The colour is rich orange in the interior of the flower, and chestnut-orange on the exterior. The plant is about a foot in height, bushy and free-flowering. XXX. Messrs. Watkins & Simpson.

GYPSOPHILA ELEGANS (pure white).—A pure white form of this handsome and useful Gypsophila. XXX. Messrs. Watkins & Simpson.

POPPY CARDINAL.—A handsome, double-flowered Poppy, from 18 in. to 2 ft. in height. The flowers are large, globular in shape, and fiery scarlet in colour, whilst the inner petals are very narrow, and recall the appearance of a Paeony. XXX. Messrs. Watkins & Simpson.

POPPY WHITE SWAN.—Another very fine double Poppy, with huge, globular, pure white heads. The plants are from 2 ft. 6 in. to 3 ft. in height. XXX. Messrs. Jas. Veitch & Sons, Ltd.

POPPY DANEBROG.—This is a very showy single Poppy, deep scarlet in colour, with a large white blotch at the base of the deeply lacinated segments. The height of the plant is from 18 in. to 2 ft. XXX. Messrs. Jas. Veitch & Sons, Ltd.

CANNA.

CANNA CHISWICK KING.—This is a new variety raised at Chiswick. The plant is about 2 ft. in height, and

thus is dwarf enough for any purpose. The spike is rather loose and few flowered, but the individual blooms are of high excellence, bright scarlet in colour with a decided flushing of orange. The segments too are broad and substantial. Award of Merit.

SWEET PEAS.

Mr. Henry Eckford, Wem, Shropshire, sent a number of new varieties of Sweet Peas for the opinion of the committee who awarded three marks (XXX) to each of them. The following are the varieties:—

FASCINATION.—A fine flower; standard mauve, wings and keel bluish purple.

COCCINEA.—A rosy scarlet self-coloured variety of great beauty.

DUKE OF WESTMINSTER.—A very deep purple self; very rich and fine.

SADIE BURPEE.—A magnificent pure white form of great merit. Each stalk is three-flowered.

DUCHESS OF WESTMINSTER.—Standard soft rose; wings creamy white flushed with rose—an exceedingly pretty combination of colours.

MRS. FITZGERALD.—A creamy-white flower, delicately veined and flushed with pink, and quite distinct from anything else.

SOCIETIES.

BROOKFIELD.—July 23rd.

The fourteenth annual exhibition of fruit, flowers, and vegetables, held by the Brookfield Society, took place on the 23rd ult. at Highgate, in a field kindly lent for the occasion by Mr. W. Burdett-Coutts, M.P. Twenty-two years ago the Baroness Burdett-Coutts provided the Highgate Rise Allotment Gardens with a view to encourage a love of horticulture amongst the working classes. On this occasion the exhibits from these allotments were both numerous and good (over 700 exhibits were staged), and must have been gratifying to the kindly heart of this philanthropic lady. The chief prize winners, with their several aggregates of prize monies, were:—Mr. C. Williams, £5 10s. 6d.; Mr. C. Parling, £4 6s. 2d.; Mr. T. R. Whiting, £3 2s.; Mr. E. Hibbert, £2 17s. 6d.; and Mr. C. Stone, £1 17s.

For the first time in the history of the society the Royal Horticultural Society offered a Bronze Medal for the most meritorious exhibit in the show. This prize fell to the lot of Mr. C. Chancy for a splendidly grown Fuchsia.

The several non-competitive exhibits added materially to the attractiveness of the show, the most important of these being a splendid stand of Sweet Peas contributed by Messrs. Wm. Cutbush & Son, of Highgate.

On Thursday, the 29th ult., the Baroness Burdett-Coutts presented the prizes to their respective winners at a meeting held at the St. Anne's Mission House. The owners of the best kept allotments also received their awards from the same gracious hands.

ST. GILES COTTAGE GARDEN SHOW.—July 28th.

The annual exhibition of this society took place on Thursday the 28th July, in the charming grounds of The Hon. Mark Rolle's residence, Stevenstone. Unfortunately the morning was showery and must have interfered with the attendance, though about noon it cleared and the sun shone out brilliantly during the rest of the day. The entries were numerous and the quality of all the exhibits uniformly excellent. The window plants were very creditably grown and the beautifully arranged baskets of cut flowers were greatly admired, while the vegetables, taken as a whole, were excellent for cottagers, who appear to take a very keen interest in the show. There was a strong competition in the latter classes, and the collections of vegetables were very good. There were also prizes for sewing, knitting, darning, laundry work, carving, etc., and quite on an extensive scale for a cottagers' show. The Hon. Mark Rolle (gardener, Mr. Gillies) kindly filled the centre of one tent with an excellent collection of flowering and foliage plants, nicely arranged, and which was much admired. The award of the judges, Mr. G. Eames, Heanton, Latchville, and J. Mayne, Bicton, were generally approved.

ABBEY PARK, LEICESTER.—August 1st and 2nd.

This annual show was held on the above date in the beautiful Abbey Park, which just now is looking well,

every department being well cared for. The various styles of bedding are splendidly carried out, and are the admiration of everyone. The entries were not up to the average, which was, no doubt, attributable to the alteration of the show to a day earlier than usual, which prevented many exhibitors living at a distance from competing. The attendance was very heavy, for nearly 30,000 people passed the turnstiles on the first day, and the money taken at the gates amounted to over £850.

The groups were good, the specimen plants fairly so, cut flowers made a grand display, and fruit and vegetables were excellent. The competition was, in most cases, very keen. Great credit is due to Mr. John Burn, the energetic secretary, for his capable management, for everything passed off satisfactorily. The weather was all that could be desired—ideal show weather, in fact.

OPEN CLASSES.

PLANTS.—The most tastefully-arranged group of plants, occupying 50 sq.-ft., was contributed by Mr. H. Rogers, Gipsy Lane, Leicester. Mr. H. Blake-way, of Rugby, was second. The last-named exhibitor scored in the classes for six stove and greenhouse plants (three foliage, and three flowering subjects), and six exotic Ferns. Mr. James Wright, Granby Street, Leicester, won for six tuberous Begonias, and Mr. H. Rogers, for six Coleuses, dissimilar.

CUT FLOWERS.—In the principal classes for Roses, Messrs. Harkness & Sons, Bedale, Yorks., carried all before them, for they won first prize in each of the following classes, and in every case they had magnificent stands of blooms:—Thirty-six and twenty-four distinct, of all sections; twelve Tea Roses, distinct; twelve H.P.'s of any variety; twelve Teas of any one variety; and last, but not least, for the best Rose in the show.

Carnations and Picotees were another special feature. Here Messrs. Thomson & Co., Sparkhill, Birmingham, were the chief winners, staging some grand blooms in the various competitions in which they entered. They were first for twelve Carnations, dissimilar, and twelve yellow Carnations, twelve Picotees, dissimilar.

Mr. J. G. Stretton, Sharwell, Rugby, had the winning exhibit of twenty-four blooms of tuberous Begonias.

The first award for eight distinct dishes of fruit went to Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby. Mr. Goodacre also won the Veitch memorial prize for the leading collection of fruit, and had, moreover, firsts for a Pineapple, two bunches of Black Hamburgh Grapes, two bunches of Muscat of Alexandria Grapes, a single dish of Nectarines, Figs, dessert Apples, Plums, and a green-fleshed Melon. Mr. J. Elphinstone, Shipley Hall Gardens, Derby, was another successful exhibitor in this section.

In the vegetable classes Mr. R. Shaw won many prizes, including firsts for the collection of twelve kinds of vegetables, six dishes of Potatoes, Broad Beans, Autumn-sown Onions, and Long Red Carrots.

AMATEURS.

The amateurs' exhibit of Roses formed a very noticeable feature. The Rev. J. H. Pemberton, Havering-atte-Bower, staged the premier lot of twenty-four blooms, distinct. The reverend gentleman also took pride of place in the smaller classes for eighteen and twelve blooms, distinct, Roses of all sections being admitted as in the first-mentioned class; also for six blooms of any one variety. First awards in their respective classes for cut Roses also fell to the lot of Mr. M. White, Leicester, for eighteen and twelve blooms, distinct; Mr. W. Bailey, Leicester, for six trusses, distinct; Mr. W. Upton for six Tea Roses of any one variety, and also for the same number of Tea or Noisette blooms dissimilar.

Mr. J. W. Barker sent the prettiest basket of cut flowers in the competition limited to cottagers.

In the cottagers' classes for vegetables of eight kinds Mr. R. Hoe was placed first. Mr. W. Lord, of Esher, won the special prize for a collection of six kinds offered by Messrs. Sutton & Sons, of Reading.

NON-COMPETITIVE EXHIBITS.

Mr. J. H. Goodacre set up a magnificent bank of Carnations and Sweet Peas, for which he deservedly received a Gold Medal.

Messrs. J. and W. Birkenhead, Sale, Manchester, had a fine lot of Ferns, both hardy and exotic. (Gold

Medal.) The Ichthemic Guano Company, Ipswich, had a tent all to themselves, and this they tastefully decorated with plants and cut flowers. (Gold Medal.)

Gold Medals were also awarded to Messrs. Wm. Cutbush & Son, Highgate, N., for a grand array of plants and cut flowers; and to Mrs. Ellis, of Knighton, Hayes, for Ferns.

Silver Medals were voted to Messrs. J. R. Pearson & Sons, Chilwell, Notts, for a collection of Gooseberries; to Messrs. Yarde & Co., Northampton, for Sweet Peas; Mrs. E. C. Carnall, Gipsy Lane, Leicester, for floral designs; Mr. Harry Rogers, Leicester, for stove and greenhouse plants; and Messrs. Harrison & Sons, Leicester, for cut flowers and vegetables.

NORTHAMPTONSHIRE HORTICULTURAL.—

August 1st and 2nd.

By kind permission of Earl Spencer, K.G., the seventeenth show of this society was opened on August Bank Holiday in the beautiful grounds of Althorpe House, Northampton. A capital exhibition was forthcoming, and the influx of visitors was heavy.

In the open classes Mr. J. Cypher, Cheltenham, carried off leading honours for twelve stove and greenhouse plants, showing grand specimens. Mr. W. Finch, Coventry, was second, and Mr. W. Vause, Leamington, third. The first prize for the central group of miscellaneous plants also went to Mr. J. Cypher, the second to Mr. W. Vause, and the third to Earl Spencer (gardener, Mr. S. Cole).

Messrs. J. Perkins & Son, Market Square, Northampton, staged the leading stand of twenty-four Roses, while the best twelve Tea Roses came from Messrs. T. Perkins & Sons, Drapery, Northampton. Mr. S. Mortimer, Rowledge, Farnham, Hants, scored for twenty-four Dahlias, and Mr. W. Vause obtained a first for twelve bunches of stove and greenhouse flowers.

Mr. H. Rogers, gardener to Lord Rendlesham, Rendlesham Park, Suffolk, won well merited honours for table decoration, Mr. J. Cypher taking second place.

In the "open" section of the schedule Mr. J. Dymock, gardener to B. Wentworth Vernon, Esq., Stoke Bruerne Park, won first prize with a capital collection of vegetables.

In the classes set apart for gentlemen's gardeners in the county of Northampton, Mr. J. Copson, gardener to Mrs. P. Phipps, Collingtree Grange, staged the best lot of six stove and greenhouse plants; Mr. J. B. Palmer, gardener to Mrs. R. Turner, Cliftonville, being second. Mr. J. Holland, gardener to Mr. F. Bostock, Springfield, scored for eight table plants, and Mr. W. Pearce, gardener to S. Lode, Esq., Floore, for exotic Ferns.

The first prize and the Royal Horticultural Society's Silver Medal, for a collection of fruit, was well won by Mr. S. Cole, who had a fine display. Mr. A. Child, gardener to H. A. Attenborough, Esq., Cateshy House, had the best black and also of white Grapes. Mr. S. Cole led for a Melon, and Mr. F. Bostock, for Peaches and Nectarines. Mr. F. G. Adnitt, Billing Road, Northampton, occupied the first places for early Apples and Pears.

The exhibits sent by amateur cultivators and cottagers were of a high order of merit throughout and spoke well for the condition of the small gardens in the county.

SPECIAL CLASSES.—In the class for a collection of vegetables, in which the prizes were offered by Messrs. Sutton & Sons, of Reading, Mr. J. Keightley, gardener to Sir Hereward Wake, Courtenhall, was first; Mr. J. Dymock, second; and Mr. S. Cole, third.

In another competition for a collection of vegetables, in which the awards were given by Messrs. Webb & Sons, Stourbridge, Mr. J. Dymock was first on the list. In a third competition for a collection of vegetables, Mr. Dymock also took pride of place, so that his great ability as a grower of vegetables was put beyond question.

The non-competitive exhibits were not numerous, but they were good what there were of them. Messrs. J. Perkins & Son sent a fine assortment of miscellaneous flowers and plants from their Billing Road Nurseries. Sweet Peas, Lilliums, and tuberous Begonias were special features of this group. The Ichthemic Guano Company, of Ipswich, showed

sample bottles of their manure. Messrs. Hinton Bros., of Warwick, contributed a meritorious collection of Sweet Peas. Messrs. T. Perkins & Sons likewise had a capital display of Sweet Peas, Carnations, and tuberous Begonias. They also showed the large white Goosberry Leveller.

ROYAL HORTICULTURAL.—August 9th.

THE finest feature of the meeting on Tuesday last was the large group of splendidly grown Pitcher Plants from Windsor. Hardy herbaceous plants, annuals, Gladioli, Carnations, Hollyhocks, Nephrolepis and stove and greenhouse plants were also in strong force. Hardy Water Lilies were shown in greater quantity than we have seen them before at any one meeting.

Orchids were poorly represented on this occasion as might be expected. Messrs. Hugh Low & Co., Bush Hill Park, Middlesex, exhibited the new hybrid *Cypripedium Olivia*, which had delicately light flowers and *Cattleya gaskelliana alba*. *Vanda (Stauroopsis) Batemanii* was exhibited by T. B. Hayward, Esq. (gardener, Mr. C. J. Salter), Woodhatch Lodge, Reigate. Mr. James Douglas, Edenside, Great Bookham, Surrey, staged *Dendrobium formosum Edenside* var., having flowers of wonderful size. Baron Schroder (gardener, Mr. H. Ballantine), The Dell, Egham, exhibited *Sohralia sanderiana*. G. W. Law Schofield, Esq., New Hall Hey, Manchester, exhibited *Odontoglossum crispum Lehmannii Schofield's* var., having a rich and handsomely marked lip.

On this occasion the Ferns sent by Mr. H. B. May, of Dyson's Lane Nurseries, Upper Edmonton, comprised a splendid representation of the genus *Nephrolepis*, no fewer than twenty-four forms being shown. A central and conspicuous feature was *N. pectinata*, of which there were some capital clumps massed upon the arms of a rustic tree stump. *N. exaltata*, *N. e. multiceps*, *N. e. furcans*, and *N. e. plumosa* were represented by exceptionally good specimens. Smaller plants of *N. rufescens tripinatifida*, *N. cordata compacta*, *N. Barterii*, *N. Duffii*, *N. pluma*, and *N. philippinense* were other notable forms. All the plants were in first-rate health. (Silver-Gilt Banksian Medal.)

Messrs. Wm. Paul & Son, Waltham Cross, Herts, had a showy group of cut spikes of Hollyhocks, which included some grand varieties, also herbaceous Phloxes and Pentstemons, and a large batch of cut blooms of *Yucca flaccida*. (Silver Flora Medal.)

The most imposing of the exhibits of plants or flowers was a large group, chiefly of foliage subjects set up by Mr. G. Kelf, gardener to Mrs. Ahbott, South Villa, Regent's Park, N.W. The outline of the group was three bold curves, and the plants, which all stood upon the floor, rose from very near the ground level in the front to a considerable height in the background, several tall Palms proving very effective. *Caladiums*, *Dracaenas*, *Acalyphas*, and Ferns were all tastefully and well employed, and the exhibit was really a very meritorious one. (Silver Gilt Banksian Medal.)

On the left-hand-side of the doorway a splendid group of *Campanula pyramidalis compacta*, in both white and blue forms, was set up by Mr. Geo. Wythes, Syon House Gardens, Brentford. A plant of the type was shown to illustrate the difference between it and the 'compact' variety, and from comparison it was evident that Mr. Wythes' variety has flowers of greater substance and wider petals, which reflex gracefully. A groundwork of Ferns gave a finish to this valuable contribution. (Silver Banksian Medal.)

Mr. Owen Thomas, gardener to Her Majesty the Queen, sent a nice collection of well pitched *Nepenthes*. The plants were elevated on stands above a groundwork of Maidenhair Fern, and comprised such elegant forms as *N. mastersiana*, *N. hookeriana*, *N. intermedia*, *N. mixta*, *N. dicksoniana*, *N. Morganiae*, *N. rafflesiana*, and *N. wrightiana*, all of them in splendid condition; also a few plants of *Acalypha Sanderi*, and the beautifully variegated *Ahutilon Swatzi*. (Silver Gilt Flora Medal.)

Messrs. Jas. Veitch & Sons, Ltd., Chelsea, showed sprays of *Cornus macrophylla* and *Pavia macrostachya*; also small plants of the small blue-berried *Coprosma acerosa*, and the showy *Eucryphia pinnatifolia*.

From Mr. S. Mortimer, Rowledge, Farnham, Hants, came a quantity of excellent blooms of Show

and Cactus Dahlias. Of the Cactus varieties Mrs. Wilson Nohle, Matchless, Chas. Woodbridge, Lady Penzance, Britannia, and Earl of Pembroke were the best, whilst Mrs. Morgan, Perfection, Jas. Cocker, Mrs. Mortimer, John Walker, and Queen of the Belgians were some of the leading show forms. (Silver Banksian Medal.)

Mr. J. Walker, Thame, Oxon, also had a lot of cut blooms of Show, Pompon and Cactus Dahlias, the flowers being very large and fine throughout. (Silver Banksian Medal.)

Messrs. Webb & Brand, Saffron Walden, sent three stands of flowers of named Hollyhocks, amongst which *Delicata*, *Sunset* and *Rose Queen* were the leading sorts. (Bronze Flora Medal.)

A comprehensive display of cut hardy flowers came from Messrs. W. Cuthush & Son, Highgate, N. Carnations, Sweet Peas and *Aconitum Napellus* bicolor were the brightest subjects here. (Bronze Banksian Medal.)

A group of choice cut hardy flowers was contributed by Mr. M. Pritchard, Christchurch, Hants. They included the pretty *Montbretia rosea*, *M. Soliel Couchant*, *M. Pottii grandiflora*, *Helianthus multiflorus maximus*, and *Echinops sphaerocephala* in first-class order. (Silver Banksian Medal.)

Messrs. Jas. Veitch & Sons, Limited, sent a charming group of annuals in competition for the Sherwood Cup. Shirley Poppies, *Coreopses*, *Godecias*, double Scabiouses, and purple Sweet Sultan were particularly showy here.

A large exhibit of cut hardy flowers which came from Messrs. Kelway & Son, Langport, Somerset, occupied one side of a long table running the whole length of the exhibition hall. The principal feature was a grand array of cut spikes of Gladioli of which fully a hundred varieties were on view. *Cacus*, *Alhano*, *Leonard Kelway*, *Gallia*, *Mrs. D'Ombra*, *Sir H. D. Wolff*, *Remus*, *Menabrea*, *Marengo*, *Prince Edward of Saxe Weimar*, and *Wm. Roupell*, were some of the best of these. *Gaillardias* and *Eryngiums* were also well shown. (Silver Flora Medal.)

The group of cut hardy flowers coming from Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester, was, as usual, replete with interest. Lilliums formed a notable feature of this exhibit, and of these the noble *L. auratum Wittei* was largely in evidence. The pretty *L. chalconicum*, *L. Batemanniæ*, *L. thunbergianum venustum*, *Montbretia Pottii* and several fine forms of Gladioli were all noteworthy. (Silver Banksian Medal.)

Mr. Jas. Douglas, Edenside, Great Bookham, Surrey, had a group of flowers of new Carnations raised by himself and Mr. Martin Smith. Miss Alice Mills, Hardii, Mr. Nigel, Queen Bess, and Queen of Scots, were some of the best. Mr. Owen Thomas sent a leaf and bloom of the white *Nelumbium nuciferum speciosum*. Messrs. Kelway & Son had the variegated *Antirrhinum majus kelwayanum*. Messrs. F. Sander & Co., St. Albans, showed the variegated *Furcroea watsoniana*. A seedling, golden Yew, named Waltham Golden, came from Messrs. Wm. Paul & Son. A plant of the golden Irish Yew was shown side by side with it for comparison.

A Silver Banksian Medal went to Mr. Jas. Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton, for a collection of flowers of twenty-four varieties of Water Lilies grown in the open air. A noticeable variety here was the charming *Nymphaea stellata*.

A Bronze Flora Medal was voted to W. Robinson, Esq., 63, Lincoln's Inn Fields, W.C., for another large tray of Water Lilies; whilst a Silver Flora Medal went to A. B. Freeman-Mitford, Esq., Batsford Park, Moreton-in-the-Marsh, for two large pans of fine samples of the same chaste flowers. A group of flowers of border Carnations, sent by Mr. Allan, gardener to Lord Hillingdon, Hillingdon Court, Uxbridge, obtained a Bronze Banksian Medal.

At a meeting of the Fruit and Vegetable Committee, a Silver Knightian Medal was awarded to Mr. G. Miller, gardener to Lord Foley, Ruxley Lodge, Esher, for a capital collection of fruit, which comprised Melons, Peaches, Apricots, Apples, Plums, Cherries and Gooseberries, all of high quality.

A Silver Banksian Medal went to Messrs. T. Rivers & Sons, Sawbridgeworth, for trays of Early Rivers' Nectarines, and several grand varieties of Plums and Cherries.

Mr. Kelf demonstrated beyond question that he

could grow fruit as well as plants by staging an excellent collection of the former. Royal George Peaches, Grapes and Plums in variety were conspicuous by their excellent finish. A Silver-Gilt Knightian Medal was voted.

Messrs. Jas. Veitch & Sons, Ltd., had a large and highly meritorious exhibit of Gooseberries and Currants. Of the former there were a hundred dishes in as many varieties. Whinham's Industry, Langley Gage, Early Green Hairy, Champagne, Ironmonger, Langley Beauty, were some of the choicest of the dessert varieties, and these were in splendid condition, as also were such larger berried sorts as Legerdemain, Great Eastern, and Red Robin. There were twenty-five dishes of Currants shown, and the red varieties were undeniably good. Fruiting sprays of Currants were also on view. A Gold Medal was awarded this fine exhibit.

Messrs. Harrison & Sons, Leicester, sent a collection of Broad Beans. Messrs. Damman & Co., Naples, Italy, sent dwarf French Beans; and Mr. Wm. Carmichael, 14, Pitt Street, Edinburgh, had a dish of the new Strawberry Britannia.

A NOVEL SALAD.

A "BIRD'S NEST SALAD" is the latest addition to the menu of a fashionable dinner table. The white heart leaves of Lettuces are so disposed as to represent the nest itself, the requisite hollowness being obtained by curling the leaves. Several nests go to fill one big salad bowl. In each nest are placed five little speckled "eggs," made of cream cheese rolled into shape, and then sprinkled with finely-chopped Parsley. This is a quaint and rather pretty conceit.

QUESTIONS AND ANSWERS.

Will our friends who send us newspapers be so good mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Mushrooms Bored with Insects.—W. W.: In the neighbourhood of London, at least, it is a very common complaint for Mushrooms indoors to be infested with the grubs of a fly. Yours were bored not only in the stem but all through the top or edible portion. Unfortunately there is no cure for it, because the grubs are amply protected in the interior of the Mushrooms, as you will find by breaking one open. The grubs are small, white, active creatures. You will have to leave off growing Mushrooms indoors, at least, for a year or two during the summer months. You may make up fresh beds again in the same place next autumn without fear of being troubled with the insects. In the meantime, you might make up a bed or two of Mushrooms in the open air, under a north aspect wall. This can be done by taking out the soil and putting in a layer of horse droppings about a foot deep. Tread firmly, put in the spawn, and cover with a thin layer of soil. Some good Mushrooms are obtained in this way, when it is impossible to get them clean indoors. All the Mushrooms unfit for food ought to be burned to destroy the grubs.

Crucifer with Shrubby Thick Stems.—Sigma: The plant is *Raphanus Raphanistrum*, not quite typical of the plant as seen growing in our cultivated fields, though it is easily matched by Continental specimens. Usually the pods of our plant are not so distinctly jointed, this feature being more characteristic of *R. maritimus*. The latter has yellow flowers, and is biennial in duration with usually more divided radical leaves, but the biennial character is, perhaps, its most reliable point, though all are liable to be broken down by intermediate forms growing under different conditions. The mild and equable character of the Channel Islands is conducive to longevity and the shrubby character of which you speak.

A Beech with two Forms of Leaves.—A. C.: The deeply divided leaves are those of the cut-leaved Beech (*Fagus sylvatica laciniata*). It was most probably grafted or budded upon the common form of the Beech when young. The fact that the tree now carries two forms of leaves must be due to either one or other of two causes. The broad leaves may be upon branches springing from the stock, or they are the result of the cut-leaved form reverting to the original. You do not mention whether the tree is or is not budded or grafted; but you may depend upon it that such is the case. You should again examine the tree and ascertain whether there be any evidence of its having been grafted by a swelling or otherwise upon any part of the trunk. You could then determine whether or not the branches bearing the

broad leaves arise from the stock; if not, it must be a case of reversion, though we have never yet noticed it in the Beech. The latter would be a very interesting case, and we should be pleased to know what you make of it.

Groups of Cactus Dahlias.—William S. Watson: The schedule is rather loosely worded, but we should say that the common sense view of the matter would be that six and not eighteen are wanted, though the wording of the schedule might leave it open for the latter number. Instead of saying "six groups Cactus Dahlias, varieties, three in the group," we should have made it read "six varieties of Cactus Dahlias, three blooms in the group" (or bunch). If you were to put three varieties of Cactus Dahlias in each bunch it would give a mixed and bizarre effect; whereas if you put three blooms of one variety in a bunch there would be a more harmonising and effective display. We should say that this is really what is meant, and what we should do under the circumstances, and protest afterwards as to the wording of the schedule if the judges allow eighteen varieties to pass muster.

Geraniums and Pelargoniums.—W. M.: The schedule of your society must be very loosely worded even if we are to take the popular meaning; but we do not consider that show Pelargoniums would pass muster for zonals. We should take it for granted that the "best two Geraniums" would mean some or any variety of the zonal Pelargonium and think that is what is meant, from what we have seen or heard of the application of the word "Geranium." We should like, however, that gardeners and schedule makers would be a little more definite. A Geranium is quite distinct from any Pelargonium, and most of the Geraniums are hardy border flowers. Vesuvius, for instance, is a variety of Pelargonium zonale. The show Pelargoniums, as well as the fancies, have all been raised from *P. cucullatum*; the Ivy-leaved section from *P. peltatum*, &c.

Prices of Currants and Gooseberries.—W. M.: The half-seive of Red Currants at 5s. is the quotation we had from Covent Garden, so that we cannot dispute it. Half a seive of Red Currants weighs 12 lbs. That was the average wholesale price quoted on August 3rd. Some might have sold for less, some for more, according to the quality of the sample and the demand. Nothing is definite about the prices obtainable on any given day, so that only an average can be given. A half-seive of Gooseberries is 14 lbs., and the quotation for August 3rd was 2s. 6d. to 3s. per half-seive. On August 3rd, 1897, the price quoted for Red Currants was 4s. to 4s. 6d.; for Gooseberries 3s. to 4s., likewise per half-seive. On the same day Black Currants were quoted at 8s. per half-seive. These items for last year were furnished by a grower at some distance from London. The Gooseberries were then dearer than this year, but as the season was earlier, they must have been scarcer; hence the higher price. You state that the half-seive for different fruits in Glasgow is 24 lbs. and 28 lbs.; but that is probably a slip for whole seive, which would be on a par with Covent Garden.

Strawberries Certificated.—J. H. F.: As far as we have been able to ascertain the Award of Merit you mention is all that has been accorded to Strawberries at Chiswick this year. An Award of Merit has also been granted to a variety named Lady Sheffield, exhibited at the Drill Hall at the meeting previous to the last one of the R.H.S. A First-class Certificate was also awarded to Veitch's Prolific at a previous meeting at the Drill Hall, this being given chiefly on the score of prolific fruiting as expressed by the name and for flavour combined. The fellows are admitted to the gardens free every week-day, and the public can gain admission during the same days of the week at a nominal charge of 6d. The more we look into the matter the more apparent it becomes that soil and climate have a great influence upon the bearing of any particular variety and also upon flavour and other good points of a Strawberry. Even in different counties in the south-western and midland parts of England, the same varieties behave very differently. In some localities they do excellently, and in other parts with a different climate or rainfall they are practically a failure through the plants going blind, that is, in failing to produce flower stems. Strawberries are particularly troublesome subjects both in this country and in America, the plants often proving either male or female in the latter country, though their failure in some or other part of this country is entirely from some other cause, rather difficult to ascertain. The same might be said of Raspberries, Apples and Pears, though only in a lesser degree.

Names of Plants.—Plantarian; 1, *Rhoeo discolor*, often called *Tradescandia discolor* in gardens; 2, *Pteris cretica*; 3, *Fuchsia Riccartoni*; 4, *Escallonia punctata*; 5, *Escallonia pulverulenta*; 6, *Adiantum Capillus-Veneris* var.; 7, *Adiantum cuneatum*; 8, *Adiantum formosum*.—H.G.: 1, *Odontoglossum luteo-purpureum*; 2, *Odontoglossum Pescatorei*; 3, *Masdevallia harricana*; 4, *Dendrobium moschatum*.—A.L.G.: 1, *Veronica longifolia*; 2, *Veronica spicata amoena*; 3, *Veronica longifolia rosea*; 4, *Campanula rhomboidalis*; 5, *Corydalis lutea*; 6, *Lathyrus platyphyllos albus*.—T.B.: 1, *Polystichum aculeatum*; 2, *Polypodium Phegopteris*; 3, *Poly-*

podium Dryopteris.—H.C.: 1, *Daboecia polifolia*; 2, *Andromeda polifolia*; 3, *Genista tinctoria elata*.—E.C.H.D.: 1, *Mentha aquatica hirsuta*; 2, *Calamintha officinalis*; 3, *Apium nodiflorum*.

Communications Received.—W. Swan.—R. G. W.—A. Wright.—J. Mayne.—A. O.—James Good.—Ludwig Möller.—Albert Upstone.—M. Todd.—W. B. Hartland.—Hamish W. Russell.—Sigma (next week).—G. E. T.—Arma.—Conflans.—W. Lawrance.—Frank P.—Y.—Sweet Brier.

TRADE CATALOGUES RECEIVED.

DICKSONS & Co., 1, Waterloo Place, Edinburgh.—Flower Roots.
JOHN PEED & SONS, West Norwood, London, S.E.—Peed's Bulb Catalogue.
SUTTON & SONS, Reading.—Sutton's Bulbs.

COVENT GARDEN MARKET.

August 9th, 1898.

| FRUIT.—AVERAGE WHOLESALE PRICES. | | | |
|----------------------------------|-------|-------|---|
| | s. d. | s. d. | s. d. s. d. |
| Apples ... per bushel | 0 0 | 0 0 | Red Currants, per half sieve |
| Cobbs | 0 0 | 0 0 | per 100 lbs. |
| Grapes, per lb. | 1 6 | 3 6 | Cherries, per half sieve 4 0 9 6 |
| Pine-apples | | | Raspberries, per cwt. 40 0 |
| —St. Michael's each | 2 6 | 7 6 | Ripe Gooseberries, per half sieve 1 3 1 6 |
| Strawberries per lb. | | | |
| Black Currants, per half sieve | 5 6 | | |

| VEGETABLES.—AVERAGE WHOLESALE PRICES. | | | |
|---------------------------------------|-------|-------|-------------------------------|
| | s. d. | s. d. | s. d. s. d. |
| Artichokes Globe doz. | 2 0 | 4 0 | Herbs per bunch 0 2 |
| Asparagus, per bundle | 3 0 | 8 0 | Horse Radish, bundle 1 0 2 0 |
| Beans, French, per lb. | 0 9 | 1 6 | Letnecs ... per dozen 1 3 1 6 |
| Beet..... per dozen | 1 0 | | Mushrooms, p. basket 1 0 1 6 |
| Brussels Sprouts per half sieve | 1 0 | 1 6 | Onions..... per bunch 0 4 0 6 |
| Cabbages ... per doz. | 1 0 | 1 3 | Parsley ... per bunch 0 3 |
| Carrots ... per bunch | 0 3 | | Radishes... per dozen 1 0 1 3 |
| Caniflowers..... doz. | 2 0 | 3 0 | Seakale... per basket 1 6 2 0 |
| Celery..... per bundle | 1 0 | 1 6 | Small salad, p. nnnet 0 4 |
| Cucumbers per doz. | 2 6 | 3 6 | Spinach per bushel 2 0 3 0 |
| Endive, French, doz. | 1 6 | 2 0 | Tomatos..... per lb. 0 6 1 0 |
| | | | Turnips ... per bun. 0 3 |

| CUT FLOWERS.—AVERAGE WHOLESALE PRICES. | | | |
|--|-------|-------|--|
| | s. d. | s. d. | s. d. s. d. |
| Aium Lilies, 12 bims. | 3 0 | 4 0 | Mardenbar Fern, 12 b. 4 0 6 0 |
| Asparagus Fern, bun. | 2 0 | 3 0 | Mignonette, 12 bun. 1 6 3 0 |
| Bonvardias, per bun. | 0 6 | 0 8 | Orchids, doz. blooms 1 0 8 0 |
| Carnations doz. bims. | 1 0 | 3 0 | Pelargoniums, 12 bun. 3 0 6 0 |
| doz. (bun. 4 0) | 8 0 | | Red Roses, per doz. 1 0 1 0 |
| Enoharis ... per doz. | 2 0 | 4 0 | Roses (Indoor), doz. 0 6 1 0 |
| Gardenias ... per doz. | 1 0 | 3 0 | Tea, white, doz. 1 0 2 0 |
| Geranium, scarlet, doz. bunches | 3 0 | 6 0 | Perle 1 0 2 0 |
| Lilium longiflorum per doz. | 3 0 | 4 0 | Safrano 1 0 2 0 |
| Lily of the Valley doz. sprays | 1 0 | 2 0 | (English), Pink Roses, doz. 1 0 2 0 |
| Merguerites, 12 bun. | 1 6 | 3 0 | Smilax, per bunch ... 1 6 2 0 |
| | | | Tuberoses, doz. blooms ... 0 6 1 0 |

| PLANTS IN POTS.—AVERAGE WHOLESALE PRICES. | | | |
|---|-------|-------|-----------------------------------|
| | s. d. | s. d. | s. d. s. d. |
| Arbor Vitae, per doz. | 12 0 | 36 0 | Hydrangeas, per doz. 8 0 10 0 |
| Aspidistra, doz..... | 18 0 | 36 0 | Ivy Geraniums, per doz. 4 0 6 0 |
| specimen 5 0 | 10 0 | | Lilium Harrissii, per pot 1 6 2 0 |
| Calceolarias, per doz. | 4 0 | 6 0 | Lycopodiums, doz. 3 0 4 0 |
| Coleus, per doz. | 3 0 | 0 | Lobellias, per doz. ... 3 0 5 0 |
| Dracaena, various, per doz. | 12 0 | 30 0 | Marguerite Daisy doz. 4 0 9 0 |
| Dracaena viridis, doz. | 9 0 | 18 0 | Mignonette, per doz. 4 0 6 0 |
| Euonymus, var. doz. | 6 0 | 18 0 | Myrtles, doz. 6 0 9 0 |
| Evergreens, invar. doz. | 6 0 | 24 0 | Palms in variety, each 1 0 15 0 |
| Ferns, invar., per doz. | 4 0 | 12 0 | Palms, specimen ... 21 0 63 0 |
| Ferns, small, per 100 | 4 0 | 6 0 | Pelargoniums ... 8 0 10 0 |
| Ficus elastica, each | 1 0 | 5 0 | Rhodanthe... per doz. 3 0 4 0 |
| Foliage Plants, var., eaob | 1 0 | 5 0 | Scarlets per doz 3 0 4 0 |
| Fuchsia, per doz..... | 5 0 | 8 0 | Spiraea, per doz.... 6 0 9 0 |
| Heliotrope, per dozen | 4 0 | 6 0 | |

INDEX TO ADVERTISEMENTS.

| | |
|---------------------------------|------------------------------|
| Bulbs. | W. Richardson & Co.785 |
| C. G. Van Tubergen | J. Weeks & Co., Ltd.785 |
| Sutton & Sons | |
| J. Veitch & Sons, Ltd.787 | |
| Catalogues. | |
| Barr & Sons | 785 |
| Bunyard & Co. | 785 |
| Dobbie & Co. | 785 |
| W. B. Hartland | 785 |
| Kelway & Son | 785 |
| J. Peed & Sons | 786 |
| Simpson & Son | 786 |
| Sutton & Sons | 787 |
| Chrysanthemums. | |
| Devon Nursery | 785 |
| Florists' Flowers. | |
| J. Douglas | 785 |
| Kelway & Son | 785 |
| R. Owen | 785 |
| J. Peed & Sons | 786 |
| Flower Pots. | |
| Sankey & Sons, Ltd. | 799 |
| Fruit Trees. | |
| G. Bunyard & Co. | 785 |
| Garden Sundries, &c. | |
| J. Arnold | 785 |
| Eyoson Coal & Coke Co. | 785 |
| Fowler's Lawn Sand | 786 |
| Hirst, Brooke & Hirst. | 785 |
| A. Outram | 799 |
| Porter's Stakes | 799 |
| H. G. Smyth | 786 |
| Summer Cloud | 799 |
| Heating Apparatus. | |
| W. Cooper, Limited | 786 |
| Richardson & Co. | 785 |
| Thames Bank Iron Co | 785 |
| Horticultural Builders. | |
| J. Boyd & Sons | 785 |
| W. Cooper, Ltd. | 786 |
| J. Gray | 785 |
| Hose. | |
| F. Reddaway & Co., Ltd. | 800 |
| Insecticides. | |
| Exors. R. Campbell | 800 |
| Gishurst Compond | 785 |
| G. H. Richards | 786 |
| Manures. | |
| Anglo Continental Guano | 785 |
| C. Beeson | 785 |
| Chemical Union | 785 |
| Clay & Son | 800 |
| W. Colchester | 800 |
| Meggitt's | 785 |
| W. Thomson & Sons | 786 |
| Miscellaneous. | |
| Frosteen | 800 |
| Gishurstine | 785 |
| Smyth's Baskets | 785 |
| Netting. | |
| A. Potter | 785 |
| Orchids. | |
| J. Cypber | 786 |
| P. McArthur | 786 |
| F. Sander & Co | 785 |
| Stanley-Mobbs & Asbton | 785 |
| Publications. | |
| Darlington | 799 |
| GARDENING WORLD | 799 |
| Ogilvie | 799 |
| Seeds. | |
| Simpson & Son | 785 |
| Webb & Sons | 786 |
| Shows. | |
| 799 | |
| Strawberries. | |
| Bunyard & Co. | 786 |
| Laxton Bros. | 785 |
| Tents. | |
| A. Potter | 786 |

NEW HINTS
— FOR —
FRUIT GROWERS.

"A Year's Work on a Kent Fruit Farm."
1/- Post Free from the Publishers,
GEO. BUNYARD & CO., Maidstone.

SEEDLING STRAWBERRIES.

- 1. QUEEN OF DENMARK.**—Prolific bearer, medium size, unsurpassed in flavour.
 - 2. RICHARD GILBERT.**—Large in size, fine flavour, unsurpassed for market purposes; awarded a First-class Certificate R.H. Society, August 3rd.
 - 3. BRITANNIA.**—To be sent out for the first time, fruit medium size, delicious flavour, and the latest of all my seedlings; a great acquisition.
- The above three kinds are all standard kinds.
Queen of Denmark, £1 per 100; Richard Gilbert, £1 per 100; Britannia (new), £3 per 100.
Cheaper to the Trade.

William Carmichael, 14, Pitt Street, Edinburgh.

ORCHIDS.

Clean Healthy Plants at Low Prices.
Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

GLOXINIAS FINEST MEDAL COLLECTION
* IN THE WORLD. *
Send for CATALOGUE to
JOHN PEED & SONS, West Norwood, London

The Royal Nurseries, Maidstone, Kent.

GEORGE BUNYARD & CO.,

Are now booking orders for early delivery of the very best
NEW AND OLD STRAWBERRIES.
For crop 1899, or for forcing.
They offer the largest stock and the best plants in the trade.
Change of stock pays.
Catalogue of Strawberries and Summer Fruits now ready.

Caladiums FINEST COLLECTION
in the World. We make
a speciality of CALA-
DIUMS. Gold Medals
Manchester & Leicester.
Silver Cup, R.H.S., &c.
Satisfaction guaranteed. JOHN PEED AND SONS,
West Norwood, London.

BRITISH ORCHIDS

BY A. D. WEBSTER.

Author of "Hardy Ornamental Flowering Trees, and Shrubs."
"Hardy Conifers."
An exhaustive description of every species and variety,
with Chapters on Cultivation, Fertilization, &c., together with
an ILLUSTRATION of each species.
Second and enlarged edition. Demy 8vo., cloth gilt, 5/-.
London—J. S. VIRTUE & Co., Ltd., 26, Ivy Lane, E.C.

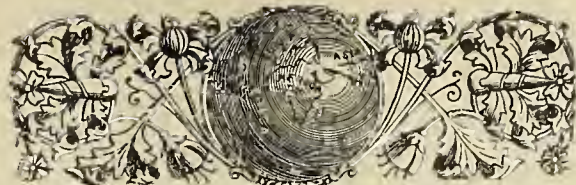
RETARDED LILY OF THE VALLEY CROWNS.

Headquarters at Dersingham.

For prices &c., apply to—

T. JANNOCH,

Lily Nursery, Dersingham, King's Lynn, Norfolk.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, AUGUST 20th, 1898.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, August 23rd.—R.H.S. Show and committees at Drill Hall, Westminster, S.W.
THURSDAY, August 25th.—Shows at Wickersley and Boston.
FRIDAY, August 26th.—Show by R.H.S. of Ireland. Forfar Show (2 days).
SATURDAY, August 27th.—Falkirk Show.

GARDENS AND THE DROUGHT.—We are passing through a season of great surprises in the matter of climate; and no industry is sooner or more extensively affected by it than gardening. Early in the year and up to the end of February the weather was abnormally mild, with the result that many things in the open ground, both trees and soft wooded subjects, were much further advanced than desirable. Then followed a succession of cold and ungenial weather that continued more or less intermittently till well into June. Many things suffered in March and April to an extent from which they never fully recovered, including such things as Carnations and Roses, the latter suffering most of all in May. During the latter month and June, Strawberries were considerably injured by frosty nights, and cold ungenial winds, particularly the latter. The summer bedding plants suffered so much from the check, that many of them lost their best leaves, and besides being late in making a display, such things as Coleus remained in a naked and unattractive condition for weeks together, or never made a decent display at all.

As summer advanced great and sudden fluctuations of temperature continued at intervals, thus militating against the success of many things, by no means tender. It may afford some consolation to those concerned to know that similarly ungenial conditions have prevailed not merely in the south, but all over Britain. The early part of the season was more particularly notable for cold days and nights, and latterly for heat and drought, so much so that the crops which were late in June now promise to be considerably earlier than was anticipated. Italy and some other parts of the Continent, notwithstanding their supposed sunny skies and balmy nights, have had their share of climatic vicissitudes. The heat about the lakes of Como, Italy, has been excessive, but accompanied by violent thunderstorms and hail. Heat and storms have been equally excessive and violent at Naples, doing untold damage to the crops. Over the southern counties of England there has been a culmination of extremes, all within the space of a week or eight days. On the 7th inst., farmers and gardeners alike were rejoiced at the beneficial rainfall, which continued from 8 a.m. or a little later till nearly 5 o'clock in the afternoon. There was an absence of wind, and rain fell steadily and perpendicularly all day, but it was accompanied by a densely overcast sky and low temperature, so that the rainfall was the only blessing upon which we could count. On the following day (8th inst.) the lowest temperature in the shade was 45° and the

highest 54°, so that those not engaged in active work felt the need of a great coat, while fires were lighted in many dwelling houses, as well as the House of Commons. From that day till the 15th inst. the temperature kept rising rapidly, till it culminated in 85° in the shade, the minimum in the shade during the same day being 65°. Thus in the course of eight days there was a jump of 20° between the two minimum temperatures, and 31° between the two highest. In London itself the extremes are more severely felt than in the country, where a more or less perceptible breeze makes itself felt.

All the same the breeze is more conducive to the welfare of the people, gardeners included, than it is to plants in the open ground exposed to the full blaze of the sun all day, and to a high temperature at night. Even a heavy downfall would have been an advantage, but that has not been general for many days past. As far as Strawberries and bush fruits were concerned neither market nor private gardeners required rain; and such green crops as are already harvested give gardeners no concern; but the winter crops have yet to be established. Late sowings of Peas and French Beans, as well as other late summer crops, have yet to give an account of themselves. The flower garden on many dry soils, such as gravelly sandy, and chalky formations, require constant attention in the matter of watering; and in many establishments this has already become a problem. Apart from the labour attached to it all, there is the difficulty in getting water; for many of the wells and ponds or pools upon which gardeners have hitherto depended have dried up, or are almost drained of the last drop of their contents. This, of course, is due as much to the shortage of the annual rainfall as to the severity of the recent spell of drought. Even the steady rainfall of the 7th inst. did not penetrate the thirsty soil very deeply; while thunderstorms are often as productive of damage as of advantage, because the moisture runs away by the surface into the nearest drain or ditch, often washing away much of the soil with it.

The frequent recurrence of drought during the past decade might well impress upon owners of estates and gardeners the necessity of making more adequate provision against a deficiency in the rainfall, if they desire to have their gardens up to the standard of efficiency, or even capable of giving a satisfactory return for the labour and money otherwise expended upon them. Besides having sufficient work upon their hands in all ordinary seasons, gardeners have all this watering in addition; but when the pond or the pump fails it is impossible for many of them either to keep the flower garden gay, or the kitchen garden well stocked with vegetables. Means should be taken to ensure an adequate supply of water for all the more important garden crops at least, from an unfailing source. It would be possible in many establishments to make provision for irrigating certain parts of the garden, where the natural fall of the ground makes it possible to bring the water purely by gravitation or otherwise. A more recent innovation from America, and which has even been successfully conducted in this country, is the irrigation of important crops, such as Strawberries, by means of perforated pipes laid beneath the surface of the soil and between the rows of plants. Water applied on the surface has the ill effect afterwards of causing the surface to become baked and thus lose almost as much as it gains. Underground irrigation does not produce this result, and the water applied does not readily escape by the surface, because that is or should be covered by a non-conductive layer of dry soil. Gardeners might try this with advantage for various crops.

EDEN TENT.

6 ft. square.



A WORK OF ART!

For gardens, lawns, tennis and cricket grounds. Made from artistic striped tent canvas. No CENTRE POLE, allowing whole of interior to be used.
Complete with framework, lines, pegs, mallet and bag,
£1 17s. 6d. each.
If made with awning 10s. extra.
Carriage paid to purchaser's residence.
Lists, testimonials, and samples free.

A. POTTER, Tent Works, WOLVERHAMPTON.
Make to the Queen and Prince of Wales.

Royal Horticultural Society.—The next Fruit and Floral meeting of the Royal Horticultural Society will be held on Tuesday, August 23rd, in the Drill Hall, St. James Street, Westminster, 1.5 p.m. At 3 o'clock a lecture on "Perpetual Fruiting Strawberries" will be given by Monsieur Henry de Vilmorin.

A Vegetarian Experiment.—An orphanage is to be founded in Berlin, to be carried on strictly on vegetarian principles, for the purpose of settling the dispute as to the nutritive capacity of a vegetarian diet, by making a start at an early age. For this purpose a sum of money was left by Dr. Baron, late Professor of Jurisprudence in Bonn.

Royal Horticultural Society of Ireland—Final arrangements have been made for the show of this society to be held in Merrion Square on the 26th inst. Their Excellencies the Lord Lieutenant and the Countess Cadogan have intimated their intention to be present at the show in the afternoon. The band of the 1st Dragoon Guards will play during the afternoon and evening.

Rapid Growth of Potatoes.—"It's dreadfully queer," said the housewife, "that the Potatoes you bring should be so much bigger on the top of the basket than they are at the bottom." "Well mum," said the honest farmer, "it comes about this way. P'taters is growin' so fast right now, that by the time I get a basketful dug the last ones is ever so much bigger than the fust ones."

Syndical Chamber of Belgian Horticulturists.—The monthly meeting of this society was held in the Casino, Ghent, on the 7th inst., when the jury awarded Certificates of Merit for *Odontoglossum Adrianae* (crispum × hunnewellianum) var. M. Verdouck, exhibited by M. Maurice Verdouck; and to *Cyrtostachis Rendah*, shown by M. L. De Smet-Duvivier (with unanimity). At the same meeting Honourable Mention for culture was accorded to *Aralia kerchoveana*, presented by M. Ad. Alloncius; likewise an Honourable Mention for botany was given to *Selaginella proniflora*, presented by M. L. De Smet-Duvivier.

Shirley Gardeners' Mutual Improvement Association.—The monthly meeting of the above society was held at the Parish Room, Shirley, Southampton, on Monday evening, 15th inst., Mr. W. F. Mayoss presiding over a rather thin attendance of the members. J. H. Aldridge, Esq., M.D., J.P., gave a most interesting and useful lecture on "Farm and Garden Insects and their Relation to Flowers and Crops." With the aid of lantern slides the lecturer was able to give the life history of those insects with which he dealt, and also to make his lecture very interesting. Some hints were also given as to the best time to destroy some of these pests, and the best means to attain that end. Mr. R. Beck assisted with a collection of beetles. On the conclusion of the lecture a hearty vote of thanks was accorded to the doctor, who expressed the pleasure it had afforded him to give the lecture. A vote of thanks was also given to the exhibitors for the display of fruits and flowers, with which they had brightened the room, and a vote of thanks to the chairman closed the meeting.

Phoenix Park, Dublin.—This splendid park, in addition to its miles of roads and turf rides, has features in its bedding that are specially worthy of a visit of all horticulturalists. Although not extensive in this department the arrangements are of a varied and interesting character; the bed of succulents in the centre of which stands the statue of George William Frederick, seventh Earl of Carlisle, is exceedingly pretty, the large fleshy limbs of many of the species utilised giving it a unique appearance. Begonias make a brave show; *Mme. O. Larmarke*, scarlet, proves a capital bedder for its free blooming qualities; *B. superba* is another fine scarlet with flowers of medium size and of good substance. Standard Heliotropes, some three feet in height, with stems over an inch in diameter, show that they have been carefully tended for a number of years, and give a fine effect, standing well above the dwarfer flowers of more brilliant colouring. The rock garden with its pools of water, and Palms that appear to have withstood the elements of many winters are well worthy of a visit to all lovers of nature. —R. G. W.

The Oaks, of Magdalen, Oxford, that Macaulay lauded so highly, proved to be Elms upon casual inspection.

Kew Notes.—Gentleman, showing his friends round: "This is the Holy Anna Plant" (Oleander). Lady, pointing to *Drosera rotundifolia*: "This is the Sensitive Plant."—After a pause: "Have you been into the wood house." (She meant Wood Museum.) —Patterson.

Tintern Abbey.—This fine old abbey and attached estate has been nominally in the market for some little time, but the Marquis of Worcester is hanging back from setting a price upon it. The proposal has been mooted that part of this fine Monmouthshire estate should be purchased for public use, but the proposal has not yet taken definite form.

A 160 Guinea Ring in a Tomato.—In a thickly populated part of Hull, says the evening paper of that town, an urchin picked up a Tomato and commenced eating it till something hurt his teeth. He dropped the hard substance on his hand, and lo, it was a ring, which he took home to his mother, who, seeing something flashing with brilliancy, took it to the jeweller to ascertain its value. That worthy assessed its value at 150 guineas. How did the milk get into the cocoon?

Crimson Rambler Rose an Old Acquaintance.—The current issue of the *Revue de l'Horticulture Belge* points out that the supposed new Rose, Crimson Rambler is in reality an old friend. In 1886 M. Cochet introduced it to France. It was figured in the July number of the *Journal des Roses* in the same year under the name of *Rosa platyphylla*, and appears to be synonymous with the *Rosa multiflora coccinea* which it bore in the year 1815, when some seeds of it were brought to Europe. Following M. Cochet came a Japanese student, M. Takasima, at the Nancy School of Forestry, who brought it to the notice of M. Sisley, of Lyons. In Japan, Crimson Rambler is called *Sakoura-Ihara* (rose-cerise) and there are numerous varieties of it in existence. One of the best is *Cramoisie* which was put into commerce by Mr. Chas. Turner.

Self-Irrigation in Plants.—The Rev. Alex. Wilson, M.A., B.Sc., continues his interesting remarks upon this subject in the current issue of *Knowledge*. The case of the Fuller's Teasel is instanced as one of the best established cases of imbibition, the plants being provided with "leaf-cups." The leaves of the Teasel are arranged in pairs, the broadened base of each leaf uniting with that of its neighbour to encircle the stem, and form the "leaf-cups." Silphium, a member of Compositae, also has "leaf-cups," whilst many epiphytic Bromelias and Tillandsias retain quantities of water in their expanded leaf bases. Of this water a portion is imbibed by means of thin-walled cells. The writer next goes on to consider the Chickweed, and attributes in large measure the rapidity with which it spreads over the garden to its very complete system of self-irrigation. Here again the sheathing bases of the leaves form "leaf-cups" in which the water collects. The leaf stalks are channelled, but the stems are not, the water being conducted from one "leaf-cup" to another by a line of deflexed, easily wetted hairs, which the writer considers are meant to act as water conductors. Each hair consists of several cells filled with protoplasm. In a dry condition the walls of the basal cell present a striated appearance, and this has caused Kerner to assign to them an absorbent function. The Rev. A. Wilson, however, points out that this can hardly be, for the cells are not directly connected with the vascular system. The water and particles of earth that collect in the "leaf-cups" conduce to the formation of roots, and the hairs serve to conduct water to these roots. Another interesting fact in the connection between the row of conducting hairs and the axillary buds, the former being placed on the same side of the stem as the axillary bud immediately below them. Aquaducts consisting of lines of hairs similar to those found in the Chickweed are to be seen in a number of other plants, including the Germander Speedwell. The Rev. A. Wilson thinks it not improbable that the rootlets of the Chickweed take up nitrogenous compounds dissolved in the water accumulated in the "leaf-cups." Several excellent cuts illustrate the writer's remarks, which, however, are exceedingly lucid throughout.

Asparagus grows wild, but sparingly, on some of the British coasts. On the Russian steppes it is so abundant that cattle eat it like grass. The seeds are used as a substitute for coffee in some parts of southern Europe.

A Lady Gardener in the Emerald Isle.—A military officer's wife was wandering in her husband's garden one day, and, seeing a spade, conceived the idea of digging up some Potatoes with it to see what the work was like. Her husband's servant, an old soldier and a Scot to boot, walked down the garden path. With a smiling countenance she looked up and asked, "Don't I dig these well, Sandy?" "Mebbe you were reared till it," was the Scot's reply, as he passed on to his work.

Public Park, Widnes.—The first prize of thirty-five guineas in the public competition for the best design for laying out the Appleton House Estate as a public park, has been awarded to Messrs. Wm. Barron & Son, Elvaston Nurseries, Borrowash. The area of the park is about 36 acres, and in addition to the general plan of the park, which contains a lake, cricket and recreation ground, and lawn tennis grounds, bowling green, gymnasiums, &c., they also furnish three alternative plans for dealing with Appleton House and premises; also designs for entrance gates, bandstands, shelters, fountains, &c.

Primeval Vegetation.—Lord Kelvin says there is not more than three hundred and forty million million tons of fuel in the earth, and says that this is the exact amount because all the oxygen of our atmosphere came from primeval vegetation. One ton of coal takes three tons of oxygen to burn it, and therefore its vegetable originals, decomposing carbon dioxide and water by the aid of sunlight, gave three tons of oxygen to the atmosphere. Every square metre of the earth's surface bears ten tons of air of which two tons are oxygen. The whole surface of the earth is one hundred and twenty-four thousand millions of acres; hence his reasoning.

National Co-operative Flower Show.—The "One & All" Flower Show to be held at the Crystal Palace on Saturday next, in connection with the National Co-operative Festival, promises this year to exceed even the gigantic proportions of previous years. Last year it will be remembered that the Crystal Palace authorities were unable to find accommodation even in their great building both for the Victoria Jubilee Exhibition and this great annual industrial flower show at the same time, and the flower show had to be housed in a gigantic tent, over one-tenth of a mile long, and the whole width of the great terrace of the Palace, specially erected for its temporary accommodation. This year, however, the "One & All" show is able to get back to its old quarters, where it will fill the whole centre of the Palace from end to end. The enthusiastic horticulturist who intends to conscientiously inspect every exhibit should be warned that if he is to walk down each side of all the long tables he will have over a mile to walk before his task is accomplished. The competition for the Challenge Cup, instituted this year by the Countess Grey, promises to be very keen, the entries in the industrial section being heavier than usual, we are informed by Mr. Edward Owen Greening, the Hon. Sec. The two classes for Vegetable Marrows in this section exceed 50 entries in each class; there are over 175 entries for the four classes of Potatoes, the other entries of vegetables being in equally remarkable proportions. But in addition to the large entries for the commoner kinds of vegetables usually grown by working men, the entries in the classes for the choice vegetables usually grown by well-to-do amateurs and professional gardeners, such as Tomatos, Celery and Cucumbers, are remarkably well filled, and the interesting comparison between the produce of these simple amateurs and the better equipped gardeners of the second section of the show has by no means in previous exhibitions always been to the advantage of the latter. More room has had to be found for the growing photographic section, which will move across from the Italian Court to the larger Egyptian Court near the main entrance. The hints which this pictorial exhibition enables one horticulturist to convey to another as to the arrangement of small town or gardens, the greenhouse, the window box, hanging basket, rockery, or other objects not readily movable, are most instructive, and form a feature entirely lacking in the usual exhibitions confined to the more portable fruit and vegetables.

Too much Expected.—Clergyman to groom-cowman-gardener who has brought a dirty trap to the front door: "Johnson, I must insist that you keep the pony and trap cleaner."

Johnson: "Well sir what with 'ortayculter' and the cow I ain't got much time for 'ossyculter'."—*Punch*.

Scottish Sporting Rents annually amount to a very respectable figure. The seventy estates upon which red deer are to be found, and of which the shooting rights are to be purchased represent an aggregate rental of £109,300 from last year's returns. In the county of Inverness alone the sporting rents of the first twenty estates on the lists of one of the large agents reached £10,000, whilst the first ten estates totalled a value of £26,000.

The Queen Elm of New England, so named by Oliver Wendell Holmes, was one of the handsomest in Springfield until it was killed by gas or the steam heating pipes. The tree stands in front of Elm Tree School, and was taken possession of recently by a swarm of bees. It is very unusual for "bee trees" to be found so near civilisation as the heart of the city. The intention is to have the defunct tree cut down in the autumn.

Haymaking in a Wet Season.—The methods of making hay pursued by our farmers do not vary to any extent whether the season be wet or fine, bad or good, for it has been proved through long years that we generally get enough of sunshine to admit of the hay being properly cured under the working of our present system. In Norway and Sweden, however, according to Mr. John Speir in "*The Transactions of the Highland and Agricultural Society*," other methods are followed, and good hay is thereby procured in these northern latitudes even in the wettest season. When the hay gets to the stage at which, in England, it is "cocked," the Scandinavians erect rows of poles at convenient places in the meadows and by means of ropes tied to these uprights the hay is suspended in layers of about 18 in. in depth, one above another. The ropes are so arranged that the layers just touch each other, and thus while rain is excluded air is freely admitted. Mr. Speir has tried the method and found it answer capitally, not only for ordinary hay but also for making sewage-dressed grass and the second cut of Italian Ryegrass into hay. He therefore recommends farmers to have recourse to this method in wet and unfavourable seasons.

SIDBURY MANOR, EAST DEVON.

SITUATED on the summit of a hill commanding extensive views on either side, four miles from the sea, stands this well built mansion, almost surrounded by a little town of glasshouses, which can be seen for miles, especially when the sun is shining. The wind from the north-east is very treacherous at times here, blowing right out to sea, some of the Conifers exhibiting signs of distress from this quarter. The putting out of summer bedding plants cannot be taken in hand until the month of June, as with us, and the soil being of a heavy texture it takes some little time ere the plants take kindly to it; but when once the plants are established it withstands the drought better than soil of a lighter nature similar to ours at Bickton. We patrolled the houses first, where all was thriving and clean. Tidiness was the order of the day in each department. One house was filled with Challenger Tomatos in 9-in. pots, heavily laden with fruit, some few clusters carrying as many as twelve and fifteen in various stages of maturity.

The early vinery had just been cleared of its crop, and the hard, nut-brown wood indicated that some good bunches (Hamburghs) had been taken from the Vines. Against the back wall two good plants of Pelargonium Raspail and Candidissimum plenum that had been in flower ever since March, and still in the middle of July are in full bloom. They are very useful to cut from in early spring, where double flowers are not objected to. The Muscats were extra fine in bunch and berry. Madresfield Court has medium-sized bunches with good berries, jet black, and not one showed the least sign of splitting. What do growers say to this who tell us it cannot be grown to perfection unless given a house to itself? The late Hamburgh house, just beginning to colour, had a heavy crop of medium-sized bunches. The

latest house contained nice bunches that had every appearance of finishing up well, the varieties being Gros Maroc, Gros Colman, Appley Towers, and Lady Hutt. The two last-named are thought highly of by Mr. Reynolds, the gardener.

Two fine clusters of Bananas I noticed in two separate houses. A batch of trees of the recently certificated Orange, Edith Cave, was carrying many fruits which are used for dessert, and are much esteemed by Sir Charles Cave, Bart. The Cucumber and Melon house had excellent crops. The first-named had remarkably fine fruits of Rollinson's Telegraph. Half a dozen Melon plants averaged five fruits on a plant of good size; the major part would average 6 lb. each, Earl's Favourite being the variety. Peaches under glass are retarded as much as possible, a quantity being required during August and September. The Fig house looked promising for a second crop.

A fairly good number of Orchids are grown here, Calanthes and Dendrobiums looking strong, and Oncidium jonesianum carrying a spike of fifteen flowers. One house is devoted to Crotons and Dracaenas, and no shade is afforded. This treatment suits the Crotons, but evidently not the latter. Several Acalyphas enjoyed the full sun, being of a most lovely colour; while outside I remarked a fine batch of Kalosanthes coccinea, fifty pots carrying good heads just about to expand. The Chrysanthemums, to the number of 500, looked well, and should yield good returns later on. Celosias, too, are always well done here, and showy things they are for early autumn work.

The kitchen garden had felt the drought, but was well cropped. The bush and pyramid Apples had an average crop, as well as Pears, principally against the wall. Plums and Peaches are scanty, though the latter look clean and healthy, and it is to be hoped the spring will be congenial to them another year when in flower. To show how mild the late winter has been two very large Ivy-leaf Pelargoniums against the gardener's house, had stood out unprotected, and were a mass of bloom at the time of my visit.—*J. Mayne, Bickton, East Devon.*

EMPLOYMENT OF MANURE IN HORTICULTURE.

By MESSRS. A. HERBERT AND G. TRUFFAUT.

THE production of flowering plants and ornamental shrubs having become a regular industry the questions of time and yield are now of the greatest importance. To rapidly obtain fully developed plants employment of manure is indispensable, but not in excessive amounts, which would be injurious from the horticultural point of view. Thus the Cyclamen growing in moderately manured soil gave an abundance of well developed flowers, whereas the same plants grown in excessively manured soil degenerated, and produced leaves to the detriment of flowers.

The authors employed manure in the culture of a good number of ornamental plants. Plants of Dracaena Bruanti were amongst the varieties giving the best results; they were grown in pots, ten centimetres high, containing 330 grammes of leaf humus. The experiment began with slips of twenty-five to thirty centimetres long. Only part of the plants were manured, the rest being kept for comparison. Preliminary analyses of these plants led to their being manured during the experiments with twenty-five grains of a mixture of nitrate of potash, ammonium chloride, phosphate of ammonia, sulphate of magnesia, sulphate of iron, as follows:—Nitrogen, 3.06 grs.; sulphuric acid, 3.91 grs.; potash, 7.39 grs.; magnesia, 1.06 grs.; chlorine, 0.72 grs.; oxide of iron, 1.08 grs.; and phosphoric acid, 1.45 grs.

The experiment lasted nine months (March to November), the plants being kept in a conservatory without repotting. The effect of the manure was clearly visible very shortly after the beginning of the experiment and became more and more marked. The plants were much stronger and more verdant than the others; their stalks more turgid, harder and more woody; the roots more developed but not proportionally with the aerial parts. The market value of the plants, which was about two francs, became double after the employment of manures.

The weighings and analyses of both sets of plants gave the following average figures for centesimal or total composition of a plant.

| | Dry extract per 100. | | Composition of an entire Dracaena. | |
|----------------|-----------------------|-------------------|------------------------------------|----------|
| | Dracaena not manured. | Dracaena manured. | not manured. | manured. |
| Total weight.. | — | — | 260 | 480 |
| Water | — | — | 187 | 349 |
| Dry extract .. | — | — | 73 | 131 |
| Organic matter | 82.50 | 81.89 | 60.23 | 107.28 |
| Ash | 17.50 | 18.11 | 12.77 | 23.72 |
| Nitrogen | 2.20 | 2.72 | 7.60 | 3.56 |

| | CENTESIMAL COMPOSITION OF ASH. | | | |
|-------------------------|--------------------------------|-------------------|--------------|----------|
| | Dracaena not manured. | Dracaena manured. | not manured. | manured. |
| Silica | 71.50 | 71.65 | 9.13 | 16.99 |
| Chlorine | 2.71 | 2.37 | 0.34 | 0.56 |
| Sulphuric Acid | 3.44 | 1.89 | 0.43 | 0.44 |
| Phosphoric Acid | 2.98 | 2.49 | 0.38 | 0.59 |
| Oxide of Iron | 2.10 | 2.59 | 0.26 | 0.61 |
| Alumina | 0.05 | 0.51 | 0.006 | 0.12 |
| Lime | 6.04 | 6.83 | 0.77 | 1.62 |
| Magnesia | 1.40 | 1.05 | 0.17 | 0.24 |
| Potash | 8.70 | 8.70 | 1.11 | 2.06 |
| Soda | 0.68 | 1.27 | 0.08 | 0.60 |
| Oxide of manganese | traces. | traces. | traces. | traces. |

The centesimal composition of the manured plants and others is exactly the same except for sulphuric acid, alumina and soda; but the final weight doubled in manured plants, both in the mineral and organic substances built up by the plant. Assimilation did not change relatively, but doubled absolutely. All the constituents of the manure improved the plant except sulphuric acid, which seems of slight importance. The plants having their subsistence amply assured were able to assimilate more silica, alumina, lime and soda, elements contained in excess in garden soils or water supplied to the plant. This example clearly illustrates the increased production to be obtained by judicious employment of fertilising substances. Similar experiments give equally good results with the following plants:—Chrysanthemum, Hortensia, Kentia belmoreana, Adiantum, Corypha australis, Latania, Anthemis, Dracaena (various), Medeolus, Areca sapida, Ficus elastica, Pandanus utilis, Asparagus (various), Fuchsia, Phoenix, Begonia Rex, Heliotrope and Rose trees.

FRUIT GROWING AND STUDY IN VICTORIA.

MR. HAMISH W. RUSSELL, at present studying horticulture, but particularly fruit growing, at the Government Horticultural College at Burnley, Victoria, is a grandson of the late Mr. James Russell, for a long time gardener at Pottaloch, Lochgilphead, N.B. In a letter, amongst other things, he writes to us as follows, showing the great necessity for untiring industry even in that comparatively young country:—

"I recently built a dingy in which I go to the outer reefs for shell-fish and do a little fishing. I never saw one being built. A general all-round knowledge is what is required here.

"You are aware that I attend the Government Horticultural College at Burnley. Mr. Luffmann is our curator; Mr. McAlpine, Government pathologist; Mr. French, Government entomologist; and Mr. Pearson, Government agricultural chemist. During the mornings students do practical work, and in the afternoons attend lectures given by either of the foregoing, or Mrs. Luffmann, who takes a great interest in the 'boys,' and gratuitously delivers lectures and gives instruction in different subjects.

"Our daily duties are 'listed,' and arranged so that we may each acquire a thorough knowledge of practical work, which is explained and supervised (under Mr. Luffmann's directions) by a practical and experienced gardener. One of the men is a son of the late curator, Mr. G. Neilson, Government fruit expert. Digging, trenching, ploughing, making cuttings, budding, grafting, inarching, pruning, planting trees, spraying, drying fruit, bottling fruit, packing fruit, examining fruit for export, fumigating diseased fruit trees, making cider and vinegar, grading, levelling, draining, the proper application of manures, &c., are among our daily duties.

"At present we are grading and levelling a part of the old orchard for a new Citrus plantation. The growth of the Citrus family is to have special attention at the college, and it will be a grand object lesson for old students who took part in its formation to revisit the scene of their labours and note the advance made, and the result of experiments with different varieties and methods.

"The Orange grows well in the colony of Victoria. In the Mildura and Wangaratta districts plantations

have been very successful. The trees are planted on the quincunx system about 20 ft. apart, preferably on slightly sloping ground. Drainage is not required on light soil with gravelly bottom; but where there is a clayey sub-soil drains are made two feet deep, and as required, either between each row or between every alternate row. Irrigation is sometimes resorted to. When flagging takes place, special drains or shallow trenches are made, and filled with water.

"Lemons grow further south, and, like Oranges, require a northerly aspect and sandy, loamy soil on a sandstone or limestone bottom. They do well in almost any well-drained soil. Humus is added where the ground is poor. Wood ashes are considered valuable. The ground is better if not too rich. Fungi and insects must receive constant attention, and proper pruning and careful management of the soil are imperative. Attention must be paid to mulching with stable manure, and care taken to avoid disturbing the roots, and that no stagnant water is allowed to sour the soil. As one mulching becomes exhausted another is applied. Grass is used for mulching, but is used only as a substitute for stable manure.

"Collar-rot is very troublesome in some districts. Mr. McAlpine has discovered the mycelium of a fungus in this 'rot,' and recommends an application of Bordeaux mixture.

"Where adequate protection is not provided, growers avoid tall trees, for north winds and other gales play havoc with them. Trees are grown more like shrubs, and pretty thick, to protect them from the heat of the sun. The lower branches are grown about 2 ft. from the ground. Mulching manure is not allowed to touch the trunks.

"The 'Parramatta' Orange and the 'Lisbon' Lemon are found most profitable in Victoria.

"Further on I may drop you a few lines, but meantime I do not seem to have the time to write at any great length.

"After Christmas, when I finish my college career, I am going into the country to rough it and get practical experience. Then I hope to visit you, and spend at least twelve months 'at home,' working and getting further experience. After that—well, I may do anything."—*Hamish W. Russell.*

BELGIAN NURSERIES.

(Concluded from p. 795.)

X.—M. VINCKE-DUJARDIN, BRUGES.

The famous nursery conducted by M. Vincke-Dujardin is situated within ten minutes' walk of the railway station at Bruges, and is just outside the canal that surrounded the ancient city. On entering the nursery, the first thing that strikes the visitor is the magnificent collection of pyramidal and standard Bays (*Laurus nobilis*), which appear like a little forest in front of the dwelling house; and from thence extend in three avenues right through the nursery. This is practically the metropolis of the Sweet Bay in Belgium, or for the matter of that the whole world. Europe is mostly supplied with Sweet Bays in tubs from Belgium, and a very large proportion of the whole originate at Bruges. Most of the outdoor space of the nursery is occupied with forests of these Bays, grown by thousands in tubs. Just outside the proprietor's house are some of the patriarchs of the establishment ranging from 150 to 170 years of age, rivalling the pigmies of the Japanese in age, but not in miniature decrepitude. On the contrary they are pyramids of real beauty, even if somewhat formal. They are housed in winter in large tiled houses, some of which are used as packing sheds in summer when their occupants are stood in the open air. The Bays exist in all sizes, and some of the old giants fetch very long prices.

ORCHIDS.

Orchids and Palms are the two other specialities of the establishment, and monopolise the village of glasshouses. There are something like twenty-seven Orchid houses alone, of which twenty are devoted to *Odontoglossums*. They vary from 75 ft. to 90 ft. in length, and all are built in the span-roofed style, but connected in blocks with a continuous interior space and a uniform temperature throughout. The first house we entered was filled with healthy, robust and clean plants of *Odontoglossum crispum* and *O. Pescatorei*, grown for the sake of cut flowers as well as for the sale of the plants. The next and several other houses were similarly occupied on the occasion

of our visit; and the day being bright they were shaded with lath blinds.

Proceeding to other houses we found quantities of *O. ruckerianum* and *O. Pescatorei*. A fine variety of the former was richly spotted all over with brownish-purple. Pretty also were fine varieties of *O. Pescatorei*, tinted with rose. The favourite of all is evidently *O. crispum*, for house after house is filled with it, some of the varieties being of excellent quality, with shapely, well imbricated flowers, both white, rosy tinted and blotched. Another house contained hundreds of *Ada aurantiaca*, also *Oncidium spilopterum*, *Odontoglossum polyxanthum* and *O. Rossii majus*. Well coloured varieties were *Odontoglossum crispum roseum*, *O. c. ruckerianum*, and *O. c. andersonianum*, the latter being a variety with nearly brown sepals and very finely spotted petals. Alongside of them *O. odoratum* and *Cymbidium lowianum* were also in season. We passed through several houses in succession filled with little else than *O. crispum* growing vigorously or flowering healthy and strong. Amongst *Oncidiums* there were grand pieces of *O. luteo-purpureum*, *O. luteo-purpureum sceptrum*, *O. marshallianum*, and beautifully clean they were. They are largely grown for the sake of cut flowers which are sent to France, England, Germany, Russia and Sweden, by hundreds of spikes. Something like 80,000 plants of *Odontoglossum* are grown, and that will give some idea of the resources at hand for cut flowers.

Cattleyas are also rather extensively grown; *C. citrina* being then in the height of its glory. The young pseudobulbs of *Oncidium marshallianum* attain a much larger size than those that were imported. Both this and *O. varicosum* Rogersi were strong and flowering grandly in baskets as well as upon rafts. A large quantity of *Cattleya labiata* put in pots, and also fixed on short rafts, having their ends inserted in pots, about ten or eleven months previous to our visit had become well established, being well furnished with leaves and commencing to grow a second time. About 2,000 flowers were cut from them last Christmas, and a second batch of 3,000 flowers in January.

A houseful of *Laelia anceps* was in grand condition, an importation having been made about seven years ago, when the pieces were put in pots and baskets. They have had nothing but supplies of water since, and we could not but admire the grand condition and health of every plant. Each pot or basket carried from seven to ten flower spikes last autumn. In another house close by *Laelia purpurata*, *L. elegans* and *Cattleya amethystoglossa* were flowering freely. Of the latter there were some finely spotted and richly coloured varieties, the latter bearing large spikes of bloom. A houseful of *Cattleya Mossiae* was at that time in sheath.

House after house lay in our path all completely devoted to Orchids, grown practically in a wholesale way, and their condition showed that M. Vincke-Dujardin, fully understood their culture. The fine orange blotch in the throat of *Cattleya Schroderae* was very conspicuous. Fine also were *C. Mendelii*, *C. gigas*, *Oncidium sarcodes*, *Miltonia Roezlii*, and *Odontoglossum vexillarium*, the latter just developing its flower spikes. The next house contained flowering plants of *Cattleya Mendelii*, *Vanda suavis*, and *Oncidium ampliatum majus*, with which no fault could be found.

A houseful of *Cypripediums* next engaged our attention, but we noted only some of those in bloom. Very fine were *C. barbatum superbum*, *C. lawrenceanum*, *C. callosum superbum*, *C. superciliare*, *C. superbiens*, and *C. Argus Moensii*, of the latter of which the flowers were handsomely blotched. Next to this came a houseful of *Vanda suavis* and *V. tricolor*, in plants of various heights, but all in robust vigour and flowering splendidly. Some of the varieties were handsomely spotted. Two houses were also filled with *Cattleya labiata*, newly imported.

PALMS.

Not having received the measurement of the glass-houses it would be difficult to say whether Orchids or Palms occupied the greater amount of house-room, though we believe the Palm ought to be given the latter, for some of the buildings were of enormous size and crowded to their utmost capacity. A block of seven houses was filled with *Kentia belmoreana* and *K. fosteriana* in 60-size and large 30-size pots, fit for decorative purposes. We next came upon a block of twenty houses, each 150 ft. long, and completely filled with Palms. Conspicuous

amongst them were *Kentias* of various sizes; *Latania borbonica* in healthy, vigorous specimens of all sizes; a fine lot of richly-coloured *Cycas revoluta*; and *Phoenix tenuis*, in plants 2 ft. to 3 ft. in height. The specimens of *Dracaena Doucetti* were 4 ft. to 5½ ft. high, and pictures of healthy vigour, and handsomely coloured.

Another gigantic block of five houses of wide span, entirely devoted to Palms, was shaded with lath blinds, which break the fierce rays of the sun, and ensure a healthy, dark green colour to the foliage. In this structure we noted *Cocos weddelliana*, *Rhaphis humilis*, *Kentia australis*, with beautifully arching fronds, and *K. dominyana*, a graceful tree, having long arching fronds and flat pinnae. Next the path, the leaves of the large *Latanias* had been tied up to allow free movement to visitors while moving through the houses.

Six other buildings were devoted to Palms of various useful kinds. Conspicuous amongst them were fine specimens of *Chamaerops humilis*. In the same house were handsomely furnished specimens of *Araucaria excelsa*, 3 ft. high. *Kentias* in 48-size pots filled another structure. Then came *Chamaerops excelsa* and *C. humilis*, monopolising a similar amount of space. *Latanias* filled two other houses; and a houseful of *Corypha australis* completed our inspection of an extensive glass nursery, kept up to a high standard of excellence under the watchful care of M. Vincke-Dujardin and his son.

CARNATIONS FROM MONTAGUE NURSERIES.

It is now late in the season for Carnations in the South of England, but a boxful of fine, named, border varieties reaches us from Mr. F. Gifford, Montague Nurseries, Tottenham, N. The size and colour of the flowers were wonderful for this late period of summer, and the vigour of the plants was evidenced by the size and number of the flowers borne upon each stem. Of course, Mr. Gifford knows well what is required in border Carnations, and does not disbud them. He is also a raiser, and has put many fine things into cultivation, including some delightfully scented ones.

Amongst those sent were two maroon-crimson varieties named Mr. John Hare and Pelham, respectively, the latter having very smooth and refined petals. Amongst the scarlet varieties was the Clove-scented Cantab, so highly appreciated by lovers of Carnations generally. An unapproachable fiery-scarlet is W. J. Fish, and an abundant bloomer. Florida is a large, bold flower. Senior Wrangler is powerfully scented, brilliant scarlet, and an advance on Cantab, being new for 1898. The rosy-scarlet Mark Welford produces flowers 3½ in. across. Andrew Noble is in the way of Endymion, but brighter rose and marbled. The flesh-coloured Dorothy Drew has petals of great substance. Edith Leadenham is a handsome white variety, with remarkably stout stalks that require no wiring for decoration purposes, as the flowers stand up stiffly. Hon. Harry Escombe we believe to be the finest golden-yellow Carnation in cultivation, the colour being rich, the flowers large, the calyx not splitting, and the plant hardy and robust.

Pandora seems to be a new colour, being of a rich salmon-red, the darker colour forming water lines, as it were, through the petals. A very pretty soft, but warm salmon is that named Cinnamon, the colour being attractive and not too common. The yellow ground Picotees in Mr. Gifford's collection are fairly numerous, and some of them extremely pretty. A cheerful and attractive flower was that named Dora, a light scarlet-edged variety. Mrs. Julian Storey is also a bold and handsome flower with a heavy red edge, and the colour running in lines and streaks down both surfaces of the petal. The other yellow grounds had much more colour corresponding to what would be termed fancy varieties. That named Julian Ralph is bold and free, erect on stout stalks, and thickly lined with bright scarlet. Father Rigg is heavily lined with rich crimson from the margin inwards, and is a magnificent variety. Atbara is another of the same colours, but the crimson markings are chiefly confined to the margin and centre of the petals. One of the prettiest of these fancies is Fantasy, a broad light purple-edged variety of beautiful form, and not liable to burst the calyx. It stood out very distinctly from all the rest. Very distinct in its way also was

Rhodesia, flaked with purple, and occasionally crimson, on a buff ground.

Other types included Walter Peart, a deep shade of rosy-pink, and Comic, a large and showy, bright rose flower. A fancy Carnation of quite another type is Mrs. C. W. Townley, heavily margined and lined with maroon-crimson. Col. Chard is marked in the same way with dark purple, and is certainly good of its kind. The dark purple of Surgeon Hugo is arranged in slender lines very closely placed, and occasionally covering the greater portion of the petal on both surfaces. The blooms in their prime grow to an immense size, making a good fancy or decorative flower. All were cut from the open border, and included many highly refined varieties. Stoker Lincoln is deep red, flaked with maroon.

SCOTTISH HORTICULTURAL ASSOCIATION.

THE STRAWBERRY MEETING.

AT the August meeting of this association, a very cordial vote of thanks was awarded to the president, Mr. M. Todd, for the successful way in which he had organised and carried out the recent Rose and Strawberry meeting. This gathering, a report of which we have not hitherto had an opportunity of giving, was held on July 20th, and proved in every way a highly interesting and successful function. Last year, on the initiative of the president, the first Strawberry meeting was held in the Rooms where the usual monthly meetings of the society take place, and proved so welcome an addition to the ordinary programme of the association's proceedings, that it was repeated this year on a more extensive scale. Advantage was taken of the liberal offers from leading growers of Roses, herbaceous plants, &c., to make a "Bijou" Flower Show of the meeting which was transferred to the Albert Hall, Shandwick Place (the *locale* of one of Mr. Gladstone's most noted speeches), and opened during the afternoon to the public, free of charge, a boon which was largely taken advantage of.

Splendid exhibits of Roses were contributed by Messrs. Thos. Smith & Sons, Stranraer; Mr. Hugh Dickson, Belfast; Messrs. Croll & Sons, Dundee; and Messrs. Robertson & Co., Helensburgh. A very beautiful exhibit of herbaceous plants and Roses was made by Messrs. Cocker & Sons, Aberdeen, containing many choice and desirable things. Herbaceous plants came from Mr. M. Cuthbertson, Rothesay; and beautiful exhibits of Sweet Peas from Mr. H. Eckford, Wem, and Messrs. Dobbie & Co., Rothesay.

Beautiful exhibits were made also by the Edinburgh trade growers. Messrs. Laird & Sons made an elegant and interesting display of decorative plants on the platform of the Hall, showing the richness of their nurseries in decorative materials. Mr. John Downie exhibited a beautiful table of new and choice plants, including *Acalypha sanderiana*, which had not been previously seen in Edinburgh. Messrs. Dickson & Co. exhibited a lovely table of Violas, Pinks, herbaceous plants, &c. Messrs. Grieve & Sons had a nice exhibit of Violas, Ferns and Palms. Table decorations were contributed by Messrs. Todd & Co., and Messrs. Ford & Co. There were no competitive awards, but special certificates were given to the leading exhibits.

The Strawberry table was a most interesting one, and proved a great source of attraction to visitors and members. Over a hundred dishes were shown in about thirty leading varieties. Mr. Dunn, Dalkeith, had a very choice collection, the most notable kinds being Royal Sovereign, Scarlet Queen, and British Queen. Beautiful exhibits were also made by Messrs. Smith, Oxenford Castle; Smith, Hope-toun; Kirk, Alloa; Temple, Carron House; McIntyre, of the Glen, whose Glen Diamond was greatly admired; King, Castlemilk, &c., &c. At the evening meeting of the members of the association there were about 120 present, and a short discussion took place on the Strawberries of the season, and the merits of the varieties exhibited. At the conclusion of the meeting votes of thanks were cordially accorded to all who had contributed to the success of a most interesting meeting, and the proceedings terminated by those present partaking of the liberal supplies of Strawberries with the addition of sugar and cream.

PLANTS RECENTLY CERTIFICATED.

THE undermentioned received certificates from the Royal Horticultural Society on the 9th inst.:—
Orchid Committee.

SOBRALIA SANDERIANA. *Nov. sp.*—This is a recently imported species, bearing flowers of large size. The sepals are tinted with the palest lilac hue on a white ground, the petals being of a darker or a more decided lilac. The lamina is bifid and of a rich purple, shaded with pale brown. The throat is yellow, with a clouding of brown, extending right down into the tube, the extension of which is lilac. Award of Merit. Baron Schroder (gardener, Mr. H. Ballantine), The Dell, Egham.

VANDA (STAUROPSIS) BATEMANII.—Not very often do we see this peculiar species in flower, and less seldom is it exhibited in public. The sepals and petals are rather fleshy, wavy at the margins, spatulate, and yellow, spotted all over with crimson. The lip is concave at the base, resembling a slipper, and the basal lobes are more or less coloured with white, yellow and brown, while the upper portion is very thick, fleshy, turned up at the points, and rich purple, fading to red. Award of Merit. T. B. Haywood, Esq. (gardener, Mr. C. J. Salter), Woodhatch Lodge, Reigate.

CYPRIPEDIUM OLIVIA. *Nov. hyb.*—The female parent of this hybrid was *C. tonsum*, itself a hybrid, and largely giving to the progeny its own particular shade of colour. The pollen parent was *C. concolor*, and has largely determined the shape of the petals and lip. The dorsal sepal is shaded with soft lilac-pink on a white ground, and lined with green veins. The petals are oblong-elliptic, and much of the same hue as the petals. The lip has the same hue, but the contour of *C. concolor*, particularly about the mouth. Award of Merit. Messrs. Hugh Low & Co., Bush Hill Park, Middlesex.

Floral Committee.

FURCROEA WATSONIANA.—Something like fifteen species of this genus have been described, but many of them have a close resemblance to one another. They are allied to *Agave*, and come originally from the warmer parts of America, but are now widely cultivated in various tropical or sub-tropical countries of the old world for the sake of the fibre in their leaves. The leaves of *F. watsoniana* are lanceolate, grooved along the middle, leathery, deep green and shining, with a broad, gray-green band along the middle, and a creamy-yellow band, changing to creamy-white on either side of this. They are often striped and banded in other ways. It is a handsome foliage plant, and well deserved the First-class Certificate awarded it. Messrs. F. Sander & Co., St. Albans.

NELUMBUM NUCIFERUM SPECIOSUM.—The peltate, concave, and glaucous leaves of this grand plant closely resemble those of the Sacred Lotus or Sacred Bean of Egypt (*N. speciosum*). The flowers are of huge size, and white, the petals being very numerous, and the outer ones nearly orbicular and of great size, gradually becoming smaller inwardly towards the pale green, pitted and singular receptacle. The plant will form a handsome companion to the better known one, and be a valuable addition to the aquatic stove. First-class Certificate. Her Majesty the Queen (gardener, Mr. Owen Thomas), Windsor.

NYMPHAEA IGNEA.—This is probably the largest of the dark crimson-red varieties in cultivation, though some of the small ones may be a shade or two darker. The petals are broad and blunt, and the stamens of a rich orange-red at the base. Award of Merit. A. B. Freeman-Mitford, Esq. (gardener, Mr. John Garrett), Batsford Park, Moreton-in-the-Marsh.

GLADIOLUS W. B. CHILD.—Here we have one of the hybrid *G. nanceianus* type with triangular, widely expanded flowers of handsome size. They are of a rich crimson-red, paler or rosy in the centre, and finely mottled with crimson on a creamy ground of the lower petal. Award of Merit. Messrs. Kelway & Son, Langport, Somerset.

GLADIOLUS LEMOINEI VESUVIUS.—This variety of another distinct race of hybrids, has more curved and funnel-shaped flowers of a rich, dark crimson, the three lower petals being darker and furnished with a creamy-yellow band along the centre of each. Award of Merit. Mr. M. Prichard, Christchurch, Hants.

GLADIOLUS LEMOINEI BARON J. HULOT.—The form and size of this variety are similar to those of *Vesuvius*, but the flowers are of a remarkable shade of dark blue-purple, with a short creamy-yellow band or blotch on the centre of five of the segments. Award of Merit. Mr. M. Prichard.

CARNATION NOX.—As far as we know this is the blackest Carnation in existence, being of an intense maroon-crimson, with smooth and refined petals. Fragrance is an additional recommendation. Award of Merit. Mr. James Douglas, Edenside, Great Bookham, Surrey.

CHRYSANTHEMUM MDLLE. MARIE MASSE.—In this we have one of the very earliest of the early Chrysanthemums, having flowers of the size of *Mme. C. Desgranges*. They are of a soft rose with a darker centre, freely produced and very useful for cutting. Award of Merit. T. B. Haywood, Esq.

Fruit and Vegetable Committee.

BLACKBERRY-RASPBERRY.—This peculiar hybrid is the result of crossing *Raspberry Belle de Fontenoy* with the common *Blackberry (Rubus fruticosus)*. The fruits are large, black and handsome in appearance, but somewhat acid. For cooking purposes this should be a recommendation rather than otherwise. The stems are stout and similar to those of the *Raspberry*, but are spiny like those of a *Blackberry*. A new strain or race of hardy fruits might yet be developed from it by perseverance. Award of Merit. Messrs. J. Veitch & Sons.

Kitchen Garden Calendar.

WEEK'S WORK.—The continued bright sunshine and hot weather is taking serious effect on all newly planted winter crops, so much so in this part of the country, that some difficulty has been experienced in establishing the plants. If the present dry weather continues much longer many of the late planted crops will be a failure, as water in many places is becoming short. Where half-decayed manure can be procured, a thin coating placed over the ground around the plants would materially help to keep the soil moist and so promote root action. When the ground is very dry anbury or club makes greater headway, therefore every effort should be made to keep the soil moist around the plants. In such weather as we are now experiencing the *Celery Fly* becomes very troublesome, and often whole rows of promising plants are ruined through these little creatures laying their eggs in the leaves. The larva, which is very small at first, soon grows and eats the pulp from the leaves, causing them to wither. On its first appearance all leaves affected should be passed between the finger and thumb to destroy it. The plants too should be liberally treated with liquid manure to help them to grow out of the attacks.

CABBAGE.—As soon as plants from the first sowing are large enough to handle, these should be pricked out that they may grow sturdy from the commencement. Do not allow them to receive a check in any way; if the weather should continue dry they must be liberally watered to keep them growing. Late Peas will now need special attention, as mildew will soon put a stop to growth unless the plants are kept healthy. It is astonishing how soon the foliage becomes affected if we have bright hot days with foggy nights. The advantage of thin sowing can now be seen; for, where the plants are overcrowded, the foliage, even of such hardy varieties as *Autocrat* and *Late Queen* are affected, while those allowed plenty of room are as green as in May. Here there has only been one fall of rain for a long time, so that the ground has become quite parched. Runner Beans that have long stakes put to them will require well looking after in the respect of feeding, for though these when pinched and kept dwarf will withstand the dry weather better than most vegetables, when allowed to climb to their fullest extent require a lot of support, and no crop gives a better return for such extra labour bestowed upon it. Pay special attention to seedling plants such as *Lettuce*, *Endive*, *Corn salad*, and the like, for unless they make a free growth from the commencement, it is seldom they do well.—*Kitchen Gardener.*

HINTS FOR AMATEURS.

Combating the Drought.—Like the sun that shineth alike upon the just and the unjust, so the effects of the sun and the drought affect both amateur and professional gardener, although the latter, with his closer grip of his subject and his wider experience, is better able to minimise the evil effects of a long spell of drought upon his plants than the amateur. Deep and thorough cultivation of the soil is an inestimable blessing at such times, and the amateur would do well to take the hint and work his ground as deeply and as thoroughly as he can. The ever recurring question of watering is also of vital importance at such seasons. The tyro is apt to keep on sprinkling his plants day after day, and wondering in his blissful ignorance why they are always dry, and seem to be going backward all the time. He does not know that his wretched sprinklings and surface waterings in dry weather are worse than nothing, and that they do the plants more harm than if they had had not a drop at all. Deep root waterings is what is wanted, and unless these can be given it is better to leave the water-can alone, and let the clouds of heaven do all the sprinkling. Mulching with short, half-rotted stable manure or cocoanut fibre, if nothing better can be obtained, following after a good watering are of inestimable service. Such plants as Dahlias, Sunflowers, and perennial Asters benefit greatly by mulchings of manure, for not only is nutriment directly added to the soil but the excess evaporation of water from the soil is checked.

Helenium pumilum.—So comparatively few are the plants that do really well in a town garden that when we find one of them we cannot refrain from mentioning it. At the present time this pretty little *Helenium* is the most showy plant in the herbaceous border, and it will continue to produce its relatively large bright golden-yellow flowers for a considerable time. As the specific name implies the plant is dwarf in stature, its height varying from 1 ft. to 18 in., according to the season, whether it be wet or dry. This year the plants are not more than 1 ft. in height, owing to the prevalence of drying winds and hot sun, and the shortage of rainfall. The market growers know full well the value of this bright-faced flower, for many acres of it are grown solely for supplying cut flowers for market. It is, however, its remarkable smoke-resisting qualities that we wish now to point out, for it does equally as well in the town as in the country. It is rather tall for window boxes, except in the case of very large windows where a fairly high screen does not come amiss. In such cases it might well be utilised in this way, for it is certainly the most showy of the dwarf yellow flowers that we are acquainted with. Given one good strong plant a stock may soon be worked up by dividing the roots in springtime just before growth commences. The divisions soon make good plants if they are put into rich soil and are looked after for water during the early part of the summer. Seed also germinates freely enough.

Calystegia pubescens flore pleno—To general appearance this plant looks exactly like a *Convolvulus* with double flowers, and it is, in fact very closely allied to that genus, and is oftentimes called a *Convolvulus*. We get the same climbing habit, the long pliant stems twining round everything within reach. The chief, if not the only, difference between the two genera is that in *Calystegia* the calyx or green outer covering of the flower is itself enclosed by two large, persistent bracts or modified foliage leaves; hence the generic name *Calystegia*, from *kalyx*, a calyx, and *stegē*, a covering. The leaves in the form under notice are hastate or halberd shaped, and bear a certain resemblance to those of the Ivy. This has caused the specific name of *C. hederacea* to be applied to it, but *C. pubescens* is the one under which it is usually to be met with in gardens. This has allusion to the pubescent or downy character of the leaves. There are few climbers that will do better in a London garden than this handsome plant, for the large, full double bright pink flowers are produced with great freedom all along the stems during the latter part of summer and autumn. It does exceedingly well if trained to a wall facing towards the west, but a south wall is rather too hot for its likings. The plant is gifted with a strong constitution, and no matter how much the white, string-like roots are cut up during the winter digging, all the pieces will grow

as freely as those of the ordinary Bindweed (*Convolvulus sepium*); indeed, the roots of the two are very similar. This quality of the plant may be taken advantage of in propagating it, for all that is necessary is to cut the roots up into pieces 4 in. or 5 in. in length, and plant them just before growth begins. They should not be kept out of the ground too long, or they become withered and enfeebled.

Everlasting Peas.—The great boom that has been made in Sweet Peas of late years seems to have caused the eclipse, partial or otherwise, of our old friend the Everlasting Pea, *Lathyrus sylvestris platyphyllus*, or *L. latifolius*, to give it its rather commoner name. At the present time, however, the rose-coloured flowers of the type as well as those of the white flowered variety are much in evidence, and their huge trusses are making a great show. Those who are on the look-out for a hardy climber for covering arbours and trellises cannot do better than go in for it. Almost any soil will suit it, and the plants very quickly make themselves at home, when they take little or no looking after, for they are quite able to take care of themselves, and will appear year after year in ever increasing bulk. They like to be in firm soil, and by far the best plants and flowers that we have ever seen were growing by the side of a hard trodden gravel walk, and clambering over an old hedge of Yew and Holly trees. In such a position they can get but comparatively little moisture, but they do not seem to mind it. The flowers are very valuable for cutting, for if the trusses are heavier than those of the Sweet Pea, and less elegant, they score off the latter by lasting better in water. The footstalks, too, as a rule are long, stout and wiry, and thus are fully able to support the weight of the flowers. The white form is not quite so tall and vigorous a grower as the rose one, for if the latter gets into good soil it will grow with almost the abandon of a weed, although in such cases the flowers are not so numerous, even if they are individually a little larger. Both white and rose forms are, however, worthy of a place in every garden where there is a trellis or an arbour to cover and beautify. Propagation may be effected by seeds, but whether the seeds that are often sold are not good, or whether the treatment given has not been just the thing, many people have complained that they have failed to get them to germinate, particularly those of the white variety. We have known pans in which the seed was sown and tended carefully to lie for three months without a single plant making its appearance, until the gardener's patience has been lost, and the contents of the pans have been consigned to the rubbish heap. Happily other methods of propagation besides that of seeds offer themselves. Division of the root in spring is very easy and is generally attended with complete success, whilst cuttings, taken just as the young shoots are pushing through the soil root readily enough if placed in light soil round the edges of pots, and covered with a handlight. Once the plants are established in their places nothing should be allowed to disturb them at the roots, and then an annual display of bloom may be confidently looked for.

Carnation Raby Castle.—Last week we discussed the progress and development of the Carnation, and gathered up a few points whereby we contrasted the florist's ideal with the kind of plant that found favour with the general public. In Raby Castle we have a good instance of what we may term a popular Carnation. The bright salmon-pink flowers have those notched margins to the petals that the florist abhors, but the flower is all the prettier for them even if it be in a vulgar sort of way. A more serious defect is the occasional bursting of the calyx in the larger flowers, but in view of the general utility of the variety we are fain to overlook this. There is no other sort that beats it as a continuous bloomer, for with us it is the first to open its flowers, and continues to throw blooms from the side buds long after most of the others have entirely finished. The late blooms may be small, but the colour is good, and they come in very useful for decorative work—it is indeed cut and come again with them. The plant is of vigorous habit and makes plenty of "grass," so that there is no lack of material for making up with the flowers or for layers when they are wanted. We have found that this variety seems to do best when it is allowed to form large clumps, and is not layered every year. Such clumps throw a lot of bloom, and as they stand, are a great ornament to the flower garden. Young plants may throw finer flowers, but

as has been stated, these are most likely to split their pods, so that the apparent advantage is discounted. —*Rex*.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Seedling Fuchsia.—*Sardon*: It is not at all likely that your seedling Fuchsia will bloom this year. Keep it growing on, however, in the same pot in which it now is until the leaves begin to fall off, thus showing that its season of growth has practically finished. Then give less water and expose it fully to all the sun you can in order to ripen up the wood thoroughly. Next year it will flower freely enough if these directions are followed. Seedling Fuchsias rarely, if ever, bloom the same year that they are raised from seed, but are all right for the following year.

Achimenes.—*Jas. T.*: You may turn the plants out of doors, and stand them on a bottom of ashes. Keep them well supplied with clear water, but give no manurial stimulant. They will gradually die down, and you should watch for this, curtailing the water supply as maturation advances.

Heeling down Onions.—*W. L.*: The practice of bending down the stems of Onions which you describe in this way is quite a common one. There is no doubt that it assists the development of the bulb as it tends to check the flow of sap to the leaves, and thus induces the plant to turn the whole of its attention to the swelling of the bulb.

Pear Citron des Carmes is ripe from the middle to the end of July, *C.*, according to the character of the year. The variety has nothing to recommend it but its earliness, and we think you would be disappointed with it. Of course it sounds very nice to hear of ripe Pears in July, but there is no comparison between them and those ripe in September and October.

Fig to name.—*Jarl*: The Fig is White Ischia, a very fine flavoured and good all-round variety. It never gets very much larger than the samples you sent, but it is an exceptionally prolific bearer, whilst in our own opinion nothing can touch it for flavour.

Gooseberries.—*A. Carleton*: You will find it a matter of considerable difficulty to keep the Red Warrington Gooseberries for any length of time. True, it is, that the variety will hang as long as, probably longer than, any other variety, but that accounts for only a relatively short period. The best thing that you can do will be to cover the bushes entirely with Archangel mats to exclude a great part of the light. If you want Gooseberries late in the season you must plant a few bushes against a north wall, where they will hang much longer than they will on bushes in the open ground.

Seedling Pentstemons.—*W. Barnes*: Cuttings should be taken within the course of the next month of the varieties that you wish to preserve. As a rule, plenty of cuttings are obtainable from side shoots near the base of the plant. Put the cuttings in a bed of soil in a cold frame, or if the frame is large use a small hand-light, such as those employed for covering Cauliflowers.

White Abutilon.—*A. B.*: Abutilon Boule de Neige is the best white-flowered variety that we know of. It is of a good many years' standing, but we presume that does not make any difference to you.

Mushroom Litter.—*Advance*: The preparation of the litter for Mushroom beds is one of the most important points, for if it be neglected or improperly performed, good-bye to the chances of success. The material should consist in bulk of horse droppings, but an admixture of leaves and straw will do no harm. The droppings should be procured fresh from the stables, and placed in a heap on the floor of an old shed or other place where protection from the rain can be given. About twice a week the heap should be turned over and well shaken out, so as to

incorporate the fresh manure with the old. Keep up this practice until a sufficiency of material has been obtained for making up the bed.

Mustard and Cress.—*f. O.*: In order to have these saladings good during the summer months you should sow the seed on a shady border. If exposed to the sun the produce will be bitter. Keep it well watered.

PEOPLE WE HAVE MET.

MR. WILLIAM BAYLOR HARTLAND.

THE subject of our portrait is the well-known seedsman, Daffodil and Tulip grower, of Cork, now in his sixty-third year, and grandson, or third generation of a Richard Hartland, who settled in Ireland during the Arthur Young period, and very soon after which time established himself in three distinct spots in the County of Cork as a nurseryman, seedsman and landscape gardener, finally settling down at one establishment outside the town of Mallow, where he raised trees by millions, planted and beautified most of the old places now seen through the counties of Cork, Kerry and Limerick. This Richard Hartland was a man possessed of great fortitude and patience.

A great many of the tree seeds were had from the old firm of Purday & Mersillys, in Scotland (now extinct), while the garden seeds came from 60, Strand, London, or from Lawson, of Edinburgh. No Swede or Mangel crops were grown in Ireland. Peas were limited to Early Hotspur, Chasleton, and Blue Prusslan; Beans to Early Mazagan, Long Pod, and Scarlet Runners. Flower seeds were Sweet Peas, blue Nemophila, Collinsia bicolor and Virginian Stock. The chief meadow grass was the common Yorkshire Fog. Sheep and cattle were but a primitive breed. There was no oil cake, no phosphates, no artificial manure of any sort, no tea or groceries unless at the "Great House," but plenty of Potatos and Wheat. Lime was largely burned and used; whiskey three halfpence the glass; war rife with America; and the first Napoleon or "little corporal," the embryo ruler of Europe. What changes!

This pioneer nurseryman died in 1821, leaving three sons, all at the business, Richard and Arthur removing to Cork in 1809 and 1810, and forming separate establishments. The younger brother and father of the subject of our notice remained at the pioneer's concern at Mallow. Arthur died in 1835;

May; while the city folk know the place as the Klondyke of South Cork on account of its hue.

Mr. Peter Barr visited the place for the first time this spring.

His eldest son is now with him at the work. Few firms in the United Kingdom can boast of a fourth generation at the calling. We wish him and his large family all happiness, and that the generation of the old pioneer of 130 years since may not soon die out.

Mr. Hartland had a brother Albert, now dead, who inherited the grandfather's art. For what the old man could get from the foliage and undulation, the grandson put on canvas, some of his pictures being purchased by South Kensington, as studies.

Mr. Hartland's neice, Gertrude Hartland, also draws beautifully, and has produced some exquisite water-coloured drawings in landscape; and her Daffodil portraits in her uncle's list of conference sorts are the finest extant. Mr. Hartland is also the author of "Wayside Ireland," second edition, being "A Trip from Cork to the Western Highlands," 1894, published by Messrs. Purcell & Co., Cork. The first edition of this little book we had the pleasure of reviewing at the time of its appearance.



MR. WILLIAM BAYLOR HARTLAND.

He was descended from an old Dorsetshire family, sent to Kew Gardens when a lad, noticed there by James Early, Esq., of Kingston, and brought over under his patronage for special departmental work at the Castle. One of his first undertakings was the planning and laying out of the present extensive grounds at Mitchelstown Castle, now celebrated and admired by tourists for its extent, for the manner of its tree grouping and effect, particularly during the autumnal season.

It is but a few years since the subject of our sketch had a most complimentary letter from the present Countess, in which her ladyship mentions how his grandfather must have been a born artist, because now, after a number of years, the work can show the masterhand, particularly for its undulations, and the light and shade of tree growth, while the grouping could not be surpassed.

This was the age of the timber plough, together with the great lack of skilled labour, so that it was no easy task to think of establishing the growth of young trees from the native seed, and teaching the peasantry to line them out afterwards. It was also the age of sailing vessels between the two countries.

William in 1843; and Richard in 1861. The families are now much scattered. The Mallow nurseries were given up in 1852. While in 1859 Mr. Wm. Baylor Hartland joined his cousin, the late Joseph B. Hartland, at 86, Patrick Street, Cork (now Oakenhead & Co's.), and in 1876 went into business for himself; while his cousin Oliver conducts the nursery at the Lough, under the title of Messrs. R. Hartland & Son. Mr. Baylor Hartland is fond of his work, is all his life at it, has a lovely spot outside the city, at Ardcairn, where he resides and grows some shrubs, splendid trees of Prunus Pissardi, Azara microphylla, golden variegated upright Yews, beautiful specimens, the finest tree of Abutilon vitifolium seen in the south of Ireland, in which poultry go to roost. He grows Daffodils largely as most of our readers are aware; and has formed a collection of late single Tulips, not seen in Holland. He has also gone in for Begonias, crossing and raising many beautiful double sorts from seed. In another month his batch of 1898, consisting of some thousands planted out, will be an interesting show.

But the chief attraction at Ardcairn is the golden sheen of Daffodils in the spring, and the Tulips in

ALPINE AND ROCK PLANTS.

ERODIUM RICHARDI.—No complaint can be made on the score of dwarfness in this case, for neither flowers nor leaves rise much above the soil. The diminutive, heart-shaped, and crenate leaves lie on the surface of the soil. The flowers are pure white, or show faint lilac veins at the base of the petals, and arise singly from amongst the leaves. The plant is a dainty gem, and although hardy, a small piece or two should be kept in pots so that they may be sheltered in winter, plunged in ashes, to guard against losing a little, but very uncommon, beauty.

LINARIA ALPINA.—Of the smaller species of Toad-flax none is prettier than this Austrian plant. It was introduced as long ago as 1750, but has never become very common, not because it lacks beauty, for in my opinion it is the acme of perfection amongst its kind. It is generally considered half-hardy, but the probabilities are that the soft and changeable character of our winters is responsible for the death of many plants. To guard against any loss half a dozen plants in small pots could always be kept in stock in a frame, so as to make good any

deaths that may occur. An earnest and enthusiastic cultivator will never grudge their space nor the trouble of rearing a few young ones now and again by means of cuttings in light and sandy loam under a bell glass or hand light. The short racemes of blue flowers contrast handsomely with the orange palate. The whole plant seldom exceeds 6 in. in height, but is often dwarfer. It flowers from July till the advent of frost.

THYMUS SERPYLLUM NUMMULARIUS.—This is often regarded as a distinct species, but is obviously only a form of the British wild Thyme, which is very variable even in this country. It only differs in having broader and nearly orbicular leaves, that are strongly ciliate at the base, and in having larger pale purple flowers. Certainly it is distinct enough to deserve wide cultivation. It was introduced from the Crimea in 1822. Propagation is particularly easy by means of cuttings, as in the case of other sorts of Thyme, more especially the creeping ones.

CAMPANULA PUMILA.—Some of the small Bell-flowers are liable to be confused with their nearest relations. This species may easily be distinguished from *C. pusilla* by a little careful observation. The lower leaves are heart-shaped, gradually becoming narrower and lanceolate on the short flowering stems. They are also light green, but more particularly on the albino *C. pumila alba*; and the flowers are truly bell-shaped, and blue or white according to the variety.

CAMPANULA PUSILLA has a few, small, heart-shaped leaves springing from the rootstock; but those on the stems become suddenly very narrow, few, and set widely apart on the slender stems. The flowers are narrower at the mouth than in its congener, generally paler blue, and appearing thinner in texture. The leaves, however, are generally sufficient to establish its identity. This species is also more inclined to creep, while *C. pumila* forms a dense tuft. The creeping habit makes propagation easy by division, especially if planted in free, not over dry, soil, on the rockery. Cuttings of either may also be taken, avoiding the flowering shoots. Both are very choice, and sure flowering rock plants.

ERIGERON MUCRONATUS.—The dwarf, branching, and bushy stems of this Composite produce a great profusion of Daisy-like flowers, extending over a long period of time. They are rather smaller than the common meadow Daisy, but their greater numbers, and the white rays, tipped with red, might very aptly have been addressed by the bard across the border as the "Wee, modest, crimson-tipped flower," for that describes the starry flowers to a nicety. Its cultivation usually presents no difficulty whatever, when planted in well drained, friable soil with plenty of root-run. In the Channel Islands it grows like a weed, and a very pretty one. A clump or two of it in moist or well-watered pockets on the rockery are very effective.—*J. Effe.*

PANSHANGER.

THE SEAT OF EARL COWPER.

I WAS much pleased on calling here a few days ago to notice a grand lot of plants of *Eucharis grandiflora*, and to find that they were grown in a house where the atmosphere and surroundings are of a much drier nature than is usually given to these useful plants. Mr. Anderson finds these plants grow well, that they retain their foliage and bloom most abundantly, on a front shelf in a warm house, where the open laths of the stage permit the warmth of the pipes to rise up immediately amongst the plants; this treatment and position suits them well. It is a long time since I saw such a quantity of healthy and clean looking specimens. The vineries here were also in capital condition, and in the separate houses Black Hamburgs, Buckland's Sweetwater, Muscats, Lady Downes, and Black Alicante were fine in berry, with large bunches and a very heavy crop. A new vinery has recently been planted with Muscats, Mrs. Pince and West St. Peter's. These have made good growth and are on the right track for good fruiting canes. Peaches and Nectarines were especially good. So, too, were the Figs, an immense tree of White Ischia being full of its luscious fruit. Pines were also fruiting well, the fruit of Queen running about 4 lbs. to 5 lbs. each, a goodly number of them. A quantity of Sir Joseph Paxton Strawberry was still fruiting in pots, no break occurring in the gathering of this fruit. I noticed in other houses a fine lot of

Clerodendron fallax, Gardenias, zonal Pelargoniums, Hydrangeas, Ferns, Caladiums, Crotons, &c., &c., besides Carnations in quantity inside and out.

In the kitchen garden some grand Royal Sovereign Strawberries were being gathered. These were fine in colour, of splendid flavour, and exceedingly large. Mr. Anderson's method with this and other sorts also is to plant in the autumn in rows, 18 in. apart each way, to fruit the plants the first year, when the crop is not a heavy one, and then cut away every alternate plant, so that for the second year of fruiting each plant has double the space. Grand crops are gathered from these, and the fruit is of uniformly large size. Generally the beds are then cleared away, and in other quarters similar processes are going on. It is only by emergency that a crop is gathered the third year. This is truly a far surer method than retaining the crop for three or four years, and never thinning away any of the plants. The crop of May Queen and William I. Peas was heavy, and in all respects satisfactory.

Leaving the kitchen and plant department, we drove across the park to the flower garden, the Rose borders, rock garden, &c., each having beauties of their own. The singular beds of close trimmed Box, planted in curves and scrolls, with sand, white limestone, and red shingle, with just a few shrubs here and there, is certainly a departure from the usual type of flower garden. The Tea Rose garden was just coming into beauty, and many fine flowers will, I should say, have been gathered here. In borders near this portion were fine masses of Roses, and on pillars some 8 ft. high many of the rambling and free-growing kinds were growing and blooming with great freedom. Of the grand lawn and park trees I had little time for inspection. One Oak, however, I was enabled to measure, and at 3 ft. from the ground this had a girth of 23 ft.—*W. Swan.*

HORTICULTURE IN ROTHERHAM.

CAIRNFORTH LODGE, MOORGATE.

THE residence of J. Kekwick, Esq., J.P., is situated a short distance from Oakwood Grange, the scene of my preceding article.

Here there is a large amount of good stuff grown in a considerably limited space; indeed from a cultural point of view the greater part is composed of glass structures, in which have been grown from time to time Chrysanthemums and other subjects that have graced the tables of local shows.

Immediately inside the entrance gate is the gardener's cottage, occupied by the veteran Mr. T. Gartery, who has done duty here quietly and unostentatiously for the past seven years. Proceeding past this spot and bearing to the right one comes to a small stretch of kitchen garden, &c., that was at the time of my visit well stocked with comestibles of grand culture. A bed of seedling Carnations arrested my attention in passing, being characterised by strong healthy grass and prodigious blooms in really first class variety, that had for the most part not burst. Continuing in the same direction the first plant house is upon us, and these houses continue without intermission for a length of 130 feet in all—the whole of them being either lean-to or three-quarter span, and built up to a high brick wall that flanks one side of the grounds. The first house alluded to is a spacious one, having a superficies of seventeen yards by seven yards. It is, however, of such an altitude that the wonder is how Mr. Gartery maintains such a striking dwarf habit that is noticeable in the small subjects of flowering plants that occupy a spacious stage on the left hand when entering.

Calceolarias, *Streptocarpus*, zonal and show Pelargoniums, Fuchsias, Petunias, Begonias and *Primula obconica* were all showing evidence of careful culture, and might have been in a model plant house instead of a structure that does duty as vinery, conservatory, Palm house, &c. The centre staging was occupied with specimen Azaleas, *Phyllocactus*, Palms, &c.; whilst on the wall was a conspicuous and huge plant of *Heliotropium* in partial bloom that I was told furnishes an enormous amount in the twelve months. The next compartment 5 yds. by 6 yds. is utilised as a stove and contained a good variety of suitable plants, embracing Marantas, Acalyphas, *Dracaena goldiana*, and many other species, Ferns of sorts, Eulalias, Crotons, *Dieffenbachias*, &c. Another section of 7 yds. by 8 yds. held a good plant each of *Euphorbia splen-*

dens, *Hibiscus Cooperi* and *H. grandiflora*, a nice piece of *Vallota striata* (an effective plant), some good pieces of *Eucharis grandiflora* sending up plenty of spikes, Caladiums in variety, Maiden-hairs in healthy condition, *Pteris* of sorts, &c.

Following on, one comes to a small section used as a vinery, containing the variety Black Hamburg, cropping well. In the large house first of all alluded to, I might have added most of the Grapes are grown, and a good crop is always realised, although the Vines are not as young as they were more than twenty years ago.

Proceeding, the next department is devoted to the culture of Peaches, merely holding two large specimen trees of Royal George in dimensions of about 8 yards by 6 yards. When I say that at the time of my visit there were on the respective trees 300 and 250 sizeable fruits, and that they were condemned by Mr. Gartery's predecessor as being beyond bearing more than seven years ago, it surely is a striking evidence that opinions differ on the matter of age and incapability. In what way some of our leading growers, for sale, will argue this point had better be left to imagination, description being unnecessary.

As we sat together at this spot, discussing the fruitfulness (the Peaches were not ripe), I had an opportunity of trying to draw Mr. Gartery, the gardener, as to his antecedent career in the profession which he, by general consent in South Yorkshire, so well adorns. But no, he obstinately hides his light under the proverbial bushel, and is as hard to draw as a good pipe stuffed up. However, after a lapse of skilful doggedness on his part I gathered a few hints that fell from his less reserved, but worthy son, Mr. C. Gartery, who presides over the gardens at Yhosapham Manor, a few miles away; and who was in our company at the time. It appears then that he first saw the light at Clarendon Park, Wilts, the seat of Sir F. H. Bathurst, Bart., where his father was foreman forty years, under the late Mr. Chard. He has been nearly thirty years in Yorkshire, about twenty of which have been spent in Rothertham, namely, four years at Clough House, nine years at Oakwood Grange—the subject of my last notes in the time of Mr. H. Jones' residence there—and seven years in his present employ. He is on the committee of the Sheffield Chrysanthemum Society, and was formerly secretary, being now chairman, of the Rotherham and District Chrysanthemum Society.

But to continue with a survey of all the good things under his skill, we emerge into the portion devoted to Roses (climbers) and other decorative climbers such as *Passifloras*, Fuchsias, Ivy-leaf Pelargoniums, &c., which were in full beauty. A spacious glass-roofed potting shed must perforce conclude the large number of houses, and here were setting luxuriant Tomatos and late Grapes, whilst on the stage at the side were to be seen in pots such subjects as Lilies, *Gloxinias*, Seedling *Primulas* and *Calceolarias*, &c.

Open sesame, and the small kitchen garden that revels in good things can be observed in an instant. Daisy and Gradus Peas were bearing gloriously, and were highly praised by the cultivator as desirable varieties. About eighty varieties of Chrysanthemums were stood out in the usual way one is wont to see, and were looking healthy and well wooded. Such examples as Condor, Phoebus, Mrs. G. Carpenter, Mrs. Weeks, Emily Wells, Silver Cloud, Silver Queen, Waban, Louis Boehmer, and Beauty of Teignmouth were conspicuous. A dozen or two of Tomatos (Peachblow) were also standing out in fruiting pots looking exceedingly well, and were about to be housed. Apples were few, and Pears a failure. Two rows of superb Celery, the same of each Ne Plus Ultra and Canadian Wonder Beans were a picture. Unlike the experience of most others the latter and Runner Beans, although sown early, not a single one missed according to Mr. Gartery's statement. Sharpe's Queen, Stratagem, and Autocrat Peas bore out in a high degree the prevalence of good culture, with the addition of seeds of a first-class stock. In the front of the mansion was to be seen a superb hedge of Sweet Peas, regularity of bloom and foliage with size of individual flowers being its characteristics. A narrow border running the whole length of the Sweet Peas, revealed a superb strain of Seedling Pansies, the blotching and markings being extremely pleasing. The pretty chain borders were bedded out, not much variety being utilised, but embracing zonal Pelar-

goniums, such as Happy Thought and Vesuvius, Brighton Gem Lobelia, and Echeveria secunda glauca. The effect was pleasing, and in good taste. To gaze from the elevated ground on which stands the mansion one can take a good view of the lawn, with its fine specimen Hollies introduced, banks of Laurels here, mixed shrubs there, and anon bright dots of such conspicuous representatives of the herbaceous family as Inula glandulosa, Helianthus, Rudbeckias, Gaillardias, Leucantheums, and the like. Mr. Kekwich takes a delight in his garden, and is a patron of the local Chrysanthemum society, whilst he is known to be as liberal as anybody in the district in all charitable objects. He is now eighty-four years of age, having been up to twenty-two years ago managing director to the Messrs. Stubbs' Holmes Steel Smelting Works for a period of thirty years. The only daughter takes as keen a delight in matters horticultural as he, whilst the gardener is made to be as comfortable as it is possible to be.—*Albert Upstone.*

BOTANIC GARDENS, DUBLIN.

On a trip to the Sister Isle I had the opportunity of visiting the well-kept grounds and gardens of forty-two acres, at Glasnevin, Dublin. The houses and Coniferae are well worthy of notice by lovers of horticulture. The contents of the houses will be noticed in the same order as they were visited. The Camellia house contains many healthy plants of the usual leading varieties. On the side stages was a bright array of Cannas and zonal Pelargoniums. At the lower end is a fine group of *Gleichenia circinata*, 7 ft. in diameter and 6 ft. high; *G. Mendelii*, 6 ft. by 4 ft.; *G. rupestris*, 6 ft. by 4 ft.; and a number of other large specimens. In this house some dozens of *Disa* blooms were in full beauty. The Palm house is a large structure, 66 ft. high, and the contents included Tree Ferns and Anthuriums, *A. acaule* carrying leaves 4 ft. 6 in. long and over a foot wide. *Marattia alata* was represented by a fine healthy plant; and a large plant of the Mango was conspicuous. *Kentias*, *Dion*, *Cycas*, and many lofty Palms completed an interesting collection.

Passing on to the next structures, I found Ferns in good form, *Adiantums* being in many varieties. *Nepenthes distillatoria* was carrying a grand lot of pitchers. *Sobralias* and *Cyrtopodiums* were in quantity, and in good health. Amongst other attractive things were *Anguloa Clowesi*, *Cattleya gaskelliana*, *Epidendrum prismatocarpum*, *Pleiones*, etc. *Nepenthes* overhead were doing well.

In the stove were attractive features in *Brownea Ariza*; *Hibiscus* with their showy flowers, *Cassia laevigata* with its blaze of golden colour, and a fine-formed *Araucaria Rulei*, well feathered to the pot. The New Holland house is at present stocked with a miscellaneous assortment of flowering plants such as *Balsams*, *Crassulas*, *Cannas*, *Liliums*, *Trachelium*, *Fuchsias*, *Heliotrope*, *Celosias*, etc. A good plant of *Philesia buxifolia* was fully 8 ft. through. The succulent houses (recently built by Messrs. Boyd, of Paisley, noticeable for their lightness and beauty), were most attractive, and contain a great array of these little known but charming plants. A pair of *Cerus gigantus*, standing 10 ft. above the pot, are noble columns. The *Agaves*, *Haworthias* and many other species make up a telling and instructive display.

Victoria regia gives every evidence that it approves of its treatment and position, some of the leaves being 7 ft. in diameter, with a rim 6 in. in depth. *Nymphaeas* were in various colours and doing well. Amongst the tree Ferns were *Dicksonias* and *Cyatheas*, *C. medullaris* being 20 ft. high. A peep into the small fernery at the back of the general range of houses showed *Todea mooreana*, *T. superba* (5 ft. in diameter), *T. wilkesiana*, &c. Our guide stated that they had more of the Killarney Fern than could be found in the whole district of Killarney; and this proves so far as I saw perfectly correct, for the only piece I saw in that district was a plant under a 10-in. bell-glass, whilst at Dublin the back-wall, for about 80 sq. ft., was covered with this charming plant.

There is much that is interesting in the grounds, *Wellingtonias* being about 35 ft. high, and Irish Yews grand with their well-furnished dark foliage. *Mistletoe* flourishes on several trees in the gardens.

Some 15 acres have been added during the last few years; and the Conifers in many choice varieties

must have been carefully planted, for they are doing admirably; and if they continue in the same form for a few years will make telling specimens. The Water Lilies and rockeries are details of special interest, and worthy of a more extended notice.

The gardens and houses alike reflect great credit on the esteemed curator, Mr. F. W. Moore, and his able staff.—*R. G. Waterman, Liverpool.*

THE BEAUTY AND ORDER OF GARDEN SCENERY.*

THIS is a heading which could cover a very wide area, and as my time is somewhat limited, I thought it best to leave the landscape part out, and confine my remarks chiefly to the garden proper, though there are many points which may apply equally to both. To unite the agreeable with the useful is an object common to all departments of gardening. We see examples of this everywhere, from the cottager's humble kailyard to the nobleman's lordly domain. In both cases, the principle is the same, to beautify and adorn the homes of their possessors, and at the same time to supply them with those necessities of life, good fresh vegetables and fruits. So it is how to secure these benefits and, at the same time, keep the garden in a beautiful and orderly manner that I intend to turn your attention to-night.

For more convenience I will divide it up a little, and first of all endeavour to show you my ideas of what beauty and order in garden scenery should be; secondly, how it may be attained; and, thirdly, how it may be kept. Beauty here is not meant to represent only such things as are ornamental; every part of the garden has beauties peculiar to itself, and the main beauty of each lies in the perfection to which all these separate results are attained. Take for example the kitchen garden. We do not intend to see there a great show of ornamental works or a great display of flowers in bloom; yet who among us will deny the fact that there is beauty in the utility of a well kept kitchen garden as well as in the more showy and ornamental parts of the flower garden and pleasure grounds? Of course, its main beauty is its usefulness, so we look at everything from a useful point of view. Ornamental work appears quite out of place, and this is no doubt a good part of the secret of real beauty anywhere, namely, having everything placed where it will appear in harmony with the surroundings.

A secondary beauty also no doubt lies in the skill displayed to attain all these separate results in the neatest and most perfect manner and in this, order plays a very important part. It is well named Heaven's first law; or as Johnson says, "Order is a lovely nymph, the child of beauty and wisdom, her attendants are beauty, neatness and accuracy, her abode is the valley of happiness, she is always to be found when sought for and never appears so lovely as when compared with her opponent disorder." Without it any establishment, although the most fertile in resources, is terribly handicapped; for if the leader or conductor of any sort of work be a man incapable of an orderly disposition, he will start work with no definite object in view, will follow it in a haphazard way, till at last, if it does not end in complete failure, will at least result in a heterogeneous mass without any of the beauty and neatness that go to make up a properly finished job.

But if he be of a well ordered mind, he will reflect, arrange and systematise ideas before putting them into practice; he will look well to the end he has in view, consider the means at his disposal to attain that end, and the best mode of employing those means. To every one who has the regulation and management of a number of servants, this orderly working is essentially necessary to reap the full reward of their labours and to none more so than to gardeners, the success of whose operations, always connected with and dependent on living beings and weather, depends so much on having everything done at the proper moment.

In the next place I shall endeavour to lay before you some of the ways by which this beauty and order in garden scenery may be attained. The first step I consider necessary is systematic working, and this, I think, is the keynote of success everywhere—the art of having a time for everything, and everything done at the proper time, and a place for every-

* A paper read by Mr. James Good at a meeting of the Ayrshire Gardeners' Association.

thing, and everything in its place. Of course, it is sometimes no easy matter to get everything done when it should be done; yet by carefully studying the work in hand and doing everything when it can be done most advantageously, and in the best manner possible, much more can be got through and the work is better done and with greater comfort and pleasure to the workman than by doing it in an unthinking or rule of thumb manner. Take, for instance, hoeing. No one will deny the fact that a bright sunny day is best for this operation; or on the other hand that a dull or even a wet day is best for transplanting; and also in winter much can be done to suit the weather and the comfort of those employed outside. By doing heavy work such as digging in cold weather, wheeling manure and other matter when the ground is hard, and reserving nailing and pruning for mild days, the best results will ensue; for it considerably spoils the beauty of any garden if we go into it some cold frosty morning and see the men standing in front of a wall and supposed to be nailing, but whose blue faces and benumbed hands bring vividly to memory Burn's memorable words:—

"Man's inhumanity to man
Makes countless thousands mourn."

Of course I do not mean to say that these things can always be strictly adhered to; to suit circumstances or other work any of them may have to be done when the climatic conditions are not of the best; yet wherever practicable these points should be kept in view.

There are also other cases when, although it may be perfectly proper to have certain work done, yet to suit circumstances, we may have to refine propriety a little and act in a decorous manner. For example, it is perfectly proper to cut the grass and do up the beds in the flower garden, or water the plants in the conservatory when they require it; but decorum demands that the bulk of this work should be done in the early morning before the family are astir, so as to leave these places during the day for the use and recreation of our employers and their friends, without being annoyed by the presence of workmen coming and going at all times. Of course, much more might be added to this part, but I think I have said enough to show my meaning plainly, and that there are benefits to be derived from doing everything at the proper time.

We will now proceed and consider the benefits to be derived by having everything in its proper place. A paper could be got up on this part alone, if I were to speak of the best places to suit all the different plants; but I will not attempt to tire your patience to-night, but confine my remarks to those things we can have fixed places for. No hard and fast rules can be laid down as to what positions any of the following should occupy, as almost every garden is differently situated in some respects. Therefore it must be left to the gardener in each place to choose his own sites. All I would say is that due regard should be given to convenience and neatness. About every garden, whether large or small, places should be set apart for all the different requisites necessary for its upkeep, such as composts of all sorts, manures and everything else required; also places for refuse of all sorts; one for weeds and all other waste matter; another for all vegetable refuse to form that most valuable addition to garden manures, vegetable mould; and another for all wood refuse, so as to be convenient for burning occasionally.

We often see these places very much neglected. I do not think this is as it should be. A little attention given them well repays any extra labour it may cause. Of course, they are generally placed in the background, somewhere out of view of any of the principal walks. Yet that need be no excuse for allowing them to lie in a rough and untidy state. Each heap should be kept entirely by itself, and it should be seen to that there and there alone all such matter is placed, and that the refuse heaps be occasionally squared off, and when anything is taken off any of the compost heaps let it be neatly taken off the end, and not a portion dug out here and there, as we sometimes see done.

Another point on which I must pass a remark before passing on to something else is the tool shed. How often do we see it kept as it should be? Yet here, if anywhere, this rule should be rigidly enforced. Nothing is more aggravating to a man of an orderly disposition than to be sent off to a certain job, and, perhaps, have to look over the whole shed before he can find the necessary tools to do it with,

and then, perhaps, find them in such a state as will take him a long time to get them into proper working order, all through the carelessness of the one who had been working with them previously, by neglecting to clean them and put them in their proper places when he had finished. The time it would have taken him then would have been nothing to the time wasted now, not only in looking for them, but also in the quality of the work now performed.

No one can do work in a businesslike and proper manner without having all his tools in thoroughly good working order. When this is attended to no slovenly work should be tolerated. It should always be borne in mind that if a job is worth doing at all it is worth doing well. It should always be seen to by the head gardener or foreman in the different departments that the younger men, especially apprentices, are thoroughly initiated into the proper way of working all the different tools; for this is undoubtedly another feature in garden scenery, to see the work being gone about in a neat and businesslike way, with everyone alike interested and determined to do his share in the best manner possible. Every job should be done thoroughly as you go along. For instance, in digging over a piece of ground it is a common practice with slovens to throw weeds, stones or other extraneous matter on the alley or walk adjoining, to be raked up afterwards. As this keeps these places untidy all the time you are at the job it is a much better plan to have a basket or barrow beside you to put them into as you pick them out of the ground. When the digging is finished, should it be a border requiring an alley made up, it should be done at once, and then the job is finished and looks quite tidy, although it may have to wait some time before any crop is put in. By thus performing every part of an operation as we go along we can leave it at any time, should occasion arise, and it will still have a finished appearance as far as we have gone. Should it happen that any of the other men be sent to finish it he will see at once what is done and what is not.

(To be continued.)

SOCIETIES.

EATON, CHESTER.—August 5th.

THE annual flower show of the Eaton Estate Society was held in Eaton Park. The show was a very good one and the cottagers of the estate are to be congratulated on the quality of their vegetables, which showed considerable improvement over those of previous years. Particularly well represented were such things as Carrots, Cauliflowers, Celery, Lettuce, Onions and sweet herbs. On the other hand Potatoes were scabby, and Peas and Vegetable Marrows were not up to former standards.

The amateurs took precedence of the cottagers in the flower and fruit classes, which were fairly well shown, all things considered. The most attractive exhibit of the show was a decorative table set up by Mr. N. F. Burnes, gardener to the Duke of Westminster, Eaton Hall, and which had been arranged with exquisite taste. The principal features of it consisted of Nectarines, Peaches, Plums and other luscious hot-house fruits, beautifully set off with Asparagus, Fern fronds and beautiful varieties of Carnations.

In the cottagers' section the greater number of classes were set apart for vegetables, fruit, plants and cut flowers not being by any means neglected, though the classes were fewer. Vegetable classes were equally numerous for amateurs, and they also did credit to the fruit prizes offered for competition. Prizes were also offered for annuals and other cut flowers, as well as for bread, butter and honey. The competing tenants were classed according to the number of cows they kept.

The prizes were distributed by the Duchess of Westminster, the Duke also being present, and read out the reports of some of the judges. He congratulated the prize-winners and hoped the unsuccessful competitors would not be discouraged. The Duke and Duchess were accompanied by Lady Lettice Grosvenor, Lord Arthur Grosvenor, Lady Mary Grosvenor, Lord Hugh Grosvenor and others. The Duke held an "At Home," to which the leading tenants and a number of Cestrians were invited, including the Mayor of Chester (J. Goodie Holmes, Esq.) and Miss Holmes, both of whom attended.

BIRMINGHAM CARNATION SHOW.—

August 5th and 6th.

THE annual exhibition of the Midland section of the National Carnation and Picotee Society was held in the Edgbaston Botanical Gardens on the above dates, and demonstrated in no small degree the progress that has been made in this popular flower. Last year's show was held by many competent judges to have been the best in England; the exhibition just opened was practically its equal in number of exhibitors, if not altogether so in regard to quality. "Sels" and "yellow ground" varieties, indeed, could scarcely be surpassed, and the observant visitor examining the number of and perfection in which these beautiful varieties were shown will easily discover that the trend of public fancy is in their direction, to the exclusion of "flakes" and "bizarres." It is not that the two latter branches of the Carnation family were not largely represented, nor that the high standard of quality associated with the Birmingham show were not maintained. Far from it. They are still as striking and beautiful in colour as heretofore; but the tendency of the age is unquestionably towards the more simple and delicate tones of the yellows and sels. The season has been a fairly good one for cultivation, and it was the general subject of conversation among the many experts gathered from various parts of the country that the exhibition could, on the whole, scarcely be surpassed.

The committee were fortunate in securing the support of Mr. Martin R. Smith, of Hayes, Kent—the chief raiser of sels and yellows in the country—and it is perhaps needless to say that he won in most of the classes in which he exhibited. At the same time it is satisfactory to know that a Birmingham amateur, Mr. R. C. Cartwright, of Selly Park, Edgbaston, ran him very close, and in the competition for the "Sydenham Amateurs' Challenge Cup," for the most successful exhibitors in Classes I. to XXXVIII., was only beaten by ten points—Mr. Smith securing 141 points to Mr. Cartwright's 131. The Midland Counties Challenge Cup, open to the trade—the competition in which, it may be remembered, Mr. Robert Sydenham, of Bristol Road, having last year won the previous Cup outright, promised not to compete—was carried off by Messrs. Thomson & Co., of Sparkhill, with 119 points, Mr. R. Brown, of Crompton Road, Handsworth, being a good second with sixty-eight points. Mr. A. W. Jones, also of Handsworth, who won the Amateurs' Cup last year, but who has in the meantime joined "the trade," was third with fifty-two points.

Mr. Sydenham, however, although not taking part in the challenge competition, won in many of the classes in which he competed, and had a splendid aggregate of 194 points. Mr. Martin Smith won the first prize in Class I.—for twelve self Carnations—his most prominent blooms being Cecilia, a very fine yellow seedling, which also won at the recent show at the Crystal Palace; Conqueror, a rosy-salmon of perfect shape; and Comet, a deep crimson. Mr. Robert Sydenham was a capital second, showing amongst a well-balanced collection a perfect specimen of Regina, a new yellow self, having much in character with the ever-popular Germania. Mr. A. W. Jones, of Handsworth, who was first in the class for six self Carnations, showed a very fine flower of the dark maroon Mancunian, and a dainty white, Mrs. Eric Hambro. The competition in this class was exceedingly close, and there was not much to choose between Mr. Jones's stand and that of Mr. R. C. Cartwright, of Selly Park, who was second, the blooms being amongst the choicest seen out this season, notably a wonderfully good Regina, which won the first prize also in the class for single blooms. Mr. Martin Smith had to be content with third prize here, but in Class III.—twelve yellow-ground Picotees—the Kent grower scored comparatively easy, his exhibits including some of the choicest varieties sent out for some years. Lady Bristol, a deep yellow ground, with heavy rose edge, which gained a First-class Certificate at the Crystal Palace, and Gazelle, an entirely new flower of the same character, but with a deeper edge, being amongst the most notable. Mr. James Douglas, who was second in the class, was best represented by Stanley Wrightson, a choice primrose, with deep red edge. Mr. R. C. Cartwright was first in the class for six yellow Picotees, Mr. Nigel, primrose ground with heavy maroon edge, being his best

flower; Mr. Brown, of Handsworth, who was second, also showing a Mr. Nigel, though a little loose in formation in comparison with that of Mr. Cartwright.

The competition in the class for fancies was exceedingly keen, and here again Mr. Martin Smith scored, showing a grand specimen of Hidalgo—the finest fancy yet raised, though a bad grower—having a yellow ground, with crimson and maroon flakings. Mr. Sydenham was a good second, Little Sam—primrose with maroon lacing—being the pick of his collection. Perhaps two of the closest stands in the show were those of Mr. Sydenham and Mr. Brown, staged in Class VI.—white ground Picotees—but the former just won, his Muriel and Mrs. Openshaw being remarkably good.

In the classes for flakes and bizarres it was a source of satisfaction to several growers that despite the introduction of many new varieties, such old favourites as Admiral Curzon, Sarah Payne, which have been in cultivation for fifty years, and Sportsman—a sport started from the Curzon forty-five years ago—still hold their own, and are shown to great perfection. Mr. Sydenham secured the premier honours in this section, some of his best blooms being Gordon Lewis, a purple flake, which won also the premier prize for specimen flakes; Richard Monk, a new scarlet bizarre, and John Wormald, a scarlet flake. Messrs. Thomson & Co. were well up second, their specimens including a fine Master Fred, which also won the premier prize for bizarres.

The classes for undressed blooms—flowers shown with natural foliage and without dressing or cards—produced a lively competition, and were amongst the most interesting features of the show. Here again Mr. Sydenham was first, and Mr. James Douglas, second. Mr. R. C. Cartwright, after a keen contest, just beat Messrs. Thomson & Co., in the class in which three flowers from each of six distinct varieties were staged, these, with their foliage, making a very pretty display. Mr. Martin Smith added to his other successes with three premier prizes for specimen blooms in sels, fancies and yellow grounds, whilst Messrs. Thomson & Co. won in bizarres, Mr. Robert Sydenham, in flakes, and Mr. A. W. Jones, of Handsworth, in two classes of Picotees.

The competition in single blooms was generally very close, the principal prizes falling to Mr. Sydenham, Messrs. Thomson & Co., and Mr. Brown. The maiden classes, open to growers who had never previously won, were remarkably well contested, there being no fewer than seventeen exhibitors—certainly an encouraging augury for the future success of the society. Mr. T. F. Dranfield, of Stoke-on-Trent, was the successful exhibitor. Mr. Martin Smith won further honours in the classes for border Carnations, Mr. H. W. Wyvelin, of Torquay, and Mr. A. J. Rowberry, of South Woodford, also showing to advantage.

In addition to the Carnations sent for general competition there were classes for bouquets, table decoration, sprays, &c., whilst the honorary exhibits—especially the Begonias of Mr. B. R. Davis, of Yeovil; the herbaceous plants shown by Mr. W. F. Gunn, of Olton; Messrs. Hewitt & Co., Solihull; Mr. J. White, of Worcester; and the Sweet Peas of Mr. Eckford, of Wem, Shropshire—were of great excellence. The judges were Mr. T. E. Henwood, Reading; Mr. John Ball, Royal Forest, Slough; Mr. John Whitham, Hebden Bridge; and Mr. Chas. Phillips, Bracknell, Berks.

HASTINGS.—August 10th.

THE annual flower show of the Hastings and East Sussex Horticultural Society was held in the Alexandra Park, Hastings, under very favourable auspices as to weather. The exhibits were fewer than last year, but the quality of the plants was quite up to the previous standard as seen at Hastings. There were sixty-one exhibitors as compared with seventy-eight last year, and the exhibits amounted to 490, while last year they were 523. There was considerable competition for cut flowers, including Roses, and table decorations were of a high order of merit, great taste in the arrangements being displayed. Vegetables were also a good feature of the show, and of good quality.

The first prize for eight stove and greenhouse plants was taken by J. Warren, Esq. (gardener, Mr. A. Offer), Handcross Park, Sussex, who had some excellent samples of good cultivation. Sir Archibald Lamb (gardener, Mr. T. Portnell) took the

second place with some good specimens. P. A. Eagles, Esq. (gardener, Mr. A. Gadd) came in third. He came to the front, however, for six stove and greenhouse plants, his previous rivals taking second and third in the order named. Mrs. Lewis (gardener, Mr. H. Clarke), Guestling, took the lead for four stove and greenhouse specimens. The Rev. E. N. Blomfield (gardener, Mr. J. Bannister), was second.

J. Warren, Esq., again led the way for eight fine foliage plants, followed by Sir A. Lamb and P. A. Eagles, Esq., in this order. C. J. Ebdon, Esq. (gardener, Mr. F. Morris), had the best four fine foliage plants. J. Warren, Esq., had the best eight exotic Ferns, and Sir A. Lamb the best six Fuchsias. Mr. J. Dawson, Silverhill, had the best single and best double Pelargoniums, the best four Fuchsias, and the best double Ivy-leaved Pelargoniums. Sir James Colquhoun, Bart. (gardener, Mr. T. J. Mitchell), took the lead for British Ferns and in some other classes.

Mr. J. Snow, The Gardens, Wadhurst, had the best collection of eight dishes of fruit. Mr. W. Robinson, Rye, took the lead for dessert Apples. The Duchess of Cleveland (gardener, Mr. W. Camm), staged the best culinary Apples. Mr. W. Robinson again came to the front for dessert Pears. The Duchess of Cleveland came to the front for Black Hamburgh and also for any other black Grape. Mr. J. Snow was second in both cases, but came to the front for Muscat of Alexandria.

Mr. L. Apps, Ore, took the lead in the class for a collection of nine vegetables, showing some fine samples. Mr. H. Colegate had the best French Beans. Mr. L. Apps again led the way for Cucumbers, Cauliflowers and spring sown Onions. Mr. T. Dake, Battle, showed the best Celery, and Mr. W. Paine, the best Carrots. Mr. F. Grinstead had the best Peas. The Rev. E. N. Blomfield took the lead for round Potatoes, and Miss Barnett (gardener, Mr. A. Foster) had the best kidney varieties.

A considerable number of prizes was also offered for competition by cottagers, who were, as usual, strongest in the division for vegetables, showing some examples of great care in cultivation. They also competed in the class for flowers, plants and honey. Mr. W. Robinson, Rye, took the leading prizes for honey in 12-lb. sections and 12-lb. bottles.

SEVENOAKS.—August 10th.

THE annual show of the Sevenoaks Horticultural and Floral Society was held in the grounds of Knole Park, by the kind permission of Lord Sackville, and was again a most successful affair, and by those who live in the district it is regarded as one of the best managed and attractive shows of its kind in the south of England. The private grounds of Knole Park are very beautiful and afforded great pleasure to the visitors, who took delight in roaming over the well-kept grass, admiring the beautiful and diversified scenery. Some heavy showers fell during the morning and threatened to spoil the show; the wind also blew half a gale, and much of the canvas that separated the show from the rest of the grounds was blown down, while the tents containing the exhibits were also partly damaged. The secretary, Mr. K. Hancock, assisted by Mr. Fenner, the late secretary, set to work, and having procured additional ropes, the tents and marquees were rendered secure against all further danger. The attendance of visitors was very great, and towards evening the tents proved quite inadequate to accommodate the vast assemblage of people, who cheerfully bore the discomfort.

The premier award for a miscellaneous collection of exotic flowering plants was taken by Mr. A. Gibson, gardener to T. F. Burnaby-Atkins, Esq., J.P., Halstead Place, who was followed by Mr. A. Hatton, gardener to Mrs. Swanz, The Quarry, Sevenoaks. This order was reversed for fine foliage plants. Mr. G. Cowper, gardener to H. Foster, Esq., Hillside, Kippington, took the lead for six Fuchsias. Mr. J. Talmage, gardener to Miss Hodgson, Hernewood, Sevenoaks, had the best Caladiums, and the best tuberous Begonias. Mr. H. Heath, gardener to Mrs. Petley, Riverhead, received the first award for zonal Pelargoniums; while Mr. W. Adams, gardener to J. Dixon, Esq., Edenhurst, Sevenoaks, led the way for Coleus. Mr. J. Talmage had the best hardy Ferns. Mr. C. Sutton, gardener to Earl Stanhope, Chevening, had

the best specimen stove or greenhouse plant. Mr. A. Hatton took a like honour for a fine foliage plant; he also had the best group of Ferns arranged for effect.

There was strong competition in the class for a collection of plants arranged for effect, the first prize going to Mr. C. Sutton; Mr. G. Fennell, gardener to W. M. Cazalet, Esq., Fairlawn, Shipbourne, followed; Mr. A. Hatton took the third place; Mr. S. Cooke, gardener to De B. Crawshay, Esq., Rosefield, Sevenoaks, came in fourth; and a fifth prize went to Mr. W. Tebay, gardener to Mrs. Rycroft, Everlands; a special prize was given to Mr. W. Hough, gardener to Mrs. Lambarde, Beechmont, in this class. Mr. R. Edwards had the best table plants.

Cut flowers were well represented in the numerous classes set apart for them. Mr. C. Sutton took the lead for twelve Roses, distinct varieties. Mrs. F. W. Seale, Sevenoaks, had the best twenty-four varieties of Dahlias; and Mr. A. Parks, Ivy Hatch, had the best twelve. Mr. A. Hoadley, gardener to F. L. Bevan, Esq., Kippington, showed the best twelve China Asters, the best twelve Cactus Dahlias, and the best six varieties of Phloxes. Mr. E. Turner, gardener to the Rev. H. P. Thompson, Kippington, had the best twelve Cactus Dahlias in six varieties. Mr. C. Noble, gardener to Miss Austin, Old House, Sevenoaks, led the way for twelve blooms of Zinnias and six spikes of Gladioli. Mr. E. Hatton secured the lead in the class for a collection of cut flowers of stove and greenhouse plants. Mr. C. Noble had the best collection of herbaceous flowers; and Mr. E. Hodgson led for border Carnations.

In the fruit division Mr. A. Hatton led the way for a collection of six kinds. Mr. T. Osman, gardener to L. Baker, Esq., Chertsey, had the best black Grapes, but was beaten by Mr. W. Hough for white Grapes. He again came to the front for three varieties of Grapes. Melons, Peaches, Nectarines, Plums, Apples, Pears and Cherries were well shown.

Mr. F. Leftley, gardener to T. Collyer Fergusson, Esq., Ightham Mote, set up the best collection of nine vegetables; and was followed by Messrs. F. Robinson, A. H. Hoadley, and G. T. Barney, in this order.

The competition for table decorations was keenly contested, and Mr. S. Cooke came out at the top of the list for a table 9 ft. by 4½ ft.; he was followed by Messrs. W. A. Searing, R. Edwards, and G. Fennell, respectively. Mr. W. A. Searing came to the front for an epergne or centre table decoration.

A division was set apart for gentlemen keeping one gardener and one assistant only. Messrs. C. Noble and H. Heath took the leading prizes for plants, the latter being the most successful. H. Monckton, Esq., Maidstone, had the best eight varieties of Roses. Mr. J. Humphrey, gardener to Mrs. Bouch, Ightham Lodge, took the lead for twelve varieties of Dahlias. Mr. C. Noble also took the lead for twelve varieties of cut flowers. Prizes were also offered to those who keep no gardener, in classes for plants and cut flowers. A division was open to both of the two previous classes of competitors, the prizes offered being for fruit. The first award for a collection of four varieties was secured by Mr. G. Denton, gardener to A. Earle, Esq.; Mr. W. Miles, gardener to F. W. Francks, Esq., Loampits, Tonbridge, being second. The latter showed the best white Grapes; but Mr. G. Denton took the lead for black Grapes. Others taking first prizes in this division were Mr. L. C. Edwards, Stone Pitts, Seal; Mr. E. Marchant, gardener to the Rev. — France, Sevenoaks; Mr. G. Cowper; Mr. C. Noble; and Mr. J. Ashby, Boxley, near Maidstone. Mr. J. T. Barney; and Mr. E. Hodgson, took the leading prizes for vegetables in this division. Many prizes were also offered to cottagers, and competition was good.

In the non-competitive classes Messrs. J. Veitch & Sons, Ltd., Chelsea, had a grand display covering 200 sq. ft. and consisting of Crotons, Orchids, Dracaenas, Caladiums, Golden Ferns and other subjects most effectively arranged. Messrs. J. Peed & Sons, Roupell Park, West Norwood, made a magnificent display with some thirty varieties of Caladiums in plants of large size. Mrs. M. V. Seal, The Vine Nurseries, Sevenoaks, covered about 100 ft. run of table space in the cut flower tent with wreaths, crosses, harps, lyres, Palms, Ferns, &c. The judges accorded these three exhibitors twelve points each. Messrs. H. Cannell & Sons, Swanley, Kent, had a tent all to themselves as in former years, and made a fine display with tuberous Begonias, Dahlias, Acaly-

pha Sanderi and vegetables. The judges adjudged them ten points. Messrs. Wm. Cutbush & Son, Highgate, London, filled 150 sq. ft. with Cannas, Hydrangeas, Crotons, Dracaenas, &c. They scored eight points. Messrs. G. & A. Clark, Dover, and Mr. J. R. Box, Croydon, each scored six points, the latter showing Tea and H. P. Roses in quantity, and of fine quality. Messrs. Holland, Tunbridge Wells, and Mr. F. Webber, Tonbridge, each received four points.

NAIRN.—August 10th.

THE annual exhibition of the Nairnshire Horticultural and Industrial Society was held in the Public Hall, Nairn, and proved a great success. The quality was good considering the unfavourable character of the season generally, though the entries were not so numerous. The show was opened by Brodie of Brodie, Esq., in the presence of a good attendance.

The first prize for stove plants was secured by Mr. Anderson, of Holme Rose, who easily won the Silver Medal presented to the most successful prize-taker in four sections open to gardeners. For stove plants he was followed by Mr. Macgillivray, The Gardens, Newton House, who also had the best Fuchsias. Mr. Anderson took the lead for greenhouse plants, exotic Ferns, Gloxinias, Lycopodiums, and in many of the classes for cut flowers and bouquets. Mr. Munro, Delnies, secured first prizes for tuberous Begonias, Phloxes, China Asters, and Antirrhinums. Mr. Wedderspoon, Croy, had the best show and fancy, single, and Cactus Dahlias, and fancy Pansies respectively. Mr. Masson, Kinsteary, was the most successful exhibitor of Tea Roses, herbaceous plants, &c. Mr. Anderson had the best hybrid perpetual Roses and Gladioli.

In the first division Mr. Macgillivray had the best Grapes and Peaches, while the leading honour for Pears was taken by Mr. Dallas Nairn. Mr. Anderson again led the way for Plums, Apricots and Cherries. Mr. Masson also took a number of prizes for fruit.

Mr. Munro, Mr. Campbell, of Boath, Mr. Anderson, Mr. Masson, and the Rev. J. Bonallo took numerous prizes in the section for vegetables. Mr. Masson secured the leading award for the collection of twelve vegetables.

Classes were also set apart for amateurs and cottagers, prizes being offered for plants, flowers, fruit, vegetables, dairy produce, honey, &c. In the amateurs' section the Silver Cup for the most successful prize-winner was taken by Mr. Finlay Duff, Grigorhill, Auldearn. He also had the best kept garden in Nairnshire. Mr. Macpherson, Mill Road, had the best garden in the burgh of Nairn.

Messrs. D. Stalker & Son, Nairn, exhibited a large assortment of pot plants in fine form. They also had a stand of Ichthemic Guano, which they recommended for pot plants.

BISHOP'S STORTFORD.—August 10th.

THE annual show of the Bishop's Stortford Horticultural Society was held at the Grange, Bishop's Stortford, by the kind permission of John Barker, Esq., and was a great success. The society is generally admitted to be one of the most important in the eastern counties, not a little of the success of the show being due to Mr. Wm. Smith, who has been hon. secretary for many years. The grounds, gardens and hothouses at the Grange were thrown open to visitors. There was a great increase of entries over former years, particularly amongst cottagers.

A Silver Medal was offered by Messrs. John Laing & Sons, Forest Hill, for the most effectively arranged group of plants, which brought out seven exhibits. The premier honours were taken by Mr. G. Barker, gardener to H. A. Blyth, Esq., of Stansted, with a group which was characterised by novelty in design. His most important plants consisted of Crotons, Dracaenas, feathery Cocos weddeliana and other Palms; Mr. J. Richardson, gardener to Sir James Blyth, who is well known as a strong competitor, had to be content with the second place on this occasion, being beaten for the first time during the past five or six years; Mr. W. Clarke, gardener to Charles Gold, Esq., M.P., took the third award; and Mr. T. H. Lodge, gardener to Mrs. Menet, was accorded an extra third, all of the four groups being really fine, and other extra prizes awarded. The last named came to the front for stove and greenhouse plants; Mr. G. Beech, gar-

dener to J. Barker, Esq., being second. Mr. J. Richardson again came to the front for fine foliage plants. Mr. B. Calvert, gardener to Col. G. B. Archer Houlton, had the best Ferns.

Considerable interest was aroused by the groups of tuberous Begonias which are here grown to great perfection. The premier award was taken by Mr. W. Pavitt, gardener to W. Smith, Esq., who had a magnificent display, but was run pretty close by Mr. E. Harris, gardener to A. Taylor, Esq. The latter came to the front for hanging baskets of tuberous Begonias, beating his previous opponent, who was second. He also received the first prizes for single tuberous Begonias, and also doubles. W. P. Neal, Esq., had the best twelve Gloxinias.

In the open class for hardy perennial or bulbous flowers, the first award was taken by Messrs. G. Paul & Son, Cheshunt. Mr. H. Brace, gardener to H. A. Hare, Esq., was second.

In the subscribers' division, the first prize for Sweet Peas was taken by Mr. J. Toms, gardener to F. Calvert, Esq. Mr. T. H. Lodge secured the lead for the prizes offered by Mr. H. Eckford for twelve bunches of his Sweet Peas. Mr. W. Bentley, gardener to E. H. Watts, Esq., had the best twelve bunches of stove and greenhouse plants. He was beaten, however, by Mr. G. Beech in the class for twelve bunches of hardy perennials.

In the subscribers' fruit classes, Mr. A. Handcomb, gardener to R. C. Haldane, Esq., took the leading award for a collection of eight dishes of fruit, Mr. B. Calvert being a good second. Mr. E. Skelton, gardener to J. Barker, Esq., Graperies, had the best black Grapes, and the best white.

Mr. E. Harris was the most successful winner in the class for a collection of eighteen varieties of vegetables, Mr. G. Beech being second. Mr. J. Toms came to the front in the class for nine varieties of vegetables; and was followed by Mr. W. Bentley. J. Todhunter, Esq., had the best six vegetables.

Non-competitive exhibits were fairly prominent, a fine collection of stove and greenhouse plants coming from Messrs. J. Veitch & Sons, Ltd., Chelsea, who received special prizes. Messrs. Paul & Son, Cheshunt, exhibited herbaceous plants and Roses. Messrs. W. Paul & Son, Waltham Cross, had a similar exhibit, and both received special awards. Mr. S. Mortimer, Rowledge, Farnham, Surrey, had a fine lot of Dahlias. Col. Archer Houlton, sent a collection of Gloxinias. The Ichthemic Guano Co., Ipswich, had a fine display of plants grown by their special fertiliser. Messrs. Webb & Brand, Saffron Walden, showed Hollyhocks.

SHREWSBURY. BY TELEGRAPH.

In the class for a group of plants arranged for effect in a space not exceeding 300 sq. ft., Mr. James Cypher, Cheltenham, took the lead with an imposing and novel display. He was followed by Mr. W. Finch, Coventry; and Miss Wright, Oswestry, in this order. The Duke of St. Albans took the lead for a group of fine foliage plants, followed by Mr. Jas. Cypher, and Mr. W. Finch. Lord Harlech had the best thirty stove or greenhouse plants; Mr. Jas. Cypher was second; and H. H. France Hayhurst, Esq., of Wellington, received a special third. Mr. James Cypher again took the lead in the class for twenty stove and greenhouse plants. Mr. W. Finch received a special second.

Messrs. Perkins & Sons, Coventry, took the lead for six bouquets; Messrs. Jones & Sons, Shrewsbury, were second; and Messrs. Jenkinson & Son, Newcastle, Staffs., took the third place. Messrs. Perkins & Sons were first for bouquets; Messrs. Pope & Sons were second; and Messrs. Jenkinson & Sons, third. Class XXVII. for bouquets, Messrs. Jones & Son were first; Mr. W. F. Gunn, Birmingham, second; and Mr. F. H. Morris, Handsworth, third. Prizes for shower bouquets were awarded to Messrs. Perkins & Son, Pope & Son, W. Treseder, Cardiff; Kimberley & Sons and Mrs. Loratt, Newport, Salop. Mr. M. Cromwell, gardener to T. Sutton Timmis, Esq., Liverpool, gained the first prize for twelve bunches of cut stove and greenhouse flowers, also for six bunches of the same.

For a collection of Gladioli, first came Messrs. Harkness & Son; Messrs. Wallace & Co., Colchester, were second; and Mr. W. F. Gunn, Olton, came in third. For the Birmingham collection of Roses, Messrs. D. & W. Croll, Dundee, were first; Messrs. Pope & Sons came second. For a collection of

Dahlia, Mr. W. Treseder, Cardiff, took the lead; Mr. M. Campbell, Blantyre, was a good second; and Messrs. Keynes Williams & Co., Salisbury, third. For a collection of hardy flowers, first came Messrs. Harkness & Son; second, Mr. W. F. Gunn; and third, Messrs. Barr & Sons, Covent Garden, London; Messrs. Dicksons, Ltd., Chester, came in fourth. In the class for a collection of Begonias, Mr. B. R. Davis, Yeovil, was first. For a collection of Carnations and Picotees, Laing & Mather, Kelso, were first; Mr. M. Campbell, Blantyre, took the second place; and Messrs. Thomson & Co., Sparkbill, Birmingham, came in third.

In the class for a decorative dessert table the first prize, representing 124½ points, went to Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby. Mr. J. McIndoe, gardener to Sir J. W. Pease, Bart., Guisborough, was second with 119 points. Mr. W. J. Edmonds, Bestwood, Arnold, Notts., was third. Class LXX.—For fifteen dishes of fruit, first came the Earl of Harrington; second, Sir J. W. Pease, Bart., Guisborough; and third, Duke of St. Albans, Bestwood. Class LXXI.—Collection of nine dishes of fruit. First, Mrs. F. Need, Malvern; second, Lord Bagot, Blythfield; third, W. F. Webb, Esq., Newstead Abbey. Over 400 bunches of Grapes were shown for competition in fourteen classes, the principal prize-takers being C. E. Newton, Esq., Mrs. F. Need, Rev. T. M. Bulkeley Owen, Lord Bagot, J. T. Paton, Esq., Alloa; Sir Geo. Meyrick, Rev. F. Alderson, Mrs. Heywood Lonsdale, Lord Harlech, and Miss Wright.

In class CII. for garden produce there were four exhibits. The first prize of £7 16s. for 102 points, went to Mr. J. H. Goodacre, gardener to the Earl of Harrington. The second prize of £6 8s. 8d. for 96½ points went to Mr. J. McIndoe, gardener to Sir J. W. Pease, Bart., Guisborough, Yorks. The third prize of £6 14s. for 90½ points was taken by Mr. Thomas Wilkins, gardener to Lady Theodore Guest, Henstridge. The fourth prize of £5 10s. 8d. for 83 points was secured by Mr. W. S. Bremener, gardener to H. H. France Hayhurst, Esq., Overley, Wellington.

Mr. W. Pope, gardener to the Earl of Carnarvon, Higbclere, gained Mr. R. Sydenham's first prize for a collection of vegetables, and the £15 Challenge Cup for the year. The special prizes offered by the Ichthemic Guano Co. for the best collection of fruit and vegetables, grown with Ichthemic, brought up four competitors. Mr. Grindrod, gardener to G. T. Bates, Esq., Whitfield, Herefordshire, was first; and Mr. Huxter, gardener to T. B. Wood, Esq., Henley Hall, Ludlow, was second for the fruit. Mr. H. Huxter was first; and Mr. Geo. Davis, Pool, Parva, West Felton, took the second place for vegetables.

Gold Medals were awarded to Mr. E. Murrell, Shrewsbury; to Mr. Eckford, Wem, for Sweet Peas; to Messrs. R. Hartland & Sons, Cork, for Begonias; to Messrs. Pritchard & Sons, Shrewsbury, for a collection of cut Carnations and Picotees, Cacti Ferns, &c.; to Messrs. Sander & Co., St. Albans, for new and rare plants; and to Messrs. H. Cannell & Sons, Swanley, for a collection of Cannas, &c.

Silver Medals were awarded to Messrs. Dicksons, Ltd., Chester; to A. Meyers, Shrewsbury; to Mr. J. H. White, Worcester; to Mr. H. Deverell, Banbury; to Messrs. H. Birkenhead, Sale; to Messrs. Webb & Sons, Stourbridge; to Messrs. Wallace & Co., Colchester; and to Messrs. Smith & Co., of Worcester.

Bronze Medals were accorded to Messrs. Jones & Son, Shrewsbury; to Mr. John Forbes, Hawick; and to Mr. S. Mortimer, Rowledge, Surrey. Other awards were still being added as we went to press.

It was a record show for entries, which numbered 2,880, being 440 more than last year. There were seventeen collections of fruit, eighty bouquets, &c. The weather was fine, and there will probably be a record attendance, judging by appearances when this was written.

QUESTIONS AND ANSWERS.

List of Books on Gardening.—*W. Lowater*: By consulting this week's issue of THE GARDENING WORLD you will find a number of recently published gardening books mentioned there. Then there is the "Carnation Manual," published under the auspices of the National Carnation Society; "A

Year's Work on a Kentish Fruit Farm," published by Messrs. Geo. Bunyard & Co., Maidstone; "The Culture of Vegetables and Flowers," by Messrs. Sutton & Sons, Reading; "Dahlia," by Messrs. Dobbie & Co., Rothesay, N.B.; and "Pansies, Violas and Violets," by the latter firm. By consulting next week's issue of this paper, you will find under the heading of "Books, Notices of," the book and pamphlets on various topics we have reviewed during the course of the year. The number of books and pamphlets on various gardening topics published during the year is considerable; but if you specify more particularly what you require, we would endeavour to help you further.

Seedling Single Dahlias.—*A. West*: The colour is all right but the quality of the ray petals hardly comes up to the present standard exacted by the National Dahlia Society and connoisseurs generally. The rays should be broad, blunt and well overlapping one another so that the outline may be regular, and as circular as the compass could make them. A starry appearance is now altogether at variance with the requirements in this particular class of garden flowers. The substance must also be good, and the colours clear, bright and telling. Uniform or self colours are most in request. A good average size would also tell in their favour.

Half Sieve of Currants.—*W. M.*: At p. 798 the half sieve of Red Currants was said to consist of 12 lbs., whereas it should have been 24 lbs. The market measurements are complicated, and fearfully and wonderfully made, so that an error is liable to creep in occasionally.

Names of Plants.—*Sigma*: 1, *Helianthus debilis*; 2, *Helianthus rigidus*; 3, *Helianthus rigidus* var.; 4, *Helianthus multiflorus*.—*A. D. W.*: *Cattleya guttata Leopoldii*.—*W. B.*: 1, *Sidalcea candida*; 2, *Achillea tomentosa*; 3, *Veronica Traversii*; 4, *Phlomis fruticosa*; 5, *Prunus lusitanicus*; 6, *Rhamnus catharticus*.—*B. J. M.*: 1, *Oncidium sarcodes*; 2, *Masdevallia harricana*; 3, *Oncidium pumilum*.—*G. E.*: 1, *Spiraea discolor arifolia*; 2, *Cistus ladaniferus*; 3, *Tilia petiolaris*; 4, *Pyrus Maulei*; 5, *Clematis Jackmanni*.—*R. M.*: 1, *Veronica incana*; 2, *Physostegia imbricata*; 3, *Helianthus pumilum*; 4, *Solidago Virgaurea*; 5, *Helianthus multiflorus flore pleno*; 6, *Oenothera fruticosa Youngi*.—*A. T.*: 1, *Clematis Vitalba*; 2, *Choisya ternata*; 3, *Convolvulus mauritanicus*.—*E. C. H. D.*: 1, *Pimpinella Saxifraga*; 2, *Scabiosa succisa*.

TRADE CATALOGUES RECEIVED.

JAMES VEITCH & SONS, LIMITED, Royal Exotic Nurseries, Chelsea.—Bulb Catalogue for 1898.

M. CAMPBELL, Auchinraith Nurseries, High Blantyre, near Glasgow.—List of Carnations, Picotees, Tree Carnations, and Pinks.

H. CANNELL & SONS, Swanley, Kent.—Select List of Strawberries, Raspberries, Fruit Trees, Shrubs, Roses, Grape Vines, &c.

JOHN T. GILBERT, Anemone Nurseries, Dyke, Bourne, Lincolnshire.—Illustrated and Descriptive Catalogue of Bulbs, Tubers, &c.

ROBERT SYDENHAM, Tenby Street, Birmingham.—Mr. Robert Sydenham's Unique Bulb List, with Revised Pamphlet, corrected to Date, "How I Came to Grow Bulbs."

INDEX TO ADVERTISEMENTS.

| | |
|---------------------------------|---------------------------------|
| Bulbs. | Hose. |
| J. Jannock803 | F. Reddaway & Co., Ltd. 816 |
| C. G. Van Tubergen801 | Insecticides. |
| Sutton & Sons801 | Exors. R. Campbell802 |
| Catalogues. | Gishurst Compond801 |
| Barr & Sons801 | Ed. Helliar801 |
| Bunyard & Co.801 | G. H. Richards.....802 |
| Dobbie & Co.801 | Manures. |
| W. B. Hartland801 | Anglo Continental Guano 801 |
| Kelway & Son801 | C. Beeson801 |
| J. Peed & Sons803 | Chemical Union801 |
| Simpson & Son.....801 | Clay & Son.....816 |
| Sutton & Sons801 | W. Colchester816 |
| Chrysanthemums. | Meggitt's.....801 |
| Devon Nursery.....801 | Standen's802 |
| Florists' Flowers. | W. Thomson & Sons.....802 |
| A. D. Fleming801 | Miscellaneous. |
| Kelway & Son801 | Frosteen816 |
| J. Peed & Sons.....803 | Gishurstine801 |
| Flower Pots. | Imperial Lager Brewery 801 |
| Sankey & Sons, Ltd.815 | Smyth's Baskets801 |
| Fruit Trees. | Netting. |
| G. Bunyard & Co.801 | A. Potter.....801 |
| Garden Sundries, &c. | Orchids. |
| J. Arnold801 | J. Cypher803 |
| Eveson Coal & Coke Co. 801 | P. McArthur802 |
| Hirst, Brooke & Hirst. ...801 | F. Sander & Co801 |
| A. Outram815 | Stanley-Mobbs & Ashton 801 |
| Porter's Stakes.....801 | Publications. |
| H. G. Smyth801 | Agricultural Economist...802 |
| Summer Cloud815 | American Gardening....802 |
| Heating Apparatus. | G. Bunyard & Co.803 |
| W. Cooper, Limited812 | Darlington.....815 |
| Messenger & Co., Ltd. ...802 | GARDENING WORLD.....815 |
| Richardson & Co.802 | Ogilvie.....815 |
| Thames Bank Iron Co ...801 | J. S. Virtue & Co., Ltd. ...803 |
| Horticultural Builders. | Shows. |
| J. Boyd & Sons.....801 | Strawberries. |
| W. Cooper, Ltd.802 | Bunyard & Co.....803 |
| J. Gray.....801 | W. Carmichael.....803 |
| W. Richardson & Co.802 | Laxton Bros.....801 |
| J. Weeks & Co., Ltd.801 | Tents. |
| | A. Potter.....802 |

ORCHIDS.

Clean Healthy Plants at Low Prices.

Always worth a visit of inspection. Kindly send for Catalogue.

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

GLOXINIAS FINEST MEDAL COLLECTION
* IN THE WORLD. *
Send for CATALOGUE to
JOHN PEED & SONS, West Norwood, London

The Royal Nurseries, Maidstone, Kent.

GEORGE BUNYARD & CO.,

Are now booking orders for early delivery of the very best

NEW AND OLD STRAWBERRIES.

For crop 1899, or for forcing.

They offer the largest stock and the best plants in the trade.
Change of stock pays.

Catalogue of Strawberries and Summer Fruits now ready.

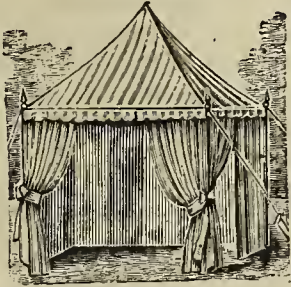
Caladiums

FINEST COLLECTION
in the World. We make
a speciality of CALA-
DIUMS. Gold Medals
Manchester & Leicester.
Silver Cup, R.H.S., &c.

Satisfaction guaranteed. JOHN PEED AND SONS,
West Norwood, London.

EDEN TENT.

6 ft. square.



A WORK OF ART!

For gardens, lawns, tennis
and cricket grounds. Made
from artistic striped tent
canvas. No CENTRE
POLE, allowing whole of
interior to be used.

Complete with frame-
work, lines, pegs, mallet
and bag.

£1 17s. 6d. each.

If made with awning top,
extra.

Carriage paid to pur-
chaser's residence.

Lists, testimonials, and
samples free.

A. POTTER, Tent Works, WOLVERHAMPTON.
Makre to the Queen and Prince of Wales.

**NEXT WEEK,
SEPTEMBER 3rd.**

SPECIAL . .

NUMBER

OF

The Gardening World

TO COMMENCE THE

15TH ANNUAL VOLUME.

**Illustrations and Special
Articles**

ON

DUTCH

AND OTHER

BULBS.

Issued Thursday, 1st.

NEW HINTS

— FOR —

FRUIT GROWERS.

"A Year's Work on a Kent Fruit Farm."

1/- Post Free from the Publishers,

GEO. BUNYARD & CO., Maidstone.

SEEDLING STRAWBERRIES.

- 1. QUEEN OF DENMARK.**—Prolific bearer, medium size, unsurpassed in flavour.
- 2. RICHARD GILBERT.**—Large in size, fine flavour, unsurpassed for market purposes; awarded a First-class Certificate R.H. Society, August 3rd.
- 3. BRITANNIA.**—To be sent out for the first time, fruit medium size, delicious flavour, and the latest of all my seedlings; a great acquisition.

The above three kinds are all standard kinds.

Queen of Denmark, £1 per 100; Richard Gilbert, £1 per 100; Britannia (new), £3 per 100.

Cheaper to the Trade.

William Carmichael, 14, Pitt Street, Edinburgh.

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Malda Vale, London, W.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, AUGUST 27th, 1898.

NEXT WEEK'S ENGAGEMENTS.

THURSDAY, September 1st.—Dundee Show (3 days).
Stirling Show (2 days).

FRIDAY, September 2nd.—National Dahlia Society's Show at the Crystal Palace.

SATURDAY, September 3rd.—Manchester Royal Botanical and Horticultural Society's Show for Amateurs and Cottagers.

FRUIT CULTURE EXTENDING.—Whoever may happen to be travelling about the country, but particularly in the best fruit-growing districts, will be able to see plantations of no great age, and making more or less vigorous growth according to the natural fertility of the soil, and the cultural treatment it received at the time of planting, and since then. The agitation that has been carried on for some years past anent the cultivation of fruit by home growers has certainly resulted in putting British cultivators upon their mettle, notwithstanding the scoffing and jeering in many quarters as to the unprofitable nature of the industry. A great many have undertaken the cultivation of fruit who knew little or nothing of a practical nature upon the subject. As might have been expected some of them made glaring failures; while others equally ignorant of the subject at the commencement, but being keen observers and men of business capacity, have been decidedly successful.

The British farmer learns slowly, and progresses accordingly; but if he is slow to adopt better methods of culture than he has hitherto pursued, he may be ready to urge that more labour is necessary for the newer methods of fruit culture than he can afford. Nevertheless a few object lessons may be gleaned from the methods pursued along the various railway routes in Kent. Not far from Sevenoaks a young orchard on the grass may be seen struggling with the various occupants of the soil and the dry weather. The young trees as yet afford but little shade against the fierce rays

of the sun, while the hard surface, together with the grass upon it evaporates four times as much of the soil moisture than would be the case if the surface were bare and kept loosened on the surface by means of the horse hoe. Beyond Wrotham, still going in the same direction, the spaces between the fruit trees are covered by Potatos and Wheat. This may be considered a degree better inasmuch as the surface is kept looser, while a profitable crop can be taken off the ground while the trees are growing. A little further on fruit trees may be seen on strips of grass, even while the middle space between the rows of trees is cropped. The grass can have little to recommend it, except that it saves the labour of cleaning. Another example may be noted where the space between the half standard trees is planted with fruit bushes. The latter help to shade the ground, keeping it cool, but the ground is very weedy even in a dry season like the present. Evidently the British farmer thinks that the loosening of the surface and the destruction of weeds are the last things to be undertaken. The heavy, loamy soil near Malling must be very fertile, for the fruit trees upon the grass are making wonderful progress. Close by one may notice that the Hop plantations are kept regularly hoed, while the Hops are now forming dense thickets amply shading the soil. Evidently more value is attached to the Hop fields than to the orchards. At the Allington Nurseries, alongside of Barming station, Messrs. George Bunyard & Co. believe in keeping the surface clean and loose by constant hoeing by means of a horse hoe, and the results proclaim the practice a good one. It does not always follow, however, that good examples are followed by others. A hedge or a fence is often all that separates well and badly-kept farms. Generally speaking, however, a healthy emulation is set up under such circumstances.

In spite of its northern latitude, Aberdeen is rapidly becoming the centre of a great fruit-growing industry. The growing city has acquired an appetite for fruit, but has little need to look abroad for supplies. The farmers situated around three sides of the Granite City, and within a range of 20 miles, are quietly setting themselves the task of meeting the demand for fruit. The largest and most important fruit farms are on Deeside, adjacent to the city. Strawberries, Gooseberries and Currants are the fruits most extensively cultivated, and for which the climate is wonderfully well adapted. Many years ago the late Mr. Gladstone recognised the suitability of Aberdeenshire for Strawberry culture. Potatos and other vegetables are also more or less extensively grown by the fruit farmers. For many years past the county of Kincardineshire has been contributing its quota to the fruit supplies of the Granite City, Mr. Sim, the Temple, Drumlithie, sending all his fruit there. His father, Mr. Sim, who commenced the cultivation of Strawberries at Strachan, Deeside, more than twenty-five years ago, is still hale, hearty and active. Strawberries were so little known there about that time that a native asked him if he was planting Avern, this being the local name for the Cloudberry (*Rubus Chamaemorus*). Mr. Sim now sends about 70 tons of Strawberries annually from this district to the jam makers. His favourite is the old-fashioned, but finely flavoured, Elton Pine.

How the Americans Advertise!—To what do they refer? Plants, ladies or stars? "Choice 3-in. Perles, for immediate planting. Fine stock which will make you money. Also some extra nice 3-in. Meteors; and some good Brides and Beauties. Sample on receipt." See American papers.—Patterson.

Water Lilies at Gunnersbury House.—There is no more enthusiastic grower of the new hardy Water Lilies than Mr. James Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton, W. On the occasion of the lecture on "Water Lilies," on the 9th inst., at the Drill Hall meeting of the R.H.S., he made an exhibit of twenty-four species, varieties and hybrids, all of which are grown in the pond in the grounds of Gunnersbury House. On the above-mentioned occasion he exhibited *Nymphaea alba*, *N. a. rosea*, *N. tuberosa*, *N. odorata*, *N. o. rosacea*, *N. o. rubra*, *N. o. sulphurea*, *N. o. s. grandiflora*, *N. pygmaea helvola* (a gem in miniature), and *N. stellata*, the latter only being tender. He also had such hybrids as *N. Aurora*, *N. ellisiana*, *N. gloriosa*, *N. Signouretii*, *N. andreana*, *N. lucida*, *N. Robinsonii*, *N. Laydekeri fulgens*, *L. L. rosea*, *N. marliacea chromatella*, *N. m. carnea*, *N. m. rosea*, *N. m. albida*, and *N. m. rubro-punctata*. He has since exhibited the hybrid *N. Exquisita*, and on Tuesday last he received an Award of Merit for *N. odorata sulphurea grandiflora*, a form measuring 8 in. or more across, and bearing a not inapt resemblance to a Cactus Dahlia.

Ladywell and Lewisham Flower Show.—This event took place on the 10th and 11th inst., and seems to have been an all-round success. A feature of the day's proceedings was the visit of the Tunbridge Wells Gardeners' Association. The gardeners also visited the Ryecroft Nursery of Mr. H. J. Jones, after which they were entertained at luncheon at the "Spotted Cow"; they then proceeded to visit the Crystal Palace, and Messrs. J. Laing & Sons' nursery. The Ladywell and Lewisham seventeenth annual show was held in the grounds of Campshill House, Hither Green Lane, Lewisham, by the kind permission of S. J. Gore, Esq. There were 450 entries, being an increase on all previous years, and the quality of the exhibits generally was excellent. When the society was founded there were 26 members and one acre of allotment ground; now the members number 300 and have 10 acres of allotment ground, while £50 is distributed in prizes at their show. Collections of flowering plants from Mr. H. J. Jones, Messrs. Laing & Sons, of Forest Hill, and Messrs. Maller & Sons, Burnt Ash, added greatly to the beauty and interest of the show. A collection of Ferns was set up by S. W. Fryett, Esq., Holmhurst, Beacon Road, Lewisham.

Foral Gala at Aberdeen.—A three days' flower show and gala were opened in the Duthie Park, Aberdeen, on the 18th inst., by the Royal Horticultural Society of Aberdeen. The enterprising committee managed to carry out their programme in spite of the interference of the War Office at the last moment forbidding staff instructors from the Aldershot Gymnasium from giving exercises there. The entries were not so numerous as last year but they were of higher quality. Mr. John Proctor, gardener to Sir Wm. Henderson, Devanha House, had the finest and most effective group of pot plants in the show, including Orchids, Palms and Crotons. Mr. J. M'Donald, gardener to Mrs. Crombie, Balgownie Lodge, secured the society's Silver Medal for the best flowering specimen in the show. A similar honour was gained by Mr. A. Howie, gardener to the Rev. J. S. Gimmell, Drumtochty Castle, for a fine foliage specimen. Mr. Alex. Grigor, gardener to A. O. Gill, Esq., Fairfield, Aberdeen; Mr. W. Ogg, gardener to Miss J. F. Taylor, Morkeu, Aberdeen; and Mr. A. Robb, gardener, Glenburnie Park, Aberdeen, were the most successful in the classes for Begonias, Pelargoniums and zonal Pelargoniums. In the class for a collection of nine dishes of different kinds of fruit, Mr. A. Hutton, gardener to George Keith, Esq., Usan, Montrose, was unfortunately disqualified owing to his having more than two dishes of Peaches. The first award then went to Mr. A. Reid, gardener to — Baird, Esq., Durris. Messrs. D. & W. Croll, Dundee, took the lead for H. P. Roses; but Messrs. Adam & Craigmile, Rubislaw, made a very close second. They came to the front for Tea Roses, beating Messrs. D. & W. Croll. In the non-competitive class Messrs. James Cocker & Son, Union Street, Aberdeen, filled a whole tent with Roses, Carnations, Sweet Peas and other flowers. Messrs. W. Smith & Sons, Market Street, Aberdeen, exhibited floral decorations, hardy cut flowers, stove and greenhouse plants. Mr. John Smellie, Busby, took the leading prize for Cactus Dahlias. Gooseberries and Strawberries were particularly good.

Daffodils Amongst Ripening Corn.—Surely the poet's licence is a far reaching one, since it allows him to sing of Daffodils amongst ripening Corn.

Erratum.—Under the heading of "People we have met" in our last issue, when noticing Mr. Wm. B. Hartland, will our readers kindly read for "James Early, Esq., of Kingston," "James Earl of Kingston."

Marriage of Mr. George H. Barr.—On August 11th, at Marylebone Parish Church, by the Rev. Hawley Sharpe, George Hewlings, youngest son of Peter Barr, of King Street, Covent Garden, to Lizzie, only daughter of Thomas Rawsley, of 39, York Street, Portman Square, W. A merry gathering sat to a most substantial dinner at the Holborn Restaurant, on Saturday evening, August 13th, at 6.30 precisely, on the occasion of Mr. George H. Barr's marriage, one of the firm of Messrs. Barr & Sons, of Covent Garden and Long Ditton. Mr. Rudolph Barr acted as president with Mr. Wm. Barr as vice, and both filled the respective positions admirably. There was a goodly number of their employees present, including a few friends, who spent a most enjoyable evening. After dinner the toast of "The Queen" was proposed from the chair, to whom reference was made as a great friend to all departments appertaining to gardens and gardening. All standing sang the National Anthem to the sweet strains from the piano. The vice-president proposed the health and safe return of Mr. Peter Barr who was now enjoying a well-earned holiday in America and elsewhere, and probably will be away for two or three years. He dilated at length upon his father's abilities in the various branches of horti- and floriculture, and sincerely hoped that all present would be with the firm and sit at the same table to welcome him when he returned, with him (Mr. Peter Barr) in the chair. Mr. T. Downes proposed the health of the ladies and Mr. Wm. Logan responded in a few well chosen and complimentary words. Mr. Rudolph Barr proposed the health of the employees and hoped that as many present had been in the firm for more years than he would care to say, yet he was delighted to say that they had been, and hoped that they would continue to work together in the future with the same love and spirit that they had in the past. Mr. J. de Gruchy (the oldest member of the staff) responded in very neat and respectful phraseology. Mr. George Leslie proposed the health of Mr. George Barr, coupling with it that of his bride, and expressed a wish that he and his co-workers hoped that an occasion similar to the present was in the near future. This was responded to by Mr. Rudolph Barr, who said that it certainly would come off, but he was not prepared to say when. The health of the "Visitors and Friends" was proposed by Mr. Tom Warburton, who dilated copiously on the number of strangers to England he had met in his travels abroad who had made "Barr" almost a household word. Mr. Rudolph Barr remarked in a very jocular manner how pleased he was to find that he did not have to go outside for Harry Randall's or Dan Leno's, &c., for talent, as those of his staff were sufficient to provide a most enjoyable evening according to the programme he had before him. The president gave the first on the programme "The Speaker's Eye" which was enthusiastically received and encored, with "Those Girls at the School." Mr. W. Logan though nervous, gave the "Bedouin Love Song" in fine style, his voice filling the spacious hall. Mr. Wm. Barr followed by a 'cello solo, and nothing less than an encore would satisfy the attentive hearers. Mr. H. Harris gave the "Alabama Coon"; Mr. Wilks, "The King's Own"; Mr. Tom Warburton, a recitation that completely carried the audience away with his dramatic rendering of the "Actor's Story"; Mr. W. Wilbraham came forward with a comic song, "The Whitewasher" which caused much laughter; and as an encore the "Green Grass Grew All Round" equally amusing. Mr. Wm. Logan's rendering of "Queen of the Earth" was cordially received, and nothing would suffice but an encore, with "Mary of Argyll" in clear voice. Mr. R. Barr followed with "Sister Mary"; and Mr. W. Barr with a 'cello solo. Lady singers were few, Miss Rapp being the only one prepared, and who sang in sweet contralto "Sunshine Above" and "Coming thro' the Rye." After the usual vote of thanks a very pleasant evening came to a close.

CRESTED BRACKEN.

THIS is an actual reality, though not mentioned in the recent edition of the *London Catalogue*, nor by the late Mr. Thos. Moore, of Chelsea, in his *British Ferns and their Allies*, though he records the crested form of the Royal Fern. Mr. C. B. Green, Acton, W., who is an enthusiastic grower and collector of Ferns, sends us mounted specimens of pinnae cut from a frond about 6 ft. high, and which he gathered in St. Leonard's Forest, near Horsham, Sussex, on the 13th inst. The apex of the frond was very fine, and is in the possession of Mr. C. T. Druery, the well-known enthusiastic pteridologist, who was travelling with Mr. Green at the time, and was sorry the find was not one of his own. *Pteris aquilina cristata*, he says, has only been found three times before, so that the present is the fourth time it has been collected in a wild state. The apex of the pinnae and every pinnule are bi-tri-furcate, with the divisions again more or less forked, giving each crest a distinctly tasselled appearance. The secondary pinnules or ultimate segments are entire and quite normal. We have not heard whether the variety is cultivated by anyone, or whether all or only some of the fronds on a rhizome are crested. This would be difficult, of course, to determine without digging up the entire plant. Mr. Green is trying to raise it from spores. If only single fronds occur in the crested condition the form in question must be a *lusus Naturae*.

LEITH FLOWER SHOW.

LEITH Horticultural Society arranged their fifteenth annual show in Victoria Park, Bonnington, on August 19th and 20th. Leith Town Council granted the park, which was a very suitable one. Hitherto the show has but lasted a day, but the addition of a day has been thought to increase the interest in the exhibition. Athleticism, as represented by races, &c., has been coupled with the calmer recreation got from horticulture.

There were 660 entries, against 699 last year. The industrial and juvenile sections are a pet feature. Model yachts were largely displayed, also fretwork, wood carvings, and model engines. Women's work was shown in shawls and such like and bakery. The juveniles had an array of free and geometrical drawing designs.

Regarded as a whole, the show was only of medium quality. Vegetables were of normal merit. Cauliflowers were extremely poor. Mr. J. F. Nairn, Cramond, stood first. The prize-winning Turnips were fair, being of goodly form and clean. Potato classes were a very even lot, and well represented. Mr. J. F. Nairn won in the Celery exhibit. Amateurs' greenhouse plants were, perhaps, fair for city folks, but their appearance evidenced no great care in cultural detail.

Mr. Hugh Dickson's stand from Belfast contained Roses of remarkably high colour and fine form. The cream of the batch were Mad. Eugene Verdier, Fisher Holmes, Gustave Piganeau and Sir Roland Hill, this latter an intensely deep blood-coloured variety. This was the only entry for Roses in the nurserymen's class.

For twenty-four herbaceous spikes or bunches, Mr. C. Irvine, Jedburgh, beat Mr. A. Brown, Piershill. Mr. Irvine also staged a host of Pentstemon spikes. He makes these a speciality, and though I did not measure the width of the mouth of the corolla, one feels sure in saying they would stretch an inch and a half. Everybody remarked them as "the best ever they saw."

Black Grapes were shown in nice condition. Mr. A. Clark, Trinity, was first; and Mr. Hunt, Coldbridge Hall, Murrayfield, was second. Other fruits were only second rate. Hardy Ferns were everywhere about the tent, many being vigorous and pleasing.

Messrs. M. S. & J. Gillespie, Leith, received a Gold Medal for a table of floral designs. Strikingly beautiful and novel was the model of a large bell. The outside was covered with crimson-scarlet Gladioli, while the inside was shown up by white Pinks and Gardenias. A single bloom of *Lilium candidum* answered superbly as the bell's tongue. Smilax and the same Gladioli were arranged twinedly down the supporting frame. Shower bouquets, harps, and crosses were other designs. In the composition of the harp, pink Asters formed a central band to the frame; a thin white line ran on either side of the Asters, while delicate Smilax fringed the

outside. A beautiful basket of Sweet Peas was also very tasty. Various colours were grouped in bunches and pleasingly blended.

We are glad to say the show days were both fine and a large surplus of money should be on hand, to provide larger prizes, and so secure greater quality in produce another year.—*Harrison D.*

BLACKPOOL FLOWER SHOW.

THE Blackpool and Fylde Horticultural Society held their second annual show in St. John's Schoolroom on the 17th inst. The entries were considerably in excess of last year, being 270 as compared with 190. The show was opened by Alderman Cocker, the president, who spoke of the aims and opportunities of the society, and rejoiced in its prosperity. He said that the committee might do worse than start a co-operative society to provide plants on a cheap scale for the gardens on the promenade, and maintain the same. As a shareholder he would give £200 with that object in view. The work of the society was to encourage horticulturists generally in the higher branches, and to promote flower culture as much as possible. Several speakers supported Dr. Cocker's suggestion.

The exhibits were of a high order of merit, except in some of the cut flower classes, though the collections were good. There were 55 classes for cut flowers, 112 for vegetables, 19 for fruit, and a few for industrial exhibits. There were four entries for the collection of twelve varieties of vegetables, and Mr. J. Collins was first. Mr. G. Rockliffe, gardener to T. G. Lumb, Esq., would have been an easy first but for the omission of Potatos from his exhibit, but for that reason was placed second. Tomatos and Potatos were well represented in the classes for them. Mr. Butler, gardener to G. H. Harrop, Esq., easily led the way for a group of plants amongst four entries. He had a grotto arrangement with Crotons, Pandanus, Cocos and other Palms, Acalypha, Gloxinias, Dracaenas, Begonias, Campanulas, &c., all tastefully arranged. Mr. G. Rockliffe made a very creditable second. Mr. Jos. Pasquill, gardener to T. Blane, Esq., was third. Messrs. Peter Cardwell & Sons took the lead for hardy shrubs and evergreens suitable for Blackpool, showing Veronica, Euonymus, Holly, Tamarisk, Rhododendron and Aucuba.

For non-competitive exhibits Certificates of Merit were awarded to Mr. W. Troughton, Preston; Messrs. F. W. Dicks & Co., Manchester; Mr. Wm. Colchester, Ipswich, represented locally by Mr. J. Brownsett, who made a speciality of Ichthemic Guano, which was new to the district; Mr. Tom G. Lumb; Mr. R. Aitken; Mr. J. Brownsett; Mr. W. Thom; Mr. P. Cannon; Mr. Heaton, gardener to the Winter Gardens Co.; and Alderman Cardwell, who showed both plants and vegetables.

The judges for plants and flowers were Mr. Wm. Tunnington, Liverpool, and Mr. Hargreaves, Lancaster; for fruit, vegetables, eggs, butter and front gardens, Messrs. Hathaway and Tomkins, Southport.

NATIONAL CO-OPERATIVE FLOWER SHOW AND FESTIVAL.

August 19th and 20th.

THE eleventh great annual occurrence of the "One and All" flower show and National Co-operative festival took place as usual at the Crystal Palace. Operations and meetings commenced on Tuesday at the Palace, and continued till the end of the week. The flower show was opened on Friday the 19th, by Earl Grey, K.G., accompanied by the Countess Grey and Lady Victoria Grey, and the great gathering culminated in the National Co-operative Festival on the 20th. Splendid weather favoured the proceedings throughout the entire week, and on the last day there was an immense gathering of people from all parts of the country.

The entries exceeded in number and variety any one of the previous exhibitions. They numbered 4,321 and the exhibits amounted to more than 5,000. The show of fruits, flowers and vegetables occupied the whole of the central nave of the Palace, both the central and the side staging, the industrial exhibits being in the north nave, and professional gardeners' and amateurs' in the south nave. There were sixty-one collections of vegetables, the workmen each showing six kinds, and the gardeners ten. There

were twenty-four minor collections; and the vegetables altogether amounted to 500 exhibits.

INDUSTRIAL CO-OPERATIVE SOCIETIES.

The industrial exhibits numbered four to one of the gardeners'. Thus the former had 239 dishes of Potatos; 146 dishes of various kinds of Beans; 107 entries of Vegetable Marrows; 86 of Onions; 83 of garden Turnips; 79 of Peas; 79 of Beet; 60 of Shalots; 56 of garden Carrots; 53 of Lettuces; 38 of Parsley; 35 of Celery; 31 of Cabbages; 24 of Cauliflowers; 43 of Cucumbers; 28 of Tomatos; 15 of Radishes and 11 of Leeks. The exhibits of cut flowers from workmen's gardens numbered 504; they also had 257 entries of pot plants; and 159 entries of fruit, the latter being more numerous and finer than ever we have seen them before.

While we noted a marked improvement everywhere, nowhere was more skill and taste displayed than amongst the vegetables. First prizes for collections of vegetables were taken by Mr. G. North, Banbury; Mr. C. Luff, Bromley; Mr. W. Biles, of the Sydney Herbert Society; Mr. E. Page, Lechlade; Mr. J. Yorke, Desborough; Mr. L. Daft, Long Eaton, and several others. The quality of the produce was of a very high order of merit, particularly the Potatos, Carrots, Broad Beans, Scarlet Runners, Peas, Parsnips, Onions, Cauliflowers, Celery, &c. Hardy fruit and a few bunches of Grapes were wonderful.

AGRICULTURAL AND HORTICULTURAL ASSOCIATION.

The flowers and plants exhibited by the members of this section of the show were very numerous; and in the case of Fuchsias, Ferns, Coleus, and hardy flowers the display was attractive. The first prize lot of herbaceous flowers was exhibited by Mr. C. F. Wood, gardener to St. B. Sladen, Esq., Reigate. Very fine were his bunches of *Lathyrus platyphyllus* albus, *Veratrum nigrum*, Phloxes, and *Montbretias*. He also had the best *épergne* of cut flowers.

Mr. R. Chamberlain, gardener to F. M. Souergan, Esq., Reading, was second with very similar species of plants. Mr. C. Moody, Penge, had the best annuals in pots showing, amongst other things, *Torenia Fournieri*. Mr. F. Batt, Norwood, had the best pot of dwarf *Lobelia*. Mr. J. Galley, Penge, had the best *Fuchsia*. Mr. J. Constable, West Norwood, had the best collection of Ferns, which were British. Mr. R. E. Stillwell, Bromley, had the best collection of Maidenhair Ferns; and Mr. R. Robertson had the best *Coleus*. Other flowers shown were Stocks, China Asters, Lilies, Ivy-leaved *Pelargoniums*, &c. The first prize for a collection of flowers and plants was taken by Mr. W. Smith, Mr. C. Moody being second.

Fruit was better represented than on former occasions, particularly hardy kinds. Mr. Thos. Osman, gardener to L. J. Baker, Esq., Chertsey, had the best black Grapes in Black Hamburgh. Mr. W. Taylor, gardener to C. Bayer, Esq., Forest Hill, was second with Madresfield Court, and Mr. C. J. Waite, gardener to Sir P. Talbot, Esher, came in third with nice bunches of Gros Maroc. Mr. W. Taylor came to the front for white Grapes, followed by Mr. T. Osman and Mr. C. J. Waite respectively. Mr. A. Chapman, gardener to Sir E. Walter, had the best Peaches. Mr. G. Cheal, gardener to Sir W. Farquhar, Dorking, had the finest Nectarines. Mr. C. J. Waite took the lead for dessert Pears. Mr. W. Taylor had the best cooking Plums, and Mr. C. J. Waite came to the front for dessert varieties. He also took the lead in the class for a collection of fruit represented by eight bunches of Grapes, two Melons, two dishes each of Peaches, Nectarines and Apricots. Mr. Thos. Osman took the second place with greater variety, but less quality in some cases. The latter came to the front for five dishes of fruit grown in the open air. Mr. R. Chamberlain was second. Apricots, Cherries, Red and White Currants and Gooseberries were also well shown. Mr. J. E. Bughy, Desboro', had the best Gooseberries. Mr. S. Chapman took the premier position for cooking Apples, which were good. Mr. R. Felton, gardener to R. B. Berens, Esq., St. Mary Cray, had the best dessert Apples. Both classes of this fruit were abundantly shown.

Vegetables were abundant and generally good. The leading place for a collection of ten sorts was taken by Mr. C. J. Waite, who had grand samples of Potatos, Tomatos, Onions, Celery, Beet, Scarlet Runners, Leeks, Carrots, Cauliflowers and Peas. Mr. J. Nowell had the best ten vegetables in another

class. Scarlet Runners were abundant and best shown by Mr. J. Holton, Oxford. French Beans, Broad Beans, Beet, Carrots, Cauliflower and Celery were also well shown. Mr. J. Holton took two of the leading prizes for Carrots, and the first for red Celery and Leeks. Mr. W. Omerton, Bucks., had the best spring sown Onions, and Mr. J. Holton was first in another class. Mr. R. Waham had the best autumn sown Onions. Altogether the Onions were abundant and excellent, but wanted a little trimming. Potatos were notable for their enormous size. Mr. C. J. Waite had the best six white dishes, the best dishes of white kidneys, and round white. Mr. W. Omerton had the best dish of round coloured, and Mr. J. Holton the best coloured kidneys. Quality generally was very good. Tomatos were abundant, the best dish coming from Mr. O. Basile, gardener to the Rev. O. L. Powell, Weybridge. Vegetable Marrows were of better quality than we have seen on former occasions here. Mr. J. Humphrey took the leading consolation prize for vegetables. Mr. C. J. Waite took the lead in the large collection of vegetables, and included a large number of varieties. Mr. O. Basile was a good second, and Mr. W. Smith, third.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, exhibited a collection of hardy cut flowers of Lilies, Phloxes, Gaillardias, Statice, *Echinacea purpurea*, &c., on two separate tables. The Royal Arsenal Co-operative Society, Ltd., exhibited a fine and varied collection of the Bostal Farm produce, from Woolwich and Plumstead.

The Orchid Grower's Calendar.

DENDROBIUMS.—This beautiful and extensive genus, when well done, pays to grow as well as most Orchids. So much, however, depends on attention being paid to the proper ripening off of the newly made up pseudobulbs, that just a few words at this period will no doubt be acceptable to amateurs who make their culture a speciality.

That to flower them well they must make good strong growths is apparent. It is equally essential that they should, to produce the best results, have a good season of rest. Therefore, those plants that have made up this year's new growths should be removed to a more airy structure, where the atmosphere is much drier and the light plentiful. It, however, would not be wise to expose them all at once to full sunshine during the hottest part of the day or they would dry up too quickly. Give a light shade at first and syringe the plants overhead for a week or two until they get used to the altered conditions.

D. nobile, which, after all is the most serviceable for supplying cut flowers early in the year, will stand any amount of rough treatment, for you may find it growing under most varied conditions; but it undoubtedly responds best when treated to plenty of heat during growth, and a good sound rest when the growths are made up.

D. FALCONERII.—This is a most beautiful *Dendrobie* hut one that does not seem to be so well understood. The best plants I ever saw grown were given the heat of the East India house in which to grow, and afterwards rested in a vinery. Grown in this way, from three to five hundred flowers to a plant were obtained. It would be impossible to do this if the plants were kept in heat, as they would always be on the move.

Then we have *D. densiflorum*, and *D. Farmeri*, which is identical in habit, requiring similar treatment as regards heat and moisture when growing freely. But they should not be allowed to shrivel to the extent practised with the two preceding varieties when at rest, or the graceful racemes will be short and the flowers poor.

Of garden hybrids, *D. leechianum*, one of Mr. Swan's raising from *D. aureum* and *D. nobile*, and the similar cross, *D. Ainsworthi*, and *D. dominianum*, all of which claim the good old *D. nobile* for one of their parents, require similar treatment to that species as regards culture, as does *D. splendidissimum*. The *D. highhum* section seems to require to be kept in rather strong heat all the year round, and the resting induced by withholding water from the roots, and by exposing them to all the light and air possible. A stove where Crotons are grown seems to suit them admirably.—C.

HINTS FOR AMATEURS.

Strawberry Runners.—Now that the runners which were pegged down in small potfuls of soil have had time to root they may be cut away from the parent plant at once, as this will give an opportunity of clearing off the rubbish from the old plantation, and of putting things ship-shape in that quarter.

Potting for Forcing.—The forcing of Strawberries is not by any means a difficult operation, for if the plants are treated at all well they will surely bear fruit, but there is a good deal of labour attached to the work, and those amateurs who embark upon it must make up their minds for this. Not a day should be lost in getting the plants potted up into their fruiting pots, for it is necessary that they should not be cramped up in the small ones any longer than is absolutely unavoidable. The plants need a good long season of growth to enable them to develop and mature their crowns.

The soil may consist of two-thirds of good loam, and one-third of old Mushroom bed manure, with, say, a quart of soot to each bushel of soil, and a fair sprinkling of coarse river sand. Mix the whole lot well together by repeated turnings. The condition of the soil with regard to moisture is an important point, for as the rammer will have to be used pretty freely during the potting process, in order to impart the necessary firmness, it will not do to have the soil too wet, otherwise it will become caked and unkindly for the roots of the plants. A good test for moisture conditions is to take up a little soil and squeeze it in the hands. If it is in fit state for use the particles will adhere together, but without "caking," and will separate on being thrown back on the bench.

Six-inch pots are the best size to use. They should be clean and well drained, with plenty of crocks in the bottom, and a layer of the rougher parts of the compost placed next to this. Some growers like to give a dusting of soot next to this, but this is more or less of a "fad," for the soot is much better incorporated with the soil in the first place. Pot firmly, and if the soil is in the condition recommended the rammer may be used with freedom. A thin lath or long wooden label should be used to work the soil equally round the sides of the balls, so that no hollow places may be left.

Strawberries are exceedingly thirsty subjects, and will need a lot of water presently, hence the pots should only be filled with soil to within three quarters of an inch or an inch of the top. This will allow of sufficient water being given at one application to thoroughly soak the ball.

Varieties for Forcing.—Of the numerous varieties of Strawberries that are in cultivation only comparatively few of them can be recommended for forcing. For general purposes there is nothing to beat Royal Sovereign, which takes very kindly to either early or late forcing. The plants crop well, and what is of considerable importance the fruits ripen regularly and at the same time as each other. Thus a batch of plants started at the same time and kept under the same conditions will all ripen their fruits at the same time. This is important, because it is a waste of space to keep plants hanging on for the sake of one or two fruits that may not be ripe when the room is wanted for succeeding batches. The fruit of Royal Sovereign is, moreover, of first-class appearance as well as high flavour, and another good quality, the flesh is firm and travels well. Laxton's Noble is a favourite in some quarters by reason of its good hearing qualities, and the fact that the fruit, although deficient in flavour, is very attractive in appearance. We should, however, prefer either the old Sir Joseph Paxton or Vicomtesse Hericart de Thury to it. Both of these do well, and the fruit is of capital flavour. August Nicaise and La Grosse Sucrée are two other good forcing varieties, and Keens' Seedling is not to be despised.

British Queen is pre-eminent amongst Strawberries for high flavour, but it is a very poor doer either when forced hard or when grown in the open ground. Some excellent fruit may, however, generally be obtained by potting up a hatch of plants, and allowing them to come along gradually and ripen their fruit just before the open air crops turn in. This system is well worth a trial by those who have failed with British Queen when they have attempted to grow it in the ordinary way. The plants may be

placed at the commencement of the year on a shelf in a Peach house, where the coolness and moisture that prevails will largely dispel the fear of red spider.

Zonal Pelargoniums for Winter Flowering.—Up to within a fortnight ago these plants had not made very much growth, but since the end of the first week in the month they have come along very quickly. The pinching off of flower buds will now be an operation requiring constant care, whilst shoots that are observed to be growing away at the expense of the others must be pinched in good time, otherwise unshapely, one-sided plants will be developed. Careful feeding with stimulants must now receive attention, but the thing should not be overdone, even to the extent of producing rank growth in the plants, for this should be avoided carefully.

Show and Regal Pelargoniums.—For the last six weeks the plants have been basking in the open, in the full enjoyment of the sun's rays, so that now the wood is well ripened, as may be easily seen by its rich brown hue. Pruning should, therefore, be resorted to without delay, the plants being allowed to become fairly dry at the root beforehand. This is quite a simple operation, and all that is needed is a sharp knife and sufficient experience to tell the difference between last year's wood and that of this year's production, which is not at all a difficult matter, for the older wood is harder and much darker brown, whilst the bark is thicker and rougher.

Pruning consists in cutting back the growths to within two or three eyes, say an inch, of last season's growth. The cuts should be made short and clean, and not long and ragged, as they far too frequently are, even in gardens where professional gardeners have the management; indeed, the pruning of stove and greenhouse plants very often to be seen leaves much to be desired.

After the old plants have been cut back in the manner indicated they should be given the shelter of a cold frame. Here they may be stood pot thick together, as there are no tops to occupy space. Meanwhile the soil should not be soaked with water, for an occasional sprinkle by means of the syringe will be quite sufficient, and will, moreover, assist the plants in breaking into growth. The frame in which the plants are should not be kept too close, but air should be given during the day, although the lights may be shut up at night. Potting will require to be seen to when the young shoots make their appearance.

Cuttings.—Old plants may be grown on year after year with advantage, and they really increase in usefulness each season, at least where large plants that will produce many flowers are wanted. As the plants are, moreover, pretty tough and hard to kill, there is very little danger of the stock diminishing. It is occasionally advisable, however, to increase the stock of particular sorts for which a special fancy is evinced, or which are of more than ordinary value to the grower. The approved method of doing this is by cuttings, and as cuttings are to be obtained in quantities from the prunings of the old plants. The present is the most suitable time to work up an increased stock of any chosen varieties. As a rule, with most plants the tips of the growths are the most suitable portions to select for cuttings, but in the case of these Pelargoniums the tips are very weak and spindly, having reached their natural limit of growth for the season. The shoots should, therefore, be cut up into lengths of about 5 in. each, and the stouter portions selected. Each cutting will be furnished with a number of leaves, and the lower of these should be removed in the usual way in order to admit of the cutting being inserted in the soil.

Very light sandy soil is necessary in order to get the cuttings to strike properly. Sixty-sized pots will be found the handiest, and if the cuttings are put all round the sides of the pot the latter will easily hold five or six of them. Make the soil fairly firm, so that the cuttings are not easily pulled out during the process of shifting about.

Varying treatment is accorded the cuttings by different cultivators. A favourite plan is to put them in a cold frame, and keep the frame fairly close and the cuttings rather dry at the root until they have rooted. The production of roots is, however, rather slow under such conditions, and the plants are a long time before they make good flowering specimens. The best way of inducing the cuttings to strike root speedily is to put them in heat. A place on a shelf near the glass in a warm

pit will suit them admirably. Under such conditions there is no need to limit the water supply, but they may be treated much the same as other cuttings in that respect. An occasional sprinkle with the syringe will do them good.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Drying Mint.—*Mint*: The proper time to cut Spearmint (*Mentha viridis*) for drying is just when it is coming into flower. Cut the stems back to within a couple of inches of the ground, and lay them out in a sunny place to dry. Beyond that nothing will be needed. The Mint thus dried will be brown in colour, and is not largely favoured by cooks who prefer to obtain green-dried Mint by placing the leaves in a hot oven for a while. Under such treatment the green colour is retained, but much of the essential oil, which is rather volatile, is driven off. The plants will throw out young shoots from the bottom after they have been cut back, and these will probably prove more useful than the flowering stems.

Mirabilis Jalapa.—*Emu*: This pretty plant, popularly known as Marvel of Peru, is really a perennial, but it is usually grown in this country as an annual, the seeds being sown in heat under glass early in March, and the young plants subsequently transferred to the open border as the weather permits. The tuberous roots which you speak of as being something like those of Dahlias can be lifted in the autumn, stored during the winter, and planted again in the spring to flower in the following summer the same way as Dahlias are commonly treated. The plant will grow in any ordinary garden soil, and as it generally flowers pretty freely is well worthy of attention as a border subject.

The Sensitive Plant.—*U.* The subject to which this name is commonly applied in this country is *Mimosa pudica*, but there are many other species of *Mimosa* which have leaves which prove sensitive to the touch. You may grow *M. pudica* in a window in an ordinary dwelling room during the summer months, but the seed must be sown and the plant reared to a certain size in heat, whilst as the autumn wears on and the temperature begins to fall, the leaves begin to drop, and presently only the bare stems are left. *M. pudica* is really a tropical or subtropical subject, as are most of its congeners.

Seedling Double, Tuberous Begonias.—*Foe.* The flowers sent are certainly large enough, but size is not the only thing that is wanted. Most of them have the heavy many-centred flowers, and this is a serious defect. The colours are good, however, and if the plants are free flowering the varieties would prove useful for decorative purposes to yourself and friends. Further than that we cannot hold out any hopes, for there are innumerable varieties now in cultivation, many named, and many others unnamed. For a person who wants to work up a stock, whether of single or double flowered varieties, the best plan is to purchase a packet of seed, sow it early in the spring, put out the plants in trial beds, select the colours and the varieties that suit him best, mark them, lift them in the autumn, and grow them on again next spring. There are comparatively few establishments where expensive, high class varieties are purchased.

Stocks Coming Single.—In a bed of ten-week Stocks that I have in my garden about 30 per cent. of the plants are producing single flowers. Has the drought had anything to do with this?—*E. A. G.*

The drought may certainly have had some effect upon the plants in the way you suggest, but it is very difficult to assign a reason for the variation of stocks of flowers and vegetables. A certain percentage of plants are almost sure to throw double flowers in any season, and this percentage varies considerably. Did you purchase your seed from a reliable source? Good seed is apparently high priced because it represents the results of much labour and incessant vigilance on the part of the part of the seed grower.

Asparagus plumosus nanus.—*Perplexed*: There is nothing for it but to cut the growths out. It will be

impossible to free the plant from the mealy bug otherwise. Fumigation is no use, and liquid insecticides will not penetrate the net work of fine leaves. The only thing therefore is to cut the dirty growths away and have a fresh start. Keep the plant a little drier at the root after it is cut back until the young growths show.

Peas.—Mearns.—The Peas have got mildew badly. You can do nothing except see that the plants get all the nourishment possible, and that during periods of drought they do not suffer from lack of water.

GORING HALL GARDENS.

THE accompanying illustration shows a view in the well-kept garden of Major Lyon, Goring Hall, near Worthing, Sussex. The close-mown green sward has numerous large beds distributed in suitable situations over it. A bold display of herbaceous plants occupies a border on the left, many of the

ALLINGTON NURSERIES.

ALTOGETHER the Royal Nurseries, Maidstone, run to something like 310 acres, including the nurseries proper and the seed farm, besides 66 glasshouses, chiefly in the town of Maidstone itself. Messrs. George Bunyard & Co. are known to our readers chiefly as pomologists or fruit growers, but they really transact a general nursery business, as we shall endeavour to show. Their seed business is also growing, and they grow the seeds of their own specialities themselves.

The London, Chatham and Dover Railway runs alongside of their Allington Nurseries, where the thousands of hardy fruit trees are raised to be disseminated broadcast all over the country. Every convenience for alighting at this spot is afforded by the station at Barming, for the visitor has only to cross the line to find himself in the midst of the trees which bear the far-famed Kentish fruit, particularly Apples. The Allington Nurseries are about

preventing the loss of moisture through evaporation. This is one of the great secrets of success, and an example that might well be followed by every fruit grower.

MEDLARS, PLUMS, CHERRIES, PEACHES, APRICOTS.

We saw so many useful things and samples of good culture that we must necessarily be brief, so as to cover the wide field as we hurriedly paced it. We first came upon a plantation of Medlars, grafted on the White Thorn, and observed two-year-old trees fruiting, as a result of two successive dry summers. Usually they take three or four summers before they commence bearing. The red and yellow fruited varieties of the Myrobalan Plum are the favourite stocks for standards. There are 30,000 trees of the wild Mazard used as stocks for Cherry trees. There are also Plum stocks and the thorny wild Pear stock, and all of the above stocks have made excellent growth.

A collection of Japanese Plums, which have been



E. EDWARDS.]

GORING HALL GARDENS.

[EXCELSIOR STUDIO, NEW STREET, WORTHING.

June and July subjects being in bloom at the time the photograph was taken. Araucarias, Cedars and deciduous trees, which shelter the garden, and some of the glasshouses, may be noted over the top of the well-kept hedges. The general upkeep of the place does great credit to Mr. W. Greenyer, the gardener.

The photograph from which the illustration was taken and lent us by Mr. Ed. Owen Greening, was sent to the "One and All" flower show photographic competition, in connection with the National Co-operative Show at the Crystal Palace, an account of which we give on another page. Prizes have been offered for photographs of gardens, large and small, garden and sylvan scenery, window boxes, &c., for the last three years by the "One and All" association, and the recent exhibition of photographs was the largest that has yet been got together, so that this competition has now become a well-established and important section of the great annual show.

1½ miles out of town, and lie on rising ground commanding a fine prospect of the North Downs on the other side of the valley, with corn, Hop fields and orchards spread out like a panorama before the eye. The soil here is a rich sandy loam, overlying the Kentish rag, and that it is rich one has only to look upon the cornfields, which, however, are well farmed. It was a burning hot day on the occasion of our visit, but the splendid breeze made us equal to the occasion of tramping over the wide acres without the slightest sensation of fatigue.

In spite of the heat and drought, the fruit trees have made excellent growth, though none of them are mulched, while watering is entirely out of the question. The ground beneath the trees is bare and clear of weeds, for an Exmoor pony is kept at work, and nimbly but patiently steps over the ground up one row and down the other, dragging a kind of five-toothed hoe or cultivator, which scarifies the surface and keeps it loose, killing the weeds and

creating a considerable amount of discussion in America, has been got together here, and amongst them we noted *Prunus Mume* and *P. Satsuma*, both belonging to the same section as the Myrobalan. We may here mention that Burbank's novelties have found their way here, including Giant Prune, Apple, America, Chalco, Wickson, and the Burbank Plum. The fruit of the latter is about the size and shape of Monarch, and when approaching maturity becomes first clear, sub transparent yellow, then overlaid with pale to deep rosy-purple. The flesh is yellow, flavoured like an Aprioot and very pleasant. It is very distinct in its way, and from all appearances will be a great acquisition for orchard house culture. It also does well at Margate in the neighbourhood of the sea, and should also prove hardy in the south and west of England.

Elsewhere we came across a fine plantation of the well-known Plum, Monarch, in maiden trees that have made growths 3 ft. to 5 ft. high, and propor-

tionately stout, and branched. The variety Rivers' Prolific seems to be held in high estimation, seeing that 40,000 trees of it are grown here, very largely, if not chiefly, in the form of standards. The Czar is grown more or less in the pyramidal form, and the fruit is now ripe and of high quality in the open nursery. The Plums have been wonderfully free from aphids, and their leaves glitter in the sunshine.

Here may be seen the finest collection of Kentish and English orchard Cherries generally, chiefly Bigarreus and Napoleons, grown in the form of full standards with stems $5\frac{1}{2}$ ft. to 6 ft. high, and all in robust vigour. On the other side of the pathway is a fine plantation of trees for the market people, which may be cut or pruned to form bushes or standards according to their liking. Peaches are grown in great numbers, trained and untrained. Some of them, including Sea Eagle, were making splendid growths; and, indeed, this was the case generally except where the trees were hopelessly crippled by the fierce and bitter cold winds of April. They are trained both in the fan and espalier forms, as are Apricots. Curiously enough the latter had not been injured in any way by the cold winds. A quantity of Peach and other trees purchased at Messrs. Lee's sale have made excellent growth the first season in the soil of Kent. Elsewhere we came upon more standard Cherries in grand form; and were informed that 10,000 trees in this form are grown. A plantation of American Peaches of the early ripening kinds, for culture in the open air was also interesting.

PEARS.

This is decidedly not a Pear year; indeed, in many gardens they are a failure, for which the cold and ungenial weather is chiefly to blame. They are not altogether a dead letter at Maidstone, however, though it is tantalising to see so many fine trees having so little to do in perfecting a crop. On the walls of the offices and other nursery buildings are many varieties trained in the form of long, oblique cordons, which carry a few fruits, but are destined, we believe, to swell to handsome size in the course of another month or six weeks. Many of the choicest of the old and new varieties are grown in this fashion. In the open ground are some fine plantations of pyramidal trees, two years old. Directeur Hardy is fruiting with exceptional freedom, when others have failed; and this should be a plea for growing numerous varieties, as some of them are sure to afford a supply. Emile d'Heyst usually fruits heavily, but this year very thinly. Williams's Bon Chretien is also fruiting fairly freely; and Jules Guyot, which is similar, is worthy of note, as the tree is a more vigorous grower, and the fruit not liable to spotting. Rivers' Princess carries some fine fruits. Rivers' Beacon is an early Pear, that is doing fairly well. Old Duchess is fruiting well as a tall pyramid. Beurre Jean Van Geert, Louise Bonne of Jersey, and the new Marguerite Marrillat, and others as cordons against a wall are carrying some fine fruits.

APPLES.

The Apple is the king of British hardy fruits, both from a utilitarian point of view, and the readiness with which it responds to cultivation throughout every part of the British Isles, from Land's End to the Orcaades, and in Ireland. Nowhere in these islands does it grow to greater perfection, both in the matter of size and colour, than in Kent, though a few other favoured southern localities are not far behind in this respect, when the cultivator in a private capacity devotes his energies to the care of the trees. The plantations of Apples in the Allington Nurseries make many a cultivator green with envy to see with what facility and ease the trees may be grown, and the size and colour the fruits attain. The trees are pruned and trained in every useful and fanciful form such as bushes, half standards (with stems $4\frac{1}{2}$ ft. high), full standards (6 ft.), pyramids, amateur standards, espaliers, oblique, horizontal and upright cordons, as well as the gridiron form.

In different parts of the ground Cox's Orange Pippin and Allington Pippin are grown in juxtaposition, and the visitor can compare and note their various excellencies or otherwise. Maiden trees of Cox's Orange almost invariably consist of a single stem, while those of Allington Pippin alongside are much taller, more vigorous and freely branched. In the two-year-old plantations the same differences are noticeable. The fruits of Allington Pippin are larger, and when mature have the flavour of the Golden Reinette. A plantation of three-year-old trees of these sorts is well worthy of inspection, for though

both varieties are splendid and bearing freely, the same differences are noticeable. Elsewhere is a line of Allington Pippin, half the trees of which are grown upon the Crab, and are fruitless. The rest of the trees are on the Paradise, and fruiting heavily.

Very interesting is a plantation of old-fashioned, highly flavoured dessert varieties that deserve a great deal more attention than they get. We refer to Russet Nonpareil, Cockle Pippin (an old Sussex dessert Apple), Golden Reinette and Lord Burleigh, all in dwarf form upon the Paradise and fruiting freely.

Alongside of the above and of the same age are fruitful trees of Sturmer Pippin, Lord Grosvenor (a stronger grower than Lord Suffield, and often recommended as a substitute), Mrs. Barron (a large fruiting and handsome Apple), a sort named Gris from Canada, and others. Maiden trees of Golden Spire, Baumann's Red Winter Reinette, and Belle de Pontoise are making wonderful growth. Frogmore Prolific is well named, for it is very prolific, and an Apple with a strangely greasy skin. Lord Derby, Eclinvill Seedling, Stirling Castle, Stone's and King of the Pippins are all fruiting splendidly. Lord Grosvenor has been fetching 7s. a bushel for the fruit in the market. Many of the above sorts are doing well as standards, also Castle Major, a large and handsome fruit.

A plantation of trees ranging from 2 ft. to $3\frac{1}{2}$ ft. high carried crops of fruit that would excite the envy of any pomologist. All are grown upon the Paradise, showing their suitability for this stock. Amongst these, particularly noteworthy are Bramley's Seedling, Grenadier, King of Tomkin's County (an American variety with the promise of a great future before it, as it fruits splendidly), Troughton Gold Medal, Small's Admirable (much favoured in Scotland), Scarlet Lamb, Gladstone and Beauty of Bath, the two latter highly coloured, and now ripe, as the birds have discovered. Equally good are Devonshire Quarrenden, Duke of Devonshire, Jubilee, Baumann's Red Winter Reinette, Yellow Ingestre, Col. Vaughan, Golden Spire, Duchess of Oldenburgh and Peter the Great or Cardinal, a twiggy and fruitful tree, with a clear yellow skin to the fruit, softly streaked with red and now ripe. Numerous trees of it convinced us of its extreme fertility and usefulness for private gardens.

Popular market varieties are grown in great quantities, including 5,000 of Worcester Pearmain. Another large plantation of maiden trees excited our admiration on account of their regularity and vigour. Besides many already mentioned, there were fine plantations of Bismarck, Newtown Wonder, Kerry Pippin, &c. A splendid plantation of three-year old trees left nothing to be desired. The large greenish-yellow fruits of Bielo Borodawka have the flavour of Irish Peach, while the tree is a splendid grower and bearer.

What is known as the trial orchard contains 400 varieties and is well worthy of going a long way to see. The trees are grown in the form of bushes, which are now of some size. We noted only a few of those which were heavily laden, including Tower of Glamis, Dutch Codlin, Mrs. Barron, Lord Grosvenor (which would beat Lord Suffield twenty times over), Ribston, Cox's, Margil, Foster's Seedling, Emperor Napoleon (a showy, early, red fruit), Kerry, Hubbard, Peter the Great, Peasgood's Nonsuch, Warner's King, Red Juneating (mostly gathered), Adam's Pearmain, Emperor Alexander, Sops in Wine, James Grieve (earlier than Cox's Orange) and Pome de Neige, otherwise known as Royal Snow.

Amateurs' standards are cordons which are allowed to run up and then form a head like a standard. They fruit along the stem as well as on the top, and are very handsome for small gardens. They are on the Paradise. They are movable and fruit the first year after planting. Very interesting was a lot of standards, ten years old, and fruiting abundantly. Some are on the Paradise, but most of them on the Crab. Some of them have heads 30 ft. in diameter.

(To be continued.)

SOCIETIES.

FLORAL FETE AT NEWTON-STEWART.— August 10th.

ON Wednesday, the 10th inst., Kirroughtree Park presented a very gay and attractive appearance.

The particular occasion was the Newton-Stewart, Minnigaff and District Horticultural Society's festival, the principal event of the kind in the South of Scotland. In the morning the weather was not at all promising for the event, but as the day advanced the sun broke through and continued to smile upon the day's proceedings, which were of an interesting and enjoyable character. Whatever may have been the success of the past, the society has never held a more gratifying nor encouraging exhibition from every point of view. Mr. Mann, the obliging and courteous secretary, under whose care the society has added greatly to its prosperity and popularity, continues to discharge his duties, with his usual courtesy, energy, and enterprise. The most complete arrangements were made for staging and showing the various exhibits, and one was at once struck with the admirable way in which this work had been carried out. The Galloway Marquee Company, Newton-Stewart, had come to the assistance of the society and put at their disposal a fine commodious marquee, in which the exhibits were displayed to great advantage. Notwithstanding the excellence of last year's show, this exhibition was far surpassing, both in point of quantity and quality. That the society is doing splendid service in developing a taste for floriculture is plainly evidenced, and the secretary and committee deserve to be warmly supported in their efforts to promote this laudable institution.

All the classes were well filled, and it would be difficult to say which section was the most representative. Vegetables and garden produce, generally, were plentiful, while flowers of every variety flourishing at this season of the year were in abundance, and the bloom generally was noticeable for its excellence. In addition to two special trains, one from Whithorn, and one from Stranraer, which brought many visitors to the show, a large number of brakes were also plying backwards and forwards between various parts. The attendance was most encouraging. A great attraction was the military tournament by a detachment of Argyll and Sutherland Highlanders, and the fine music discoursed by their band and pipers. At half-past twelve the exhibition was declared open by Lady Maxwell, who spoke some words of encouragement to the committee of management and the exhibitors, and concluded by thanking Major Armitage for the kind way in which he had introduced her. Provost Matthews and Major Armitage briefly addressed the audience, after which the judging was proceeded with. During the afternoon an excellent programme of music was sustained by the band and pipers. The committee are to be congratulated upon this new departure in securing the services of a detachment of this regiment to give a performance. Their exhibition of physical drill was one of the features of the day's proceedings, and has doubtless done much to add further to the popularity of the society. The rifle firing, bayonet exercise, and physical drill, which were gone through with the utmost precision, seemed to be thoroughly enjoyed by the spectators.

The principal prizewinners in the gardeners' classes were Messrs. Day, Galloway House; Young, Craignean; Silbury, Penninghame; M'Duvall, Mertonhall; Higgins, Craigenvever; and Falconer, Dornhill, Newton Stewart. In the amateur section the honours were divided among Messrs. A. M'Phaty, H. Blain, J. Clement, Stranraer; J. Devoy, Stranraer; and Jas. Stewart, Newton Stewart. In the cottagers' class Messrs. S. Smellie, H. Blain, and J. Muir were among the most successful exhibitors.

SHROPSHIRE HORTICULTURAL.—August 17th and 18th.

LAST year the brilliant success which attended the Royal Jubilee Commemoration Show at Shrewsbury gave rise to the idea that it could not be surpassed, but the imposing show which was again held in the Quarry, Shrewsbury, beat the record by 400 fresh entries, sufficient to make a provincial show in itself. It is the twenty-fourth floral and musical fete that has been held by the Shropshire Horticultural Society, and each succeeding show outgrows the previous one. The entries totalled 2,900, and included entries from all parts of the United Kingdom. There were nearly 400 bunches of Grapes, besides other fruits in abundance. The display everywhere has never been surpassed either in quantity or quality. The groups of plants which filled one of the principal tents have been declared

by competent judges never to have been better. All this was rewarded by £950 of prize money, besides Gold and Silver Medals. The crowds of people that entered the grounds of the Quarry blackened the roads, and at the end of the first day it was found that more than £850 had been taken, the amount being greater by £120 than on the same day last year.

PLANTS.

In addition to our telegram of last week we now give some additional details. The bulk of the classes were open to all. The groups naturally excited a considerable amount of attention. The group of miscellaneous plants, not to occupy more than 300 sq. ft. of space, shown by Mr. Jas. Cypher, Cheltenham, was characterised by airiness, gracefulness, elegance and taste in arrangement. His Humeas, Palms, Aralias, Lilies, Cattleyas and other Orchids produced a most charming effect of light and shade, colour and greenery. The group shown by Mr. W. Finch, of Coventry, well earned the second place on account of its brilliant effects, but the construction of it was heavier. Mr. Roberts, gardener to Miss Wright, Halston Hall, Oswestry, secured the third award.

An equal interest centred in a group of fine foliage plants of similar size. The premier honour was secured by Mr. Edmonds, gardener to the Duke of St. Albans, Bestwood, Notts, who had some magnificent specimens of *Acalypha musaica*, richly coloured and faultless in form. Scarcely less noticeable were his specimen *Crotons*, *Dracaenas*, *Bamboos*, *Begonias*, *Palms*, &c., all displayed to the best advantage. Mr. J. Cypher had to be content with a second place here, though his *Crotons*, *Palms*, and other tall plants were well shown off by smaller plants beneath them. Mr. W. Finch came in third.

The class for thirty stove or greenhouse plants in 10 in. pots also brought out some fine exhibits, amongst which Mr. Lambert, gardener to Lord Harlech, Brogyntyn, took the lead with choice *Ixoras* and *Dipladenias*, profusely flowered, *Phormium tenax variegatum*, *Heliconia illustris*, *Palms* and other subjects. He was followed by Mr. J. Cypher, and Mr. Bremmell, gardener to H. H. France-Hayhurst, Esq., Overley, Wellington, in this order.

Mr. J. Cypher again came to the front for twenty specimen stove and greenhouse plants, taking the Silver Cup. Mr. W. Finch was second. The flowering specimens of *Phoenocoma prolifera Barnesii*, shown by Mr. Cypher, were magnificent examples of cultivation. He again led the way for a specimen plant in flower with *Erica austrianæ*, followed by Mr. Finch, and Mr. Lambert in this order.

Mr. Edward Jones, gardener to A. M. Barber Esq., Field House, Wellington, had the best exotic Ferns; and was followed by Mrs. J. H. Slaney, Sunnycroft, Wellington. Mr. Bird, gardener to Mrs. Watkins, Shotton Hall, Shrewsbury, had the best *Dracaenas*, though not very highly coloured. Mr. Sawley, gardener to Mrs. Darby, Adcot, took the lead for *Caladiums*, which were well grown. For pyramidally-trained *Coleus*, Mr. A. Myers, Shrewsbury, took the premier place, with handsome specimens of medium height. He also had the best *Fuchsias* in one class; and Mr. Walford, gardener to Mrs. Wace, College Hill, Shrewsbury, took the lead in another class. Mr. A. Myers had the best single and double zonal *Pelargoniums*. Mr. B. R. Davis, Yeovil, Somerset, was the champion for tuberous *Begonias*. Mr. J. Parson-Smith, Abbotsmead, Shrewsbury, had dwarf and well-flowered *Gloxinias*, taking the first prize. Mr. Edmonds was again to the fore in the class for table plants.

In the class for thirty miscellaneous plants in 5 in. pots, Mr. Townsend, gardener to Col. R. T. Lloyd, Aston Hall, Oswestry, had a splendid exhibit, showing several fine *Cattleyas* and *Cypripediums*. He was followed by Mr. Bird. Mr. Lambert again came to the front for six stove or greenhouse plants, showing fine *Allamandas*, *Dipladenias* and *Ixoras*. In another class for six, Mr. Innes, gardener to G. Burr, Esq., took the lead with nice plants of moderate size.

Mr. Townsend had the best Orchids in a class open to the county of Shropshire only, showing very fine *Cattleya gigas*, *C. Mossiae* and *C. Mendellii*. Mr. Edward Jones had the best tuberous *Begonias* for Shropshire. Mr. Tugwood, gardener to T. F. Kynnersley, Leighton Hall, Ironbridge, upheld the

honour of the county for a group of miscellaneous plants in a space not exceeding 150 sq. ft. Mr. Bremmell was second. Both of the groups were elegant and airy in arrangement.

CUT FLOWERS.

Many classes were devoted to cut flowers, both for decorative and other purposes. Messrs. Perkins & Sons, Coventry, took the premier honours in the class for six bouquets and six baskets of cut flowers, in which Orchids played a very prominent part, together with *Pancreatiums*, *Lily of the Valley* and *Francoa ramosa*. Messrs. Jones & Sons, Shrewsbury, were second with a beautiful, though less varied display, and Messrs. Jenkinson & Son, Newcastle, Staffs, came in third. Messrs. Perkins & Sons again led for a ball and bridal bouquet, beating Messrs. Pope & Sons, King's Norton, Birmingham. The latter came to the front for similar bouquets, from which Orchids were excluded. Mr. W. Tresseder, Cardiff, had the best shower bouquet of *Cactus Dahlias*, and Messrs. Pope & Sons the best one of Sweet Peas, while Messrs. Perkins & Sons took the lead for a shower bouquet of *Roses*.

Mr. T. Sutton Timmis, Cleveley Hall, Allerton, Liverpool, showed the best twelve bunches of stove and greenhouse flowers, and the best six bunches. Messrs. Harkness & Sons, Bedale, Yorks., were first for *Gladioli* and for hardy flowers; Messrs. D. & W. Croll, Dundee, for a collection and for twenty-four *Roses*; Mr. W. Tresseder, for *Dahlias*; Messrs. Laing & Mather, Kelso-on-Tweed, for *Carnations*; and Mr. J. B. Wood, Ludlow, for twenty-four blooms of *Roses*. Mr. M. Campbell, High Blantyre, led for twenty-four show and *Cactus Dahlias*; Messrs. Keynes, Williams & Co., Salisbury, for twelve bunches of *Pompon Dahlias*; Messrs. Laing & Mather, for *Carnations*; and Messrs. Thomson & Co., Sparkhill, Birmingham, for *Picotées*. Dr. H. H. O. Sankey, Boreatton Park, Baschurch, secured the Eckford Silver Challenge Cup for thirty-six varieties of Mr. Eckford's Sweet Peas. Mr. A. Bessel, Ludlow, took the first award for eighteen varieties of Mr. Eckford's Sweet Peas.

FRUIT.

As is always now expected, the display of fruit at Shrewsbury is of a very extensive, interesting and instructive character, the greatest amount of interest, perhaps, centering in the classes for a dessert table, decorated with plants; and for a collection of garden produce, both classes being judged by points and the money awards distributed in proportion to the number of points scored, as we mentioned last week. The first prize table, shown by Mr. J. McIndoe, gardener to Sir J. W. Pease, Bart., Hutton Hall, Guisborough, was decorated with *Montbretias*, *Carnations*, and other cut flowers in an epergne, and some smaller glasses. In the garden produce class the exhibits consisted of six dishes each of fruits and vegetables, together with foliage.

Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, staged the winning lot of fifteen dishes of fruit, having first-class bunches of *Muscat of Alexandria*, *Alnwick Seedling*, *Canon Hall Muscat*, and *Gros Maroc Grapes*, together with other fruits. He was followed by Mr. J. McIndoe and Mr. J. Edmonds in this order. Mr. J. Jones, gardener to Mrs. F. Need, Malvern, was the leading winner in the class for nine dishes of fruit; and was followed by Mr. Bannerman, gardener to Lord Bagot, Blithfield, Rugeley, and by Mr. A. McCulloch, gardener to W. F. Webb, Esq., Newstead Abbey, Notts, respectively. Mr. Roberts upheld the honour of Shropshire in the county class for nine dishes of fruit. He was followed by Mr. J. Langley, gardener to the Rev. T. M. Bulkeley Owen, Tedsmore Hall, West Felton; and by Mr. S. Bremmell, in this order.

Some of the winners of leading prizes for Grapes were Mr. J. Campbell, gardener to C. E. Newton, Esq., Mickleover Manor, Derby, who took the lead in four of the principal classes; Mr. F. Bannerman; Mr. W. Pilgrim, gardener to Sir T. Meyrick, Bart., Bcdorgan; Mr. A. Kirk, gardener to J. T. Paton, Esq., Norwood, Alloa; Mr. J. Langley; Mr. T. Lambert; and Mr. W. Dawes, gardener to Lord Trevor, Brynkinalt.

Vegetables were abundant and of excellent quality, the Potatos being worthy of special attention. The premier award in the class for nine vegetables, the prizes for which were offered by Messrs. Sutton & Sons, Reading, was secured by Mr. W. Pope, gardener to the Earl of Carnarvon, Highclere Castle,

Newbury. Mr. G. Lye, gardener to Mrs. Kingsmill, Newbury, was a very good second. Mr. J. Bowerman, gardener to C. H. Hoare, Esq., Hackwood Park, Basingstoke, came in third with an exhibit of great excellence; while Mr. T. Wilkins, gardener to Lady Theodora Guest, came in fourth.

Mr. W. Pope took the first prize offered by Messrs. J. Carter & Co., High Holborn, London, for a collection of twelve vegetables, where the prizes were offered by Mr. Edwin Murrell, Shrewsbury. Messrs. Webb & Sons, Wordsley, Stourbridge, also offered prizes for a collection of eight vegetables, and the three leading prizes were taken by Mr. J. Bowerman, Mr. G. Lye, and Mr. T. Wilkins. For the Tomatos grown from Messrs. Webb's seeds, Mr. G. Lye again led the way. The leading prizes offered by Mr. R. Sydenham, Birmingham, were taken by Mr. W. Nicholson, Newcastle, Staffs.; Mr. W. Pope, and Mr. G. Lye.

The first prize for a collection of five dishes of Potatos was taken by Mr. B. Ashton, gardener to the Earl of Lathom, Ormskirk. Mr. J. J. Brewin, Brimstage, nr. Birkenhead, had the best three dishes of Potatos; Mr. C. J. Waite, gardener to Sir P. Talbot, Esher, was second, but came to the front for a dish of six Potatos.

Messrs. Adnitt and Naunton, the hon. secretaries, deserve great credit for the clockwork regularity and order with which everything passed off in its own proper groove.

NON-COMPETITIVE EXHIBITS.

Messrs. H. Cannell & Sons, Swanley, Kent, exhibited a gorgeous group of the *Cannas* which they grow so well in pots. All the best modern varieties were represented. (Gold medal.)

Messrs. Webb & Sons, the Queen's Seedsmen, made a fine display, including a bank of their *Excelsior* strain of *Gloxinia*, produced from seed in ten months. *Begonias* were also shown, together with a collection of cut flowers, amongst which was an effective lot of Sweet Peas, comprising thirty varieties. A Gold Medal was awarded, not a Silver one, as stated in the hurried report for our telegram.

Mr. Henry Eckford, Wem, Shropshire, made a splendid display of Sweet Peas, for which he is so justly famed in many parts of the world. (Gold Medal.)

Messrs. Pritchard & Sons, Shrewsbury, made a fine display with *Carnations*, chiefly seedlings cut from the open border. They also had a fine group of *Ferns*. (Gold Medal.)

Messrs. F. Sander & Co., St. Albans, exhibited Orchids and some fine examples of *Acalypha Sanderi*, *Dracaena sanderiana*, and other of their specialities. (Gold Medal.)

Messrs. R. Hartland & Sons, Cork, staged a fine lot of cut blooms of tuberous *Begonias*. (Gold Medal.)

Cut *Roses* were the feature of the fine group set up by Mr. Ed. Murrell, Portland Nursery, Shrewsbury. (Gold Medal.)

Messrs. Dicksons, Ltd., Chester, had a group of miscellaneous plants, including *Acalypha Sanderi*, the new *Cordyline Kippisii*, *Conifers* for which they are noted, &c. (Silver Medal.) Messrs. W. & J. Birkenhead, Sale, Manchester, made a pleasing display with the *Ferns* they grow so well. (Silver Medal.) Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester, set up a showy group of *Montbretias* and other bulbous plants, including *Lilies*, *Gladioli*, *Kniphofias*, &c. (Silver Medal.) Messrs. R. Smith & Co., Worcester, exhibited cut flowers of hardy herbaceous plants and various other subjects in pots, of a more tender character. (Silver Medal.) Mr. A. Myers, Shrewsbury, had a group of well-grown Zonal *Pelargoniums*. (Silver Medal.) Mr. J. H. White, Worcester, exhibited *Crotons* and other stove and greenhouse plants and hardy flowers. (Silver Medal.)

Mr. John Forbes, Hawick, exhibited *Carnations*, *Violas*, and other hardy plants. (Bronze Medal.) Mr. S. Mortimer Rowledge, Farnham, Surrey, exhibited a fine lot of show and *Cactus Dahlias*. (Bronze Medal.) Messrs. Jones & Sons, Shrewsbury, also received a Bronze Medal for cut flowers. Mr. P. Blair, gardener to the Duke of Sutherland, Trentham Hall, received a First-class Certificate for *Carnation Trentham Rose*. The Jadoo Company, Ltd., Exeter, had a group of plants grown in Jadoo fibre. Mr. H. Deverill, Banbury, exhibited cut flowers. Mr. Wm. Sydenham, Tamworth, had a display of *Violas*.

DEVON AND EXETER HORTICULTURAL.—

August 19th.

THE annual summer exhibition of this society was held on the recently improved grounds of Northernhay, on Friday the 19th inst., the event being favoured with perfect weather, a pleasant change from the past three or four years, which had been more or less showery and unfavourable to the society's finance. Let us hope this day made amends for past years. Taken altogether, the show was a decided improvement on last year's one. Several nurserymen greatly assisted the display. Messrs. R. Veitch & Son, Exeter, had a splendid show of Gladioli, Cannas, Dahlias, Lilliums, Water Lilies of the richest colours, hardy herbaceous and rockery plants for which this firm is noted. Mr. W. J. Godfrey, Exmouth, showed a very bright collection of cut flowers, pot stuff, &c., and included the purple Rudbeckia, Lobelia corallina and L. Milleri, but neither so bright and showy as Queen Victoria in my idea. His Cannas were remarkably good, well-flowered, and of the newest; pot Carnations, two new American varieties, Mrs. M. Burney and Flora Hill, pink and white respectively, and zonal Pelargoniums, all tended to make his exhibit most noteworthy. Messrs. Clarke & Son, Wellington, showed Gladioli, Roses and Sweet Peas in great variety, which were much admired. Messrs. Jarman & Co., Chard, exhibited some grand blooms of double Begonias, all seedlings, Roses, Gladioli, Cactus Dahlias, &c. Mr. J. Walters, Rose grower, Exeter, had a good lot of Roses. Mr. F. Smale, Torquay, brought up a very fine show of Dahlias, the most noteworthy being Ruby (new), Mary Service, Britannia, Primrose Dame, Standard Bearer, &c. The Devon Chrysanthemum Society had a beautiful collection of Cactus Dahlias, well grown and of the richest colours.

The Exeter Nursery Co. had a good collection of stove and greenhouse plants which reminded one of the old days when they used to compete at the great shows. Well-flowered Allamandas, Ixoras, Clerodendrons, Dipladenias, Bougainvilleas, &c., while for foliage some grand Crotons, finely coloured, were shown; also samples of wreaths and crosses for which this old firm are well noted. Lord Poltimore (gardener, Mr. Slade), had a non-competitive group of Maidenhair Ferns, Pancratiums, Bougainvillea glabra, &c., with half-a-dozen good Cotton plants, very interesting, which called for a lot of remarks. He also showed dishes of good Peaches, Dwarf and Runner Beans.

The prizes for the open group brought two competitors, both practical old hands at the work, the first a Silver Cup, value £5, falling to B. H. Hill, Esq. (gardener, Mr. G. Lock); second, W. Brock, Esq. (gardener, Mr. Roland). In the amateur class for a group of similar size, namely, in an oval with a diameter of 11 ft. by 15 ft., the tables were reversed, Mr. Brock beating his antagonist here. The two groups were well arranged, and had a good effect, but to my idea too much cork was used in Mr. Hill's exhibit. This appears unnatural to some observers. For six stove and greenhouse plants, Mr. W. Brock came first; R. Hamilton Gell, Esq. (gardener, Mr. Barnes), was second. For six stove and greenhouse Ferns the latter came to the front and Mr. W. Brock was second. For a miscellaneous group for effect, 11 ft. by 8 ft., Lady Duckworth King (gardener, Mr. Bake) was first, and W. F. Richards, Esq., second. Mr. Randall Johnson showed six Gloxinias (white), very good, taking first honours. Cockscombs, Begonias, Fuchsias, Coleus, &c., were all good.

In the fruit department there was a good competition for ten dishes. B. H. Hill, Esq., took first. This carried a Silver Medal with it. J. Brutton, Esq. (gardener, Mr. Crossman), was second; and Admiral Parker (gardener, Mr. W. Selly), came in third. For six dishes, Hammond Spencer, Esq. (gardener, Mr. G. Foster), was first with a good lot, Muscat Grapes being specially good; Hamilton Gell, Esq., was second; and Sir J. Fergusson, Davil (gardener, Mr. Seward), took the third place. For three bunches of Hamburgh Grapes, W. A. Sarford, Esq., was first; Washington, Esq., second. For three bunches of Madresfield Court, C. S. Eddy, Esq., first; Rev. H. Clerk (gardener, Mr. Pike), second. For three bunches of Muscats, C. S. Eddy, Esq., first; Hammond Spencer, Esq., second. For three bunches of Buckland Sweetwater, Admiral Parker was the only exhibitor. For three bunches, any

other variety, Hamilton Gell, Esq., first, with Black Alicante; F. Carr, Esq., second, with Foster's Seedling. For one Pineapple, Sir R. Buller (gardener, Mr. R. Bull), first. For six Peaches, B. James, Esq., was first, and Admiral Parker was second. For six Nectarines, W. A. Sarford, Esq., first; Hammond Spencer, Esq., second. Melons were very inferior as regards flavour. Apricots, Figs, Plums, Cherries, Apples, Pears, Gooseberries, Currants, &c., were all meritorious.

The vegetables, as a whole, were of exceptional merit, especially the first prize in the collection of twelve kinds. Here Sir John Shelly (gardener, Mr. Mairs), was a long way ahead; his Carrots, Leeks, Cauliflower, Onions, &c., were remarkable. This is the seventh year in succession this veteran exhibitor had premier honours; B. H. Hill, Esq., was second. For six kinds, Lady Duckworth took first, Lady Walrond being second. Potatos, Onions, Carrots, Parsnips, and, in fact, all the roots were very fine, taking into consideration the dry weather experienced in this part of Devon since the end of May.

ROYAL HORTICULTURAL.—August 25th.

THE meeting on Tuesday was not a very large one, though quite respectable for the month of August. Hardy herbaceous plants of all sorts, including Montbretias in quantity, also Gladioli, Lilies, Bouvardias, annuals, and some fruit were plentiful.

Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking, exhibited a grand piece of *Platyclinis filiformis*. Sir Henry Fairfax, Ravenswood, Melrose, N.B., showed *Cattleya hardyana* and a grand spike of a fine variety of *Odontoglossum harryanum*, receiving a cultural commendation. Messrs. James Veitch & Sons, Ltd., Chelsea, exhibited *Epidendrum radicante-stamfordianum*, *Disa Clio*, *Cypripedium rothschildiano-villosum*. Thos. Hogg, Esq., Woodside Gardens, Paisley, exhibited *Cypripedium Lawrebel*. Norman C. Cookson, Esq. (gardener, Mr. Murray), Oakwood, Wylam-on-Tyne, staged *Cattleya hardyana* Oakwood var. G. F. Moore, Esq., Bourton-on-the-Water, Gloucester, exhibited *Cypripedium Godefroyae leucochilum mooreanum* and *Cattleya Trianaei* Popayan var.

Messrs. Hugh Low & Co., Bush Hill Park, Enfield, exhibited a group of Orchids, including *Sobralia xantholeuca*, *Cypripedium bellatulum album*, *Cattleya Harrisoniae*, *C. bicolor* wrightiana, &c.

Messrs. F. Sander & Co., St. Albans, exhibited the curious *Bulbophyllum barbigerum*, *Oncidium incurvum album*, and dwarf plants of *Acalypha Sanderi*, forming a pretty group.

Messrs. Kelway & Son, Langport, Somerset, made a splendid display with their Gladioli, which filled the whole of one side of a table. All the best types and their varieties were included in the collection. (Silver Gilt Banksian Medal.)

Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester, had a splendid assortment of Montbretias, Lilies, Gladioli, and Kniphofias. The Gladioli included varieties of the *Brenchleyensis*, *Nanceianus* and *Lemoinei* types. (Silver Gilt Banksian Medal.)

Messrs. Barr & Sons, 12 & 13, King Street, Covent Garden, made an extensive display with hardy herbaceous plants, including Sunflowers, Lilies, Phloxes, Eryngiums, *Echinops ruthenicus*, &c. (Silver Flora Medal.)

Messrs. H. Cannell & Sons, Swanley, Kent, had a bank of fine varieties of *Salpiglossis*, *Scabiosa atropurpurea* and its varieties, backed with *Cosmos* and edged with *Gypsophila*. They also had some splendid Cockscombs. (Silver Banksian Medal.)

Sir Trevor Lawrence, Bart. (gardener Mr. Bain), exhibited a fine collection of Gladioli, dark crimson *Lobelia* seedlings of the tall hybrid Mexican strain, *Rudbeckia bicolor superba*, and a bunch of white hybrid *Anthuriums*, including *A. Laurenceae*, *A. Marie*, *A. Laingi*, &c. (Silver Flora Medal.)

Messrs. J. Veitch & Sons, Ltd., exhibited a group of annuals showing a great amount of variety, and including *Salpiglossis*, *Scabiosa*, *Cosmidium*, *Cent-aurea*, *Phlox Drummondii*, &c. They also showed a tall and well fruited specimen of *Rubus phoenicolasius*.

Mr. H. B. May, Dyson's Lane, Upper Edmonton, staged a highly meritorious exhibit of *Bouvardias*, including well flowered plants of *B. Humboldtii grandiflora*, *B. President Cleveland* and others, making twenty of the best varieties in cultivation. (Silver Flora Medal.)

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, exhibited Cactus and pompon Dahlias, Lilies, Kniphofias and other hardy herbaceous flowers. (Silver Banksian Medal.)

Purnell Purnell, Esq., Woodlands, Streatham Hill, exhibited a large group of Lilies, Fuchsias, tuberous Begonias and Ferns, interspersed with Palms and other ornamental subjects. (Silver Banksian Medal.)

At a meeting of the fruit and vegetable committee, a Silver Gilt Knightian Medal was awarded to Messrs. George Bunyard & Co., The Royal Nurseries, Maidstone, for a large and very fine collection of fruit, consisting chiefly of Apples, but also including Peaches, Pears, Plums and Early Prolific Filbert. The Apples were mostly ripe, and a large proportion of them handsomely coloured.

Alpine and perpetual fruiting Strawberries, to illustrate the lecture, were exhibited by Messrs. Laxton Bros., Bedford; Mr. Jas. Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House; Messrs. H. Cannell & Sons; and by M. Henry de Vilmorin, of Paris.

Messrs. T. Rivers & Son, Sawbridgeworth, exhibited grand samples of Apple Peasgood's Nonsuch, Rivers' Dryden Nectarine, Early Silver Peach, and several varieties of Plums, all grown under glass. (Silver Banksian Medal.)

Peaches and Figs were shown by Lord Foley (gardener, Mr. J. Miller), Ruxley Lodge, Esher.

The Dowager Lady Freake (gardener, Mr. Rickwood), exhibited a collection of Apples, Pears, Plums, Grapes, Figs, Peaches, Cherries and Currants. (Silver Banksian Medal.)

QUESTIONS AND ANSWERS.

Beech with two Forms of Leaves.—A. C.: From your lucid description and illustration we can now see that whether the tree has been grafted or not, the two forms of leaves are not due to that. The tree is extremely liable to variation, and has received several names accordingly, but the one that is adopted by good authorities, and which is most descriptive of the tree is *Fagus sylvatica heterophylla*. Other names, given it at different times, are *F. s. laciniata*, *F. s. incisa* and *F. s. salicifolia*. They have been applied to different sports of the tree, but which are not always constant. Over and above these variations in which the leaves assume different forms, the tree is liable to return to the normal form or branches of it. Now the broad-leaved form you sent us was very near the normal or typical form of the Beech, but not quite. The deeply-cut leaves are those of the variety *F. sylvatica heterophylla*. That the broad leaves should occur here and there on the tree is very interesting, as they show that the tree has a tendency to revert to the original. It is well worth looking after.

Names of Plants.—C. B. G.: *Rhamnus Frangula*.—A. L.: 1, *Hibiscus syriacus*; 2, *Rubus discolor flore pleno*; 3, *Rubus laciniatus*; 4, *Cupressus nutkaensis*; 5, *Lysimachia vulgaris*.—W. P.: 1, *Papaver glaucum*; 2, *Tropaeolum aduncum*; 3, *Impatiens fulva*; 4, *Inula Helenium*; 5, *Solidago canadensis*.—J. M.: 1, *Veronica longifolia subsessilis*; 2, *Monarda fistulosa*; 3, *Lilium tigrinum*; 4, *Lilium pardalinum*.—H. Hardy.—1, *Cattleya Warscewiczii*, more widely known as *C. gigas*; 2, *Odontoglossum luteo-purpureum sceptrum*; 3, *Oncidium maculatum*.—W. K.: *Salix purpurea pendula*; 2, *Viburnum Opulus*; 3, *Genista tinctoria elata*; 4, *Malva moschata*.—R. M.: *Epilobium hirsutum*; 2, *Ononis spinosa*.

Communications Received.—H.C.P.—E.H.C.D.—Bell & Bieberstedt.—W. B. H.—E. O. G.—A. E. Stubbs.—C. L. Smout.—H. Myers.—A. L.—W. K.—H. Hardy.—A. Ward.—T. M.—Aro.—W. F.—R. G. W.—A. G.—E. S.—Veitch & Sons.—Webb & Sons.—Wm. Cutbush & Son.—A. Hutton.—Omega.—Wm. Carmichael.—J. Mayne.—M. Temple.—Shrub.—Laing & Mather.

TRADE CATALOGUES RECEIVED.

FISHER, SON & SIBRAY, LTD, Royal Nurseries, Handsworth, near Sheffield.—Catalogue of Bulbs and Flower Roots, and Horticultural Requisites, also Flowering and Decorative Plants for Winter Months, &c.

SAMUEL DOBIE & SON, Heathfield Gardens, near Chester.—Dobie's Book on Bulbs, Autumn, 1898.

FRANK DICKS & CO, 66, Deansgate, Manchester.—Bulb Catalogue.

BENJAMIN SODDY, 243, Walworth Road, London, S.E.—Bulbus Flower Roots.

JOHN RUSSELL, Richmond Nurseries, Richmond, Surrey.—Descriptive Catalogue of Dutch and other Flowering Bulbs.

THEODORE TURNER, Begonia Nurseries, Great Sutton, Chester.—Catalogue of Bulbs.

JAMES CARTER & CO., High Holborn, London.—Carter's Bulbs, as supplied to Royal Palaces and Public Parks.

