

19 Birds
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THE AVICULTURAL : MAGAZINE :

BEING THE JOURNAL OF THE
AVICULTURAL SOCIETY FOR
THE STUDY OF FOREIGN AND
BRITISH BIRDS IN FREEDOM
AND CAPTIVITY.

EDITED BY
HUBERT D. ASTLEY, M.A., F.Z.S., M.B.O.U.

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♡



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REPORT OF THE COUNCIL

— FOR 1913-1914. —

A PART from the election of Councillors, the only change in the Executive to be recorded in the past year is the retirement of Mr. R. I. POCOCK, F.R.S. from the Honorary Business Secretaryship after the five years tenure of that office allowed by the rules of the Society. Owing to the increasing pressure of other work, Mr. Pocock felt unable to offer his services for another term of five years and Mr. T. H. NEWMAN, who held the Secretaryship from 1904 to 1909, kindly consented to resume the office.

Under Mr. ASTLEY'S able and energetic Editorship the excellence of the Magazine has been fully maintained, and the increase in the number of members, attesting the growing interest in aviculture, has permitted the expenditure of more money upon illustrations than was possible in former years.

The Council wishes to express its obligations to all those members who have helped the Executive by the generous donation of subscriptions to the Illustration Fund and by the contribution of articles to the Magazine. Especially indebted is the Society to Mr. ASTLEY, who has cheerfully devoted his time to the onerous duties imposed upon him by the Editorship. In addition to the large number of illustrations he has given to the Society, his articles and notes have far exceeded in extent those of other members. In this connection the Council ventures to repeat its appeal to members to send in "copy," no matter how trivial the subject-matter may appear to be. By so doing they can add enormously to the interest of our periodical and relieve considerably the undue pressure of work that falls upon the Editor, with whom the sole responsibility for the monthly production of each number of the Magazine rests.

But flourishing as is the condition of the Society up to the present time, the Council feels it a duty to point out that the financial crisis resulting from the European War cannot fail to affect adversely the prosperity of the Society in the ensuing year. The cost of printing the text of the Magazine and of reproducing plates and text figures will probably rise; dealers' advertisements may be withdrawn or curtailed, and the funds generously subscribed for illustrations may be required for more important things. It cannot be expected that the average number of new members for the past two or three years will be maintained and, on the other hand, the number of resignations will probably be increased. It may, therefore, be necessary for the Executive to reduce somewhat the size of the Magazine and lessen the number of illustrations. Nevertheless the Council feels that it may confidently rely upon Members to continue to support the Society in every way that is possible through the time of stress and anxiety that is to come.

Signed for the Council,

R. I. POCOCK,

Hon. Business Secretary.

Sept. 1914.

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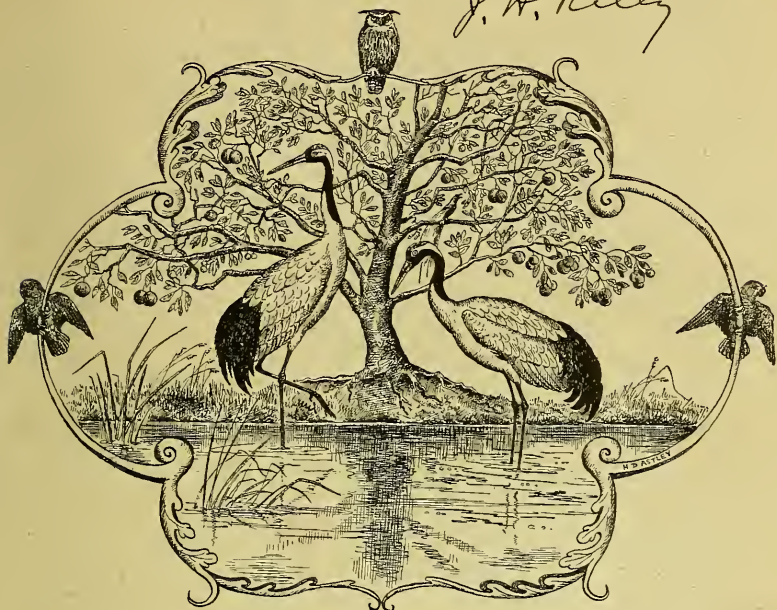
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J. A. Riley



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- ANNINGSON, Mrs.; Walt-ham-Sal, Barton Road, Cambridge. (May, 1899)
- ARMSTRONG, CHARLES; The Grove, Cambridge. (Sept., 1913).
- ARTHUR, CHARLES P.; Market Place, Melksham, Wilts. (Jan., 1895).*
- 10 ASTLEY, HUBERT DELAVAL, M.A., F.Z.S., M.B.O.U.; Brinsop Court, Hereford. (*Editor*). (June, 1895).*
- ASTLEY, REGINALD B.; The Cottage at the Crossways, Hoe Benham, Newbury. (July, 1902).
- ASTLEY, Mrs. REGINALD; The Cottage at the Crossways, Hoe Benham, Newbury. (Oct., 1905).
- ATHERLEY, Mrs.; Eastnor Castle, Ledbury, Herefordshire. (April, 1903).
- ATTEWELL, HAROLD E.; "Cassia Grove," Kingston, Jamaica. (July, 1903).
- BAINBRIDGE, W. A.; Hazelwood, Thorpe, Surrey. (1913).
- BAHR, Dr. PHILIP H., B.A., M.B.O.U.; 12, Vicarage Gardens, West Kensington, W. (Nov. 1907).
- BAILY, W. SHORE; Boyers House, Westbury, Wilts. (Feb., 1910).
- BAIRD, Sir ALEXANDER, Bart; Urie, Stonehaven, Kincardine, N.B. (Oct., 1904).

- BAKER, E. C. STUART, F.Z.S., M.B.O.U.; 6, Harold Road, Upper Norwood, S.E. (Feb. 1904).
- 20 BAKER, DR. F. D.; Superintendent, Nat. Zoological Park, Washington, D.C., U.S.A.
- BAKER, JOHN C., M.B., B.A., M.B.O.U.; Ceely House, Aylesbury. (June, 1903).
- BALDELLI, LA CONTESSA GUILIA TOMMASI; 4, Via Silvio Pellico, Florence, Italy. (April, 1902).
- BAMFORD, WILLIAM; The Coppice, Werneth, Oldham. (March, 1904).
- BAMPFYLDE, The Hon. Mrs.; Court Hall, North Molton, N. Devon. (Oct., 1910).
- BARBER STARKEY, F. W. G.; (*no permanent address*). (June, 1906).
- BARCLAY-WATSON, Miss F.; The Court House, Goring, Sussex. (July, 1902).
- BARLOW, ALFRED; Superintendent, Alexandra Park, Oldham. (April, 1908).
- BARLOW-MASSICKS, LESLIE; The Mount, Rotherham, Yorks. (1913).
- BEDFORD, Her Grace the Duchess of, F.Z.S.; Woburn Abbey, Woburn, Beds.; and 15, Belgrave Square, S.W. (Feb., 1903).
- 30 BEEBE, C. WILLIAM; Curator of Ornithology; New York Zoological Park, New York City. (July, 1903).
- BENTLEY, DAVID; 80, St. Hubert's Street, Great Harwood, Blackburn. July, 1895).
- BERESFORD-WEBB, G. M.; Norbryght, South Godstone, Surrey. (May, 1906).
- BERKELEY, The Rev. C. J. ROWLAND; Sibbertoft Vicarage, Market Harborough. (Nov., 1902).
- BERRIDGE, W. S., F.Z.S.; 24, Fortismere Avenue, Muswell Hill, N. (Dec., 1909).
- BLACKBURN, H. R.; Woodlands, Surrenden Road, Preston, Brighton. (1913).
- BLAAUW, F. E., C.M.Z.S., M.B.O.U.; Gooilust, 's, Graveland, Hilversum, Holland. (Nov. 1901).
- BLAGG, E. W. H.; Greenhill, Cheadle, Staffs. (Sept., 1911).
- BLAINE, G.; Whitedaile, Hambleton, Hauts. (Oct., 1908).
- BLAND, F. L.; Rookwood, Copdock, Ipswich. (1912).
- 40 BLATHWAYT, A. P.; The Grange, Northwood, Middlesex. (Jan., 1895).
- BONHOTE, JOHN LEWIS, M.A., F.L.S., F.Z.S., M.B.O.U.; Zoological Gardens, Ghizeh, Egypt. (Dec., 1894).
- BORTHWICK, ALEX.; Vereena, Canonbury Grove, Dulwich Hill, Sydney, N.S.W. (Feb., 1909).
- BOSCAWEN, The Hon. VERA DOUGLAS; 2, St. James's Square, S.W. (Nov. 1910).
- BOSCAWEN, TOWNSHEND E., I, Old Burlington Street, London, W. (1913).
- BOUGHTON-LEIGH, HENRY; Brownsover Hall, Rugby. (May, 1900).
- BOURKE, Hon. Mrs. ALGERNON; 75, Gloucester Place, Portman Square, W. (Feb., 1911).

- BOX, E. A. GRANVILLE ; 76, Broomwood Road, Battersea, S.W. (Nov., 1907).
- BOYD, HAROLD ; Box 374, Kelowna, British Columbia. (March, 1902).
- BOYES, FREDERICK ; Norwood, Beverley, Yorkshire. (Sept., 1907).
- 50 BRAMPTON, Miss E. ; 31, Church Crescent, Church End, Finchley, N. (Feb., 1898).
- BRAZIL, Prof. ; Université de Caen, France. (1913).
- BRIDGEMAN, Lieut. and Commr. The Hon. RICHARD, O.B., R.N., M.B.O.U. ; H.M.S. "Druid," 1st Destroyer Flotilla, Home Fleet. (Dec., 1904).
- BRIDGEMAN, Colonel The Hon. FRANCIS C. ; Neachley, Shifnal. (Oct., 1905).
- BROOK, E. J. ; Hoddam Castle, Ecclefechan, N.B. (August, 1905).
- BROWNING, WILLIAM H. ; 18, West 54th Street, New York City. (March, 1906).
- BURDON, Mrs. W. ; Hartford House, Bedlington, Northumberland. (1913).
- BURGOYNE, F., F.Z.S., 116, Harley Street, W. (1912).
- BURTON, WALTER ; Mooresfoot, East Sheen, Mortlake, S.W. (Dec., 1901).
- BUTLER, ARTHUR G., Ph.D., F.L.S., F.Z.S., M.B.O.U. (*Hon. Correspondence Secretary*) ; 124, Beckenham Road, Beckenham, Kent. (Orig. Mem.) *
- 60 BUTLER, A. L., F.Z.S., M.B.O.U. ; Superintendent of Game Preservation, Kharotum, Soudan. (Aug., 1906).
- BUTLER, ARTHUR LARCHIN, M. Aust. O.U. ; Waimarie, Lower Sandy Bay, Hobart, Tasmania. (July, 1905).
- BUTTIKOFER, Dr. J., C.M.Z.S., M.B.O.U., Director of the Zoological Gardens, Rotterdam, Holland. (Oct., 1907). (*Hon. Member*).
- BUXTON, E. HUGH ; Fritton Hall, Great Yarmouth, Norfolk. (June, 1909).
- CADOGAN, Dr. FRANCIS, Hatherop Castle, Fairford, Glos. (Sept., 1913).
- CAMPBELL, A. C. DRELINCOURT ; 48, Rockliffe Road, Batlwick, Bath. (1912).
- CAMPS, H. T. T., F.Z.S. ; Linden House, Haddenham, Isle of Ely. (Orig. Mem.)
- CAPERN, F. ; Avenue House, Cotham Park, Bristol. (March, 1903).
- CARR, RICHARDSON, Home Farm, Tring, Herts. (1913).
- CARPENTER, The Hon. Mrs. ; 22, Grosvenor Road, S.W. (Feb., 1898).
- 70 CARPENTER, Prof. G. H. ; Royal Zoological Society of Ireland, Phoenix Park, Dublin. (Oct., 1905).
- CARRICK, GEORGE ; 13, King's Terrace, Maryhill, Glasgow. (March, 1898).
- CASTELLAN, VICTOR E. ; Hare Hall, Romford, Essex. (Orig. Mem.)
- CATTLE, C. F. ; Thurston, Bury St. Edmunds. (Jan. 1905).
- CÆCIL, Lady WILLIAM ; Baroness Amherst of Hackney ; Didlington Hall, Stoke Ferry, Norfolk and 23, Queen's Gate Gardens, S.W.

- CHAMBA, H. H., Sir BHURI SINGH, K.C.S.I., Rajah of; Chamba, viâ Dalhousie, Punjab, India. (Jan., 1908).
- CHAMBERLAIN, WALTER; Pendock Grove, Cobham, Surrey. (1912).
- CHARRINGTON, Mrs. MOWBRAY; How Green, Hever, Edenbridge, Kent. (May, 1906).
- CHAWNER, Miss; Forest Bank, Lyndhurst, Hants. (July, 1899).
- CLITHEROW, Mrs. CLAUD STRACHEY; 20, Park Square, Regent's Park, N.W. (June, 1903).
- 80 CONNELL, Mrs. KNATCHBULL; The Orchard, Brockenhurst, Hants. (Nov., 1897).
- CONSTABLE, The Rev. W. J.; Uppingham School, Uppingham. (Sept., 1901).
- COOKE-HURLE, Mrs. EDWARD, Netherwood Farm, Lyndhurst, Hants. (1913).
- COOPER, E. E.; Berrydown Court, Overton, Hants. (1912).
- COOPER, JAMES; Cayton, Scarborough. (Orig. Mem.)
- COOPER, WILLIAM; Aislaby Hall, Pickering, Yorks. (March, 1907).
- CORBET, Sir ROLAND J., Bart.; Coldstream Guards, Chelsea Barracks, S.W. (May, 1911).
- CORBET, Mrs. BERTRAM; 19, St. James's Square, S.W. (1913).
- CORY, REGINALD R.; Duffryn, near Cardiff. (August, 1905).
- CRAIG, Prof. WALLACE; Orono, Maine, U.S.A. (1912).
- 90 CROFT, A. B.; The Clock House, Ashford, Middlesex. (May, 1907).
- CRONKSHAW, J.; 193, Manchester Road, Accrington. (Dec., 1894).
- CROSS, W. SIMPSON, F.Z.S.; 18, Earle Street, Liverpool. (Jan. 1908).
- CUMMINGS, A.; 16, Promenade Villas, Cheltenham. (Dec., 1896).
- CUNNINGHAM, MARTIN; Goffs Oak House, Cheshunt, Herts. (Oct., 1908).
- CURREY, Mrs.; The Pit House Ewell, Surrey. (Feb., 1906).
- CUSHNY, CHARLES; (*No permanent address*). (June, 1906).
- DAVIES, CLAUDE G., M.B.O.U.; "D" Squadron, Cape Mounted Riflemen, Matatiele, E. Griqualand, S. Africa. (July, 1909).
- DAWNAY, The Lady ADELAIDE; Brampton House, Northampton. (July, 1903).
- DELL, CHARLES; 12, High Street, Harlesden, N.W. (July, 1900).
- 100 DENMAN, ARTHUR, M.A., F.Z.S., F.S.A., 29, Cranley Gardens, South Kensington; S.W. (Sept. 1909).
- DENNIS, Mrs. H. E.; St. Leonard's Park, Horsham. (March, 1903).
- DE TAINTEGNIES, La Baronne Le Clément; Cleveland, Minehead, Somerset. (Feb., 1902).
- DEWAR, D., I.C.S.; c/o Messrs. Grindley & Co., 54, Parliament Street, S.W. (Sept., 1905).
- DEWINTON, WILLIAM EDWARD, F.Z.S., M.B.O.U.; Southover, Burwash, Sussex. (Aug., 1903).
- DIRECTOR, THE; Zoological Museum, Tring, Herts. (1912).

- DIMOCK, C. W. ; U.S. Cartridge Co., Boston, Mass, U.S.A. (1913).
- DONALD, C. H. ; c/o The Alliance Bank of Simla, Ltd., Simla, India. (March, 1906).
- DOUGLAS Miss ; Rose Mount, Pitlochry, N.B. (June, 1905).
- DOUGLAS, WILLIAM C., F.Z.S. ; 9, Trebovir Road, Earl's Court, S.W. (Nov., 1900).
- 110 DREWITT, FREDERICK DAWTREY, M.A., M.D., F.R.C.P., F.Z.S., M.B.O.U. ; 14, Palace Gardens Terrace, Kensington, W. (May, 1903).
- DRUMMOND, Miss ; Mains of Megginch, Errol, N.B. (Feb., 1905).
- DUFF, The Lady GRANT ; Earl Soham Grange, Framlingham, Suffolk. (Aug., 1905).
- DUNLEATH, The Lady ; Ballywalter Park, Ballywater, co. Down, Ireland. (August, 1897).
- DUTTON, The Hon. and Rev. Canon ; Bibury Vicarage, Fairford. (Orig. Mem).
- DYOTT, R. A. ; Freeford, Lichfield. (1912).
- ECKSTEIN, F. ; Ottershaw Park, Ottershaw, Surrey. (1912).
- EZRA, ALFRED ; 110, Mount Street, London, W. (1912).
- EZRA, DAVID ; 3, Kyd Street, Calcutta. (June, 1912).
- FARMBOROUGH, PERCY W., F.Z.S. ; Lower Edmonton. (June, 1896).*
- 120 FARRAR, The Rev. C. D. ; Micklefield Vicarage, Leeds. (Jan. 1895).
- FASEY, WILLIAM R. ; The Oaks, Holly Bush Hill, Snaresbrook, N.E. (May, 1902).
- FIELD, GEORGE ; Sorrento, Stapelhurst, Kent. (March, 1900).
- FIELD, Miss HILDA ; Ashurst Park, Tunbridge Wells. (1912).
- FISHER-ROWE, HERBERT ; St. Leonard's Grange, Beaulieu, Hants. (1913).
- FIREBRACE, Mrs. ; 26, Old Queen Street ; Westminster, S.W. (Feb., 1911).
- FLOWER, Captain STANLEY SMYTH, F.I.S., F.Z.S., M.B.O.U. ; Director Egyptian Government Zoological Gardens, Giza, Cairo, Egypt. (Jan., 1913).
- FLOWER, Mrs. STANLEY ; Longfield, Tring, Herts. (March, 1909).
- FOCKLEMANN, AUGUST ; Tier Park, Hamburg-Grossborstel, Germany. (Nov., 1907).
- FOLLETT, The Lady JULIA ; Woodside, Old Windsor. (Oct., 1903).
- 130 FORTESCUE, Col. H. ; Falmouth House, Newmarket. (Oct., 1908).
- FOSTER, E. HUBERT, Lower Bowden, Pangbourne, Berks. (1912).
- FOWLER, CHARLES, 26, Broad Street, Blaenavon. (Dec. 1894).
- FROST, WILFRID ; 13, Fairlawn Avenue, Chiswick Park, W. (July, 1908).
- GALLOWAY, P. F. M. ; Durban, Rectory Road, Caversham, Reading, (March, 1907).

- GHIGI, M. le Prof. Alessandro; Via d'Azeglio, Bologna, Italy, (March, 1911).
- GIBBS, Mrs. H. MARTIN; Barrow Court, Flax Bourton, R.S.O., Somerset. (April, 1904).
- GIBBINS, WILLIAM B.; Ettington, near Stratford-on-Avon. (June 1895).*
- GILBEY, Sir WALTER, Bt., F.Z.S.; Elsenham Hall, Elsenham, Essex. (Dec., 1907).
- GILES, HENRY M., M. Aust. O.U. (Orig. Mem.); Zoological Gardens, Perth, Western Australia. (June, 1903).
- 140 GILL, ARTHUR, M.R.C.V.S., Mount Denison, Nova Scotia. (Dec., 1899).
- GLADSTONE, Miss J.; The Lodge, Parkstone, Dorset. (July, 1905).
- GODDARD, H. E.; Rothsay, Thicket Road, Sutton, Surrey. (Feb., 1899).
- GODMAN, F. DUCANE, D.C.L., F.R.S., F.Z.S.; President of the British Ornithologists' Union, 45, Pont Street, S.W. (Oct., 1904).
(Honorary Member).
- GOODALL, A. A.; 12, Ildersley Grove, West Dulwich, S.E. (Nov., 1909).
- GOODCHILD, HERBERT, M.B.O.U.; 66, Gloucester Road, Regent's Park, N.W. (Oct., 1902).
- GOODFELLOW, WALTER, M.B.O.U.; The Poplars, Kettering. (June, 1897).
- GORTER, Madame; The Delta, Walmer, Kent. (Nov., 1901).
- GOSSE, PHILIP, M.R.C.S.; Curtlemead, Beaulieu, Hants. (April, 1911).
- GOW, J. BARNETT; 86, St. Vincent Street, Glasgow, and Jedcameroch, Bearsden, Glasgow. (Feb., 1906).
- 150 GRABOWSKY, F., Director of the Zoological Gardens; Breslau, Germany. (June, 1905).
- GRAY, HENRY, M.R.C.V.S.; 23, Upper Phillimore Place, W. (June, 1906).
- GREENING, LINNÆUS; Fairlight, Grappenhall, nr. Warrington. (Jan. 1911).
- GREGORY, Mrs.; Melville, Parkstone, Dorset. (Dec., 1901).
- GREY, Rt. Hon. Sir EDWARD, Bart, K.G., M.P., 3, Queen Anne's Gate, S.W. (1913).
- GRIFFITHS, M. E.; Caizley House, Temple Road, Stowmarket. (May, 1902).
- GRÖNVOLD, HENRIK; 26, Albert Bridge Road, Battersea Park, S.W. (Nov., 1902).
- GUILFORD, Miss H.; 23, Lenton Avenue, The Park, Nottingham. (March, 1903).
- GULDENKIAN, C. S.; 27, Quai D'Orsay, Paris. (Dec., 1908).
- GUNN, W. CECIL; The Red House, Bickley, Kent. (Jan., 1910).
- 160 GÜNTHER, ALBERT, M.A., M.D., Ph.D., F.R.S., F.Z.S., M.B.O.U.; 2, Litchfield Road, Kew Gardens. (Sept., 1902). (Honorary Member).
- GURNEY, JOHN HENRY, F.Z.S., M.B.O.U.; Keswick Hall, Norwich; and Athenæum Club, Pall Mall, S.W. (Dec. 1904).
- HAAGNER, A. K., F.Z.S., M.B.O.U., Transvaal Museum, Pretoria, South Africa. (Nov., 1905).

- HAGENBECK, HEINRICH; Stellingen, Hamburg, Germany. (Nov., 1913).
- HALKED, Lieut. N. G. B.; King's Own Yorkshire Light Infantry; 3rd Battalion, Egyptian Army, Kliartoum. (Dec., 1908).
- HARCOURT, RT. HON. LEWIS, P.C., 14, Berkeley Square, W. (1913).
- HARDING, W. A., M.A., F.Z.S.; Histon Manor, Cambridge. (Dec. 1903).
- HARDY, LAWRENCE, M.P.; Sandling Park, Hythe, Kent. (Nov., 1906).
- HAREWOOD, The Countess of; Harewood House, Leeds. (March, 1903).
- HARLEY, Mrs. F.; Brampton Bryan, Herefordshire. (1908).
- 170 HARPER, Miss; 6, Ashburnham Road, Bedford. (March, 1902).
- HARPER, EDWARD WILLIAM, F.Z.S., M.B.O.U.; c/o Wardle & Co., Nairobi, British East Africa. (Feb., 1901).
- HARTLEY, Mrs.; St. Helen's Lodge, Hastings. (April, 1897).
- HARVEY, The Hon. Lady; Langley Park, Slough. (Oct., 1906).
- HAWKE, The Hon. MARY C.; Wighill Park, Tadcaster. (Nov., 1900).
- HAWKINS, L. W.; 206, Clive Road, West Dulwich, S.E. (Jan., 1899).
- HAZELRIGG, Sir ARTHUR, Bt.; Noseley Hall, Leicester. (March, 1907).
- HEMSWORTH, The Rev. B., M.A., J.P.; Monk Fryston Hall, South Milford, Yorks. (June, 1901).
- HETLEY, Mrs. HENRY; Beaufort House, 114, Church Road, Norwood, S.E. (July, 1910).
- HEWITT, H. C.; East Sooke, Vancouver Island, B.C. (Jan., 1905).
- 180 HEYWOOD, RICHARD; Narborough, Norfolk. (Oct., 1911).
- HILL, Mrs. E. STAVELEY; Oxley Manor, Wolverhampton. (Oct., 1905).
- HINCKS, Miss E. MARJORIE; Barons Down, Dulverton. (Feb., 1908).
- HINDLE, R. FRANKLIN; 34, Brunswick Road, Liverpool. (Sept., 1898).
- HODGSON, The Hon. Mrs.; Clopton, Stratford-on-Avon. (March, 1903).
- HOLDEN, RALPH A., F.Z.S.; 5, John Street, Bedford Row, London. (May, 1906).
- HOPKINSON, Dr. EMILIUS; D.S.O., M.A., M.B. Oxon., 45, Sussex Square, Brighton. (Oct., 1906).
- HOPSON, FRED C.; Northbrook Street, Newbury. (March, 1897).
- HORSBRUGH, Major BOYD R., A.S.C.; Tandridge Priory, Oxted, Surrey. (Jan., 1898).
- HOUSDEN, JAMES B.; Brooklyn, Cator Road, Sydenham, S.E. (Orig. Mem.)
- 190 HOWARD, ROBERT JAMES, M.B.O.U.; Shear Bank, Blackburn. (April, 1903).
- HOWARD-VYSE, H.; Stoke Place, Slough. (Nov., 1906).
- HOWMAN, Miss; 6, Essex Grove, Upper Norwood (Mar., 1897).
- HUBBARD, GEORGE; 112, Fenchurch Street, E.C. (Jan., 1905).
- HUSBAND, Miss; Clifton View, York. (Feb., 1896).
- HUTCHINSON, Miss ALICE; Alderton Vicarage, Chippenham, Wilts. (August, 1907).
- INCHQUIN, The Lady, Dromoland Castle, Newmarket-on-Fergus, County Clare, Ireland. (Nov., 1897).

- INGRAM, COLLINGWOOD; The Bungalow, Westgate-on-Sea. (Oct., 1905).
 INGRAM, Sir WILLIAM, Bart; 65, Cromwell Road, London, S.W. (Sept., 1904).
 ISAAC, CHARLES; Somerton, Bath Road, Slough. (March, 1906).
 200 IVENS, Miss; 13, Rua de Piedada, Campo D'Ourique, Lisbon, Portugal. (August, 1903).
- JAMRACH, ALBERT E., 180, St. George's Street, E. (April, 1913).
 JOHNSON, Major FRANK; Melrose House, Wilbury Road, Hove, Sussex. (1912).
 JOHNSTONE, Mrs. E. J.; Burrswood, Groombridge, Sussex. (May, 1900).
- KEYS, Dr. C. LOVELL; Park Lodge, East Hoathley, Sussex. (Aug., 1913).
 KENNEDY, Lieut. G.; (*No permanent address*). (1911).
 KIRCHNER, Mrs.; Sea Copse Hill, Wootton, Isle of Wight. (Jan., 1911).
 KLOSS, C. BODEN; (*No permanent address*). (1912).
 KUSER, ANTHONY R.; P.O. Box 590, Newark, New Jersey, U.S.A. (Dec., 1908).
 KUSER, J. DRYDEN; Faircourt, Bernardsville, New Jersey, U.S.A. (1912).
- 210 LANCASTER, JOHN; Dunchurch Lodge, near Rugby. (March, 1904).
 LASCELLES, The Hon. GERALD, F.Z.S., M.B.O.U.; The King's House, Lyndhurst. (Oct., 1896).
 LEE, Mrs. E. D.; Hartwell House, Aylesbury. (July, 1906).
 LEEKE, Miss DOROTHY; 9, Hertford Street, Mayfair, W. (May, 1909).
 LEICESTER, The EARL OF, G.C.V.O., etc.; 15, Hill Street, Berkeley Square, W. (May, 1913).
 LEIGH, CECIL; Lyburn Park, near Lyndhurst, Hants. (Nov., 1906).
 LEGGE, Hon. GERALD; Patshull House, Wolverhampton. (Feb., 1913).
 LE SOUËF, A. SHERBOURNE; Zoological Gardens, Sydney, New South Wales. (Aug., 1913).
 LE SOUËF, DUDLEY; Zoological Gardens, Royal Park, Parkville, Melbourne, Australia. (1912).
 LILFORD, The Lady; Lilford Hall, Oundle, Northamptonshire. (Jan., 1898).
- 220 LLOYD, Capt. A. M.; 1/24th Regiment, Chatham Barracks, Chatham. (April, 1912).
 LOCKYER, ALFRED; St. Monica's Lodge, Elm Park Road, Winchmore Hill, N. (Dec., 1905).
 LOGAN, Mrs. CARLETON; Roydon, Lymington, Hants. (May, 1913).
 LONG, Mrs.; Sherrington Manor, Berwick, Sussex. (Feb., 1907).
 LOVELACE, The Countess of; Wentworth House, Chelsea Embankment, London, S.W. (May, 1906).
 LOVETT, C.; Route 3, Brentwood, Tennessee, U.S.A. (Dec., 1912).
 LOW, GEORGE E. 14, Royal Terrace East, Kingstown, Ireland. (Mar., 1913).

- LUCAS, Dr. N. S., 19, Westbourne Terrace, Hyde Park, W. (Jan., 1913).
- MANCHESTER PUBLIC LIBRARIES; Reference Library, Piccadilly, Manchester. (July, 1913).
- MCGEAGH, Dr. R. T.; 23, Breeze Hill, Bootle, Lancs. (Aug., 1908).
- 230 MCGEE, The Rev. Father; Keppel Street, Bathurst, N.S.W. (July, 1908).
- MALONE, Mrs. M. I'ESTRANGE, The Manor Cottage, Clewer Green, Windsor. (Jan., 1902).
- MANNERS-SMITH, Lieut.-Col.; The Residency, Nepal, India. (1911).
- MAPPIN, STANLEY; 12, Albert Hall Mansions, Kensington Gate, S, W. (April, 1911).
- MARSHALL, ARCHIBALD MCLEAN; Chitcombe, Breds, Sussex, (Jan., 1906).
- MARTIN, H. C.; 147, Victoria Road, Old Charlton, Kent; and Saladero, Liebig, Fray Bentos, Uruguay. (Jan., 1897).
- MARTIN, H. J.; Clock House Farm, Woodmansterne, Surrey. (June, 1911).
- MARTORELLI, Dr. GIANCINTO, M.B.O.U., etc.; Collezione Turati, Museo Civico di Storia Naturale, Milan, Italy. (July, 1906). (*Honorary Member*).
- MATHEWS, GREGORY M., F.R.S., Edin., F.L.S.; Langley Mount, Watford, Herts. (Dec., 1909).
- MAUD, Mrs. CHARLES E.; Monterey, California. (July, 1913).
- 240 MEADE-WALDO, E. G. B., F.Z.S., M.B.O.U.; Stonewall Park, Edenbridge, Kent. (Jan., 1895).
- MEDLAND, Miss LILIAN M.; 10, Newcastle House, Northumberland Street, W. (Oct., 1913).
- MERCER, WILLIAM; Doylestown, Pennsylvania, U.S.A. (March, 1913).
- MILLS, The Hon. VIOLET; The Wilderness, Sevenoaks. (Oct., 1907).
- MILLSUM, O.; 7, Cliftonville Parade, Margate. (Aug., 1909).
- MITCHELL, HARRY; Holmefield, Lyndhurst, Hants. (Feb., 1904).
- MOERSCHELL, F.; Imperial Hotel, Malvern. (June, 1895).
- MOMBER, Mrs.; La Jussia, San Remo, Italy. (Sept., 1907).
- MONEY, L. G. CHIOZZA, M.P.; The Grey House, Hampstead Lane, London, N. (Nov., 1913).
- MONTAGU, Hon. F. S., M.P., M.B.O.U.; 59, Bridge Street, Cambridge, and 12, Kensington Palace Gardens, W. (May, 1912).
- 250 MONTGOM, Mdle. de; Covertside, Hasfield, Gloucester. (Oct., 1913).
- MORGAN, Hon. EVAN P.; 37, Bryanston Square, W. (1912).
- MORRISON, Hon. Mrs. MCLAREN; Parkfield, Park Lane, Southwick, Sussex. (Sept., 1911).
- MORSHHEAD, Lady; Forest Lodge, Binfield, Bracknell, Berks. (Dec., 894).*
- MORTIMER, Mrs.; Wigmore, Holmwood, Surrey. (Orig. Mem.)*
- MUNDY, Miss SYBIL MILLER; Shipley Hall, Derby. (Jan., 1909).

- MUNT, HENRY; 10, Ashburn Place, S. Kensington, S.W. (1912).
- MYLAN, JAS. GEORGE, B.A., M.B. (Univ. Col.); L.R.C.P. and L.R.C.S., (Ed.) &c., 90, Upper Hanover Street, Sheffield. (Dec., 1901).
- NAYLOR, ROWLAND E.; Eton College, Windsor. (Mar., 1913).
- NEWALL, Mrs.; Red Heath, Croxley Green, R.S.O., Herts. (June, 1911).
- 260 NEWMAN, T. H., F.Z.S., M.B.O.U.; Newlands, Harrowdene Road, Wembley, Middlesex, (May, 1900).
- NICHOLS, WALTER B., M.B.O.U.; Stour Lodge, Bradfield, Manningtree. (Jan., 1907).
- NICOLI, MICHAEL J., M.B.O.U.; Zoological Gardens, Giza, Cairo, Egypt. (July, 1906).
- NOBLE, Mrs.; Park Place, Henley on-Thames. (Oct., 1900).
- OAKBY, W.; 34, High Street, Leicester. (March, 1896).
- OBERHOLSER, HARRY C.; 1444 Fairmont Street, N.W., Washington, D.C., United States of America. (Oct., 1903).
- OGILVIE-GRANT, W. R., F.Z.S., M.B.O.U.; British Museum (Nat. Hist.), Cromwell Road, S.W. (Dec., 1903).
- OGLE, BERTRAM SAVILLE, M.B.O.U.; Steeple Aston, Oxford. (Dec., 1902).
- OLIPHANT, TREVOR; Bale Rectory, Melton Constable, Norfolk. (May, 1908).
- ONSLow, The Countess of; Clandon Park, Guildford, Surrey. (July, 1910).
- 270 O'REILLY, NICHOLAS S.; 144, Eastern Road, Kemp Town, Brighton. (Dec., 1894).
- OSTREHAN, J. ELIOTT D.; Bank House, Thame, Oxon. (April, 1903).
- PAGE, WESLEY T., F.Z.S.; Glenfield, Graham Avenue, Mitcham, Surrey. (May, 1897).
- PAINTER, K. V.; 2508, Euclid Avenue, Cleveland, Ohio, U.S.A. (Dec., 1909).
- PALMER, Mrs. G. W.; Marlston House, near Newbury. (Oct., 1905).
- PAM, ALBERT, F.Z.S.; Wormley Bury, Broxbourne, Herts. (Jan. 1906).
- PAM, HUGO, C.M.Z.S.; 65, Bishopsgate, E.C. (Sept., 1911).
- PARKER, DUNCAN, J.P.; Clopton Hall, Woolpit, Bury St. Edmunds. (June, 1903).
- PARKIN, THOMAS, M.A., F.R.G.S., F.Z.S., M.B.O.U.; Fairseat, High Wickham, Hastings. (Oct., 1903).
- PATTINSON, Mrs.; The Deanery, Brisbane, Queensland. (April, 1913).
- 280 PAUWELS, R.; Everberg, par Cortenberg, Brabant, Belgium. (Dec., 1904).
- PEIR, P.; c/o W. G. PEIR, Esq., 60, Elizabeth Street, Sydney, N. S. Wales. (July, 1903).
- PENNANT, Lady EDITH DOUGLAS; Soham House, Newmarket, Cambs. (Sept., 1908).

- PENROSE, FRANK G., M.D., F.Z.S., M.B.O.U.; c/o Mr. R. H. Porter,
7, Princes Street, Cavendish Square, W. (Dec. 1903).
- PERREAU, Major G. A.; 6, Marlborough Street, Bath. (Dec., 1903).
- PERCY, The Lord WILLIAM; Alnwick Castle, Alnwick. (May, 1913).
- PERRING, C. S. R.; 1, Claremont Avenue, New Malden, Surrey.
- PHILLIPPS, REGINALD; 26, Cromwell Grove, West Kensington Park, W.
(Orig. Mem.)*
- PHILLIPS, JOHN C.; Knobfields, Wenham, Mass., U.S.A. (March, 1910).
- PHILLIPS, Mrs. E. LORT, F.Z.S.; 79, Cadogan Square, S.W. (April,
1907).
- 290 PICARD, HUGH K.; 298, West End Lane, N.W. (March, 1902).
- PICHOT, M. PIERRE A.; 132, Boulevard Hausmann, Paris. (Sept., 1910).
- PICKFORD, RANDOLPH JOHN; Thorn Lea, Carmel Road, Darlington.
- PIKE, L. G.; Kingsbarrow, Wareham, Dorset. (, 1912).
- POCOCK, R. I., F.R.S., F.L.S., F.Z.S., M.B.O.U.; Zoological Society's
Gardens, Regent's Park, N.W. (Feb., 1904). (*Hon. Secretary*).
- PORTAL, MAURICE; High Sandhoe, Hexham. (April, 1913).
- PORTAL, The Lady ROSEMARY; Kingsclere House, Newbury. (April,
1913).
- POWIS, The Earl of; 45, Berkeley Square, W.; and Powis Castle,
Welshpool. (April, 1902).
- PRINCETON UNIVERSITY, LIBRARY OF; Princeton, New Jersey, U.S.A.
(Nov., 1907).
- PYCRAFT, W. P., A.L.S., F.Z.S., M.B.O.U. &c.; British Museum (Nat.
Hist.), Cromwell Road, S.W. (Nov., 1904).
- 300 QUINCEY, RICHARD S. de Q.; Inglewood, Chislehurst, Kent. (April,
1913).
- RADCLIFFE, Captain A. DELMÉ; 105th Maratha Light Infantry, Poona,
India.
- RATHBORNE, HENRY B.; Duusinea, Castleknock, co. Dublin. (May,
1901).
- RATTIGAN, G. E.; Lanarkslea, Cornwall Gardens, S.W. (Aug., 1908).
- RAVEN, W. H.; 239, Derby Road, Nottingham. (Dec., 1909).
- REID, Mrs.; Funchal, Madeira. (Feb., 1895).
- RENSHAW, Dr. GRAHAM, M.B., M.R.C.S.; Bridge House, Sale, Man-
chester. (Jan., 1910).
- RICE, Captain G.; Persey House, Blairgowrie, N.B. (May, 1912).
- RILEY, JOSEPH H.; U.S. National Museum, Washington, D.C., U.S.A.
(June, 1906).
- RITCHIE, NORMAN; The Holmes, St. Boswell's, N.B. (Feb., 1903).
- 310 ROBBINS, HENRY; (*Address unknown*). (April, 1908).
- ROBERTS, Mrs., C.M.Z.S., M. Aust. O.U.; Beaumaris, Montpelier Street,
Hobart, Tasmania. (June, 1903).

- ROGERS, Lt.-Col. J. M., D.S.O., F.Z.S., M.B.O.U. (Late Royal Dragoons); Riverhill, Sevenoaks. (April, 1907).
- ROGERSON, A.; Fleurville, Ashford Road, Cheltenham. (Dec., 1902).
- ROTCHE, Mrs.; Park House, Park Road, Teddington. (June, 1897).
- ROTHSCHILD, LIONEL DE, M.P., 46, Park Street, W. (Nov., 1913).
- ROTHWELL, JAMES E.; 153, Sewall Avenue, Brookline, Mass, U.S.A. (Oct., 1910).
- ST. QUINTIN, WILLIAM HERBERT, F.Z.S., M.B.O.U.; Scampston Hall, Rillington, York. (Orig. Mem.)
- SCHLÜTER, JOHN C.; "Heathwood," 5, Dacres Road, Forest Hill, S.E. (Dec., 1910).
- SCLATER, W. L., M.A., F.Z.S.; 10, Sloane Court, S.W. (Aug., 1904).
- 320 SCOTT, B. HAMILTON; Hamildean, Ipswich. (1912).
- SEPPINGS, Captain J. W. H.; The Army Pay Office, Canterbury. (Sept., 1907).
- SETH-SMITH, DAVID, F.Z.S., M.B.O.U.; 34, Elsworthy Road, South Hampstead, N.W. (Dec., 1894).
- SETH-SMITH, LESLIE M., B.A., M.B.O.U.; Alleyne, Caterham Valley, Surrey; and Kampala, Uganda. (July, 1902).
- SHERBROOKE, Mrs. P.; Ravenswyke, Kirbymoorside, Yorks. (March, 1897).
- SIBAG-MONTEFIORE, Mrs.; 2, Palace Houses, W. (, 1913).
- SICH, HERBERT LEONARD; c/o Dr. L. Lovell-Keays, Park Lodge, East Hoathly, Sussex. (Feb., 1902).
- SILVER, ALLEN; 303, High Road, Streatham, S.W. (Aug., 1904).
- SIMPSON, ARCHIBALD; Oakfield House, Stanks, Crossgates, nr. Leeds. (Feb., 1901).
- SMALLEY, F. W., F.Z.S., M.B.O.U.; Chiallan Hall, Silverdale, near Carnforth, Lancs. (1912).
- 330 SMITH, C. BARNBY; Woodlands, Retford. (August, 1906).
- SMITH, Miss DORRIEN-INNIS; Tresco Abbey, Isle of Scilly, Cornwall. (August, 1908).
- SOUTHESK; The Countess of; Kinnaird Castle, Brechin, N.B. (Feb., 1901).
- SOUTHPORT CORPORATION; Curator; Hesketh Park, Southport. (Jan., 1904).
- SPENCE, G. O.; Elmwood, Hartburn, Stockton on Tees, (, 1913).
- STANSFELD, Captain JOHN; Dunniald, Montrose, N.B. (Dec., 1896).
- STAPLES-BROWNE, R.; Bampton, Oxfordshire. (August, 1898).
- STEVENS, H.; Fairfield Road, Morecambe, Lancs. (Oct., 1911).
- STIRLING, Mrs. CHARLES; Old Newton House, Donne. (Sept., 1904).
- STOCKPORT CORPORATION; Superintendent; Vernon Park, Stockport. (Oct., 1902).
- 340 STURTON-JOHNSON, Miss; Oratava House, Ore, Hastings. (May, 1897).

- SUFFOLK and BERKSHIRE, The Countess of; Charlton Park, Malmesbury. (Feb., 1909).
- SUGGITT, ROBERT; Suggitt's Lane, Cleethorpes, Grimsby. (Dec., 1903).
- SUTCLIFFE, ALBERT; Field House, Grimsby. (Feb., 1906).
- SUTTON, Lady; Brinsop Court, Hereford. (Dec., 1901).
- SWAYSLAND, WALTER; 47, Queen's Road, Brighton. (Orig. Mem.) *
- TANNER, DR. FRANK L.; Vauvert House, Guernsey. (Jan., 1904).
- TANNER, Mrs. SLINGSBY; 48, Lower Sloane Street, S.W. (Oct., 1906).
- TAVISTOCK, The Marquis of; Woburn Abbey, Beds. (1912).
- TECK, H.H. the Duchess of; Frogmore Cottage, Windsor. (April, 1913).
- 350 TEMPLE, W. R.; Ormonde, Datchet, Bucks. (June, 1907).
- TERRY, Major HORACE A., M.B.O.U. (late Oxfordshire Light Infantry); The Lodge, Upper Halliford, Shepperton. (Oct., 1902).
- TESCHEMAKER, W. E., B.A.; Ringmore, Teignmouth, Devon. (May, 1904).
- THOM, ALFRED A.; The Citadel, Weston, near Shrewsbury. (June, 1913).
- THOMAS, HENRY; 15, Clinning Road, Birkdale, Southport. (Jan., 1895).
- THOMAS, Miss F. G. F.; Weston Hall, Towcaster, Northants. (March, 1899).
- THOMAS, Mrs. HAIG, F.Z.S.; Moyles Court, Ringwood, Hants. (August, 1907).
- THOMMASSET, BERNARD C., F.Z.S.; The Manor House, Ashmansworth, near Newbury, (*Hon Treasurer*). (July, 1896).
- THOMASSET, H. P.; Cascade Estate, Mayé, Seychelles. (Nov., 1906).
- THOMPSON: Mrs. F. F.; Canandaigua, N.Y., U.S.A. (July, 1907).
- 360 THORNILEY, PERCY WRIGHT; Shooter's Hill, Wem., Shrewsbury. (Feb., 1902).
- THORPE, CHARLES; Selborne, Springfield Road, Wallington, Surrey. (Dec., 1901).
- TICEHURST, Dr. C. B.; Grove House, Lowestoft. (1912).
- TICEHURST, NORMAN FREDERIC, M.A., M.B., F.R.C.S., F.Z.S., 35, Pevensey Road, St. Leonards-on-Sea. (Dec., 1906).
- TOMES, W., J.P.; Glenmoor, 31, Billing Road, Northampton. (Dec., 1902).
- TOWNSEND, STANLEY M.; 3, Swift Street, Fulham. (Sept., 1898).
- TRENOW, EVELYN HENRY, F.Z.S.; Ivy Lodge, Epping, Essex. (Nov., 1910).
- TRESTRAIL, Mrs.; Southdale, Clevedon. (Sept., 1903).
- TREVOR-BATTYE, AUBYN, B. R., M.A., F.L.S.; Stoner Hill, Petersfield. (July, 1898).
- TUCKWELL, EDMUND H.; Berthorpe, Compton, near Guildford, Surrey. (1912).
- 370 TURNER, Mrs. TURNER; Abbey Spring, Beaulieu, Hants. (July, 1910).
- TWEEDIE, Major W., Arg. and Suth. Highlanders; c/o Cox & Co., 16, Charing Cross, S.W. (April, 1903).

- URWICK, DOUGLAS R.; St. Cross Mill, Winchester. (March, 1913).
- VALENTINE, ERNEST; 7, Highfield, Workington. (May, 1899).
- VAN OORT, Dr. E. D.; Museum of Natural History, Leiden, Holland.
- VERNON, Mrs. E. WARREN; Lamancha House, Lamancha, Peebleshire. (Nov., 1907).
- VILLIERS, Mrs.; The Shielding, Ayr, N.B. (August, 1906).
- WADDELL, Miss PEDDIE; 4, Great Stuart Street, Edinburgh, N.B. (Feb., 1903).
- WADE, LAWRENCE M.; Oakhill Road, Ashstead, Surrey. (Sept., 1913).
- WAIT, Miss L. M. ST. A.; 12, Rosary Gardens, S.W. (Feb., 1909).
- 380 WALCOTT, F. C.; 14, Wall Street, New York, U.S.A. (March, 1913).
- WALKER, Miss; Persey House, Blairgowrie, N.B. (Jan., 1903).
- WALKER, Miss H. K. O.; Chesham, Bury, Lancs. (Feb., 1895).
- WALLACE, Mrs. WILLIAMSON; Kelton, Dumfries. (1912).
- WALLOP; The Hon. FREDERICK; 33, South Audley Street, London, W. (Feb., 1902).
- WARDE, The Lady HARRIETT; Knotley Hall, Tunbridge. (Aug., 1903).
- WATERFIELD, Mrs. NOËL E.; Port Soudan, Red Sea. (Sept., 1904).
- WATERHOUSE, Mrs. D.; 6, Esplanade, Scarborough. (Feb., 1903).
- WATSON, S.; 37, Tithebarn Street, Preston. (Feb., 1906).
- WAUD, REGINALD; Hoe Benham, near Newbury. (May, 1913).
- 390 WELLINGTON, EVELYN, Duchess of; West Green House, Hartley Wintney, Winchfield, Hants. (1912).
- WELLINGTON, Her Grace the Duchess of; Ewhurst Park, Basingstoke. (Oct., 1913).
- WHITAKER, JOSEPH I. S., F.Z.S., M.B.O.U.; Malfitano, Palermo, Sicily. (August, 1903).
- WHITEHEAD, Mrs. HENRY; Haslem Hey, Bury, Lancs. (March, 1902).
- WHITEHEAD, JEFFERY; Mayes, East Grinstead, Sussex. (1912).
- WHITE, Mrs. CARL; Chattanooga, Tennessee, U.S.A. (Nov., 1913).
- WHITE, STEPHEN J.; Lloyd's, London, E.C. (Oct., 1913).
- WIGLESWORTH, JOSEPH, M.D., M.B.O.U.; Springfield House, Winscombe, Somerset. (Oct., 1902).
- WILLFORD, HENRY; Upland View, Havenstreet, Ryde, Isle of Wight. (Nov., 1907).
- WILLIAMS, Mrs. C. H.; 49, Okelhampton Road, St. Thomas, Exeter. (May, 1902).
- 400 WILLIAMS, Mrs. HOWARD; Oatlands, Sunbridge Avenue, Bromley, Kent. (April, 1902).
- WILLIAMS, SYDNEY, Jun., F.Z.S.; Holland Lodge, 275, Fore Street, Edmonton, N. (Feb., 1905).
- WILSON, MAURICE A., M.D.; Kirkby Overblow, Pannal, S. O., York. (Oct., 1905).

- WILSON, T. NEEDHAM; Oak Lodge, Bitterne, nr. Southampton. (Dec., 1901).
- WINCHELSEA and NOTTINGHAM, The Countess of; Harlech, Merioneth. (April, 1903).
- WOLFE, Miss GEORGINA; S. John's, 37, Granada Road, E. Southsea. (August, 1904).
- WOOLRIDGE, Prof. G. H., M.R.C.V.S.; 30, Brixton Hill, S.W. (1912).
- WORKMAN, WM. HUGHES, M.B.O.U.; Lismore, Windsor, Belfast. (May, 1903).
- WORMALD, HUGH; The Heath, Dereham, Norfolk. (Dec., 1904).
- WRIGHT, R. N.; Church Hill, Robert Road, Handsworth, near Birmingham. (Dec., 1908).
- 410 YEALLAND, JAMES; Binstead, Isle of Wight. (July, 1913).
- YOUNGER, Miss BARBARA HENDERSON; 4, Douglas Gardens, Edinburgh. (July 1909).
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Rules of the Avicultural Society.

As amended January, 1908.

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1.—The name of the Society shall be THE AVICULTURAL SOCIETY and its object shall be the study of Foreign and British Birds in freedom and in captivity. Poultry, Pigeons and Canaries shall be outside the scope of the Society. The year of the Society, with that of each volume of the Society's Magazine, which shall be known as *The Avicultural Magazine*, shall commence with the month of November and end on the 31st of October following.

2.—The Avicultural Society shall consist of Ordinary and Honorary Members; and the latter shall be restricted in number to six, and be elected by the Council.

3.—The Officers of the Society shall be elected, annually if necessary, by members of the Council in manner hereinafter provided and shall consist of a President, one or more Vice-Presidents, a Business Secretary, a Correspondence Secretary, an Editor, a Treasurer, an Auditor, a Scrutineer, and a Council of fifteen members. The Secretaries, Editor, and Treasurer, shall be *ex officio* Members of the Council,

4.—New Members shall be proposed in writing, and the name and address of every person thus proposed, with the name of the Member proposing him, shall be published in the next issue of the Magazine. unless the candidate shall, within two weeks after the publication of his name in the Magazine, be objected to by at least two Members, he shall be deemed to be duly elected. If five Members shall lodge with the Business Secretary objections to any candidate he shall not be elected, but the signatures to the signed objections must be verified by the Scrutineer. If two or more Members (but less than five) shall object to any candidate, the Secretary shall announce in the next number of the Magazine that such objections have been lodged (but shall not disclose the names of the objectors), and shall request the Members to vote upon the question of the election of such candidate. Members shall record their votes in sealed letters addressed to the Scrutineer, and a candidate shall not be elected unless two thirds of the votes recorded be in his favour; nor shall a candidate be elected if five or more votes be recorded against his election.

5.—Each Member shall pay an annual subscription of 10/-, to be due and payable in advance on the 1st of November in each year. New Members shall pay in addition, an entrance fee of 10/6; and, on payment of their entrance fee and subscription, they shall be entitled to receive all the numbers of the Society's Magazine for the current year.

6.—Members intending to resign their membership at the end of the current year of the Society are expected to give notice to the Business Secretary before the first of October, so that their names may not be included in the "List of Members," which shall be published annually in the November number of the Magazine.

7.—The Magazine of the Society shall be issued on or about the first day of every month,* and forwarded, post free, to all the Members who shall have paid their subscriptions for the year: but no Magazine shall be sent or delivered to any Member until the annual subscription shall have reached the hands of the Business Secretary or the Publishers. Members whose subscriptions shall not have been paid as above by the first day in September in any year shall cease to be Members of the Society, and shall not be re-admitted until a fresh entrance fee, as well as the annual subscription, shall have been paid.

8.—The Secretaries, Editor, and Treasurer shall be elected for a term of five years, and should a vacancy occur, it may be temporarily filled up by the Executive Committee (see Rule 10). At the expiration of the term of five years in every case, it shall be competent for the Council to nominate the same officer, or another Member, for a further term of five years, unless a second candidate be proposed by not less than twenty-five members of at least two years standing, as set forth below.

In the September number of the Magazine preceding the retirement from office of the Secretaries, Editor, or Treasurer, the Council shall publish the names of those gentlemen whom they have nominated to fill the vacancies thus created; and these gentlemen shall be deemed duly elected unless another candidate or candidates be proposed by not less than fifteen Members of at least two years standing. Such proposal, duly seconded and containing the written consent of the nominee to serve, if elected, in the capacity for which he is proposed, must reach the Business Secretary, on or before the 15th of September.

The Council shall also publish yearly in the September number of the Magazine the names of those gentlemen nominated by them for the posts of Auditor and Scrutineer respectively.

9.—The Members of the Council shall retire by rotation, two at the end of each year of the Society (unless a vacancy or vacancies shall occur otherwise) and two other Members of the Society shall be recommended by the Council to take the place of those retiring. The names of the two Members recommended shall be printed in the September number of *The Avicultural Magazine*. Should the Council's selection be objected to by fifteen or more Members, these shall have power to put forward two other candidates whose names, together with the signatures of no less than

*Owing to the extra pressure of work, the October and November numbers are liable to be late.

fifteen Members proposing them, must reach the Hon. Business Secretary by the 15th of September. The names of the four candidates will then be printed on a voting paper and sent to each Member with the October number of the Magazine, and the result of the voting published in the November issue. Should no alternative candidates be put forward, in the manner and by the date above specified, the two candidates recommended by the Council shall be deemed to have been duly elected. In the event of an equality of votes the President shall have a casting vote.

If any Member of the Council does not attend a meeting for two years in succession, the Council shall have power to elect another Member in his place.

10.—Immediately after the election of the Council, that body shall proceed to elect three from its Members (*ex officio* Members not being eligible). These three, together with the Secretaries and Editor, shall form a Committee known as the Executive Committee. Members of the Council shall be asked every year (whether there has been an election of that body or not) if they wish to stand for the Executive. and in any year when the number of candidates exceeds three there shall be an election of the Executive.

The duties of the Executive Committee shall be as follows:

- (i). To sanction all payments to be made on behalf of the Society.
- (ii). In the event of the resignation of any of the officers during the Society's year, to fill temporarily the vacancy until the end of the year. In the case of the office being one which is held for more than one year (*e. g.* Secretaries, Editor, or Treasurer, the appointment shall be confirmed by the Council at its next meeting.
- (iii). To act for the Council in the decision of any other matter that may arise in connection with the business of the Society.

The decision of any matter by the Executive to be settled by a simple majority (five to form a quorum). In the event of a tie on any question, such question shall be forthwith submitted by letter to the Council for their decision.

The Executive shall not have power

- (i). To add to or alter the Rules;
- (ii). To expel any Member;
- (iii). To re-elect the Secretaries, Editor, or Treasurer for a second term of office.

It shall not be lawful for the Treasurer to pay any account unless such account be duly initialed by the Executive.

It shall be lawful for the Business Secretary or Editor to pledge the Society's credit for a sum not exceeding £15.

Should a Member wish any matter to be brought before the *Council* direct, such matter should be sent to the Business Secretary with a letter stating that it is to be brought before the Council at their next meeting otherwise communications will in the first place be brought before the Executive.

A decision of a majority of the Council, or a majority of the Executive endorsed by the Council, shall be final and conclusive in all matters.

11.—The Editor shall have an absolute discretion as to what matter shall be published in the Magazine (subject to the control of the Executive Committee). The Business Secretary and Editor shall respectively refer all matters of doubt and difficulty to the Executive Committee.

12.—The Council (but not a Committee of the Council) shall have power to alter and add to the Rules, from time to time, in any manner they may think fit. Five to form a quorum at any meeting of the Council.

13.—The Council shall have power to expel any Member from the Society at any time without assigning any reason.

14.—Neither the Office of Scrutineer nor that of Auditor shall be held for two consecutive years by the same person.

15.—The Scrutineer shall not reveal to any person how any Member shall have voted.

The Society's Medal.

RULES.

The Medal may be awarded at the discretion of the Committee, to any Member who shall succeed in breeding, in the United Kingdom, any species of bird which shall not be known to have been previously bred in captivity in Great Britain or Ireland. Any Member wishing to obtain the Medal must send a detailed account for publication in the Magazine within about eight weeks from the date of hatching of the young and furnish such evidence of the facts as the Executive Committee may require. The Medal will be awarded only in cases where the young shall live to be old enough to feed themselves, and to be wholly independent of their parents.

The account of the breeding must be reasonably full so as to afford instruction to our Members, and should describe the plumage of the young and *be of value as a permanent record of the nesting and general habits of the species*. These points will have great weight when the question of awarding the Medal is under consideration.

The parents of the young must be the *bona fide* property of the breeder. An evasion of this rule, in any form whatever, will not only disqualify the breeder from any claim to a Medal in that particular instance, but will seriously prejudice any other claims he or she may subsequently advance for the breeding of the same or any other species.

In every case the decision of the Committee shall be final.

The Medal will be forwarded to each Member as soon after it shall have been awarded as possible.

The Medal is struck in bronze (but the Committee reserve the right to issue it in *silver* in very special cases), and measures $2\frac{1}{2}$ inches in diameter. It bears on the obverse a representation of two birds with a nest containing eggs, and the words "The Avicultural Society—founded 1894." On the reverse is the following inscription: "Awarded to (*name of recipient*) for rearing the young of (*name of species*), a species not previously bred in captivity in the United Kingdom."



H. D. ASTLEY

West, Newman chr.

RED-HEADED TITMOUSE. (*Life size*)
Ogithalpus erythrocephalus.

THE

AVICULTURAL MAGAZINE,

BEING THE JOURNAL OF THE

AVICULTURAL SOCIETY.

Third Series.—Vol. V.—No. 1.—All rights reserved. NOVEMBER, 1913.

THE RED-HEADED TITMOUSE.

Egithaliscus erythrocephalus.

By HUBERT D. ASTLEY.

Nothing more dainty and more fascinating can be found amongst birds than this tiny Titmouse. Inhabiting the forests of some parts of the Himalayas, it probably there bears in its habits a cousinly resemblance to the European Long-tailed Tit, but the Red-headed has more of a curve in the minute bill, and less length to the tail. Major Perreau brought some to England in March 1913, but owing to their cage being violently upset on board the channel steamer, they did not long survive.

Two were landed at Genoa last spring in Major Horsbrugh's collection, which I took with me to Lake Como, but they succumbed in two days, after having lived long enough for me to be all but moved to tears at their departure! It was a chilly rainy evening when the ship was towed in to the dock at Genoa, looking as if she was tired-out after her voyage from India. Perhaps the little Titmice contracted a chill, anyhow they succumbed within a few hours of each other. I did all I could. I collected sprays of rose branches rich in green "fly," and those small birds eagerly and without the slightest fear clung to the stems as I held them in my fingers, picking off the "fly."

The grace and confidence which they showed would have impressed even a hippopotamus! which always strikes me as the most hideously uncouth and self-centred creature on the face of the

globe. Chacun à son gout! There *may* be those who would prefer that monstrous mammal to a Red-headed Titmouse as a pet.

If these tiny birds could recover the disadvantages of a voyage to England, I see no reason why they should not be easily kept, so long as in addition to a good artificial insectivorous mixture, they were supplied with fresh ants' 'eggs,' flies, and other insects, in season.

Every aviculturist has his list of departed over which he sighs, but on mine there is no name written which I more deeply regret than that of the Red-headed Titmouse.

BREEDING OF THE LONG-BILLED PARRAKEET.

Henicognathus leptorhynchus.

By F. E. BLAAUW, C.M.Z.S.

When I visited Chili in March, 1911, I, for the first time, made the acquaintance of this interesting and little known parrot.

I was riding between Osorno and Puerto Octay, on the lake of Llanquihué, a distance of some sixty kilometres, and was traversing a large wood consisting of mixed trees, amongst which the Southern beech largely preponderated. I had been admiring various birds, which were busy along the side of the road, when my attention was attracted by shrill screams from birds with pointed tails and wings, that were flying in small parties high over the forest trees. Of course I knew at once that they must be parrakeets, but at first I did not realise to which species they belonged. Then some birds by flying not quite so high, or by moving in their flight so that the light fell more fully on them, showed themselves to be green with red tails, and then I knew what they were.

As I rode on, the little flights of these birds became more and more numerous, and for a long time they were quite a feature in the landscape. As I passed a cottage I saw in front of it, sitting on a pile of wood, one of those parrakeets with stunted wings and tail, looking the picture of misery.

Puerto Octay—which I reached in the evening by a beautiful

moonlight—is on the border of the lake Llanquihué, in more or less open country, and I saw no more parrakeets there.

From Puerto Octay I crossed to Puerto Varas, and continuing to travel eastwards towards the Cordilleras the Los Andes, I reached Casa Pangui after two days, which is near the foot of the Tronador Glacier. Here again I met numerous flocks of this parrakeet, and as I saw them perch on lower trees than they had done before I had a better view of them.

Five or six days later found me at Puerto Montt, and riding westwards from this place I traversed some splendid woods in which enormous Urmus trees (*Eucryphia cordifolia*) were particularly numerous. These woods were full of Long-billed Parrakeets, which screamed loudly and were very active, flying about in small flocks or perching on the tops of the giant trees. It is probable that these birds were feeding on the seeds of the Urmus trees which look like a thin small olive, and no doubt they found any amount of seeds and berries in those woods. I never saw the birds on the ground, and it seems that they liked to perch as high as they could. I was told that the inhabitants of Puerto Montt go out on Sundays to try and shoot the parrakeets and that they found them good eating!

Having returned to Puerto Varas, I spent the night there and decided to go north again next morning by a steamer which was to take me to Puerto Octay, from which place I would ride to Osorno to join the railroad there. An hour before I left I noticed near the inn a tame Long-billed Parrakeet, which, with stunted wings and tail but looking rather contented, was sitting on a railing in front of a small house. The bird was quite tame, and when the old woman who inhabited the house saw that I noticed it, she at once offered it to me for sale for a few pesos, and, rather foolishly, unmindful of all the miles that separated me from home, I could not resist the temptation to buy the bird. I carried him to the inn in my hand, and as no such a thing as a cage was to be got anywhere I with great difficulty obtained a small box to put him in. This was just done when I had to go on board the steamer with all my belongings.

In the evening we reached Puerto Octay, having to travel on the following morning on horse-back to Osorno, whilst the heavy

luggage was to be taken by oxen-cart. A pack horse was to carry my valise along with me, as the cart would take some twelve hours longer to reach Osorno. Now the first difficulty with my "lorito" began. How was he to travel? I had thought of the oxen-cart, but I was told that this was not safe. Then I suggested to the péon that he should fasten the box with the bird on the pack-horse that carried my valise, but the man, apparently an exception to most of the people in those parts, was fond of birds and was horrified at the idea, saying that it would shake the bird to death and that he was quite willing to carry the box in his hand. This certainly was the best plan and I gladly accepted his proposal. The man was as good as his word and carried the bird the whole 60 kilometres in his hand, bringing him safely to Osorno.

Having resolved to try to bring this one bird home, I of course thought how I could obtain a second one, and as we passed the same wood, where a week previously I had noticed a cabin with one of these birds in captivity, I took great care not to miss the cottage and, having found it, enquired after the bird I had seen there. The answer was disappointing; the bird had died the day before!

In Osorno I asked the innkeeper where I could get a second parrakeet, and his answer was that the only way was to take a walk through the streets and listen for the screams of a bird of this kind, and then to enter the house and try to buy it. Following this advice, after some time a parrakeet's screams were heard right enough, and on going to the door of a bookseller, thinking the bird was there, I was informed that it was in his neighbour's house, to which I betook myself and asked to see the bird, of which I, ten minutes later, became the happy owner for the sum of one peso. The woman (a milliner) said that it belonged to her boy, but that he did not care about it any longer and she would be glad to get rid of it. So I carried off my prize in a paper box, taking it to the inn, where I introduced it to the other bird. A great battle followed but no harm was done, and as I had to leave by train soon after, I put both birds in the small box and took them away with me. Their travelling about in this manner quieted their tempers and they were soon great friends. In Valdivia I had a better box made for them,

and next day I carried them on board the river-boat which was to take me to Corral, where I was to find a steamer to go south to Punto Arenas, in the Straits of Magellan.

On the steamer everything went all right, but in Punta Arenas, where I landed, new difficulties began. I was going to spend a few days in Tierra del Fuego, and as that meant so many days on horseback I could not possibly take the parrots with me. Fortunately, at the Kosmos Hôtel there was a bird-loving housemaid who promised to take care of my birds whilst I was in Tierra del Fuego, and she kept her promise, for on my return I found them as noisy and as funny as I had left them.

By steamer, *viâ* the Smith Channel, I returned northward to Concepcion taking the train from there to Santiago. From Santiago I brought them to Buenos Ayres, under the same difficulties mentioned in a previous paper treating of my Antarctic Goose, and in Buenos Ayres I embarked with them on board the "Zeelandia," bound for Amsterdam, where I landed them safely.

Notwithstanding all the knocking about, my two birds had done very well, and the bird which I had first acquired and which afterwards proved to be the male—the other one being a female as luck would have it—was fast moulting his stumpy feathers when I got them safely home in an aviary at Gooilust. The other bird was not quite so robust, and as she had apparently no strength to get rid of her old feathers I tried a stronger remedy and pulled out all the old stumps, which had a very good effect, for after a few weeks of good feeding and rest both birds were in splendid plumage and robust health, remaining delightfully tame and always extremely glad to see me. Although they were a true pair, they were constantly quarrelling over something, and the male would never allow the female to come near me if he had not been fed or played with first.

There is hardly any difference in the sexes, but the male is perhaps a trifle larger although the colours are identical. They like to imitate noises and with pains could probably be taught to speak. The female imitates a whistle with which I used to announce myself on board the ship, and the male reproduces the loud spluttering call of the red Oven Birds, which were its travelling companions on board the "Zeelandia." Oven Birds, by the way, which are delight-

ful birds when free in their own country, and are very numerous in the parks of Buenos Ayres, do very badly in confinement and are very delicate.

For two years the life of my parrakeets was rather uneventful. They spent the summer in a large garden aviary and the winter in a bird-house, where they did all they could to demolish the woodwork of their flight. Last spring, however, in the second half of May, one of the birds was missing, and on closer investigation it was found sitting in a roomy nesting log which hung high near the roof of the covered part of their aviary. Of course we did not disturb the sitting bird, and so I could not tell at first how many eggs were laid, nor can I tell the exact time of incubation. Suffice it to say that after some three weeks the bird-keeper heard noises proceeding from the box resembling the cries of young Green Woodpeckers. These noises gradually grew louder, and one day, not very long before they left the nest, the head of a young bird was seen looking through the opening of the nesting-log. Some time earlier two addled eggs, more or less cracked, were found under the box. They were fine large white ones. At last, on the 3rd of August, I was agreeably surprised at seeing a splendid strong young bird in the outside flight, and the next day number two also appeared. This was the end of the supply and the box had no more treasures to reveal, so that probably four eggs had been laid, of which the two birds were the result.

The young birds are exactly like their parents, but the green is darker (*i.e.* less yellowish) and all the feathers have dark edgings. The upper mandibles are shorter than those of the adults and the tops or points of them are *white*, the same colour being seen on the top part of the under mandibles. The naked skin round the eyes is also whitish.

The old birds are extremely fond of their children, and one usually sees each of the parents with a baby under its care. They show their affection by fumbling in their children's feathers, and when the wings, tails, etc. have had their turn, the legs are passed through the bills to the great discomfort and annoyance of the little ones.

Besides the usual seeds, the youngsters were fed on bread

soaked in milk, and also on grass roots. Little bits of *Berberis dulcis* were also very much appreciated, and the birds always loudly clamoured for some branchlets as soon as I approached the aviary.

And thus my little green friends from Puerto Varas and Osorno have well rewarded me for all the trouble they gave me during the long and arduous journey across South America, and have contradicted and disproved the reputation they have with the natives of their own country of not living in confinement longer than a year. The reason of their not living there for long is probably that after a while the owners, like the child of the milliner in Osorno, "don't care for them any longer," and then the end is near!

Gooilust, August. 1913.

THE PRICELESS VALUE OF THE LIVE BIRD.

By REGINALD PHILLIPPS.

A few summers ago, the gardeners, especially perhaps the rose-growers, complained of the prevalence of blight.

One lovely afternoon found me in a large garden in the suburbs, where flowers abounded; and round and about the lawn there were masses of roses in faultless bloom, none showing a trace of injury or harm—yet the neighbours were complaining of the green fly.

In addition to her flowers, our hostess had a weakness for birds, which were regularly and bountifully fed; and the garden was alive with birds, not a few of them being as tame as chickens.

As I lounged in an easy chair on the lawn, some two or three feet from my lazily extended extremities I noticed a male House Sparrow closely shadowed by a fledgeling. Ignoring the humans and their chatterings, father Sparrow was searching a rose-bush, inch by inch, picking off aphides, and passing them on to his young hopeful. Here, then, was the secret of the beautiful roses and flowers:—the plague was being kept under by the Live Birds.

Not far away there lived another relative, the happy possessor of larger grounds, to whom we eventually repaired; and I was taken

off by my host to give an opinion on the unhappy condition of a valuable tree, which I found in a parlous plight. Here was a splendid stick of timber—I forget the species, it was new to me—with the bark, from the top to the bottom of the trunk and along the main boughs, not peeling off so much as bulging out and becoming detached from the stem: never before nor since have I seen such a case. Doubtless the tree was or had been infested with the larvæ of some moth, probably of one which bores into and lives in the wood for some four years before it develops into its imago state. If the tree had been in the country proper, our familiar friend the Green Woodpecker, or some of its congeners, would have found it and would not have rested until every grub had been cut out—and the life of the tree would have been saved. But, in the absence of the Live Bird, man was helpless, and could only look on in despair while the tree was being done to death by a miserable grub.

I have read somewhere that certain savants of the U.S.A. (? of the United States Forest Service) have expressed the opinion that, if it were not for the Woodpeckers (and, presumably, other genera, such as the Cassiques—see our Magazine VI. pp. 24, 25, December, 1899), there would not be a living tree in the whole of Tropical America, so rampant there is insect life. Is it going too far to suggest that the three Americas are saved by the wondrous variety of their marvellous collection of Live Birds!

At my house here, there are two little bits of ground which we will call, respectively, the front garden and the back garden. During a good part of the year, the garden in the front is as full of flowering plants as we can manage to squeeze in. Until some time towards the end of June, matters progress very well, and the flowers are our delight, and the admiration of all who pass to and fro. But, as soon as the House-Sparrows (the only avian visitors to the front) have reared their broods and moved on to the parks and other open spaces, a change comes over the scene—the birds go and the caterpillars come, caterpillars and grubs of various sizes, shapes and shades, differing in form, colour and habits, but all alike in their determination to turn my garden into a wilderness. In vain I try quassia, hellebore, tobacco powder, and other cures recommended by experts—they care for none of these things. Some of the “cures,”

indeed, by injuring the leaves of the plants, do more harm than good. There is only one remedy in the circumstances—hand-picking. But it is not a bit of fun, day after day, for half-hours at a stretch some two or three times a day, rain or shine, examining leaf after leaf and bud after bud; and there is no visible end to the loathsome work. For even the very buds are attacked immediately they appear, and are ruined before they open into flower. And this summer I have had a new experience that has aggravated me exceedingly. Hitherto I had found that the enemy did not attack fuchsias, so, last year, I increased the number, tended them carefully through the winter, and, this summer, placed a selection of them (in pots) all round the dining-room window, outside, on the sill. One of them is a fine specimen, which, last year, in the same spot, was a mass of bloom. But woe is me, for this year they have been freely attacked; and the pride of my heart now looks more like a cairn on the top of a Trans-Himalayan pass, stuck full of Tibetan prayer-poles and streamers, than a respectable, well-brought-up, British-grown fuchsia.

The gardener in the country will not understand this; he will attribute it to incompetency, stupidity, feebleness, he would soon put matters straight if the place were in his hands, and so on; and, with an air of superiority, he will look with self-complacency on his own beautiful garden. But could he manage one whit the better if he *were* here? Just let him try, single-handed, without his allies the Live Birds! He is simply ignorant of the fact that his own garden is in good trim, not through his own exertions alone but because he has the Live Birds to keep the army of caterpillars and other undesirables at bay.

The man in the country is thrice blessed. He has the seed-eaters which, feeding their young largely on insects, during the breeding-season at any rate are of real value. Then, the whole year round, there are certain residents and some winter immigrants which devour insects in any form or at any stage they may be able to find them. And, during the summer, when insect-life is most abundant, he has the Swallow family, ceaselessly hawking after winged creatures, the summer Warblers, the Flycatchers, the Cuckoo, and many other Live Birds that stand between him and the destruction of his woods, his crops, his orchards and his gardens.

Our nearest public gardens of any size are those in Ravenscourt Park. On July 31, after caterpillar-picking in, and a look of despair at, my own little plot, I took a tram to this place, and sat for a while in that quiet little retreat which is or used to be known as the Shakespeare Garden. The masses of rambler-roses and other flowers were charming—and not a sign of caterpillar or fly. As I lolled and looked and envied, I noticed a little mouse-like shadow, running from the copse at my back, enter and disappear amongst the flowers. It came into sight again a few yards away at the base of an arch of roses, which it proceeded to climb; and it carefully cleared the tree of insect-life as it ascended. It was much smaller and slimmer than an Accentor, and the movements were altogether different: to me it seemed to be one of the rarer Warblers, but my eyes are old, and I will not venture to give it a name, neither does it matter for our present purpose. The staff of gardeners could arrange for the production of the display of flowers, but not all the gardeners in the world could have preserved them. That stupendous work was performed, with marvellous efficiency, by the fragile birds, of so many shapes and colours and modes of procedure, working silently and without thanks, and oftentimes so secretly as in the case cited, but all with one accord, guided by to them an Unknown Hand, working for the comfort and well-being of man. The head gardener gets the praise, but where would he have been without the Live Birds!

Now let us take a peep at my back garden, with the house at one end and a four-foot-high wall along the other three sides, and overshadowed by my neighbours' houses and trees. Some trees and shrubs will not grow here, the place is so shut in: moreover, it is so full, so overfull, of such trees and shrubs as will live, if but for a time, that to attempt to grow flowers would seem to be a hopeless task. Last year, however, I chanced to move some geraniums, which had apparently been ruined by caterpillars, from the front to the back garden, and found that they did very well. Taking the hint, this spring, as early as I dared, I planted several dozen of the best obtainable scarlet geraniums in this back garden; and all through the summer—and they are still (August) going on—I have had a magnificent display of brilliant colour, set off and toned by a

rich background and framework of greenery in many shades, quite a sight to behold and feast one's eyes upon. But how about the caterpillars, the grubs, the fly, and all the hosts of the enemy? *Ne'er a one!!!* And herein is the marvel. When I go caterpillar-hunting in the front garden, I take with me what sixty odd years ago was known by the homely name of a pomatum pot—what its modern scientific name may be I do not know. In this receptacle, I tenderly and carefully place every grub, caterpillar, fly, and other beastie I can lay my hands on, and I forthwith *set them free, unharmed, amongst the flowers in the back garden*:—that is, for some weeks, there has been a continuous stream of living creatures flowing from the front to the back—and, yet, the front garden languishes and the back garden flourishes! Of course there can be only one explanation of this little phenomenon—those Live Birds again!—but never before have I had the value of the Live Bird brought to my own personal notice so prominently. The back garden is covered over with wire-netting, and in it I still have a few little seed-eaters, but not a single insectivorous bird; yet these little waxbills and finches keep the flowers and foliage clean; and I must emphasize the point that, for the most part, the geraniums in the front are identical with those at the back; for several dozen pots were brought to the house, of which so many were allotted to the one garden, so many to the other, yet those in the front have not been permitted by the insects to continue blossoming while those at the back have blossomed and still blossom as they like. The birds, those I now have at any rate, while damaging some flowers, do not injure the geraniums.

And it is not alone the small bird that is of such value; agricultural man has other enemies besides the grub and the fly. How about the mouse and the vole? and where would he be without the Kestrel and others to rule the day and the Owl to look after and protect his interests at night, during the time when he, good easy man, full surely is—or ought to be—lying in his bed, not too seldom, in his stupid ignorance, abusing his midnight saviours for making such a noise and disturbing his slumbers.

It is a red-letter day in mouse-land when a man, say in London, sets up a garden aviary. There are cats in all the gardens

around, and occasionally not too much food ; and the mice are often put to it to find meals for themselves without serving themselves up as meals for the cats ; but set up an aviary, and there you have a paradise for the mice straight away. Outside, the cats may prowl and hunger and gnash their teeth, but—*Inside!!!* Canary, and millet, and other delights and toothsome delicacies, even an occasional dish of bird's head—and not a ghost of a cat to disturb the digestion or the sweet harmony of the place. In the aviary, mice may squeak and grow fat without a care in the world, for as for man and his traps—*pis-s-s-sh*—poor feeble creature.

Years ago, I had hawks and owls—but no mice. Times changed ; the hawks and owls took their departure—and *I had mice*. Generation after generation of mice came and went until, by inherited instinct, they knew every kind of trick and trap as soon as they could run ; as for poisons and steel traps—they scratched and covered them up inches deep with earth. Virus they ignored : why should they eat such poor fare ? A learned chemist, in his wisdom, said, “ Oh, they want feeding up to it ; now *I* should begin with a little toasted cheese——.” Fiddlesticks ; they were not such gudgeons !

Then came a thought :—“ Phillipps, old man, you have never kept the Burrowing Owl ” ; and a pair were obtained as soon as might be. For a part of the year, the Owls were shut up by day and the other birds loosed ; in the evening, the birds generally were driven into and shut up in the birdroom and the Owls set free. From the nature of things, this arrangement was inconvenient and unsatisfactory, and had to be modified from time to time ; nevertheless, it disposed of the mice in my aviary so completely for the time being that I was thankful when anyone made me a present of a mouse for the Owls' dinner. And this notwithstanding that the Burrowing Owl is a poor mouser compared with most of our splendid British species, in whom the nation has a veritable treasure, some indeed killing rats as well as mice. In short, while boastful man could not do more than keep down the mice, the Owls could and did exterminate them.*

* My Burrowing Owls and their young were incidentally referred to in the New Series of the *Avicultural Magazine*—at p. 388 of Vol. I. and at p. 39 of



Photo by Collingwood Ingram.

LITTLE TOBAGO, WEST INDIES.

Where Birds of Paradise were turned out by Sir William Ingram.

Apply this little picture to the whole country ; and I hope it may be realized what a friend and ally man has in the LIVE BIRDS, how hopeless his toil and how helpless he would be without them, and how, if he loves his country, he ought (for the most part) to cherish and preserve them and their eggs, instead of carelessly slaughtering them, or recklessly turning them into "specimens" for Love of Science, for Love of Dress, or for any other love whatever.

BIRDS OF PARADISE IN THE WEST INDIES.

BY COLLINGWOOD INGRAM.

Although Birds of Paradise have been known to Europeans since the sixteenth century, our knowledge of them until comparatively recent times was limited to a few imperfect skins and some idle tales invented by the earlier Portuguese or Spanish navigators. Of these travellers' tales possibly the most fanciful was the one that led to the Greater Bird of Paradise being described as "the bird without any feet, which flies about continuously and never sleeps!" This fable undoubtedly arose from the fact that in most of the old native-made skins the feet were wanting, and Linnæus has unwittingly perpetuated the fallacy by calling the bird *Paradisea apoda!*

Since then our knowledge has gradually accumulated. Wallace met with this and other forms of the family *Paradiseidae* during his wanderings in the Malay Archipelago. Then their curiously marked eggs—for so many years the coveted prize of every oologist—were discovered, and now the living birds themselves have been imported into England.

It seems that the Greater Bird of Paradise has lately become very scarce in its native home, the Aru Islands, Dutch New Guinea. This marked diminution is doubtless attributable to the great demand

Vol. II. One of the young birds found her way, indirectly, to the Zoological Gardens ; and, later, certain papers were not slow in trumpeting abroad the intelligence that a Burrowing Owl had been bred at the Zoo. But that the mother herself had been bred in my aviary was too insignificant a trifle to be thought worthy of mention!—R. P.

that now exists for their side plumes for millinery purposes, for the high price put on these feathers encourages the native hunters to kill the birds in a very reckless manner. Believing that they were threatened with extermination, a few years ago, my father, Sir William Ingram, decided to make a serious attempt to save them from this fate.

His first difficulty, of course, was to obtain a suitable tract of land in a tropical climate, and this he finally overcame by the purchase of the West Indian Island of Little Tobago. The second was to procure the birds themselves. For this purpose he sent a collector to the Aru Islands in 1909, and this man succeeded in bringing back about fifty living specimens, forty-four of which were ultimately released on Little Tobago in September of that year. Two more were liberated in the winter of 1910, and a third in 1912—these latter having been procured from M. Pauwels, the well-known Belgian aviculturist. All these were in the uniform chocolate-brown plumage of the immature bird, in which stage it is almost impossible to distinguish the sexes. From previous experience, however, my father believes that the majority of these birds were males, but from their very small size, there was every reason to suppose that the last three, at any rate, were undoubted females.

On Jan. 2 last my father and I paid our first visit to Little Tobago. Situated roughly in $11^{\circ} 30'$ N. latitude, and $60^{\circ} 32'$ W. longitude (it is interesting to note that the Aru Islands are roughly in 6° S. latitude) it lies about a mile and a half off the north-eastern end of the main island of Tobago; a group of rocks known collectively as Goat Island, dividing the channel about mid-way. A strong current almost constantly runs through these straits in a northerly direction, and this, meeting the incoming ocean swell, is very liable to create a choppy sea, when the crossing in a small boat becomes a difficult and sometimes dangerous undertaking. A very convenient landing place, however, is formed by a small sandy cove on the leeward side of the island.

Little Tobago, about a mile in length, is obviously formed by the crests of three or four small but tolerably steep hills of metamorphic rock, the highest of which now stands some 490ft. above the sea level. According to the official estimate, the acreage is only

240, but if one takes into consideration all the inequalities of the ground, there can be no room for doubt that the area of the island has been greatly under-estimated, and a proper survey will probably show it to be nearly twice that figure.

The island is clothed with a dense vegetation, the ground being covered with verdure almost to the sea's edge. The salt-sprayed rocks, notably on the eastward or windward side, are overgrown with thickets of a fleshy-leaved, upstanding cactus (*Cereus* sp.?) among which are dotted here and there the more curious spherical Turk's head (*Melocactus communis*). The rest of the island is more or less evenly wooded, an unusual feature for a tropical country (where gregarious trees are the exception rather than the rule), being the extensive groves of fan palm (*Thrinax radiata*). A striking characteristic of the undergrowth is the immense quantity of "big-leaves"—an aroid plant, bearing as its local name suggests, gigantic lanceolate-shaped leaves. It is also an epiphyte, and many of the trees are burdened with ponderous clumps of this great plant, and it will even find a foothold on to the small columnar trunks of the *Thrinax*. Breaking off one of the leaves at random, I found it measured fully 7ft. in length.

In the sheltered and richer valleys, the vegetation assumes a more imposing character, and here the trees in their struggle to reach the light, attain the great heights so often found in a true tropical forest. Among these trees I noticed the hog plum (*Spondias lutea*), pimenta, fiddle wood, plummer cherry, cannon wood, and, here and there, the majestic cabbage palm.

Water is unfortunately rather scarce, and can only be relied upon normally at one point, where a spring of water (apparently full of organic matter and unfit for human use) percolates through the soil of one of the little ravines. As it does not appear to be extensively used by either the Birds of Paradise or any of the native species, one can only assume that the heavy dews are sufficient to satisfy all their wants in this respect.

We left the main island of Tobago about ten in the morning, one boat containing our luggage and provisions, and the other ourselves and friends. Owing to the strong tide rip, it took us over an hour to pull across, and another to carry our goods and chattels up

to the small wooden shanty that was to be our sleeping quarters for the night.

Although from time to time we had received encouraging, if somewhat conflicting, reports from the various people who had chanced to visit the island, I confess I was not very sanguine of seeing many Birds of Paradise. Surely, one argued, even if their new surroundings had not proved uncongenial to them, the majority must have flown across the narrow straits and become lost in the forests of the main island.

It was, therefore, with a sense of great relief that we presently heard the well-known "wark-wark-wark" of a *Paradisea*, the sound being carried to us faintly from a remote part of the island—but the cry was unmistakable. So one, at least, had survived its three years' exile!

In a little while we heard a second bird calling from some trees immediately behind the building. On being answered by its fellow, this one rose from the forest and flew boldly across the valley with a leisurely, Jay-like flight. In so doing it passed quite near to us, and in the bright sunlight I could clearly discern the details of its plumage. No side plumes were yet visible, but the dark green plush-like growth on the throat pronounced it to be unquestionably a male. *

In several parts of the island my father has had clearings cut for the cultivation of papaws and bananas. The food supply afforded by the fruits and the young vegetation of these comparatively open spaces, seemed to attract nearly all the bird life on the island, and it was to these places that we went in the evening, in the hope of seeing something more of the Birds of Paradise. Nor were we disappointed. We saw single birds on several occasions, and once I observed as many as four together—two young males and, if one could judge by their smaller size, two females.

* These side plumes do not appear before the fourth or fifth year (perhaps even longer), and are then only retained for a comparatively short season.—C.I.

* In a letter which I read lately from some person evidently connected with the plume trade, it was announced that the males do not breed after four or five years of age, and that therefore they could be killed off. A convenient but completely false statement. One *expects* this kind of argument from such quarters!!—ED.



Photo by Collingwood Ingram.

TROPICAL VEGETATION ON LITTLE TOBAGO, WEST INDIES,
SHOWING "BIG-LEAF" AND THRINAX PALM.

Birds of Paradise are apparently omnivorous, but, in common with several other native species, they seemed to be very partial to the soft fruits of the papaw. One would have thought that no bird would have dared to interfere with the *Paradisea*, yet the much smaller, yellow-tailed Cassiques (*Ostinops decumanus*) were obviously their masters, and only permitted them to feed on the papaw trees when they had finished their own meal. By the way, these Cassiques, or "corn-birds" as they are termed locally, are delightfully quaint birds, and deserve a few words of comment, if only for their extraordinary *repertoire* of strange sounds. Their song, for instance, opens with some very singular notes that sound more like the hollow "gobble" of liquid being poured out of a large-bellied flagon than anything else I can think of; these are usually followed by a prolonged creaking note, which Chapman has aptly likened to the chafing of boughs in a wind; or again by the very curious spluttering sound that cannot be expressed in black and white. These birds are also wont to utter a singularly human whistle—so human, in fact, that on more than one occasion I have turned sharply round under the impression that someone was trying to attract my attention by this means. Many of their remarkable purse-shaped nests were to be seen swinging from the outer branches of the higher trees.

Another bird that we found feasting greedily upon the papaws was the handsome Blue Tanager—*Tanagra cana sclateri* (Berl). Some of these were constantly present, fighting and bickering together for possession of the ripe fruit. Humming-birds, Petcharies, Grass-finches, House Wrens, and, of course, the "day-clean," or Mocking-bird (*Mimus gilvus*)*—an extraordinarily plentiful species on Little Tobago—were likewise usually to be seen about the clearings; but these were all inoffensive species that never disputed the rights of their larger brethren.

It must not be supposed that the Birds of Paradise are the first birds to be introduced into Little Tobago; domestic fowls have lived there in a feral state for a number of years. The story of their introduction is not lacking in romantic interest. Some thirty-five or forty years ago, an old man named Mitchell dwelt alone on the

* *cf.* Notes on Birds from Yucatan in this number.—ED.

island—alone, that is to say, with his dog, his chickens, and his goats. This hermit's life was evidently not of Mitchell's own choosing, for it is rumoured that his friends had quietly marooned him there to keep him from the bottle that was so speedily killing him. One fine day, when his friends sailed across with their weekly gift of provisions, they found the beach deserted save for Mitchell's little dog, who greeted them ominously with frantic barks. As soon as they landed, the distracted animal led them over the hill to a certain rock on the windward side. Here they found an old coat, some fishing tackle, and three sun-scorch'd fish lying on the edge of the cliff and, below—the everlasting surf beating angrily against the jagged boulders.

Although Mitchell's goats survived him for many years, they ultimately disappeared. The fowls, on the other hand, soon multiplied, and their descendents exist to the present day, though their numbers have recently been greatly reduced by my father's "watcher," for it was deemed inadvisable to have the place overrun by these birds. It is said, and there is every reason to credit the statement, that these fowls have largely reverted to the plumage of their wild progenitors. [It would be interesting to obtain some skins to verify this.—ED.]

Whether the Birds of Paradise have actually increased—or, indeed, nested at all—on Little Tobago, is a very moot point, and one that is almost impossible at the present time to answer satisfactorily. Towards sundown and in the early morning they become more noisy, and it is at these hours that one can best estimate their numbers. Personally I am of opinion that they are at least maintaining their numbers. That they should be able to do this after nearly three and a half years' liberty, is certainly encouraging, and I think there is now every reason to hope that the colony will continue to thrive in their new West Indian home.

* * *

ADDITIONAL NOTES BY SIR WILLIAM INGRAM.

Robert Herold, the guardian of Little Tobago, writing in July, informs me that he has seen two or three young birds accompanied by their mothers, one of which was very small and appeared

to have left the nest only about ten or twelve days. If this is really the case, it is curious as showing that the *Apoda* breeds at a different period of the year from that in New Guinea. There the Paradise Birds breed in the latter part of October or November (see Dr. Simson's account of Journey in New Guinea, *Ibis*, Vol. for 1907). I am also informed that, in the far corner in the north part of the island, there are three separate pairs of *Apodas* which remain in that locality and may have nests; at any rate, it is satisfactory to know that after nearly four years on the island the male birds are now easily distinguished from the females, as they have now obtained the distinctive colouring on their heads and necks, and, according to Herold, have recently grown short "wires," although up to the present no side plumes have been observed by the guardian. I am told that the birds were moulting in April; in New Guinea they change their plumage at the end of November and December.

Now that the different sexes can be recognised I expect to have more reliable accounts of the habits of the *Apodas*. To assist Robert Herold in his observations a good pair of glasses has been sent out to him, and perhaps in a few weeks I may have further interesting notes to contribute. [We shall be very glad to publish them.—ED.]

As to the number of *Apodas* on the island, I estimate there may be thirty, but do not feel certain of more than sixteen, out of which there may be six or seven females. I shall soon know more on this point, and one can only hope the number of females may be more than my estimate, as so much will depend on the "ladies" for the success of my experiment in acclimatizing the Birds of Paradise in the West Indies.

A PAPER ON SEXING PARRAKEETS, AS ILLUSTRATED BY CERTAIN OF THE BROADTAILS.

By Dr. L. LOVELL-KEAYS.

This article is not intended to be a recondite treatise on sexing birds, but I trust it may be of help in determining the sex of certain of the *Platycercinæ* (i.e. Broadtails). Lately I have taken up parra-keets, and I was at once struck by the apparent difficulty people had of sexing the parrakeets they offered to me. Out of upwards of fifty birds only quite a few, in which it was impossible to make a mistake, came to me properly sexed. I think one may take it as an indisputable fact that sexing birds is to a great extent a gift. But it can be cultivated and greatly improved with practice, accurate observation and patience.

These remarks are somewhat in the way of an apology for writing so elementary a paper, and yet I remember my friend Major Perreau remarking that he thought one got most help and more interest from the earlier numbers of his bird papers than from the later ones. We are apt to think that what we have learnt or found out everybody else has, but it is not so, and very often the most elementary papers are those most eagerly read.

To return to our parrakeets. It is obvious I think that it is fairly hopeless to attempt to sex immature specimens, at any rate in the majority of species. One may often make a guess, more or less lucky, but one cannot tell certainly. This is, I think, particularly true in such birds as Pennants, Redrumps, and so on.

Given a mature specimen, how are we to commence? You must get the birds in a good light, and if possible in a cage and as near each other as possible. In most cases, it is almost entirely a matter of comparison, and to sex individual or isolated birds is often exceedingly difficult, if not impossible.

Now the chief points of difference are as follows:—

- (1) The size and shape of the beak.
- (2) The size of the bird.
- (3) The shape of the bird, particularly the head and shoulders.
- (4) The colour.

I have put the points in this order as seeming to me to be the most reliable guides in that order.

To take the first point. I believe the beak of practically every bird is an index to its entire nature and character. And sex is shown more by the beak than by any other characteristic. In the hen bird in most parrakeets, particularly those parrakeets with which we are dealing, the beak of the hen is smaller, narrower, and more tucked into the bird's "face." In the Rosella this is a very constant and marked characteristic. The beak is altogether a more lady-like and less dangerous looking appendage in the hen.

(2) With very few exceptions, it will be found that the hen bird is smaller than the cock, but of course one may have a well-developed hen and a poorly developed cock.

(3) In examining some dozens of living birds, not only those that have actually passed through my hands, but at the large dealers and London Zoo, I came to the conclusion that there was a marked, though not easily described, difference in the shape of the bird. The hen bird was more kestrel shaped and slimmer with narrower shoulders and the head more daintily and neatly set on than in the cock. The neck, too, less well marked, and the head being proportionately smaller, the neck in the hen is a more graceful and deliberate curve than in the cock bird. The head itself in many parrakeets is flatter on the crown in the cock than in the hen.* This point comes out nicely in Mr. Page's "Aviary and Aviary Life," page 189, in which I should say the nearer bird is undoubtedly the hen and the other the cock. On page 207 of the same book we have what one would, in absence of another bird to compare, call a "certain cock," although in Bauer's, Barnard's, and others it is rather hard to sex these birds unless one sees them side by side.

(4) Finally, we come to the colour. Generally speaking the hen bird is decidedly duller and less plainly marked than the cock, and in many species, *e.g.* the Redrumps, the colour is the great characteristic, but in practising sexing birds we should try and ignore colour as much as possible or one is apt to lose sight of the more

* Note "How to Sex Cage Birds" p. 106 "the females of many of the Parrots . . . have rounder heads"—Mr. Page probably had his attention called to the fact by this note, but I believe I had *previously* published it.—A.G.B.

general and (in many birds) only other means of sexing them. In Rosellas the colour may lead one absolutely astray, and Butler's theory of the green spot on the nape of the neck is, I am absolutely convinced, not only unreliable but also untrue.* It is quite true that, generally speaking, the hen bird is very much duller than the cock bird, and I must confess it was colour that first led me to doubt that my Rosellas were a true pair. When I saw a solitary hen the difference appeared to me so marked that I bought her on sight, and subsequent events justified my judgment. Bright coloured hen Rosellas may and no doubt do exist, but if I was buying a "pair" of birds I should want to make very sure of their sex in other ways before I ventured on such a hen. In Pennants the colour is very variable but, on the whole, the cock birds seems to be a purer red with less dark marking than the hen, and he is too an altogether finer fellow. In Bauer's, Barnard's, and others, as far as I could ascertain, the colour difference is but slight. I need hardly say that, if colour is but little guide in adults, it is practically speaking of no value at all in the great majority of immature birds. In short, colour is likely to prove the greatest pitfall of all in sexing birds, and sexing birds is to the aviculturist of such moment that one wonders more is not written on the subject, for without properly sexing your birds you cannot breed them, and without breeding them you cannot study them properly, and, after all, it is the production of young that appeals to the average aviculturist above everything. The difficulty I had in getting true pairs of birds, led me in the first place to study and find out the difference in the sexes for myself, and in the second to place my observations on record, in the hope that if correct they may be of help to others, and if incorrect they may stimulate controversy and debate. For any errors I take full responsibility and crave indulgence.

[Further correspondence on this subject would be very useful. Perhaps Lord Tavistock and a few other members who have had experience with the *Platycercinæ*, will contribute.—ED.]

* In "How to Sex Cage Birds," pp. 127, 128, Dr. Butler states this on the authority of the late Joseph Abrahams, a most acute observer. Moreover the *shape* of the green spot was the character noted, not its presence.—ED.



OYSTER-CATCHER BROODING EGGS.



OYSTER-CATCHER ASLEEP ON NEST, BUT ALWAYS WITH ONE EYE OPEN. .
Photos by H. Willford.

THE OYSTER CATCHER.

Hæmatopus ostralegus (Linnæus).

By H. WILLFORD.

The Oyster Catcher—which my friend Dr. Heatherly has rightly christened “the coastguard of bird-land”—is more or less common all round our coasts both summer and winter alike. At all times it is one of the most wary birds I have met with in my many attempts at bird-photography, for as soon as one gets near its haunts off it flies with its piercing warning call.

The nest, if it can be called such, is merely a scrape or hollow, sometimes without any other material than the bare earth, and at others just a few bents of dried grass, amongst which are deposited two or more, often three, greenish yellow eggs, plentifully spotted with black.

The nesting site varies. I have found the eggs laid within a few feet of high-water mark, and at various heights among bare rocks, also in the shade of Mallows and amidst the beautiful wealth of sea-pinks [Thrift].

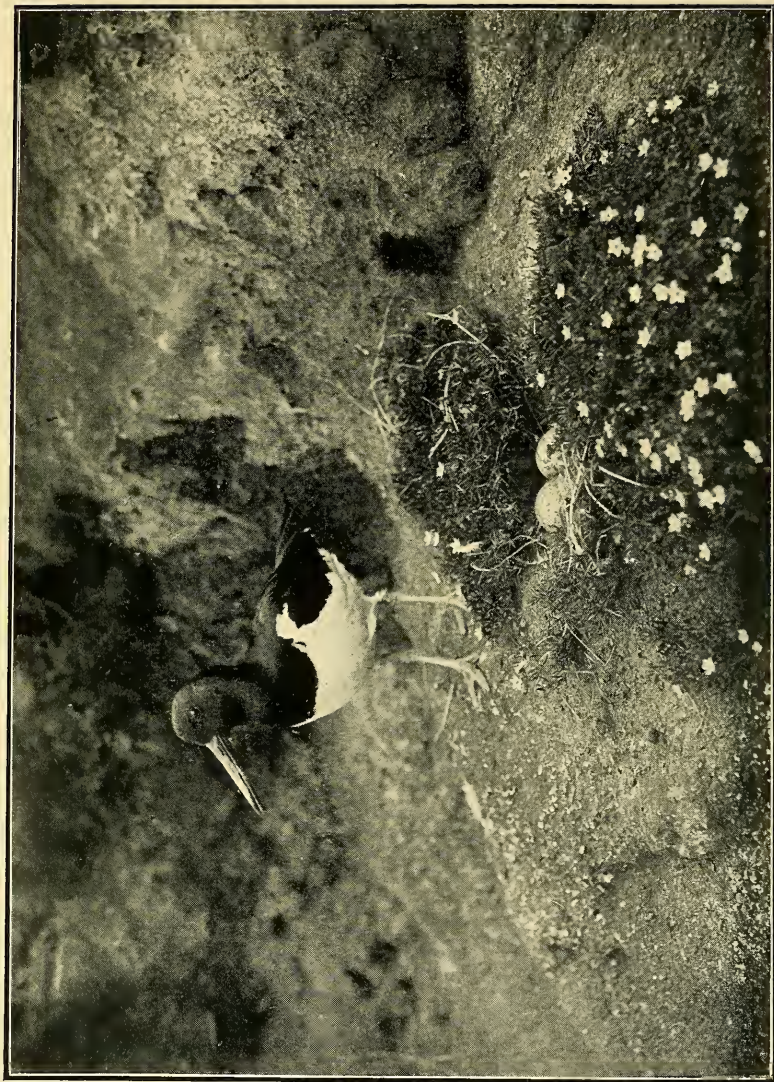
Both male and female take their turns at incubating, although it is generally supposed that this is carried on by the female alone. The particular pair of birds, to which most of my observations refer, nested on a shelf of rock some ten feet from high-water mark, and about three feet above the beach. The sitting birds were protected from the north-east by the rocks at the back. Two eggs were laid, and when found had most likely been incubated over a week. The first thing to do on finding a nest with eggs is to test the eggs by looking through them to see if they are newly-laid or if incubation is well advanced. If the latter, one need have little fear of the birds deserting, providing care is taken in fixing up the hide. This is best done at dusk, as it gives the birds a better chance to get accustomed to it during the night, and then, by the following morning, most of their fear will have vanished.

Sea-birds sit very little during hot sunny days, and can leave their eggs day after day for seven or eight hours at a stretch without harm; this I have proved, for the day after I had fixed up the hide I landed on the island and found that the eggs were warm. Having

set up my camera, I prepared to await the birds home-coming. After seven hours had passed I began to think something was wrong, for during this time both birds had been sleeping and feeding within ten yards of me, and, after a good doze of half-an-hour or so, one of them would begin to walk towards the nest, covering a few yards and then retreating. This would go on time after time, the distance growing less between the bird and the eggs after every effort, till one felt certain that the next time the bird would surely come on its nest ; but not so, the bird at this stage would think another sleep desirable, walk off to its original position and perching itself on a rock commanding a view of the nest, push its beak in the feathers of its back and, with one eye always open, doze for a further period.

On the island I was working, which was quite tiny (about two acres) there were four pairs of Oyster Catchers nesting, and, at intervals, the sleeping pair would be visited by the others. On these occasions the most extraordinary dance took place. The birds would strut round each other, beating time to their curious call with their beautiful coral red beaks. Sometimes this "dance of the Oyster Catchers" would last several minutes, then, one by one, the intruders would fly off leaving my pair to continue their broken sleep with still one eye always open.

After my long wait, I returned home rather disheartened, but next morning, on paying a visit to the eggs, I found them quite warm. My friend therefore took up his position in the hide, and I left him for the day whilst I visited another island for Ringed Plover. On returning, I found he had made two exposures, and on the following day a second friend secured three or four. The fourth day I visited the hide again, and after ten minutes wait the bird came on the nest again. I got her to go off twice by talking to her. After this, however, she took no notice of my voice and so I had to scratch the canvas of the tent. Eventually she grew so accustomed to me that she allowed me to put my hand out of the front of the tent and remove the lens and replace it with one of a longer focus. This shows how a bird can be accustomed to almost anything provided one has time, and is almost on a par with my friend C. J. King's experience when stalking a Shag. Of course he is a past master at the art and had got so near to the bird that it completely covered



OYSTER-CATCHER APPROACHING ITS EGGS.

Photo by H. Willford.

the field of a half-plate. He then began to wonder how near he really could get, so crept slowly on until at length the Shag allowed him to stroke it on the back. This took quite a long time, for nothing scares a bird more than sudden movements.

The Oyster Catcher lives principally on small marine insects, crustacea, limpets, etc., and the young when hatched are piloted down to the edge of the water within a few hours of drying. The parents are very solicitous of their offspring, and if you should by chance be close to the young, which will "squat" down by a stone and almost defy detection, the old birds will keep flying round and calling, sometimes coming to within a few feet.

The wonderful red eye of the Oyster Catcher gives it a fierce look which is in keeping with its character. When defending its young it is afraid of no birds frequenting its realms, not even the Greater Black-backed Gull.

BIRD NOTES FROM THE ZOOLOGICAL GARDENS.

Since my last instalment of these notes appeared in the August number, interesting new arrivals to the collection have been few. Five examples of the Seed Snipe (*Thinocorys*) were received, four of these being males, apparently the first consignment of these very interesting and puzzling little birds. Mr. Astley secured the other two, and as both he and Dr. Gosse have written about them in these pages I have nothing further to add, except that they seem as though they are likely to do well, and I hope that both our Editor and the Zoological Society may be successful in breeding from them next year.

In the Summer Aviary we succeeded in breeding the Spotted Tinamou (*Nothoprocta maculosa*), a common bird in the Argentine, but one seldom seen in aviaries. It is very small for a Tinamou, not much larger than a quail, and the sexes are just alike. We had three birds of which we did not know the sexes. A nest, composed

of a few bits of grass and leaves, was formed in the long grass: three glossy purple eggs were laid, and the bird (presumably the male, for in this group the male alone sits) sat steadily for three weeks, all three eggs hatching.

The young birds were of a pale buffish-brown colour with three dark brown stripes on the head. The down with which they were clothed was very long and hair-like, giving the chick the appearance of being covered with spines. They appeared to be somewhat weak, and we discovered that the parent bird seemed to take very little interest in them, and they would undoubtedly have died had we not taken them and placed them with a bantam, which took to them at once and successfully reared them. Subsequently a second brood of two was reared in the same way.

In the summer we liberated seven Roseate Cockatoos in the hope that they would remain in the Gardens. For a time they did so, and the flight of this flock as they circled about over the trees was well worth a special visit to London to see. They stayed about in the trees during the heat of the day, but about sunset, with loud cries, they flew high into the air and took long flights round the Park. One by one, however, they disappeared. They were somewhat tame, and, I have no doubt, allowed themselves to be captured by some unscrupulous person or persons who, I suppose, managed to get a few shillings each for them.

In one of the aviaries in the Small Bird House a pair of Spot-billed Toucanets (*Selenidera maculirostris*) have their abode, and as they seemed very friendly towards one another, we fixed them up a nesting log, of the type that one uses for Parrakeets. It was at once appropriated by them, and after a short time it was noticed that the hen spent a good deal of her time inside. This went on for some time, and then, when she came out, the cock took her place. We guessed that the hen had laid, and when, one day the keeper noticed both birds were out, he climbed up and peeped in, and there, sure enough, were two white glossy eggs.

About four weeks, as we judged, after the eggs had been first laid, it was noticed that both birds had left the nest and ceased to visit it, and an inspection revealed the fact that this was empty.

We can only presume that young had been hatched but, apparently, devoured by their parents.

The birds commenced to visit the nest again, and we knew there must be eggs, for they again took turns in the nest, and were evidently sitting.

On July 29th, when, as far as we could judge, incubation had been going on for three weeks, the birds were noticed to take food into the nest. Evidently a young bird or young birds had been hatched.

On August 5th the keeper looked into the log and discovered a naked young bird, apparently well nourished. On August 14th it was about half as large as its parents, with dark feathers showing. The birds fed the young one entirely upon animal food, cockroaches, mealworms and gentles. No fruit was taken to the nest, so far as the keepers could tell.

On the 21st of August the parents ceased to visit the nest, and the young bird was found to be dead.

An interesting and valuable collection of birds has just arrived from Pará, a present from the Museu Goeldi, through the intermediary of Messrs. A. and H. Pam. It contains twenty-four birds, of which the most interesting are the American Tantalus (*Tantalus loculator*), Snowy Egret (*Leucophoyx candidissima*), Boat-bill (*Cancroma cochlearia*), Darter (*Plotus anbinga*), Grey-necked Tree Duck (*Deudrocygna discolor*), Rufous-necked Rail (*Aramides chiricote*), Pileated Guan (*Penelope pileata*), and Araucuan Guan (*Ortalis araucuan*).

D. SETH-SMITH,

October 23, 1913.

REVIEWS.

THE PEREGRINE FALCON AT THE EYRIE. *

Beautiful photographs to accompany six chapters, the contents of which reveal to us intimately the daily life of the Peregrine

* *The Peregrine Falcon at the Eyrie*, by FRANCIS HEATHERLY.

"Country Life" Library.

Falcon's nursery, with minutely recorded details of the babies' behaviour and diet, not to mention the parents' mode of living as anxious husband and wife who realize their great responsibilities, make up a book of unusual interest; showing how absorbing the very smallest details can be in recording the daily life of any creature carefully and patiently watched; how it is that just those very details, unseen and unnoticed by the man in the street, enhance the interest, teaching one to look more closely into nature; to learn of her rather than destroy. And on the destruction of such birds as the Peregrine, Mr. Heatherly has something to say, warning us against the wiles of the egg-shell collectors, helping us to throw stumbling-blocks in their way. "A simple method," he writes, "is to wet each egg and then scrawl all over it with a violet marking-ink pencil. This has no prejudicial effect on incubation, but renders the egg useless to collectors, as the violet marks are more indelible than the natural blotches."

To put a stop to these greedy destroyers, we gladly accept any means of selling them, whereby we can prevent them from selling!

To climb up and take a clutch of Peregrine's eggs need not be always difficult; any fool who can shoot at all, can kill the parent birds; let those who are *really* sportsmen try to do what Mr. Heatherly and his companions did, leaving many species which are in danger of extinction to rejoice in life and reproduction of life, whilst giving to the world a record of interest, with the satisfaction that good and not harm has been done. H. D. A.

THE EMU.

We have received copies of this interesting publication of January, April, and July, 1913.

A paper worth reading, amongst others, in the January No. is one on the habits of the Cassowary by H. L. White, in the Rockingham Bay district, the eggs of which bird appear to be extremely difficult to find. Two excellent photographs accompany the article, of the nests and eggs of Cassowaries, the one concealed in Palm Scrub, the other amid a tangle of 'Lawyer' canes.

In the April No. one's interest is again maintained. In a

lengthy treatise upon the osteology of the Cereopsis Goose, we are told that it is necessary to record a complete description of its skeleton, because "this extraordinary fowl is now on the road to extinction"!!

Capt. S. A. White's paper on Field Ornithology on Kangaroo Island is interesting. Amongst numerous birds, he mentions meeting with the Kangaroo Island Crimson Parrot (*Platycercus melanoptera*) and the Black Cockatoo (*Calyptorhynchus whitea*).

The July No. also has a lengthy article by Capt. S. A. White on Field Ornithology in S. Australia (The Gawler Ranges), in which he tells his readers that probably the first ornithologist to work that country was Mr. J. F. Andrews in 1880, who mentions in letters written at that time, that amongst other skins he obtained those of the Night-Parrot (*Geopsittacus occidentalis*) for a trifling sum, so that evidently these birds were much more numerous then than they are now.

"Bird-Life of Kow Plains" (Victoria) by L. G. Chandler helps to swell this number with good 'copy,' illustrated by beautiful photographs of nests and eggs. H. D. A.

BOOKS BY MEMBERS.

Messrs. Witherby & Co. are publishing this Autumn the following works:—

"*The Gannet, a Bird with a History*," by Mr. J. H. GURNEY, who has for many years been studying the life history of this bird and the historical references to it,

"*Indian Pigeons and Doves*," by Mr. E. C. STUART BAKER; which will be a companion Vol. to the same author's well-known "*Indian Ducks*."

"*Camping in Crete*," by Mr. AUBYN TREVOR-BATTYE who gives, in addition to an account of the Country, Mountains, etc., descriptions of its birds.

We hope to be able to review these books at greater length later on.—ED.

CORRESPONDENCE, NOTES, &c.

ILLUSTRATION FUND.

At the commencement of the Magazine's year, may I once more, whilst thanking those members who so generously responded to my appeal, again remind others that in order to maintain and increase the quantity and quality of our illustrations, donations to the fund are needed. One would like to publish a *coloured* illustration every month, for no mere black and white one can do justice to, or give a full idea of, many species of birds.

Quite lately one of our members told me that he was enabled to procure one particular species from China, owing to his sending out a coloured illustration from our Magazine, which was at once recognized by a Chinaman who had been asked to procure the living birds.

No description or black and white drawing is of any assistance to many natives of different countries; indeed the same thing often applies in our own case.

HUBERT D. ASTLEY, *Editor*.

SOME BIRDS FROM YUCATAN.

At the end of September Major Horsbrugh deposited at the London Zoological Gardens some birds which had been brought from Yucatan, amongst which were two species of Mocking Birds, one of which seems to be *Mimus gilvus*, *syn. gracilis*. There were two of them, charmingly tame, and quite youngsters, still at that time opening their mouths wide for food. They are in my possession and are smaller than the better known *M. polyglottus*—the North American Mocking-Bird; the head and mantle are of a purer ash-grey, with the wings and central tail feathers blacker. The Mocking-Birds are somewhat difficult to distinguish, for there are many of them, and all bear a very close family resemblance.

Some Red Cardinals in this collection seem to be merely a rather smaller race of the N. American birds, and the male is more vermilion in colour.

Two species of Hangnests (*Icterus mesomelas mesomelas* and another), very handsome, with shorter bills and more refined heads than has the "common" Hangnest.

Five Yucatan Jays (*Cissolopha yucatanica*) all but nestlings, their heads still whitish instead of black. When young this bird is white, gradually changing to the adult plumage, which is very handsome. Bill, head, and underparts, black; upper parts, with long tail, small Kingfisher blue. Yellow rim of skin round eyes. Legs and feet orange yellow.

The Yucatan birds ought to be hardy, for Mr. Gaumer wrote about the climate and seasons as follows:—

"I reached Yucatan on the 14th of Oct. in the first heavy norther of the " season. The weather had been good for some ten days before, the summer

“ rains having ceased about ten days. During October, November and December north wind followed north wind every ten to fourteen days, with light drizzling rain, which generally lasted from two to fourteen days, and with increasing cold, until the thermometer is said to have fallen at one time to 61° Fahr. In January there were four moderately heavy rainfalls, with strong north winds and cold nights. One very heavy rainfall occurred on the 23rd February, with a considerable sprinkling of hail. After that came the dry season, with the heat very great in April and May.”

HUBERT D. ASTLEY.

THE COUNTESS OF HAREWOOD ON LONGEVITY OF A
WHITE-EARED BULBUL.

SIR,—Having read in the *Avicultural Magazine* for October of the longevity of birds in captivity, I think it may be of interest to some of your readers to know that I had a White-eared Bulbul given to me on *Sept. 16th, 1875*, which only died (in a fit) on *May 3rd, 1893*. It travelled about with me wherever I went, both abroad and in the British Isles, and was absolutely tame, always flying on to my finger directly it was called. It lived a great deal out loose in my room and I even used to let it out in the train when I could have the windows shut and I knew no one would open the door,

F. HAREWOOD.

MOTACILLA ALBA.

SIR,—Mr. Teschemaker's interesting article on the White Wagtail raises the point as to whether it is a very rare breeding bird in England or not. Personally I am inclined to think that it is often casually mistaken for the Pied Wagtail (*M. lugubris*) owing to the difference in the colouring on back and wings being overlooked.

There were certainly a pair this year near the coast of Northumberland, not far from Holy Island, though I did not find the nest myself.

M. PORTAL.

COSCOROBA CYGNETS AT WOBURN ABBEY.

THE MARQUIS OF TAVISTOCK writes on the 17th of October:—

“The young Coscoroba Swans were looking very fine when I last saw them about a fortnight ago—full-grown and fully feathered, except for their pinions, so I think they really ought to survive.”

[We believe this is the first time that this species of Swan has bred successfully in England, perhaps even in Europe?—ED.]

ACCHA SEED (?) FROM NIGERIA.

SIR,—I am sending you enclosed a sample of Accha seed from Nigeria. Some time ago there was a privately imported collection of African small finches

from the West Coast, only two birds were lost on the voyage and those that arrived did well. I got the bag of seed they were brought over and fed on. I could not find out what it was, but now have received similar seed from my brother-in-law now enclosed to you.

I always felt that we wanted something of a special kind to keep small tropical seed-eaters in health as millet seems not to nourish and all birds will not eat Canary seed. I have a couple of pounds of "Accha," and shall be pleased to send samples to any of our members who may be interested.

HENRY B. RATHBORNE.

Dunsinea, Castleknock, Co. Dublin.

* * *

The following answers were received from Mr. Silver:—

(i.) SIR,—In answer to your note with reference to sample of seed known as Accha (?) I went up to South Kensington this morning to try and find out something about it. There they do not know it, cannot identify it, or find any reference to it whatever. In my botany (Bentley) there is a reference to a plant (graminaceous) called *Paspalum exile*, which the natives call Fundi or Fundungi and it is described as the smallest seed grown as a cereal. *Pennisetum dichotomum* is called "Kasheia," but I do not know either of them. Mr. Trower has never seen it commercially, but it will be shown to Hurst, the seed importers, after which I will write you, and in the meantime I will plant some and try to get it identified from the plant.

ALLEN SILVER.

* * *

(ii.) I am informed by the authorities at Kew Gardens that the seed appears to be *Paspalum exile*, and is known in Gambia as Hungry Rice Fundi, or Fundungi. It is not known by the London houses commercially.

ALLEN SILVER.

FOREIGN BIRD EXHIBITORS' LEAGUE.

SIR,—I take the present opportunity of advising members that, in addition to the extensive classification for Foreign Birds, to be given at the London Cage Bird Association's Show, which will be held at the Horticultural Hall on Nov. 27, 28, and 29th, a class has been added for Gouldians and extra one for insectivorous birds, making a total of 30 classes. You kindly printed particulars of this earlier in the year, and I again beg to remind those members who may be inclined to show birds that I should be pleased to supply them with any information they require. There will be no cancellation or amalgamation and full prize money will be paid in all classes, and every care will be taken with the exhibits by experienced hands.

If this venture is properly supported, the League will be able to provide a really good annual fixture. Entries close on or about the 18th of November and schedules will be ready by November the first.

The judges are Mr. D. Seth-Smith and another. ALLEN SILVER.

A MOUSE HUNT.

SIR,—Some time ago, when I was on a visit to the Zoological Gardens, I was much interested in watching the curious way in which a hen Reeves' Pheasant was behaving. I stood still observing her movements for some time, and then saw that a mouse seemed to be the cause of her trouble. The bird was continually running after it, as if trying to catch it, and after some time gave the chase up as if tired of the game.

The cock bird then took up the running, and after a sharp chase eventually caught the mouse, which he held in his beak, notwithstanding its struggles, and walked about as if he was very proud of his capture. Then he proceeded to shake the mouse just as a terrier would a rat, and after it was dead, threw it up into the air, caught it in his beak and swallowed it whole.

I was not aware that pheasants ever fed in this way, or upon such food, and upon mentioning these facts at a meeting of the B.O.C., was informed by the late Mr. Tegelmeier that he had never heard of such a case. I thought it possible these facts may be of interest to the readers of the Magazine.

H. MUNT.

BIRDS LAYING TWO EGGS IN TWENTY-FOUR HOURS.

SIR,—I have read in the *Avicultural Magazine* of June 1907, on page 255, a letter from Mr. Bonhote recording instances of birds laying two eggs in twenty-four hours. Mr. Bonhote, in the last paragraph of his letter, asks if any of our members could furnish further instances.

I have in my collection of parrots' eggs, three eggs of the Undulated Grass Parrakeet (*Melopsittacus undulatus*) that were laid in the night, 13th November, 1912. These eggs are abnormal, being about a quarter the size of the typical egg. I could supply the exact measurements if it is considered necessary. The chief point of interest about these eggs is the colour, which is a light blue.

I have a fine collection of parrot eggs, and some hundreds have passed through my hands, but these are the first specimens I have ever seen coloured. I may add that a similar egg was laid by the same bird and coloured in the same way a day or so afterwards. This egg I also possess.

H. MUNT.

[Such eggs ought to produce Blue Budgerigars.—ED.]

THE NIGHTJAR.

SIR,—Miss Leeke will perhaps pardon me if I tell her that the bird she heard and saw flying at a height round a marshy meadow last June was not a Nightjar but a Common Snipe, executing those peculiar evolutions which it usually indulges in during the breeding season. She is not the first to be deceived by the strange sound made by this bird in passing obliquely downward through the air and which naturalists usually call "drumming." We are suddenly arrested by hearing a tremulous sound, much resembling that of a lamb bleating

on the uplands, and from which the Snipe is sometimes called the "heather bleater," the prefix of heather being added from the Snipe often breeding amongst heather.

The bird sweeps round in circles in the sky when suddenly it seems to fall obliquely downwards, and in so doing produces the drumming or bleating sound. If we watch a Snipe closely we shall notice that every time it swoops downward the feathers of the tail are widely spread and the wings seems to tremble or quiver, and I have long held the opinion that the shrieking sound called drumming or bleating is produced by the passage of the air through the stiff outspread feathers of the tail, modulated by the humming made by the quivering feathers of the wings.

F. BOYES, *Beverley.*

EDITORIAL.

May I express my thanks to all those who have helped me in my Editorial work by contributing to the Magazine, etc., with a hope that they will continue to do so.

If other Members who can write any papers or notes will follow their example, my work will be further enlightened; being, as it were, a china nest-egg, never to be hatched, but only to promote the laying of other eggs.

If I can have in hand sufficient 'copy' for at any rate a month ahead of that which is published, I shall be grateful.

An editor cannot expect to please everyone, so that I may consider myself fortunate in having met with almost unvarying courtesy from the Members of the Society.

Being a mere amateur at the work, and having often to snatch half-hours here and there in which to write and answer letters, etc., in addition to sometimes attempting to illustrate the Magazine, I feel that Members will very kindly continue to bear with any shortcomings.

HUBERT D. ASTLEY, *Editor.*

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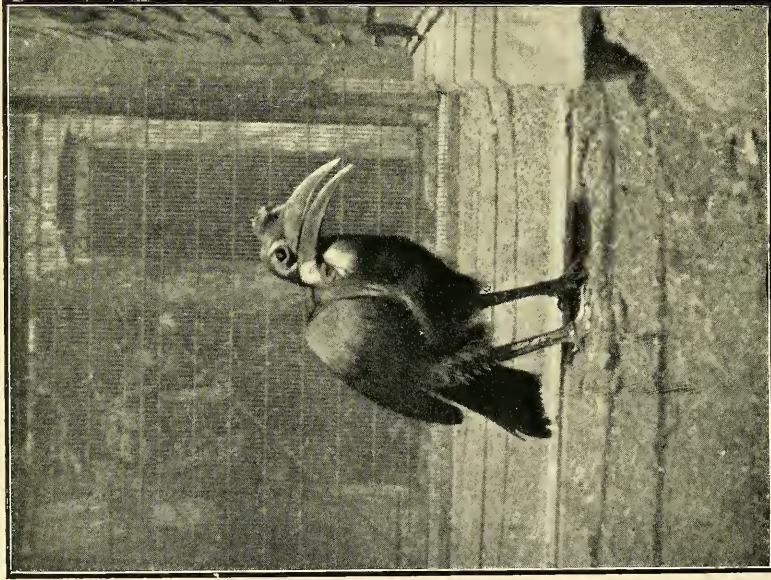
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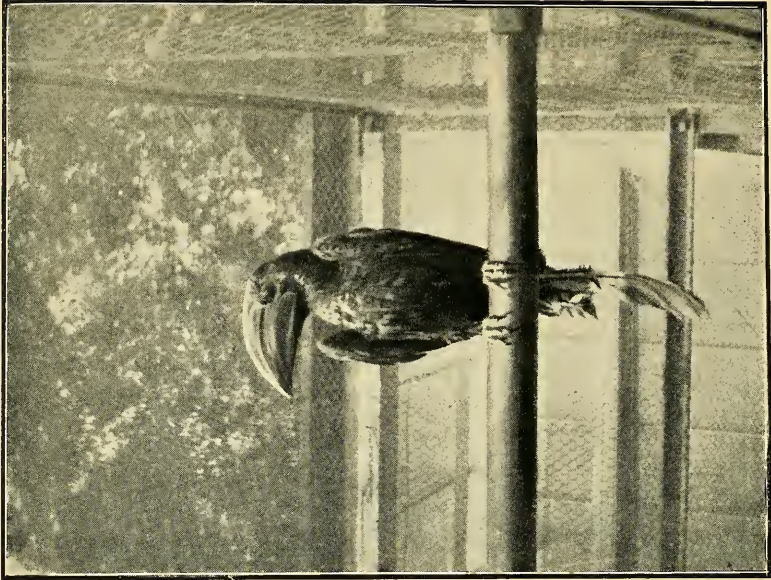
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BLACK HORNBILL (*Sphagolobus atratus*).

Photos by Graham Renshaw.

THE

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BEING THE JOURNAL OF THE

AVICULTURAL SOCIETY.

Third Series.—Vol. V.—No. 2.—*All rights reserved.* DECEMBER, 1913.

HORN BILLS.

By GRAHAM RENSHAW, M.B.

The curious birds known as Hornbills must be reckoned amongst the rarities of aviculture. Quaint, intelligent, amusing, they are unfortunately but little known to the private aviarist. Long acquaintance with the principal European Zoos has shown the present writer that comparatively few species are regularly exhibited: even in dealers' lists they figure spasmodically and uncertainly, but two or three times a year. Apparently the finest collection of living Hornbills is to be seen in the Gardens in Regent's Park. For many years the writer has taken a special interest in Hornbills, and has found them to well repay the closest study.

Ground Hornbills present a remarkable appearance owing to the "eyelashes" [modified feathers] which fringe the lids. Essentially terrestrial, when on the ground they suggest dishevelled, monstrous turkeys with the nightmare beaks of Toucans. They walk well, but are quite able to fly. Ground Hornbills in captivity are exceedingly playful. They are fond of amusing themselves with any small movable object such as an iron bar or rod, dancing round it with much display of their wings. Probably they make believe that their toy is a snake or other reptile, seizing and dropping it repeatedly, as if to swiftly disable some dangerous prey. Two species are recognised, one from Abyssinia (*Bucorax abyssinicus*), the other from South Africa (*B. cafer*).

The Black Hornbill (*Sphagobus atratus*) is a West African species: one kept by the writer proved a most charming pet.

Exceedingly tame, this bird enjoyed being caressed, allowed itself to be picked up without struggling, and fed readily from the hand. It enjoyed being scratched on the back of the head, slowly bending its head and raising the crown and nape feathers in parrot fashion. It could catch any food thrown to it, "fielding" the morsels with marvellous unerring accuracy. The cry of this bird was loud and harsh. The building in which it was kept was warmed by a stove, before which the bird would squat at night, like a dog crouching before a fire. Always good tempered and alert, this Hornbill used to amuse itself by jabbing at the stove with closed beak: it never attempted to bite anyone. On the ground it progressed in a series of long hops. Other individuals which I have observed flew well, making a loud swishing sound which has aptly been compared by travellers to the puffing of a railway engine.

The Rhinoceros Hornbill (*Buceros rhinoceros*) is but little known to aviculture. At present there is a very fine example in the Bird House at the Amsterdam Zoological Gardens, obtained from Sumatra. It appears to agree very well with the mixed collection of birds which share its cage. During the hot part of the day this Hornbill prefers to sit aloft, high up on a suitable perch. I do not remember seeing this species alive in the United Kingdom.

The "Two-horned" Hornbill (*Dichoceros bicornis*) is perhaps the oftenest imported species. It is of large size and somewhat clumsily built, and is further remarkable for its hoarse braying cry. As far as the writer has been able to observe, this is a sluggish species in captivity, entirely lacking the vivacity that characterises the enterprising, alert Ground Hornbills or the vivacious black species. Its quaint appearance is its chief claim to the attention of the aviculturist; possibly it requires a warmer temperature than is generally allotted to it, in order to display suitably its mental characteristics.

Temminck's Pied Hornbill (*Anthracoceros convexus*) is a small bird of convenient size for the aviary. In summer it can be kept out of doors in the day time: it will eat fish, frogs, mice, grapes and bananas. Some years ago I saw five of these Lesser Hornbills in the same cage in the Antwerp Zoo.: occasionally they figure in dealers' lists in this country. In common with so many picarian

birds, these Hornbills have the curious habit of shaking their plumage as if shivering. I can cordially recommend them as pets.

The Pigmy Hornbills of the genus *Lophoceros*, though apparently very little known in captivity, are sometimes exhibited in Continental collections. A few years ago I saw an example in the Jardin des Plantes, and a few weeks ago another in the Bird House at Antwerp. These were apparently the grey South African species (*L. epirhinus*), and in many years of study were the first living examples seen by the writer.

Hornbills are easily kept and can be acclimatized like any other birds. Like all creatures which have succeeded in the battle of life, they have most accommodating appetites and will eat almost anything—boiled rice, chopped bananas, fruits of various descriptions, fish, small birds, mice. Although possessed of harsh voices their cries are not disagreeable: the Pigmy Hornbills indeed are said to warble like a Thrush. Hornbills are certainly gifted with high intelligence, are affectionate, and soon become attached to their owner. In winter a warm room should be provided for them; in summer they may be kept outdoors in the day time. Like parrots they are subject to tuberculosis. The Black Hornbill mentioned above was examined by the writer after death: the liver was studded over with characteristic small, pale tubercular nodules.

ON SEXING PARRAKEETS.

Platycercinæ.

By THE MARQUIS OF TAVISTOCK.

Having had some experience of the majority of the Broadtail Parrakeets, I should say that, when adult, they are not on the whole *very* difficult birds to sex; nothing like so hard, for instance, as the true Parrots, Conures, and Macaws.

I quite agree with Dr. Lovell-Keays, however, that the sexing of immature specimens is in most cases largely a matter of guess work, though I am rather surprised to see that he mentions Redrumps as being difficult to distinguish when young. I have never bred Redrumps, although I have seen some not more than a few months old, and I have always been under the impression that the immature

cocks were very much greener than the hens from the time they left the nest ; probably, however, I have been wrong, and anyone who has bred Redrumps will of course know what they look like in their first plumage.*

I will now deal briefly with such of the *Platyercinæ* as I have kept, referring to what I consider the principal external sexual differences and the degree in which they are apparent.

COMMON ROSELLA. Adult hen decidedly smaller than the cock and with a smaller head and beak. Body colours usually less bright ; the red bib smaller and its edges much more uneven. An adult cock is quite unmistakable, but it is possible to confuse an adult hen with a young cock. The best way is to look at the back of the head ; in most young birds there is a strip of green about half inch wide, running from the neck right up on to the crown. In old hens this is seldom noticeable, and the green strip, if it exists at all, is shorter, irregular in outline, and frequently edged with orange yellow.

YELLOW-MANTLED ROSELLA. The only living specimen of this beautiful local race I have ever seen, was an old cock, till lately in my possession. The sexual differences of plumage, size, etc. would undoubtedly be the same as in *P. eximius*. In Gould's "Birds of Australia" there is a figure of a parrakeet with an almost entirely yellow head, which is described as an immature *P. splendidus*. It is, however, very improbable that young Yellow-mantles differ so remarkably from young Red Rosellas as to possess yellow heads, and it is much more likely that the bird from which the figure was taken was an abnormally-coloured adult, possibly with a dash of Mealy Rosella in its pedigree. I am, indeed, half inclined to think that Yellow-mantles are of hybrid origin.

MEALY ROSELLA and BLUE-CHEEKED PARRAKEET. Cock rather larger than the hen and a little brighter coloured. Head decidedly larger and squarer than that of the female.

BROWN'S PARRAKEET. Cock a shade larger than the hen, with, in

* The males are easily distinguished, for amongst other differences, they have some red on the rump.—ED.

most cases, considerably more black about him. Head and beak of the male always decidedly larger and heavier. Hen Brown's vary a good deal in colour, some being much brighter and more heavily marked than others. This fact, combined with the great excess in the number of females imported, is responsible for the frequent mistakes made in sexing this parrakeet.

PENNANT'S PARRAKEET. Hen decidedly smaller than the cock, with a smaller head and beak; in captivity often duller in colour, but not invariably so. An easy species to sex.

ADELAIDE PARRAKEET. Hen rather smaller and sometimes much redder than the cock. Beak and head also smaller, but many cock Adelaides have rather narrow beaks, which makes them somewhat deceptive birds to sex.

YELLOW-BELLIED PARRAKEET. Hen decidedly smaller than the cock with a much smaller head and beak. The species is an easy one to sex.

YELLOW-RUMPED PARRAKEET. Cock rather larger and brighter than the hen; beak a little broader. Difference in the appearance of the sexes, often slight, as in the case of the Adelaides.

BARNARD'S PARRAKEET. Hen a little smaller than the cock and usually less blue. Head smaller and bill much narrower.

BAUER'S PARRAKEET. Sexes much alike in colour, but the hen is decidedly smaller and has a much smaller head and beak.

YELLOW-COLLARED PARRAKEET. Hen smaller than the cock, with a rather smaller head and narrower beak. The great size of this bird—the largest of the Broadtails—makes one rather apt to mistake single hens for cocks, when one has no opportunity of comparing them with males of their species.

STANLEY PARRAKEET. Hen easily distinguishable by her dull and patchy tints. Her head is mainly green; her cheek patches very dull in colour and her breast with a lot of green feathers interspersed among the red. Young cocks have usually a little more red on their heads than young hens of the same age, or even than old hens. In some cases they assume the crimson breast of the adult in the course of their first autumn, but not as a rule before they are eighteen months old. Gould's

statement that the sexes when adult are alike, appears to be incorrect.

RED-CAPPED PARRAKEET. Hen duller in colour than the cock : cap usually streaked with green, even in old birds. Hen Red-capped Parrakeets appear to retain their immature dress much longer than males.

RED-VENTED BLUE-BONNET.	} Cock rather larger and brighter than the hen, with a slightly larger beak ; more vigorous and perky in demeanour, and " bobs " with greater energy when alarmed.
COMMON BLUE-BONNET.	

easy one to sex.

REDRUMP and other *Psephoti*. Sexes easily distinguishable by striking differences of colour.

BOURKE'S PARRAKEET. Adult cock rather brighter coloured than the hen, but extremely hard to distinguish. When in breeding condition he has a habit of occasionally drawing himself up and slightly depressing his shoulders. The best way of sexing Bourke's is therefore, if possible, to watch their behaviour in an aviary. [The head of the female is smaller, the skull less broad, whilst the male has more blue over the cere, etc.—ED.]

Of the ELEGANT and BLUE-WINGED GRASS PARRAKEETS I have had so little experience that I can only say that I am inclined to think that the males have rather larger and squarer heads than their mates. Slight differences in plumage are I believe said to exist, but I have not been able to observe them.

A TAME HUNTING CISSA.

By Mrs. WARREN VERNON.

A few weeks ago, Mr. Frost told me he had a very charming pet—a Hunting Cissa. I was at that time feeling very virtuous and quite determined to buy no more birds, at any rate till after Xmas. Alas! for human nature when hobbies come in. One morning, a few days later, my maid brought a large travelling cage and said "A bird has come." I was expecting none, and was very much surprised. On taking off the paper a curious purring noise was heard, and I saw

looking at me, through a piece of thin perforated tin, a lovely bright eye and saw also a scarlet beak. Before that bird was quite unpacked all the good resolutions were forgotten.

I must say he is the most delightful pet one could keep, besides being so pretty. At present he is deep in his moult and looks more like a porcupine than a bird.

Now as to his funny ways. The first thing in the morning he comes out in my room to be petted ; he likes to be held in your two hands and stroked and told he is lovely, growling all the time. He then helps himself to a small piece of butter off my tea tray, and holds it in his mouth till nearly melted, when he swallows it with a gulp. I take him on my hand into the bath-room, where he at once takes a bath in tepid water, and sits on the back of a chair in the sun to dry. Everything that is bright is carried away, and generally my dressing table is denuded of all the smaller things. He buries anything he likes very much, under a quilt or the corner of a cushion. I have never met a bird so free from fear : the only thing he hates is a dog, and the awful noise he makes, terrifies them as much as he is terrified himself. I caught him carrying off a ring the other day, and we had quite a fight before he would give it up.

I feed him on "Perfecto," Mr. Galloway's food, and York cheese, and he has a small bird such as a Sparrow when one is caught, also some raw meat as he is moulting so heavily. He likes raw peas in their pods, flies, and gentles. He found the mealworm pan the other day, and I was wondering what mischief he was up to as he was so quiet : I found him simply gorging as fast as he could pick them out. He will also eat potato and rice.

I let him fly about as often as possible, and for a large bird I have never noticed so little smell : he is very clean and, in fact, quite a companion.

WILD DUCKS FROM AN INCUBATOR.

By HERBERT K. JOB,

State Ornithologist of Connecticut.

*(By kind permission of the Outing Publishing Co.)*THE CRUCIAL STAGE OF THE MANITOBA WILD DUCK EXPEDITION
—HATCHING, REARING AND TRANSPORTING THE DUCKLINGS.

Somehow it seemed as though the breezy, bracing atmosphere of the wild Manitoba prairie, while it sparkled with exhilaration, was tremulous also with interrogation. Everything that we were undertaking was new and without precedent. Questions and problems confronted us on every hand. Perhaps we might fail. It was considerable of a load of responsibility.

One of the fundamental questions confronting us was whether eggs could be safely transported, or whether it would be necessary to try to hatch them and raise the young before starting back. In either case there were uncertainties, so I had decided to try both methods. During the first few days of the hunt we found quite a few ducks' nests with fresh, incomplete sets, six eggs or less. The normal full set is usually eight to eleven eggs, and occasionally there are even more. I have found as many as twenty-two! Picking up now a few of these incomplete sets, I sent them on by express. They were at once set, and before the trip was half over I knew the result. Not a single one developed an embryo.

From previous investigation I knew it was hopeless to transport eggs in the earlier stages of incubation, as the jar was sure to break the delicate blood-vessels. I had learned, though, that the embryos within a few days of hatching could stand a good deal. Mr. C. William Beebe, of the New York Zoological Park, had brought incubated seabirds' eggs from Virginia to New York, without artificial heat, which had hatched normally on arrival. In case it should prove expedient, I had thought to attempt transporting some in lighted incubators on the cars, and had secured special permission from the express companies.

An early incident of the expedition showed how much punishment incubated eggs would stand. On a driving trip, off exploring, we found a set of thirteen Gadwalls' eggs on an island, thirty miles from camp. Wrapping them in a rubber-coated focus-cloth to retain

the heat, and putting them in a creel, they were carried all the afternoon in a boat, then set under a hen at a ranch at night, and driven all the next day over rough prairie trails. The weather was hot all the time, and upon arrival the eggs were fully as warm as when taken from the nest. The assistant had carried the creel all day in his hands, to save the eggs from the jolting as much as possible. Two days and a half later every one of the thirteen hatched. Eleven of these ducklings, as I now write, grown to maturity, are happy and active in their new surroundings in our "effete" civilization of the East. Evidently the "rough riding" experience did them no harm.

This was our first batch, one hundred per cent. which came off on the 2nd of July. Rejoiced at this auspicious beginning, next morning the assistant and I started out in the canoe and collected the various sets of ducks' eggs previously found, most of them heavily incubated. The incubator was now considerably filled. How handsome the tray looked, as we took it out for cooling and sprinkling each day, how entrancingly interesting, with all those eggs of so many shades and sizes, freighted, too, with such possibilities! The uninitiated would say that they looked much alike, but years of experience reveal real differences in shade, size, and texture. The only kinds in that region that are indistinguishable are the eggs of Gadwall and Baldpate, both of which range from pure white to creamy, and those of the two Teals, which are small and creamy white. Day by day other sets were added, and the wonder and interest grew.

Right here we were, from necessity, violating one of the fundamental rules of incubator work, never to put in one machine eggs at different times and in different stages of incubation. It was clearly impossible to provide, out there in the wilderness, a separate machine for every set of eggs. Setting hens, moreover, could not be had, So we had to take chances on spoling the eggs.

Here were the incubator methods used. In the main room of the lodge, which was built of logs and plastered, we ran the incubators, which were kept at 103 degrees. Once a day we cooled the eggs, till the temperature felt neutral when the egg was laid against the eyelid. Then the tray was laid on the floor, and water, com-

fortably warm to the hand, was dashed over the eggs. They were then turned, the other side sprinkled, and then placed back in the machine. Two towels were then soaked in quite hot water and placed, almost dripping, on the tray below the eggs. In cool weather, when the temperature was slow in recovering, the regulator was shut down temporarily, to hasten matters.

As soon as any set of eggs showed signs of hatching, it was removed to the second incubator, which was run at 104 degrees, which was maintained till the hatch was complete. The ducklings were kept in the machine from twenty-four to thirty-six hours after hatching. Owing to lack of brooder facilities, we sometimes used the third incubator for another day or two as a brooder, keeping the door ajar and the temperature from ninety to ninety-five.

After our first hatch no more occurred for nearly a week. Then business came with a rush, on July 8th, a memorable day. On the seventh three sets had begun to pip, one each of Redhead, Lesser Scaup, and Pintail. This morning, as I went forth to hunt Ruddy Ducks' nests, two little Redheads were already out. At dinner time, when I returned successful, the batch was actively in progress, the eggs popping almost like corn over a fire.

It was so exciting and fascinating that we both let dinner wait and sat in front of the machine to watch, How they did come! First the shell was chipped nearly round. Pulsations more and more violent! Off bursts the larger end of the shell. A few more struggles, the head is out; then again, and the soaking little novice tumbles all over himself and everything else. Getting his balance, he takes a look around, and immediately goes to preening, as though his mother had previously whispered to him just what to do.

The afternoon was still young when the hatch was complete. Of twenty-four eggs, only three had failed to hatch—one infertile, one with dead chick, and one rotten. One set, the Scaups', hatched every egg. Our next hatch, a set of Redhead, on the eleventh, yielded another one hundred per cent, as did next day a set of what we hoped were Baldpate or American Widgeon, but which proved to be Gadwall. By this time it seemed so natural to hatch every egg of a set that we were surprised and even a bit regretful if even a single egg failed. As, for instance, on the twelfth also, when our small set

of four ruddy's eggs came to term. All four were pipped, and three came out promptly. The other duckling was having a hard struggle and seemed to be stuck. After a time I decided to assist, but it was too late. The little fellow had died from exhaustion.

So it ran on from time to time. The next four sets hatched consecutively one hundred per cent. The poorest hatch of all was a set of Blue-winged Teal, from which we got five good ducklings, three nearly ready to hatch, being dead in the shell. This was probably due to my forgetting the eggs when they were out cooling, Yet even that result was not bad.

On tabulating the records, I find that only three eggs were infertile, and very few embryos failed to hatch. In over half the sets every egg hatched, the average hatch for the season being ninety-two per cent. which is certainly remarkable, far surpassing the results in ordinary poultry work. This was despite the disadvantages of placing miscellaneous eggs in the same machine, transporting them for miles at critical stages of incubation, and subjecting them to the abrupt change of conditions. Probably it is the great vigour and virility of this wild stock, hardened to rigorous climatic conditions, that accounts for this astonishing percentage.

To revert to stern realities, lack of brooders was one of our principal causes for anxiety. All we had at first was an indoor hover, with hot water heater. The large outdoor brooder we had ordered was delayed in transportation. The weather was cold and stormy, and, even in the kitchen, that hover would not heat up to over eighty degrees. We had to keep our first brood quite a while in the incubator. Finally, getting the hover enclosed in a box and building a fire in the stove to warm the room, we ventured to transfer the ducklings. During rare periods of sunshine we transferred the ducklings by hand outdoors to a wire run on the lee side of the cottage, partly sheltered from the raging prairie wind. As other broods hatched, we had our hands more than full and saved the ducklings only by unremitting toil. Finally, one day, the assistant discovered the long-desired brooder behind an unused cottage, where a drunken driver had dumped it the night before.

Everyone familiar with young wild ducks knows what shy skulkers they are, having a supposed inherent and unconquerable

wildness. This notion may now be consigned to the scrap-heap. These ducklings, of various kinds, hatched artificially, away from the influence and teaching of the wild mother, have absolutely no fear of man. Instead of fleeing from us, they simply would not get out of the way, and we had to be very careful, in the runways, not to step on them.

Of all the hungry creatures I ever saw, these took the prize. The instant I appeared, an hour or more after any meal, they would rush at me in a frantic mob, piping, struggling, jumping on one another. If I reached out my hand to remove an empty water fountain, they would almost eat me up! When the two heaping plates of food were placed on the ground to divide the mob, they simply hurled themselves at the dishes, each one gulping, gobbling, shovelling, for all it was worth. One species is specially named "shoveller." but, bless them, every one is a shoveller from the word "go!" After about two or three mouthfuls, each duckling hustles to get a drink and wash it down, sifting the water through its bill. A quart of water did not last any time. It was necessary to use drinking fountains to keep them from getting soaked, and even then they got all too wet. We improvised small fountains for the smaller ones with saucers and tin cans with holes cut in them.

The crucial question now was whether the food would nourish the ducklings properly. The first week with that first brood was an anxious one. Every day I was afraid that they would begin to die off. In a few days one did die, and we held an anxious post mortem. The others, though grew and flourished. As the next broods hatched, we could see that the first had made great gain in size. Another stage of the battle was won. In fact, for all except the Ruddies and Scoters the food proved wholly suitable. They all thrived on it, and there was not one single death by indigestion or disease the whole trip.

The feeding system was as follows: The main staples were raw oatmeal and a special wild duck meal. For nursery food we began with three parts of oatmeal to one of duck meal, mixed with barely enough water to moisten, not sloppy. Into this was mixed also a moderate amount of coarse, sharp sand, not over ten per cent. This, I believe, is absolutely essential for proper digestion. Also we

kept by them a dish of fine grit and charcoal, and plenty of fresh water. As they grew older we increased the proportion of duck meal, till, at over two weeks old, it was about half and half.

Hard-boiled egg, finely ground up, shell and all, is also a most desirable food. Whenever eggs could be secured, we fed these once a day, mingled with sand and diluted with oatmeal. The ducklings were eager for this above everything else. It was very hard to secure eggs from the settlers. Another time I would have cheap eggs shipped out from civilization in case lots. From about five days old and on we fed a little crissel, a preparation of dried clean lean meat, but it must be used sparingly. From the age of two weeks I began to add a little chick-grain, and from a month old and on they had a considerable quantity of this.

Green vegetable food is important. Having the ducklings out on the grass, we frequently changed the location of the yards, and they soon stripped the leaves off the weeds. As substitutes for lettuce and cabbage, we pulled up armsful of cat-tails and rushes in the adjoining marsh, and chopped up the tender inside growth, down near the root, for which the ducklings were always eager.

During the downy stage we fed them five times a day, as much as they would eat up clean in a short time, reducing the number of meals as they grew larger. Three times is enough when they are getting fledged and two thereafter.

I did not dare to give them water to swim in, especially as the weather was cold nearly all the time. Under proper conditions, on warm days, however, they really need an occasional short bath, to prevent their plumage from getting stuck up. Sometimes I had to wash them off by hand, and occasionally dry them off in the incubator. Doubtless it seems strange that ducklings should be kept out of the water. In the wild state the mother probably keeps them oiled, and broods them frequently. In confinement, however, they soon become soaked and chilled, and are apt to die of cramp. We had little of this, because I did not give them the chance. One or two went that way, and others I saved by hustling them promptly into the incubator. Very hot sun is also dangerous, and shade should always be accessible. The brooder also must not be allowed to get hot.

On warm days it should be opened, and the lamp in daytime should ordinarily be turned very low.

Of our twelve species of ducklings, there were but two for which our methods were inadequate.—the Ruddy Duck and the White-winged Scoter. The young scoters are big ducklings, with black and white down; beautiful, gentle creatures. They walk around in an upright attitude, like little men, with a sort of wise air. Docile, they ate quite freely, though they did not rush and shovel quite like the others. The food, however, did not nourish them, and they kept dying.

(To be continued).

BIRD NOTES FROM PORT SUDAN.

By Mrs. Noël E. WATERFIELD.

A few notes on some of the birds that are to be seen in the Eastern Sudan may be of interest to readers of the *Avicultural Magazine*, as, during the winter, the bird population is largely increased by immigrants from England and more northerly climes. White Wagtails, Willow Wrens, Whitethroats and Wheatears are all common in cultivated ground and gardens. The first-named seems to be the commonest bird of all, and in the desert flocks are to be seen busily running about with perhaps one or two Yellow Wagtails who have joined the company. Occasionally a Redstart appears in the garden or a Red-backed Shrike, but one is struck by the silence of all the birds; they are seldom heard, and only to be seen as the result of much watching. A couple of Bluethroats were the only birds who seemed to enjoy life, and they were bathing in a pool from the hose and thoroughly enjoyed themselves and one another's society.

The birds all get wonderfully tame, and work diligently for a living in the sesabau (*Parkinsonia*) bushes round the little patch of rough grass, called by courtesy a garden. One other bird who frequents the house and garden is a Blue Thrush. He sings, though not very melodiously, and has his special nook for roosting on the upstairs verandah, having kept the same spot for the last three



WILLOW WREN WITH NESTLINGS.

Photo by H. Willford.

winters. Perhaps it is his winter plumage, but under a field-glass all the feathers of his breast appear tipped with grey.*

Everywhere round Port Sudan the country is salt, sandy, and without vegetation, except where a khor brings down soil from the hills. It is in these dry water courses that one gets glimpses of bird-life that are interesting, nay exciting. A beautiful little Bee-eater, suggestive only of a Swallow but with chestnut orange sides, sipping honey at the pink blossoms of the wild caper, is a sight not readily to be forgotten.

But the true desert birds are quiet in their colouring and wonderfully adapted to their surroundings. First among them for interest is the little Finch Lark. The male is striking in the curious arrangement of his colouring. Breast and underparts are jet black, cheeks white, back wings and tail mottled sandy colour. It is only when flying overhead that he can be appreciated, on the stony ground the bird is invisible.

A beautiful bird and a very common one in the khor is the Bush Shrike. He flies about *en famille* during the winter and breeds in June in a thorny bush. Nesting sites would be hard to find if he did not want a thorny bush.

The male has a brilliant and irregular carmine marking all down the breast and a touch of the same colour at the base of the tail. The hen bird has considerably less carmine to relieve the sandiness of her plumage.

Another bird always to be seen in the khor is the Desert Chat. He certainly is the smartest bird imaginable with his black face and wings, and behaves very much as a Stonechat does at home, taking up a position on the topmost twig of a bush from which to watch proceedings.

These few notes cannot close without some mention of the Egyptian Vulture as he is one of the commonest of birds, and may be seen by the score in the desert, round a pool after a shower of rain. Their short tails and slow walk give them a curiously fowl-like appearance, so they are well-named Pharaoh's chickens.

* The Blue Rock Thrush has a much more powdered appearance after the autumn moult, the feathers of the head becoming purer blue in the spring.—ED.

ADELAIDE PARAKEETS.

SOME NOTES AND EXPERIENCES.

By THE MARQUIS OF TAVISTOCK.

Although not, perhaps, one of the most gorgeous members of the brightly-clad family to which it belongs, the Adelaide Parrakeet (*Platycercus adelaidæ*) is certainly not the least beautiful: the varied and rather autumnal tints of its plumage, when seen to advantage, being seldom forgotten.

It is not very easy to give an accurate description of an adult cock Adelaide's plumage, but some idea can be conveyed to those who have never seen one, by saying that it has the breast and crown of the head a rosy brick colour, the sides of the neck yellowish buff, the rump and flanks yellowish or reddish buff and the shoulders marked with black in the 'hen pheasant' pattern seen in the Rosella and many other Australian Parrakeets. The wings are partly blue and partly black with some buff or greenish markings, and the tail feathers are of different shades of blue. Some hen Adelaides closely resemble the cocks in colour, and are only distinguishable by their smaller size and slightly duller tints. Others, however, have hardly any green or buff about them at all, and might almost be mistaken for small, dull-coloured Pennants. I at one time regarded these very red birds—they always seem to be hens, I have never seen a cock, dead or alive—as Pennant hybrids, but I am now rather inclined to think that this is not the case, for a pair of imported Adelaides, coming from the same district and perhaps belonging to the same brood, in which the cock was of the buffish type and the hen very red, produced young in which the sexes (now in full colour) are almost alike in plumage and are indistinguishable from another imported pair in which there is a similar absence of any marked difference in the appearance of the male and female.

So much for the colouration of adult Adelaides: now for that of the young. When first leaving the nest the latter are a golden olive, yellower on the back than on the breast, with blue cheek patches, a little red round the throat and some blue in the wings and tail. During the course of their first autumn and winter they tend to become rather greener, (though they are never so green as

young Pennants), and there is a slow but continuous growth of red feathers on the breast and a gradual appearance of the 'hen pheasant' pattern on the back. By the time they are twelve months old and are beginning to think of nesting they are almost as red on the breast as they will ever become, and the pattern on the back is very marked, though not yet perfect. There is, however, nothing like the full amount of blue and black on the wings and the rump is still yellowish olive and not yellowish or reddish buff. In early autumn, immediately after breeding, there is a complete moult and the full adult plumage is assumed. It is rather curious that Gould, in his 'Birds of Australia' has given figures of what he describes as an adult Adelaide and one in immature dress. As a matter of fact, the plate depicts two adult birds—a hen of the red phase and a cock of the buff type. The lower figure (the cock) does not show any of the markings—or rather lack of markings—really characteristic of immaturity. As an aviary bird the Adelaide possesses the merit of being absolutely indifferent to cold, when properly acclimatized, not particularly destructive to woodwork and easily catered for—wheat, oats, Canary, millet and hemp, with apple and green stuff, being all that it requires in the way of food. Grit should, of course, be supplied, as well as water for drinking and bathing. During the breeding season a mated cock Adelaide is an impossible neighbour for any other *Platycercus* kept in the same aviary. Whether he will or will not tolerate the presence of other varieties of Parrakeets less nearly related to him depends a good deal on individual temperament. He will not, as a rule, interfere with small finches, but as in nearly all cases, where the latter are kept with parrots or parrakeets, it is very advisable to protect their sleeping and nesting quarters with large mesh wire netting, through which they alone are able to pass. Under these conditions, the casualties, if any occur, will be confined to sick birds and very young fledgelings which are not sufficiently alert to keep out of the way of danger.

In the acclimatization experiment, in which I have been engaged during the past few years with different species of Australian parrakeets, the Adelaide has, on the whole, brought me more satisfaction than disappointment, which is more than I can say of its near relative the Pennant, whose exasperating behaviour I am at

present unable to describe in language sufficiently temperate to appear in the pages of the magazine. This is, I think, due not so much to the stay-at-home qualities of Adelaides in general, as to the fact that I was particularly fortunate in my first pair which happened to be endowed with more sense than others of their kind have subsequently proved to possess. Their history is as follows:—

In the summer of 1911 I bought from a dealer three young Adelaides, which appeared to be about twelve months old. They were in rather poor condition, but on being turned, with cut wings, into a sunny grass enclosure, they improved steadily, and in a few weeks time had moulted into adult plumage and were flying about the garden. One of them wandered away and was picked up dead in an orchard, too much decomposed for the cause of its death to be ascertainable; but the survivors, which proved to be a cock and a hen, continued to stay and thrive well. They did not, however, appear to care much for each other's company and the hen ultimately paired with a Pennant. During the course of that winter I bought another Adelaide, in fine condition, together with his mate, a hen Rosella. Not then possessing the knowledge with which bitter experience has since endowed me, I let the pair out together, full-winged. They stayed for a few days, then the wandering spirit, which is characteristic of her kind, asserted itself in the Rosella and she vanished—and the Adelaide with her. After that, matters ran an uneventful course until the end of March, when one day I received the disagreeable information that the cock Adelaide had been picked up with a broken wing. We put him in a cage, intending to keep him safe and well fed, until Nature had repaired the injury. He, however, was of opinion that the healing hand of Nature would work better outside a parrot cage than inside, for, three days later, he squeezed himself through the bars and disappeared entirely. We watched for him on the ground feeding trays, but he never came and was soon given up for dead. What was our surprise, therefore, when about a month later he suddenly turned up again as strong and well as ever, except for a slightly 'dropped' wing, which did not interfere seriously with his powers of flight. His miraculous return not only surprised us, but it also, apparently, made a favourable impression on the hen Adelaide, who deserted her alien husband and took up

with the ex-invalid. The disgusted Pennant departed with all possible despatch and was never seen by us again.

The pair of *Adelaides* had not been together long when the hen in her turn vanished, and as they had shown no particular signs of nesting, I imagined that she had followed the Pennant's example and that she was lost for good. About this time I received two more *Adelaides* from the Continent. They were fine birds, but the cock proved so insufferably pugnacious that I ultimately sent him away. The hen I turned out, hoping that she would mate with the broken-winged bird and prevent him from straying in search of a wife. She stayed well enough, but to my surprise he took very little notice of her. Then one day she killed herself by flying against something—and the outlook seemed gloomy in the extreme. However, a few days later, the tide of fortune turned, for after an absence of about seven weeks the first hen re-appeared, and I saw her in company with the cock, feeding busily on one of the trays. For the next fortnight the pair were constantly together and seemed to be eating an such abnormal amount of seed, that at length I began to feel convinced that there must be "something up." There was; for one day came the satisfactory news that the young *Adelaides* had made their appearance, and on going out I found four—there ultimately proved to be six—sitting in a yew tree, uttering their plaintive call for food. No doubt they had been out of the nest for some time before we found them, but young *Platycercines* are not easy to locate at first as they do not fly far, are very silent except when hungry, and harmonize perfectly with the green foliage among which they sit. Their plumage is, from the moment they leave the nest, wonderfully sleek and perfect, not a feather frayed, ruffled or out of place, and their soft colours, dainty heads and beaks and dark eyes, give them a beauty hardly less attractive than the splendour of the adults. The old birds continued to feed their offspring for several days; then, evidently considering they were quite old enough to look after themselves, they became at first indifferent towards them, and, before long, actively hostile. Unlike *Rosellas*, *Stanleys* and *Barnards*, *Adelaides* are, as far as my experience goes, single-brooded, beginning to moult very soon after the young are able to fly and never attempting to nest again during the same season.

The family of six, now deserted by their parents, did not keep very closely together, and it was the exception to see the whole number at one time; also they very soon began to disagree among themselves, especially at mealtimes, and the stronger of the young cocks would seldom tolerate the presence of his brother until he had satisfied his hunger and left the feeding tray. During September and October both old and young birds strayed to considerable distances and two of the latter never returned. They showed a great partiality for apples and paid frequent visits to neighbouring orchards without, however, doing serious damage to the fruit, as they are far less wasteful and destructive than many of the larger parrots, which throw down and spoil much more than they actually consume.

After the departure of the pair just referred to, my stock of Adelaides consisted (in November 1912) of the two breeding birds, an imported cock and two hens acquired during the summer, the young cock and three young hens. The imported birds, all of which were fully adult, stayed well during the winter, started to prospect for nesting sites in February, raised my hopes and then, in true Pennant fashion, departed for good. Of the three young hens: one paired with the young cock and another with a cock Pennant. The third, when about five months old, completely lost the use of one of her legs; I thought she had sustained some injury, but when, eight weeks later, she lost the use of the other leg also and had to be destroyed, it became evident that she had been suffering from a mysterious form of paralysis which sometimes attacks my parrakeets, etc. when at liberty. Fortunately the disease is rare among *Platy-cercines*, and a Many-Colour, which recently fell a victim after enjoying nearly a year's freedom in perfect health, is the only other case which I have met with in this particular family. Madagascar Love-birds, however, develop the disease so freely that I have had to give up keeping them. I have sent several for *post mortem* examination, but the reports have always been vague and unsatisfactory.

In March of this year the old pair of Adelaides nested in the decaying trunk of an oak about 40ft. from the ground, the entrance hole being perfectly round and only just large enough to allow them to squeeze through. The hen, as on the previous occasion, disappeared entirely for nearly seven weeks, being fed on the nest by the cock,

and I am rather doubtful if she ever came off at all, certainly we never saw her do so. At the end of her long period of seclusion, she resumed a more normal mode of existence, flying about with her mate and feeding busily. I was hoping for the appearance of another brood of six, but in this I was disappointed, for although the young bird which at length emerged was as strong as I could wish, no others followed, and it became evident that if more had been hatched, some misfortune must have overtaken them while still in the nest. Another piece of ill-luck followed, for very shortly after the appearance of his child the cock Adelaide was picked up very thin and weak and evidently in a bad way. His condition aroused in my mind grave fears of tuberculosis and septic fever—the two fell diseases against which I am for ever waging a none too successful warfare; but as it turned out, I need not have been anxious, for when the bird died the *post mortem* revealed inflammation of the lungs as the sole cause. Poor fellow! it seemed hard luck, that after enduring the fogs and frost of two winters, unscathed, he should have had his brief but useful career ignominiously terminated in July by an ordinary cold caught in the moult. If I had only “cooked” him up for a few days in a room with a temperature of 80—90° (*the* sovereign remedy for most sick parrots) I might very likely have saved him!

The fortunes of the young birds in the matter of nesting, fared no better than those of their parents. The hen which had paired with the Pennant, lost her mate in the early spring and took up with a Yellow-bellied Parrakeet (*P. flaviventris*). Both she and her sister evidently nested, as they vanished for many weeks, while their mates remained. But no young have made their appearance and they are now long over-due.

To keep up my stock and introduce fresh blood, I have lately secured three more Adelaides—two cocks and a hen. One of the former I hope will make a pair with the old breeding bird; the other—or the hen, I shall reserve as a mate for this year's young one whose sex is at present uncertain. Next year, if all goes well, I may have eighteen young Adelaides; if it doesn't—but we won't think about that. How could one bear the present trials and past disappointments of aviculture if one did not always contemplate a preternaturally roseate future?

SOME BIRDS OF THE PHILIPPINE ISLANDS.

cf. A MANUAL OF PHILIPPINE BIRDS BY
RICHARD C. MCGREGOR.

Columbæ.

Turturinaæ. DUSSUMIER'S TURTLE DOVE. *Streptopelia dussumieri*. Sexes alike. Forehead and face pearl grey. Top and sides of head and nape darker, washed with vinous, nuchal collar blackish, each feather touched with grey, the tips faint metallic green. Upper parts, earthy brown : chin white shading into light vinous on throat, breast, and sides of neck and abdomen ; sides and flanks grey, etc. Enormously abundant in many localities, especially about the rice-fields in harvest. Everywhere common in open country. It is a favourite cage-bird with the natives, who call it "took-roo" from its note.

* * *

RED TURTLE DOVE. *Enopopelia humilis*. Back, wings, and under parts nearly uniform vinaceous-red ; upper parts more reddish-brown ; head and sides of face light slate-grey sharply separated from colour of back by a narrow black nuchal band ; lower back, rump and upper tail coverts blackish slate ; chin white ; bill and legs black.

It is one of the common Doves of Luzon, and is very abundant in open lowland country ; many are sold at Manila throughout the year.

* * *

MALAY SPOTTED DOVE. *Sipipopelia tigrina*. Head dark grey, forehead and face lighter ; lores with a small black spot ; bifurcated feathers of neck black with white tips ; upper parts brown with paler rusty edges to the feathers and dark shaft-stripes ; lower parts vinous, abdomen white washed with buff.

This Dove occurs in small numbers as a winter visitor to Balabac and Palawan.

* * *

BARRED GROUND DOVE. *Geopelia striata*. One of the commonest species in Luzon, but occurring rarely in other islands of the Archipelago.

* * *

INDIAN BRONZE-WINGED DOVE. *Chalcophaps indica*.

Exceedingly common throughout the group.

Invariably found on the ground, and in deep woods. In no place abundant, the species may be found in nearly every island where forest, or even a small growth of trees exists to afford protected feeding grounds.

* * *

Genus. *Phlegœnas*. BLEEDING HEART DOVES. These are known under the name of Puñalada, meaning "stabbed with a dagger."

P. Luzonica. This beautiful Dove is often found in the Manila markets and is a well-known favourite of the Spaniards. In Europe it is the best known of the genus.

[A carpenter working at my aviaries in Italy came to me to tell me that two Doves must have been badly injured, as both had deep wounds in their breasts. They were "Bleeding-hearts." H.D.A.]

* * *

P. criniger. See *Avic. Mag.*, June, 1909. Coloured illustration, and an account by Mr. T. H. Newman.

This Dove is known as Bartlett's Bleeding-heart. They are invariably found on the ground in the forest. They run very rapidly, and in close cover frequently escape in this way without taking wing.

This Dove is fairly abundant in Basilan, but much rarer in Samar.

* * *

P. Keayi. KEAY'S BLEEDING-HEART. This Dove is easily recognised by the conspicuous white band across the wing.

Head, upper parts of cheeks, hind neck, sides of breast, mantle, and lesser wing-coverts grey, broadly edged with dark metallic green, changing to amethystine; back and rump chestnut with amethystine margins; upper tail coverts purplish chestnut; central tail feathers chestnut, the remainder grey with a broad subapical band of black; lower parts whitish, with small blood-red spot on the front breast.

* * *

P. menagei. TAWI TAWI PUÑALADA. Entire upper surface of head, upper back and sides of breast rich metallic green. Wings, etc., ruddy brown with violet and dark green lights, etc. The

metallic green of neck, etc., is continued in a distinct band across the breast, only slightly interrupted at centre of breast and enclosing a beautiful *orange* plastron formed by the bristle-like tips of the feathers of the fore breast; underparts, creamy white and buff.

This Bleeding-heart Dove is extremely rare and difficult to obtain.

* * *

P. platenæ. MINDORO PUNALADA. Head and neck dark metallic green, changing to amethystine; scapulars, back, and rump chestnut, with edgings of green; below white to buff; finely speckled with grey on sides of breast; red crop-patch very small, etc., etc.

Common in the old forests in the interior of Mindoro, but very difficult to shoot. Its nest has been found in a tangle of vines about eight feet from the ground. The female flew from the nest, pretending to be lame.

* * *

Calœnas ricobarica. NICOBAR PIGEON. This curious pigeon with its short white tail and long neck-plumes, etc., of bright metallic green, blue and red-bronze, is well known in Europe, although somewhat rarely imported.

It is rare in all the Philippine Islands except Tawi Tawi, where it is very common, and is invariably found in deep woods. It rises very heavily and with much noise, always alighting in low trees, and then flying from tree to tree if disturbed.

* * *

Macropygia tenuirostris. SLENDER-BILLED CUCKOO DOVE. Head, sides of neck, breast and lower parts cinnamon-rufous; above, including wings and tail dark brown; most of the feathers edged with fine rufous dots; neck feathers covered with irregular vermiculations of rufous and blackish brown. A few black cross lines on sides of neck and crop, the neck being glossed with amethystine and green, the metallic colours extending faintly on to the back and rump.

Exceedingly common in some localities; for example, among the mountains of North Luzon, nesting where the large tracts of dead bracken afford it good protection. It is also plentiful in the lowland forests.

M. phæa. DARK CUCKOO DOVE. Similar to *M. tenuirostris*, but larger and darker. Rather abundant in Calayan.

* * *

In addition to these there are at least thirty-three species of Pigeons, including Thick-billed, Wedge-tailed, Green, etc., and Fruit Pigeons.

H. D. ASTLEY.

(To be continued).

NESTING OF THE YELLOW WAGTAIL.

Motacilla flava.

By W. E. TESCHEMAKER.

My attempts to breed this beautiful species date, as in the case of the White Wagtail, from the year 1906, when, on a green sward close to Hickling Broad, I came across a small colony of nests and thought the sight one of the most charming glimpses of bird-life which I have ever seen.

Every summer since then I have had a pair of *M. flava* in the aviary, but it was not until last year that I obtained a nest from an old male, which had been more than three years in the aviary, and a female which had resided with me for fully a couple of years. Season after season the male had selected a site for a nest and it had been most interesting to see him executing his singular love-flight, always in the same manner, hovering or circling slowly over one particular spot, the body feathers ruffled out, his wings drooped and his legs trailing. The central idea of ruffling out the feathers seems to be to make the slim graceful body look as large as possible. It is a singular fact that this particular male and female had always been the worst of friends: the former had frequently persecuted the latter and the latter had on one occasion during the winter turned the tables and nearly managed to slay the former.

However, they at length composed their differences, and during the very wet summer of 1912 built a nest in some long grass. It was close to a Crested Lark's nest, but, as the female was careful never to rise from the nest itself, I did not exactly locate it. One morning, after the female had been sitting for about a week, I saw the male moping in a corner in the deepest dejection and the female

flying about the aviary. Something had happened to the nest, but what that something was I do not know to this day ; I suspect slugs. The despair of the male was quite touching ; perhaps some prophetic instinct warned him that this would be his first and last attempt to rear a family—at all events he died during last winter, having reached more than the usual span of life of a captive softbill.

This summer the same female and a very fine male commenced to nest early in July. Once again the characteristic love-flight was seen in the aviary, but this male hovered over the female, not over the nest. The nest was on the ground, close up to the skirting of the aviary. The period of incubation was fourteen days and the five eggs hatched on consecutive days. The female sat most unsteadily, seldom remaining more than five minutes on the nest, but, by concealing myself carefully in the aviary, I was able to ascertain that the male always took her place when he fancied himself unobserved. Without his assistance the eggs would never have been hatched. The young, with long sprawly legs and some yellowish down, seemed delicate little things and did not grow well at first, being almost entirely fed by the female ; the male would brood them but he refused to feed with anything but flies. The young began to look greyish in the pen-feather stage but the buff tips of the flights projecting beyond the quills gave the wings a mottled appearance.

On the tenth day I extracted one youngster from the nest for the purpose of a photo and a description. The crown and back were buffish brown with buff tips to the feathers ; sides of crown dark brown ; chin pale chrome, ditto eyebrow (well marked) and cheeks ; under and around cheeks and a streak in centre of upper breast dark blackish-brown ; wings brown ; lower and middle coverts conspicuously tipped with warm buff ; legs, feet and beak light flesh-colour ; two outer rectrices buffish-white.

The note of the young is similar to that of the adults—a faint “ witz-ee ” with the accent on the first syllable ; the call-note of the White Wagtail has the accent on the second syllable and sounds to me like “ chis-sick.”

The young scattered in the long grass on the eleventh day and I had great difficulty in finding one to show to a visitor (Dr.

King, of Paignton). In a few days they began to show themselves in the more open parts of the aviary, and the dark markings on the sides of the head and the bars on the wing were very conspicuous. Soon they became very bold, chasing one another on the wing and catching flies for themselves. On the 15th August I showed them to another visitor (Mr. A. Bartlett), and on the 24th I released the entire family, numbering seven individuals. Once or twice afterwards I saw them on the roof of the aviary but they showed not the least wish to re-enter it. It is with very great amusement that I now and again hear the suggestion made that birds prefer captivity to freedom.*

The Yellow Wagtail seems to be rather a delicate species and intolerant of cold, but I have never had any difficulty in domesticating it.

BREEDING OF THE GREY WAXBILL.

Estrilda cineera.

By W. A. BAINBRIDGE.

Only commencing the keeping of foreign birds towards the latter part of 1912 it stood to reason that I should not know how to begin. What I did was this: I went to a dealer's and saw some birds, when some such conversation as this would take place:—

What are those? Firefinches: Grey Waxbills.

Are they expensive? No! 3/- a pair.

Are they hardy? Very. (?)

Will they breed? Yes.

And so on; the result was that the birds were bought and the poor mites brought home and put straight into an aviary. Now we know better, then we didn't, and in consequence lost the majority. Some, however, survived and amongst them the Grey Waxbills. Why do people call it the Common Waxbill? Of course it is common in that it is plentiful, but so are others, and a Grey Waxbill in good plumage is anything but common to look upon, as with his

* Some birds undoubtedly look upon their cages as humans do their houses. One has known instances of birds shewing evident relief on getting home after having gone astray.—ED.

tail, an example of perpetual motion, he flits here and there amidst the foliage searching for some hapless fly—but to progress.

About the same time, in my ignorance, I bought a pair of St. Helenas so-called, in reality a cock St. Helena and a hen Grey Waxbill; still there it was, the St. Helena died and the three Grey Waxbills didn't, so that in this aviary I commenced the season with three, all of whom had braved the hardships of a winter out of doors, merely helped along by having their shed warmed on frosty nights and on the coldest of days.

Despite, or in consequence of this, they decided to set up house-keeping late in February or early in March, when their first nest was built. For various reasons, this and their two next nests were deserted and a fourth started on April 1st "April-fools' day:" said I, "Believe them not," and I didn't, but there I was wrong as events subsequently proved, hence this article.

This last nest was added to and enlarged until it was roughly six inches high and wide and about twice as long. I have never yet been able to discover exactly where the birds got in and out, but it was somewhere on the far side where I could not see properly; I fancy there was an entrance tube, the nest proper being some little way in. All of these nests were built on the ground in a corner and easily visible; three out of the four were built behind bare pea sticks, the remaining one behind a privet bush, in no case was there grass within a yard of the nest. It was unfortunately impossible to see the nest from the outside of the aviary, and the birds must have left it as I opened the aviary door to enter, as I never saw them leave it or approach it closely until July 23rd, when for the first time I saw one of them go to it with what I took to be a crushed up mealworm in its beak.

I was inside the aviary about this time several times a day and did not see them feed before this, again at this time they also became much tamer, and I presume that the young must have hatched about if not on this day.

The three adults now became exceedingly tame and would come almost to my feet for mealworms. On August 3rd two young left the nest and four days later they were dead; I was away from home and never saw these young ones, but two more left the nest



Photo by H. Willford.

THE ENGLISH STARLING.

on August 16th and these lived, and at the time of writing are still alive. From Aug. 16th to Aug. 29th the parents fed them on meal-worms and seed, principally the latter, while flowering grass and docks were always available. August 29th saw the young feeding on white millet.

When in the nest the parents had access to all the above foods, in addition ants' eggs, alive and preserved, and occasionally spiders were thrown to them.

Two dead young ones were found the other day just by the nest, and from what was left of them I came to the conclusion that they too had been Grey Waxbills, in which case the number of eggs must have been at least six, but whether laid by one hen or two I cannot say, probably the latter, which would account for the second two young leaving the nest eleven days after the first two.

Young plumage. On leaving the nest the colours of the young were as follows:—Breast and abdomen, light grey; wings and back, light brownish grey; tail, brown with some black feathers (I think the outer ones); beak, black; throat, light grey, with two darkish lines (thus **Λ**) from the base of beak descending a short distance. On Sept. 3rd the red eyebrow streak was beginning to show, and to-day (Sept. 21st) the young are showing signs of being indistinguishable from their parents at no far distant date. The parent birds have again been seen carrying nesting material.

ON BULLFINCHES AS DECOYS.

By E. DOROTHY LEEKE.

A cock Bullfinch (a German) owned by a friend living in a London flat, flew out of his cage about eighteen months ago, and away into Chelsea Gardens where he probably remained, but *unseen*, for about *six weeks*. He was extremely tame and quite devoted to his mistress, who had him as a constant companion for three years. He had lived chiefly *outside* his cage in her room. Every method was tried to entice 'Joseph' home, but in vain. At last, in sorrow and despair of his life, she procured another Bullfinch—a freshly-caught young cock from Shropshire—and he (Anthony) took possession of the late lamented one's cage.

From the moment this wild young bird was placed out on the window sill he never ceased to call across the road to the birds in Chelsea Gardens, until at the end of a week the old Bullfinch responded and flew into the room, where his mistress discovered him on her return home one afternoon. But he was out through the window in a moment and no more seen that day. However, he re-appeared the next morning, tempted by a train of hemp seed (the "forbidden fruit"); moreover by his intense jealousy of the interloper, and this time accompanied by a sparrow. While fighting furiously through the bars of the cage, with poor Anthony inside, his mistress crept from her hiding place, shut the window and Joseph was caught: now a shabby-looking little object, much pecked and draggled, he had clearly been engaged in many a battle—one German against many Britishers,—having also lost his own song he had adopted that of the Dunnock. He was as wild as a hawk for many weeks, and for a long time nothing could persuade him to come out of his cage.

But now and for many months he has recovered his looks and has become tamer and more devoted to his mistress than ever, and spends most of his time attacking imaginary rivals in the looking glass.

CORRESPONDENCE, NOTES, &c.

ON SEXING BIRDS.

SIR,—As it was impossible to say all that was advisable in a footnote, I wish now to make a few additional observations respecting the characters noticed many years ago, as distinguishing males from females in various Orders of birds,

The flatness of the crown in male birds, though not an absolutely constant character, since there are females in which the crown is flatter than in the male, was first brought to my notice by the late Mr. Abrahams about the year 1885, when I asked him how to distinguish the sexes of certain finches. In his usual way, he did not answer me, but caught a pair and held them side by side and asked me if I could see any difference. Of course, with my training as an Entomologist and an Insect-artist, I noticed the difference at a glance and this proved immensely useful to me later on when comparing the sexes of various birds.

I have no doubt that Mr. Abrahams was well aware of the fact that the Psittaci, in common with many other groups, more often than not differ sexually

in the same way; he may even have directed my attention to the shape of the head when with me at some of the Crystal Palace Bird-Shows.

In my footnote I remarked that I believed I had published this character for distinguishing the sexes of the *Psittaci* previous to the publication of "How to sex Cage-Birds": I see that in my "Hints on Cage-Birds" p. 32, when indicating sexual characters to be looked for in Parrots, I say: "note whether the crown is short and arched, or long and flattish." This little book was published in 1903 and had previously appeared in serial form in "The Feathered World," the above observation appearing in the part for May, 30th, 1902, and it is certain that I was aware of the character many years before.

Characters which occur in birds, based upon the form of the skull and beak, depend largely upon the habits of their possessors: where the female has to do the thinking and the building, as well as taking her share in defending her nest and young, she sometimes assumes what are in a general way male characters; indeed she is sometimes more masculine in form of head than her husband, as I have noted in the case of the Quaker Parrakeet.

By the way, with regard to the green spot in female Rosellas, which, when present, seems to be always round and of about the size of a pea, I never stated on my own authority that it was absolutely constant; but where a green spot is present in male birds it appears to be invariably irregular, never rounded.

—
ARTHUR G. BUTLER.

RE SEXING PARRAKEETS.

SIR,—In a footnote on page 43 of last issue, Dr. Butler refers to a statement of mine in "Aviaries and Aviary Life." Though the matter is but small, perhaps, I may be permitted to state, that I acknowledged in the preface of "A. and A. L." all works which I consulted in its compilation, and that the statement referred to was from experience gathered from my own and many friends' birds under the conditions of aviary life.

To Dr. Butler belongs the honour of gathering together systematically what was known, as to differences in contour, between the sexes of similarly plumaged species, and adding thereto, from an exhaustive examination of the skins at the British Museum, etc.

At the same time it must be obvious that many of these distinctions could not be original; for instance, the one in question as to contour of head, etc. (this appeared in *Bird Life* in 1906, I think), was known to myself and many other aviculturists long before that date, and, not only as regards *Psittaci*, but other Orders too.

In "A. and A. L." owing to lack of space, I had to make reference to such matters by a general statement, covering groups and not individual species. Of course, I read Dr. Butler's serial "How to Sex Cage Birds," in *Bird Life*, but did not get it when published in book form: had I quoted therefrom I should most certainly have made due acknowledgment.

Before laying aside my pen, permit me to remark, *re* the "green spot on

the nape" of some hen Rosella Parrakeets, that I have seen this on many individuals, all of which ultimately proved to be hens; on the other hand, while I have never come across a cock with the green spot on the nape, I have also seen many *proved* hens which did not possess it, hence I always refer to it as *not constant*.

With all that Dr. Butler has done, by collation and research, which none recognise more than the writer, much yet remains to be done, and, the data yet to be gathered, to be of real value, must come from living birds and from many individual pairs of the same species; thus it is obvious that it must be the work of many (all) aviculturists, the result to be ultimately collated in concrete form by some enthusiastic and industrious author of the future.

In conclusion may I be permitted to urge all aviculturists (the topic covers all orders of birds) to have a part therein, and to carefully observe and record any distinctions in contour of any true pairs which pass through their hands, whose plumages are similar. It would be of great interest, if observations were taken as to what extent these contour distinctions are common with such species in which the plumage of the sexes is dissimilar (*Psittaci* especially).

WESLEY T. PAGE.

NOTES.

HUMMING BIRDS. Herr August Fockelmann received in the beginning of November three Humming Birds, which only lived, alas! a few days, and he sent me the bodies to inspect.

Sporadinus ricordi—the size of a small Sunbird—deep emerald green, with forked tail, and a little patch of white on the under tail-coverts.

Calypte helenæ—literally scarcely larger than a Humming-bird Hawk Moth. Dark emerald green with white throat and underparts. Its tiny feet would find the stalk of a millet-spray almost too large. Bill half an inch. Tail half an inch. Head and body three quarters of an inch. One could hardly believe it to be a bird, and how this minute creature lasted out through severe ocean storms from Mexico (?) to Germany, puzzles one.

Herr Fockelmann still has hopes, when storms do not rage and when the sun shines more warmly, of successfully importing some of these wonderful little birds.

H. D. A.

A LATE SWALLOW.

Mr. O. MILLSUM watched a Swallow, near Broadstairs, flying about on the 23rd of November.

A RARE CONURE.

Mr. WALTER ROTHSCHILD and Mr. ASTLEY have acquired some very rare Conures from an uninhabited island (Mona Islands), which are said to be *C. gundlachi* (?) They are in immature plumage, all green with a few scarlet feathers showing here and there on head, breast and back; under the wings the colour is bright scarlet. They were sold by Mr. A. E. Jamrach.

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Third Series.—Vol. V.—No. 3.—All rights reserved. JANUARY, 1914.

MY SUNBIRDS' AVIARY.

BY A LOVER OF BIRDS IN FRANCE.

My collection of Sun and Sugar Birds at present consists of the following species, mostly in pairs, though in some cases I have several cocks to one hen.

Yellow-winged Sugar-bird (*Cæreba cyanea*).

Purple Sugar-bird (*Cæreba cærulea*). Two pairs.

Black-legged Pale Blue Sugar-bird (*Dacnis nigripes*).

Indian White Eyes (*Zosterops palpebrosus*). One pair.

Amethyst-rumped Sunbird (*Cinnyris zeylonica*). Two pairs.

Purple Sunbird (*Arachnechthra asiatica*).

Malachite Sunbird (*Nectarinia famosa*). Two pairs.

Amethyst Sunbird (*Cinnyris amethystinus*).

Lesser Double-collared Sunbird (*Cinnyris chalybæus*). Four cocks, 1 hen.

Greater Double-collared Sunbird (*Cinnyris afer*). Two pairs.

Red Sunbird (*Ethopyga scheriæ*).

Scarlet-chested or Bifasciated Sunbird (*Cinnyris mariquensis*).

White-breasted Sunbird (*Cinnyris leucogaster* or *Talatala*).

The great majority of these birds live in a large aviary—roughly 14 feet long and about 10 feet high—all wire, and resting on a zinc floor beneath which there are two thicknesses of linoleum, then the parquet, this being an indoor arrangement, to which a whole fair-sized room has been devoted. Another part of the same room is filled by a similar though slightly smaller aviary, which is occupied by my collection of rare Waxbills and finches; then I have a few

odd cages, placed upon collapsible shelves and over the fire-place, containing either recent arrivals or birds that need special care. The room is lit on dark days by three powerful electric lamps, as is also a small adjoining room, opening into a bigger one, and where most of the cleaning takes place, containing all bird-utensils, foods, medicines, etc. Each of the two aviaries runs to and encloses a French window, which being protected by wire inside as well as outside, can be thrown wide open, during the fine season, for the inhabitants to enjoy the air and sunshine. There are three ventilation holes, which can be open and closed at will, one on each window and one on the ceiling. For perching accommodation I use dead fruit trees only and branches of trees, the latter being changed at regular intervals. The floor of the Sunbirds' house is covered with sawdust, which is raked up daily and at intervals thrown away and replaced as necessity commands, for I may say here that if there is anything I believe in, where the keeping of birds is concerned, it is the strictest and most unceasing attention to hygiene and cleanliness. As the whole of the room where my birds are housed is whitewashed, dirt is easily rubbed or sponged off, and I boast of the fact that no "bird-smell" prevails anywhere.

All my Sunbirds get the usual mixture of Mellin's food, Nestle's milk and honey, as well as a little insectivorous food for the few Sugar Birds who share their home; then a variety of salads and ripe fruit—grapes, orange, pear, apple, banana, figs, etc. twice a week I receive fresh from the country, in addition to some big roots of grass for my finches, Traveller's Joy or other creeper, and this, besides furnishing all inmates with food and amusement, forms when being sprayed, their favourite bathing-place. They love to alight on the wet foliage, some even seeking the spray, shaking their iridescent plumage, throwing out their golden shoulders, rubbing and brushing their feathers against the dripping leaves, then carefully combing them with their slender beaks. To this, and to the more thorough bath which they generally indulge in afterwards, in the trough provided for the purpose, also of course to the large space given them and which ensures them exercise, I attribute their faultless and brilliant plumage, their happy appearance, and their almost incessant singing. Quarrels, unfortunately, there are, as most of these species

are so spiteful by nature, but so far, there have been no serious rows beyond occasional bad words, owing no doubt to their being able to get away from each other, and also to the great number of feeders provided round the different sides of their enclosure. It is a pretty sight of a morning and after the daily cleaning process has taken place, to see them all crowding round the entrance door, waiting the appearance of the food tray, then perching all over it the moment it is carried into the aviary, each bird eager to be first served or to find his favourite feeder.

As my bird-room opens on one side into a large and well-heated hall there is little need for any artificial heating, as the door is constantly left open when the windows are kept closed, and the air admitted is quite warm enough, but as an extra ordinary precaution against frost there is also an electric radiator; which however is but seldom used.

I am often asked which species of these lovely birds I like most. Indeed it is hard to say, though for combined grace of shape and attitude, charming plumage and brilliant song, perhaps the Malachite is my favourite*—one of them especially, who from the first was always tame, and allows me to touch him without even trying to get away. Then the African Amethyst,—a bird sombre yet radiant like a tropical night,—deep violet all over with a copper-coloured spot on the rump, blue shoulder, an emerald green cap and a gorget that flashes like a flame in the light. To the Lesser and Greater Double-collared I have one objection only, that is the fact that after the first moult the crimson of the breast fades away into orange, though all the tints of the body remain as brilliant as ever. It is of course possible yet, as this species has only been some six months in my possession, that the original crimson may reappear, but I fear it will not, and the same may apply to the Red Sunbird, who, at time of writing, is in the moult. But of my present collection, the gem is that rarest of rare birds, the Scarlet-chested or Southern Bifasciated Sunbird (*Cinnyris mariquensis*). This species inhabits the wilds of the lower parts of the Transvaal, and in order to procure it for me, as well as another charming one, the White-

* The beautiful Malachite Sunbird, exhibited by Mr. A. Ezra at the last L.C.B.A. Show, was also the public's favourite.—ED.

breasted Sunbird (*Cinnyris leucogaster* or *Talatala*) it was necessary for the birds, after capture, to be conveyed across the Transvaal Veldt for six wearisome weeks in a rough waggon; then followed a five days' journey in the train to the coast, and, lastly, the three weeks sea journey home. Yet some even of those reached these shores in almost faultless condition, and to my mind this speaks well, not only for the well-known "pluck" and determination to live, which forms an interesting feature of these apparently frail birds, but also proves the care and diligent attention bestowed upon them by those to whom I owe so many of my finest and rarest specimens. *Cinnyris mariquensis*, like most of the genus, rejoices in a rather short tail, but his garment on the back, head and upper throat is of cloth of gold—old gold, shining with almost every metallic hue as the light strikes him; his mantle is deep black, his rump blue; a band of sapphire encircles his gorget, and below there is another band of scarlet—truly a bird of the sun. He has a pretty song, too, though not so sweet as the Malachite, and this is heard at its best when he challenges another male, for this species is particularly pugnacious, and it is almost impossible to cage two together in a small enclosure.

A pretty sight is to watch all these birds when it has been possible to obtain for them some branches of Honeysuckle, Bignonia, Lethœa, or other flowers containing nectar. Some of them will perch on the blooms, twisting backwards and forwards into every conceivable position and attitude. Others, the Malachite for instance, enjoy hovering over the blooms, after true humming birds' fashion, all plunging their long beaks into the very heart of the flowers in order to extract the honey by means of their flexible tongue. But they can also take solid food in the way of small insects—spiders, flies, green fly, etc., when in season—though in a few cases the mixture seems to be much more relished. Nearly all will also eat fruit, large pieces of the moistened sponge cake, like the Sugar-birds. As this is rather fattening, and one must beware of fits with all these genera, I find it necessary to dose all at times with a pinch of sulphate of soda dissolved in the syrup.

To conclude these few notes, I will say that besides the great beauty of most representatives of the Sunbirds' family, besides their

many curious and interesting traits, one of the features concerning them, that from my point of view is a great attraction, is the difficulty of obtaining them. In most colonies, including Africa, these birds now-a-days are rigidly protected: for that reason and for the real rarity of certain species, it seems to me unlikely that they will ever become really common. At any rate those species which inhabit wild and almost inaccessible tracts of land (and there are many such) can hardly come into the greedy hands of the bird-dealer. For their sakes, let us rejoice that this is so.

SOME NOTES ON THE WHITE-LEGGED FALCONET.

Microhierax melanoleucus.

By E. C. STUART BAKER, F.Z.S., etc.

As pets the members of the *Falconidae* are not often kept, except for the purpose of hawking, yet amongst the birds I have personally made the acquaintance of in captivity, some of the most interesting have been Eagles and Hawks.

Perhaps the most uncommon capture—I cannot say he was a pet—I have had, was a tiny Pigmy Falcon or Falconet (*Microhierax melanoleucus*) and the way in which it came into my possession was in itself a very striking instance of the bird's character. At the time this happened I was stationed in the North Cachar Hills, a district of Assam, and one day during the rainy season, whilst out in camp, my *dakwallah*, or postal runner, handed me with my letters a bundle in a cloth which he said was a small bird he had caught on the road. He also advised me to be careful how I opened the cloth as it was "a very furious bird" and had bitten him severely before he tied it up in his pugree. With great caution, therefore, I opened the bundle and discovered inside this wonderful little black and white falcon, and with him the body of a Scimitar Babbler (*Pomatorhinus phayrei*) in the breast feathers of which his feet were still entangled. The runner's story was to the effect that he had come on the falcon seated on the babbler, which he was busy eating, in the middle of the forest path, and that the killer being smaller than his victim he

was unable to carry it away, and his feet being entangled in the wet breast feathers he could not leave it behind and so became an easy capture.

As soon as we had freed the Falconet's feet from his dinner we placed him in a small wicker-work cage with a perch across it, upon which he clambered and there sat glowering at us. Even under these depressing circumstances he looked, every one of his six inches, a regal little bird, and in attitude more like a Golden Eagle than a true falcon. His head was held low and sticking out, his shoulders humped, wings slightly spread, and his black eyes shining wickedly at us from under his prominent eye-brows. For two days he sulked and would eat nothing, but as he had, just previous to being caught, eaten a fine meal off the breast of the Babbler, this did not hurt him.

The third day I arrived home, and was then able to place him in an aviary, though, as there were none empty, he had to share one with some Red-footed Kestrels (*Erythropus amurensis*) and a pair of big Woodpeckers (*Chrysocolaptes guttacristatus*). The small Kestrels were about twice the size of the Falconet, the Woodpeckers certainly three times his weight and size: moreover, as the latter had been more than able to hold their own against the Kestrels, I had no fear for them in regard to the Falconet, though I was rather nervous for *his* sake.

My nervousness however was quite unnecessary, for on being let out of his wicker cage he stretched his wings by flying a couple of times round the aviary and then sat on a perch which was vacant and took a look round his new domain. The Kestrels, who were scattered about on different perches, at once attracted his attention, and he proceeded to hunch himself up in imitation of an angry eagle, opening his mouth and gently hissing at the same time, an intimation to all hearers not to interfere with his lordship. Having satisfied himself that he had inspired mortal terror into the hearts of all the other occupants of the cage he then proceeded to start bullying them, a proceeding to which the meek little Kestrels submitted without protest, collecting in a bunch on the perch furthest from that taken possession of by the little tyrant. For the time being, this seemed to satisfy him and he dropped his noble attitude,

fluffed himself out, preened his feathers and cleaned his feet, after which he considered his toilet finished and composed himself to rest.

The following morning, on visiting the cage, I found that he had made an attack on one of the Woodpeckers, for there were many of its feathers lying in tufts on the ground, but with them were some white ones, evidently from the breast of the Falconet himself, so I concluded he had been worsted and would leave them alone in future. Not a bit of it, however, he was only biding his time and meant retaliation as soon as possible. That day I saw nothing more in the way of bullying. The Kestrels he seemed to realize were a kind of "poor relation," and as long as they cringed to him and were utterly subservient in every way, not daring to sit on his particular perch, he left them alone. He also condescended to eat one or two fat locusts and drank a great deal of water, but most of his time he spent seated on the highest available perch at one end of the aviary, where he surveyed his domain and his subjects.

The next day I gave him a couple of live Sparrows, and one of these he killed and ate whilst I was away in office, so what I saw done on my return therefrom was not an act impelled by hunger.

For the convenience of my pair of Woodpeckers I had placed in this aviary some long logs of wood, one of which passed directly under the throne of the Falconet. This log had been carefully avoided during the morning by the two birds, but familiarity, I suppose, had begun to breed contempt, for as I was passing the cage in the afternoon I saw one of the Woodpeckers run up the log and under the throne. In a second, the Falconet had swooped and knocked his bulky opponent off on to the ground, but that was the extent of his victory on this occasion, for, on falling to the ground the Woodpecker, as is the custom of these birds in such emergencies, turned on its back and presented such formidable beak and claws to the falcon's attack that the latter retired, pretending to be satisfied with the damage inflicted.

For some days all went on well, and the Falconet was content with killing such small birds as I gave him for the purpose, varying his diet with insect food of all kinds, but refusing entirely to eat the carcase of any dead bird placed in the cage. He even became reconciled to me sufficiently to eat when I was within a few feet of

him, but he still infinitely preferred flying savagely at a finger placed through the wires rather than take food from it.

There was about a fortnight of this calm and then a tragedy occurred, for on visiting the aviary one morning I found that Mr. Woodpecker was a widower and his poor lady lay on the floor of the cage not only dead but half eaten. There was a solemn hush in the aviary, the widower crouched on a log in the furthest corner, the Kestrels huddled together on a perch, awestruck and mute, whilst the murderer sat on a perch by himself and picked from his claws the remains of Mrs. Woodpecker which still adhered to them.

An examination of the victim's body showed that the little falcon had struck just like the larger birds, such as the Peregrines strike, ripping open the centre of the Woodpecker's back, and it must be assumed, stunning her so that he was enabled to finish his bloody deed on the ground.

After this I removed the other Woodpecker to a safer abode, leaving the aviary to the sole occupation of the birds of prey, but I really think the Kestrels would also have liked a "remove." They wore a scared expression, and the subsequent death of one or two of them may have been due to nerves, for I could find no other cause. I never saw the falcon attack them, but if he was irritated or annoyed by their flying or perching too close to him he would hunch himself up and hiss at them in such a vicious manner that they always at once collapsed into stillness until his majesty was once more good tempered.

This little Falconet remained with me for two years, and was finally released when I went home on leave, as there was no one I could trust to look after him in my absence. It is impossible to say that he ever became tame, in the sense that one uses the word of most cage birds. He had no fear of me, but neither had he any fear of anything else, and the utmost I can pretend to having gained from him was a dignified tolerance of my presence and an acceptance of my services when he needed them. He would take any special dainty from my fingers, or if the dainty was not special enough, would take a bit of the finger instead when he had the chance.

He was very crepuscular in his habits, like the wild birds of

his kind, and for most of the day would sit quite quiet and apparently asleep, but up to about ten in the morning and after three or four in the afternoon was very lively and active, much to the distress and inconvenience of the Kestrels, who had always to be on the alert and clear off any perch he desired for the moment to rest on.

He would never kill the small birds given him for food if he knew that I was looking on, but the one or two I caught him killing unawares were all killed in the same way as that in which I first saw him try to encompass the Woodpecker's death. He waited patiently until his prey was just under him and then hurled himself upon it with incredible speed and accuracy, the result in every case being death to the bird attacked. The corpses of those I have found killed seemed to have all met their death in the same way.

In a state of nature the Falconets undoubtedly live far more on insects than on birds or small mammals, and I have several times watched them hawking termites in the evening when these were fighting. Whilst engaged in this pursuit their actions were typically those of the larger birds of prey, the foot always being used for the capture, and for conveyance of the captured white ant to the mouth. They seldom seemed to miss any termite they struck at, being far more accurate in this respect than the Rollers, King-crows, and other birds which joined in the fray.

A flight of "white-ants" is a wonderful sight, and in some cases many hundreds of thousands of ants must be on the wing at a time, so there is for the time being food and to spare for all who care. Accordingly Falconets and other birds are all fully employed, and there is no reason for the former to resent the latter sharing in the banquet and I never saw any attempt at molestation.

They seem often to have very favourite perches which they visit evening after evening at about the same hour. One such perch was a dead branch on the top of an immense tree standing on a plateau and surrounded by tea, which was regularly visited by a pair of these birds, who hawked insects during the summer months, from about four o'clock until it was almost dark. Under this tree were a good many of the pellets which these little birds disgorge, and these pellets proved that they were very largely insect eaters, though we also found bones of mice, bats and small birds, whilst scattered about

were feathers which proved that Barbets, Cinnamon Sparrows, a Pipit of some kind and various other birds larger than themselves had been sacrificed to their appetite.

Sometimes they soar round in the air much in the way of Swallow-Shrikes, fluttering to one side or the other, as some insect attracts their attention, but keeping much to one spot generally round and round some big tree. My attention to this habit was first drawn by Dr. H. N. Colltart, to whose garden at Margherita, in Assam, a pair of these Falconets were regular visitors, evidently nesting somewhere in the close vicinity, though we never succeeded in finding where.

Very little is known of the breeding of this and the allied Falconets, but it is probable that they always lay their eggs in holes in trees, deserted nest holes of Woodpeckers, Barbets, etc. I once found an egg of this species in N. Cachar and two others in the Khasia Hills, and in each case these eggs were taken from deserted Barbet's nest holes, which were more or less filled with a mass of wings, legs, and other remains of insects. In addition to these there were a few feathers, conspicuous amongst them the scarlet and black feathers from a Minivet in one nest, and in another those of a Franklin's Barbet.

The eggs are very unhawk-like in character and colour. In shape they are rather stout little ovals, practically the same size at either end, and the texture is like that of polished chalk, not so soft and chalky as that of the Crow Pheasants (*Taccocua* or *Centropus*), but more so than that of the Barbets, Parrots, etc.

Two eggs now in my collection measure respectively 29.1×23.3 mm. and 27.7×22.7 mm.

The only other egg I have seen of these little Falconets is one of *Microhierax eulomus*, sent to me from the Malay States. This is exactly like those already described and measures 29.2×24.5 . This last egg was taken on the 4th February from a deserted Woodpecker's nest-hole high up in a big tree. My two eggs of the White-legged Falconet were taken on the 12th March, 1889, and the 4th of July, 1908, respectively.

WILD DUCKS FROM AN INCUBATOR.

By HERBERT K. JOB,

State Ornithologist of Connecticut.

(By kind permission of the Outing Publishing Co.)

THE CRUCIAL STAGE OF THE MANITOBA WILD DUCK EXPEDITION —HATCHING, REARING AND TRANSPORTING THE DUCKLINGS.

(Concluded).

Out in the wilds our resources were scant. Some of them survived the long journey. An expert from the New York Zoological Park came out to advise on the problem. Minnows were offered them, and they were given a varied fish, meat, and insect diet, all in vain. At the Zoological Park, we were told, they had never been able to keep Scoters alive. Here is a problem for further study.

The Ruddy Duck is another problem. This duck, though little larger than a Teal, lays eggs bigger than those of such large species as the Mallard and Canvasback. The young are most curious creatures. Similar in colour to the young Scoters, they are differently marked, and, rather strangely, have larger bills, of broad spoon-shape. They have a coarse, hair-like plumage, and are fat and squatty, about as broad as they are long. Their legs are set uncommonly far "aft," even for a diving duck, and the body is so heavy that they can hardly stand more than for a moment. The feet are enormously broad. Waddling a few steps, down they fall and lie there, blinking helplessly, with a sort of foolish air. Seldom would they take even a mouthful of food or drink. The way they flop over the ground reminds one of turtles.

I tried various plans to induce them to eat. About the only way was to put food in water, but they made bad work with it, and soon would become thoroughly soaked. The first attempt killed one with cramp, and I had to desist. If I forced food down their throats they hawked it up. They steadily refused food, and died in less than a week. Opening one that was four days old, I was surprised to find a large unabsorbed yolk in the abdominal cavity. It is entirely different from any other duck, if, indeed, it deserves to be classed with the ducks. It presents a singular problem—which, by the way, our guide did not consider worth solving.

“What in the world does he want to raise ruddies for?” said he to the assistant. “They’re no good, even if he raised them. Why, if you go and pluck one, you pull off the meat with the feathers.”

Though I hope to pursue the problem further, as an interesting matter of science, it is probable that various marine species, such as Scoters, Mergansers, Eiders, the Old Squaw, and the Ruddy Duck, will prove unadaptable to domestication, and would be of no practical or commercial value.*

The other ten species, however, that we investigated, are readily raised. These are,—to repeat from the other article (*The Outing Magazine*, November),—Pintail, Shoveller, Mallard, Gadwell, Baldpate, Blue-winged and Green-winged Teals, Redhead, Canvasback, Lesser Scaup. The young Canvasbacks and Redheads, contrary to what might be expected, are docile creatures and do splendidly. The only duckling that showed any trace of natural wildness was the Scaup—the blue-bill or broad-bill of our Atlantic coast gunners. Not that they are afraid, but they are nervous and restless, always running around and jumping, trying to get out. They seem rather harder to raise than the others, and we lost more in proportion. Nevertheless, we have a nice little bunch of them grown to maturity.

In addition to the above species which are evidently capable of domestication, the Dusky or Black Duck and the Wood Duck are known to come in this category. The chances are also, I believe, in favour of the American and Barrows’ Golden-eyes and the little Bufflehead. The Greater Scaup would doubtless be like the Lesser. Then there is the Cinnamon Teal, found farther west. So here are at least seventeen splendid native American Wild Ducks, all probably capable of artificial increase, as some are already known to be. These are problems well worthy the attention of lovers of Wildfowl.

I had imagined that most of the wild ducklings would be practically indistinguishable. As a matter of fact, however, many of them are absolutely unlike, and all can readily be told apart, even

* Perhaps Mr. St. Quintin will write something on this subject?—ED.

though some are very much alike. Canvasbacks and Redheads are the "yellow-birds" among the duck tribe, but have distinctly different bills. The Pintail is a blackish and white striped bird. Gadwall and Baldpate are identical, save that the former has light brownish feet, the latter dark slaty. The Blue-winged and Green-winged Teals are similar, save for a trifling difference in marking on the head, and the Green-wing has a smaller, shorter bill. The Scaup is a very dark bird, mostly blackish brown, with a slight crest. The Shoveller is always distinguishable by its enormous bill. And so on.

Owing to our late arrival, we found it desirable to try to complete our stock by catching some ducklings already hatched in the wild state. If anyone imagines this an easy task, a few attempts will disabuse him of the notion. I shall never forget my own futile attempts to chase broods of Canvasbacks and Redheads. When I first saw them out on open waters of the larger bays, I thought surely I could catch some, as they were quite young. But, as I paddled up fairly near, they began to skitter rapidly over the surface, and then they plunged. Not a sign of them could I see again, for the surface was ruffled, and they only raised their bills to breathe, swimming long distances under water to the edge of the rushes, where they were absolutely safe.

Finally, we were lucky enough to enlist some French-Indian half-breeds, who are wonderful paddlers and hunters. Whenever we saw their rig, in the evening, driving towards our camp, I always felt a thrill of excitement, knowing that something of great interest was near. Besides some small ducklings, they caught some magnificent specimens, fledged all but the flight feathers, of Canvasback, Pintail, Shoveller, and Mallard.

It was exciting to hear them tell how they caught the Canvasbacks. Two or three canoes would single one out from the rest and chase it. For nearly an hour it would dive and skulk. It took keen eyes to see where it stuck up its bill and expert paddling to keep up with it. They simply tired it out, and at last the poor duck, unable to dive any longer, came to the surface and meekly allowed the nearest boat to pick it up.

We had little trouble in taming and rearing most of these

captives. The Canvasbacks at first would lie down flat on the ground and skulk, but they soon got over this. In a few hours all of them would be shyly eating and drinking, and within a week they would eat out of my hand. The only serious trouble or loss was due to fighting, on account of a lack of coops, in which to segregate new arrivals. The larger ducks are terribly savage to others put in with them as strangers, chasing and hammering them, and we lost some nice birds thus. Those that could stand it for a day or two were then accepted on equal terms. We found that the prairie is no lumber-yard, when it comes to building operations. The proper way is to build a number of coops in advance, keep new arrivals separate till they get to eating well, and then mix the groups so that, more or less, all feel strange.

Though heat is not needed after the ducklings are over a month or so old, it is necessary to provide good shelter for cold windy nights and the heavy rains of the region. After learning a lesson by losing a fine Canvasback, we brought into the kitchen each night all the ducks not fully fledged, not having material for coops, and not daring to take any more chances. We also found that a moderate percentage of wild ducklings captured at a very tender age were liable to die from shock, exhaustion, or abstinence. Most of them, though, would take right hold with the tame incubator birds. With these latter, it was encouraging to find that practically about the only losses were due to overcrowded conditions. In the large brooder hardly a bird died, save in the youngest brood of Gadwalls. The others seemed to get the start of them and were always stepping on them and pushing them away from the food. They became more and more bedraggled and stunted, and in the end we lost them all.

In the other brooder, with the smallest ducklings, the hover was crowded at night. It was too bad to have to make fat Scoters and tiny Teals sleep together, for some of the little ones were trampled or smothered. There was very little loss from any other cause. If I were doing the thing again, I should know exactly what equipment and facilities to provide and should expect the losses to be almost nil, certainly no more than on a well-regulated tame-duck farm.

The days passed rapidly, crowded with incident and adventure which there is not space enough here to recount. It was the last night in camp. At midnight, having completed the necessary tasks, I went outside before retiring, and sat on the brooder in the moonlight, enjoying the wonderful scene and listening to the weird voice sounds of birds from the great mysterious marsh. How I should miss the canoe and the charm of the strange labyrinth where bred the noble Canvasback !

Soon dawned the eventful day when 102 ducklings were to start on their long journey. In the incubator were a few eggs still unhatched. Three of them were the remnant of a set of Green-winged Teal stepped on by cattle ; the rest were of the late-laying Scoter. I had calculated that these would not hatch till the end of the journey. Alas, some were pipped that last night, and on the morning of leaving a Teal and a Scoter were out, all the rest being in process of hatching.

It was a real tragedy, but it was too late to alter our plans. So, reluctantly, I put the unlucky brood in a pail, with warm sand beneath, wrapped in a blanket. I misjudged the temperature. Every egg had a live duckling in it, but by the time we got aboard the train all had been overheated or smothered, save the two already hatched, which, strange to relate, made the trip safely to Connecticut.

We could not, therefore, determine the point about transporting incubated eggs. I did, however, settle the question of the safety of carrying a fresh Wild Ducks' eggs in the cars on a very long journey under the best conditions, with personal care. I had saved for this test a set of eggs laid close by our camp, taking each new egg as it was laid, to make sure of its being fresh, substituting each time an egg from another set of the same kind in the incubator. I packed them with great care, in springy paper, took care of them on the journey, and turned them each day. Despite all this, not one of them started an embryo. It is clear that the only sure way is to hatch out the eggs before starting.

I might devote the entire article to the experiences of that memorable 2,000 mile journey. Two large double wagon loads trailed southward over the prairie, that twenty-ninth of July, merci-

fully one of the few pleasant days. The ducklings were carried in two crates and two brooders, assorted according to size. Officials at every divisional point, through the courtesy of the Dominion Express Company, had received orders to give every facility, and I remember everyone of them with gratitude. The bumping and jerking of the cars kept throwing the poor ducklings off their feet, but they were so tame they endured it philosophically, and devoted themselves to eating and drinking. The worst trouble was in keeping them dry, as the water slopped around, and they spilled it in drinking. I carried a bag of hay, from which I frequently changed the litter for them.

At one point, Fort William, Ontario, I suddenly found that they were going to divide the train into two sections. I hustled my suitcase from the Pullman to the express car and saw no more of my berth or my son for the next twenty-four hours. I tremble to think of what would have happened to the ducklings had I been left behind! That night I slept on top of two boxes in the express car. It was hardly as comfortable as the lower berth, but more desirable for the purpose in hand. The nights were cool, and I had to keep a little heat in the brooders most of the way.

All things come to an end, and on the afternoon of the fifth day of the trip, over four whole days from the start, I landed the ducklings on the preserve—102 of them, representing eleven species of Wild Ducks. Also there was a Coot or Mud-hen that harmonized beautifully with the Ducks and makes a singular appearance among them, with its long legs and slender lobed toes. We had lost eighteen birds on the journey, and during the next few days some of the smallest ones dropped off from the effects of the journey. Ever since then, as at present, the rest have been in fine shape.

It was most encouraging and instructive to find that of the losses due to the journey, every one, with one solitary exception, were of birds not over twelve days old at the start, and down to three days. Every duck three weeks old or over at the start, except this one, a Red-head, which may have been about three weeks old and perhaps was hurt, stood the ordeal safely. It simply means that young Wild Ducks over three weeks old can stand a long journey if they are properly fed and handled. A good rule would be to have them one month old to make sure.



MEADOW PIPIT.

Photo by H. Willford.

It is a rare delight now to have this unique and beautiful stock within easy access, to study their early plumages and changes, as yet not all described in books, to note their interesting ways, and to work out details of handling, feeding, and breeding, under the auspices of a Government Experiment Station, where scientific work is understood and appreciated. If only experiments could thus have been made with the lamented Passenger Pigeon, we should doubtless have had them alive to-day. We may well hope that from such beginnings these splendid wildfowl species may be so widely multiplied that extermination will be impossible, and, better still, that through public interest engendered in their welfare, they may again become familiar sights upon the waters of our entire country.

[We are most grateful to the Outing Publishing Co. for so kindly permitting Mr. Herbert K. Job's extremely interesting paper to be reproduced in our Magazine.—ED.]

HAND-REARING BRITISH BIRDS.

By DR. ARTHUR G. BUTLER.

Although many of my experiences in rearing our British Birds have been published elsewhere, I have never drawn conclusions from my own successes and failures, which might be of value to others who may be contemplating a similar course.

First of all then I would point out, for the benefit of those who desire to rear birds for show purposes, that hand-reared birds will always remain delightfully tame and steady while associated only with human beings, even though allowed to fly freely in a room—and in some cases in the open-air : but many of them, if once associated with other birds in an aviary, become ten times more nervous than wild caught birds : it almost seems as if the older inhabitants of the aviary had gone to work to set the new-comers against their owners and foster-parents. In the case of the Titmice however we have a notable exception to this rule, for they continue to be as confiding as ever.

In the second place, if birds are required for song, proper tutors must be provided, excepting in the case of certain types such

as the Larks and Wagtails, in which the wild song seems to be instinctive.

By constantly hearing music superior to its own, we know that the poor little melody of the Bullfinch (when brought up from the nest) can be replaced by recognizable tunes and the chirping and chattering of the House-Sparrow can be replaced by a softer reproduction of the notes of a Norwich Canary. Untaught Blackbirds and Thrushes utter a few loud notes which are neither pleasing nor in the least melodious ; but if given half a chance they are liable, while still young, to pick up anything in the shape of a song : thus I once had a hand-reared Song-Thrush which had learned to sing from a Canary and made such a terrific noise that an inn-keeper who had heard of it came to inspect it, and willingly paid rather a high price to become the possessor of it. It proved a disappointment however, for it ceased to sing when hung up in a public bar.

Like most beginners I started my experiments with those birds most easy to obtain and also most easily reared—the Song-Thrush, Blackbird and Starling : at first I fed these with a mixture of what is popularly called fig-dust (oat-flour) and pea-meal, given very wet until the birds were old enough to drink, and afterwards made up into the consistency of dough and rolled up into small sausage-shaped pellets. Later, I discovered that greater success attended my efforts when I gave scalded Spratt's poultry-meal mixed with pea-meal ; but these coarse feeders rarely fail one ; indeed I have heard of Blackbirds which had been successfully brought up upon sopped bread alone, though I should doubt their having strong constitutions after such poor fare. Nowadays, even for these birds I should provide far more expensive and nutritious diet, for I believe in nourishing food for children of all kinds.

I got no opportunity to hand-rear Missel Thrushes until 1886, when I found a nest containing a young pair : these I reared easily on the pea-meal and fig-dust mixture with scalded snails cut up and small worms ; they were strong and handsome birds of which I gave away the hen but kept the cock for show purposes, but the first show I sent it to (when it was nearly four years old) it was fed upon minced raw beef mixed with breadcrumbs (instead of the



WHITETHROAT WARBLER ON NEST.

Photo by H. Willford.

food which I forwarded with it) and consequently had one fit after another, dying about an hour after I got it home again.*

As evidence of the evil effects of raw beef upon the *Turdidæ* when given regularly I may note that about the year 1886 a lad brought me a nest of young Robins (supposing them to be Nightingales) and, in my ignorance, I tried to rear them upon shredded raw beef and sopped bread mixed up together, which speedily killed them all. Then again in June 1887, I got a genuine nest of Nightingales and, in addition to more suitable food, gave a little chopped meat: they all got violent diarrhoea and two of them died; I then discontinued the meat, feeding the remaining three upon powdered dog-biscuit, oat-flower, pea-meal, yolk of egg and ants' cocoons, and reared them without difficulty.

The same year I attempted to rear a nest of Lesser White-throats upon moistened Abrahams' food (a sort of German paste mixed with yolk of egg and ants' cocoons) but the tiny things got dirty with the messy food, which contained a quantity of golden syrup, so that I lost two of the four and the other two (like many hand-reared birds when kept in a cage) ate more than was good for them and died from apoplexy when about a month old.

Later in the same year I successfully reared one of two Sedge-Warblers, feeding at first upon hard-boiled egg and bread-crumbs, but later upon the same food as that upon which I had reared my Nightingales. I kept the young bird in a flight-cage and he was most fascinatingly tame: but overeating caused his death in September, after the completion of his moult: I still possess his skin which was pronounced by the late Dr. Sharpe to be one of the most brightly-coloured examples he had seen.

I only once attempted to bring up a nest of Hedge-Accentors, but failed owing to the fact that I gave a mixture of egg and sweet biscuit—excellent for domesticated Canaries, but quite insufficient for insectivorous birds.

* This and many similar experiences of carelessness on the part of show attendants, and not infrequently ignorance on the part of judges who preferred two cock birds exhibited as a pair to genuine sexes (on the plea that the former were "bigger birds"—two cocks would seem bigger than a pair) I gave up showing years ago.

The Titmice are most entertaining birds to hand-rear, they stand in a row on the edge of a basket shouting all together and forcibly remind one of a class of charity children dressed alike and reciting, but when feeding begins they push and struggle and jump over each other's backs to get at the feeding-stick. I nearly succeeded with Great Tits in 1886, but they were so intolerably greedy that, after they were fully fledged and able to fly, they apparently swallowed some of the wadding in their sleeping-basket, and all died in one day. Coal-tits I could have brought up without trouble in 1888, but unfortunately my holiday came to an end just as they were beginning to flutter about me, so that I had to leave them to the care of a young girl who allowed them to get into such a dirty condition that I lost them all. Blue-tits I reared without difficulty in 1889, and for several months they were some of the most delightful pets I had, flying to me and running all over me so long as I remained in their aviary ; but they require warmth in winter when kept in captivity and at that time the enclosure which sheltered them was only protected from the cold on the outside by a curtain. I provided warmly lined boxes for them to retire to, but each bird would have a bed to himself and permitted no other to enter ; consequently they gradually all died from cold. For rearing Tits a good insectivorous food moistened is all that is needed ; but they must have warmth when adult, or they will not long survive.

The only Wagtail I ever took in hand was the Pied, a bird which I have frequently written about as the most charming and satisfactory of all my foster-children. I and my wife brought it up between us in 1892, feeding it upon a mixture of crushed biscuit, yolk of egg, ants' cocoons, and Abrahams' food, mixed together and moistened. The late Dr. Bradburn asserted that it was impossible to hand-rear Wagtails, but as a matter of fact they give less trouble than most young birds. I stated this fact some years ago, and not long afterwards a reader of the *Feathered World* wrote to say that he had brought up a nest of Yellow-Wagtails and was delighted with their tameness. I never heard the love-song of the Pied Wagtail until my bird became fully adult ; he often sang it to my servant when she approached his cage. Of course we gave him a good deal

of liberty, but I fear that he did not get sufficient living insect food since he died in May, 1896.

I reared Sand-Martins in 1887 upon Abrahams' Nightingale mixture, but after they had acquired the use of their wings they did not care to take exercise, but simply sat on the food-pot and gorged themselves to repletion. Of course I ought to have discontinued the soft food and given them scoured maggots; but this I did not know at the time, so I lost them all in about three weeks time. In 1891 I tried House Martins and with these I was rather more successful owing to some extent perhaps to their affectionate nature which impelled them to leave their food and fly to me at once when I called them; unlike most birds they delight to nestle down in one's hand. However about two and a half months saw the end of them, to my very great regret, and I do not recommend any of our members to attempt to keep these birds, since it is very difficult to supply them with anything approaching their natural conditions of life: I should never have taken the nests myself, but when they were brought to me I felt bound to do my best to save the poor little orphans' lives.

Finches are of course easy to bring up, at first upon egg and biscuit made into a paste and later upon scalded seeds and perhaps a few smooth caterpillars, spiders, green fly, etc., but when reared they must be kept apart from other birds if you do not wish them to become insanely wild. I reared nine Linnets in 1888 and in the previous year I had brought up a nest of four Chaffinches: the only difficulty with the latter is that as soon as you offer to feed them, although they open their beaks widely they sway their heads from side to side and back away from you, so that it requires quickness and accuracy to get the food into their mouths and not all over their faces: however I succeeded, and got two pairs of strong and healthy birds for my pains.

In 1898 a young Jay was given to me; it had been taken from the nest shortly before and fed upon shredded raw beef and bread-crumbs. I at once changed the diet to a mixture of bread-crumbs, powdered biscuit, egg and "Century Food" (a mixture very similar to "Cekto.") I reared this bird without the least difficulty, and, as I have already noted, it lived in perfect health for thirteen years: I

rarely gave it raw meat, as too much of this tends to produce diarrhœa, and is better avoided altogether if small dead birds or mice are obtainable.

My first attempt to bring up young Skylarks was in 1886 and, through want of knowledge, I lost them all; but in 1887 and 1888 I was successful, owing to the fact that I introduced a good-sized fresh turf into the runner in which I kept them: in the turf I cut a round hole wherein I placed an old Sedge-Warbler's nest, in which I placed the birds, covering them up with flannel after each meal. The birds I took in 1888 were only six days old when I removed them, as I was returning home that day: I regarded this as somewhat of a triumph at the time, but as only a perky little hen bird survived the autumn moult, the only advantage I gained was the knowledge that hand-reared hen Skylarks were able to sing excellently.

In 1887 I reared three Wrynecks from the nest, feeding them upon Abrahams' Nightingale food and smooth caterpillars; but I lost all three before the end of the year, probably from lack of sufficient living insect food. Years afterwards I tried a young Cuckoo, but it was a disgustingly greedy bird and no sooner was it induced to feed itself than it simply stuffed until its food-pan was empty, shouting to be fed all the time it was eating and then going off into a state of stupor from which it only aroused to eat again: it never attempted to clean itself and its plumage became matted with filth: I gave it a thorough wash every now and then, drying it afterwards by a fire, but it soon died from over eating, unregretted.

Now it will perhaps be noticed that nearly the whole of my experiments in hand-rearing birds were made in the three years from 1886 to 1888 although I brought up successfully one or two birds at later dates, and it will be seen that of the score or so of species which I took in hand the following were the only ones which lived for any length of time afterwards, viz. :—Missel-Thrush, Song-Thrush, Blackbird, Nightingale, Pied Wagtail, Linnæus, Chaffinch, Starling, Jay, and Skylark, and of these the Wagtail and Jay were reared when my experience in keeping birds was much riper than when I made my previous attempts and long after I had decided that it was not only kinder to the birds, but more satisfactory

to the owner, to capture them when adult than to bring them up by hand ; not that the parents suffer, as sentimentalists would have one believe, to any great extent, when deprived of their young ; they are indeed furious at the time, but they very speedily settle down to the construction of a new nest ; indeed, in the case of Martins and House-Sparrows, I have seen them at work almost immediately after the removal of the old one ; moreover I have seen young neglected by their parents and dying of starvation simply because the nest had become drenched by heavy rain or because a thorn had grown through the side, rendering it uncomfortable for the parent to settle in it.

At the same time my advice to all bird-lovers is—Do not attempt to stand *in loco parentis* to baby birds unless you have learned, by the successes and failures recorded by others, exactly how to treat them ; and remember that you must be content to hop out of bed every morning at 6 a.m. to give the first meal : and that, until the youngsters begin to get fairly lively, they will need a meal every hour up to 9 p.m. (little and often is far better than a big meal and stupor every two or three hours). Secondly I would suggest that no young birds should be taken unless urgently required for show-purposes, or as household pets : nestlings are extremely fascinating, but this only makes one feel the deeper remorse at having taken them, when they die young.

On the other hand, if nestling birds are brought to you which you have not asked for, as was the case with not a few of those which found their way to me, or if from any other cause the lives of young birds are threatened, by all means do your utmost to bring them up by hand, and may good luck attend your efforts.

Of birds which came into my hands soon after they had left the nest I cannot boast : I kept them for a time, but they died young.

THE APPARENT ASSUMPTION

OF A DISTINCTIVE PHASE OF BREEDING PLUMAGE
IN THE MALE PLUMED GROUND DOVE.

By E. W. H. BLAGG.

Towards the end of the month of June, 1911, I obtained a pair of the very pretty Australian Plumed Ground Dove (*Lophophaps leucogaster*). Within a few minutes of being turned into the aviary the cock bird proclaimed his sex by bowing and showing off to his mate, with outspread wings and tail. In all the published accounts of this species that I have had access to it is stated that the cock and hen bird are identical in the colouring and marking of their plumage, and so were these two birds on arrival, and so they remained until the early summer of 1912, when the cock bird, by moult, changed the colour of his plumes from fawn colour to blue grey, and the posterior part of the crown of the head also became blue grey instead of fawn colour. At the same time the black marking on his throat became more extensive and pronounced.

In this state of plumage, not even the most careless observer could say that the sexes were alike in colouring. I used to amuse myself by asking casual visitors to my birds, "Do you see any difference in those two birds?" and at once would come the reply, "Certainly, one has a blue head and the other one has a brown head."

At this time I was speculating as to whether my bird would retain his blue head for the rest of his life, or whether he would reassume his brown head at his autumnal moult: in the former case I should have drawn the conclusion that the blue head was the mark of full maturity, and in the latter case that the blue head marked the full breeding plumage. I was also wondering whether the hen bird was going to follow the lead of her mate, and change the colour of her plumes, &c., for in that case the sexes would still be alike. But no, the hen's plumes have always remained brown, and at his autumn moult the cock reassumed brown plumes. At the beginning of this summer, 1913, his head again became blue, and at his autumn moult he has once more grown brown plumes.

It would be interesting to hear whether anyone who has kept

this species has noticed this change of plumage, or whether it has been noticed amongst the wild birds in Australia. It appears to me to be an analogous case to the Chaffinch getting a blue head in summer, the Brambling and Black-headed Bunting getting black heads, and the various other breeding plumage changes in different species, but, so far as I am aware, it has not hitherto been recorded of any species of dove or pigeon that it assumes a distinctive phase of plumage for the breeding season.

A FEW OF MY BIRDS IN CAGES.

By MRS. WARREN VERNON.

I am living at present in a very cold part of Scotland, and at an altitude of 904 feet, so after hearing that last winter the glass went down to 7° below zero I gave up all idea of out-door aviaries. I have turned a room into a place for the birds to get exercise and change, but the majority I have to keep in cages. So far this plan seems to answer well, and from former experience I consider one has a better chance of seeing if the birds require attention when in cages and separately, than when a lot of them are together flying loose. There is often one looking rough and a little immediate attention and medicine if given at once will cure; when in an aviary the bird may be moping behind something and escape notice till too late to save its life.

The room has cork lino on the floor and looks N.W. getting sun in the afternoon, large boughs in pots, lots of nest boxes and cocoa nuts to furnish it. On the deep window sill I place some green stuff, and in front of it a long bough on which the birds sit. The window is half-wired and is opened whenever the weather permits, it changes very quickly here from warm to bitter cold. Large baths stand on a tray, the birds bathing constantly no matter how cold the weather is. On a mantelshelf all the seeds for the hard bills are put. There is electric light in the room, and I can turn it on in the dark evenings, as it begins to get dark so early now,

I found certain birds much more restless and disturbers of the peace at night than others, viz. : Java Sparrows (white variety)

and Wagtails. The latter used to keep up a continual tapping for hours at night, until I discovered who the culprits were and caged them. Now quiet reigns.

The following is a list of birds I at present keep, some in cages, others flying loose :—Great Reed Warbler ; Lesser Reed Warbler ; Marsh Warbler ; Sedge Warbler ; Red-crested Flycatcher ; Blue-throated Warbler ; Wood Warbler ; White-throated Singing Finch ; Russian Bullfinch ; Pied Wagtails (6) ; Belgian Canaries ; White Javas ; Orange Bishops (6) ; Zebra Waxbills ; Diamond Sparrows.

In one large aviary cage I have the following Small African Waxbills, etc. :—Cordon Blues ; Orange Breasts ; Orange Cheeks ; African Waxbills ; Grey Singing Finches ; African Fire Finch ; Ruficaudas ; Bronze Wing Mannikins ; Avadavats.

The food I give all the soft bills is Galloway's "Life," for smaller ones "Perfecto," for Thrush and larger birds I mix it with chopped lettuce and York cheese, gentles and mealworms, according to their individual requirements, some of the Warblers are most fearfully greedy and will eat till they die, so some days I give dry sponge cake and ants' eggs. There is much less eaten on those days ! Seeds as follows : Paddy rice, three sorts of millet, spray millet, canary, inga, sunflower and hemp ; shell gravel in a saucer. This finishes the foods.

I have also a lovely Blue Rock Thrush, a hand-reared Wry-neck, Gold Crest Wren and Jenny Wren. The latter I also hand-reared. Also a lovely specimen of the Hunting Cissa, about which I wrote last month. All the birds have become very tame, from being constantly handled, and changed from cages to bird-room. Those in cages fly every day for a short time in my room. They perch on my head, and also help themselves to the food as I am preparing it. I find all the small Waxbills like the soft food, and what is left over in the various glasses from the soft bills I throw on the tray in their cage. They find great amusement in picking it all over. The grass seed too is a great delight when the seed is all picked out, the long ends are taken up and made into nests ; all the eight nest boxes are full of grass. They will also eat small gentles and of course mealworms. Personally I believe all foreign hardbills will eat live food if given.

The inmates of the Waxbill Aviary are a sight for color conditions and plumage. The Fire-finch is quite lovely. I have two cock Grey Singing Finches and one hen. One cock bird sings beautifully and continually, the other has never uttered a sound. I have heard that sometimes they never do sing.

The pair have mated and the hen is sitting now, she has built herself a lovely nest on the top of a box lined with horse-hair. She was badly egg bound the other day but I was able to save her, and she is all right and sitting steadily now. Apparently the noisy inmates don't in the least disturb her. The Hunting Cissa is really a most funny pet, he is not like a bird at all, letting one pick him up, hold him close to one and ruffle his feathers, all he does is to make a growling noise and spread out his wings. He collects all the shoes, handkerchiefs, etc., he can find in a heap, and will play a tug of war with the girdle of a gown, pulling for all he is worth. He hides meat in one's shoes, and if given a dead Sparrow eats it, bones, head and all.

I shall be going to a more salubrious part of Scotland next spring and shall hope to have more birds and aviaries. I have also one pair Long-tailed Tits, very tame and very pretty. This ends my list.

"BOBS" & "BILLY."

By Mrs. CURREY.

"Bobs" was a most charming specimen of the robin family. He first made my acquaintance during the hot summer of 1911, when he was still in his baby clothes. Two days after our introduction an enticing mealworm brought him into my lap, and after that we became fast friends and I never had any peace when sitting in his particular piece of the garden, but his district seemed to have a definite limit.

He always came to the dining room for meals, and one hot night slept on the curtains and caused a fearful commotion by falling out of bed in the middle of dinner and landing on the butler's head. The room had to be darkened and a lamp put in the garden before he could be persuaded to leave the room. Sometimes he would be in a

room a few minutes before anyone noticed him, when he would sing a few notes to attract attention, and would generally be found perched on a candle.

The spring of 1912 I found his nest, but his wife was never allowed to come for food, any titbits were carried to her. Unfortunately the whole family succumbed to a too liberal allowance of mealworms. Bobs himself became ill, nearly losing all power in one leg, as apparently mealworms cause a sort of fit. He was about all last winter and gradually got well and strong again, until at last, this spring, he brought his wife "Roberta" to the window, but she never came inside the room. After much consultation their nest was made in the conservatory close by. It was on a large palm pot hidden by maiden-hair fern, and Roberta's bright eyes peeping out of the foliage made the prettiest picture.

It was amusing to see how Bobs kept all birds away from the dining room window, especially another robin—"Billy" by name—who had a nest on a Camellia tree in a greenhouse on the other side of the dining room. He and his wife "Wilhæmena" would perch on a small tree near, and Billy would swoop on any food that he thought Bobs did not notice; a battle royal usually followed, in which Bobs was always victorious. One day I noticed Billy had a tiny speck on his head, so I thought Bobs had pulled his feathers out, but the speck grew larger until the whole head and neck grew absolutely bald. In spite of this, Billy reared two families, and it was comic to see the bald-headed father attending to the children, as two days after the fledglings had left the first nest, Wilhæmena began laying again in the same nest, and Billy seemed to have sole charge of the little ones. He disappeared about the beginning of June, and has not been seen since, so whether he has died of a cold in the head or sunstroke I do not know.

Bob's family again met with disaster, as the eggs were sucked by mice a few days before they should have hatched. Bobs also has not been seen since, but I hope he is not dead. I feel I have lost a friend and am still vainly hoping he may come back again when I call him.

SOME RARITIES AT THE HORTICULTURAL HALL BIRD SHOW.

The twenty-fifth annual exhibition of the L.C.B.A. was held at the Horticultural Hall on the 27th, 28th and 29th of last month. The entries were a record, thanks to the untiring energy of Mr. Allen Silver and The Foreign Bird Exhibitors' League for altering the classifications and guaranteeing all the Classes. The Show undoubtedly was a huge success, as never before was there such a marvellous collection of rare and beautiful Foreign Birds seen—nearly 20 of which being quite new to the show bench. The most coveted prize for the Best Foreign Bird in the Show was awarded to Mr. A. Ezra's Southern Malachite Sunbird (*Nectarinia famosa*), a most beautifully graceful bird and in most perfect condition. Many good judges declared it the best bird ever exhibited both as regards beauty and condition. In the Class for Parrakeets Miss Clare's pair of Queen Alexandra's were beautiful, also her pair of Hooded Parrakeets. The rarest Waxbill was Mr. Maxwell's "Peter's Spotted Finch," a bird so seldom seen, and next to him came Mr. Frost's lovely pair of Red-faced Finches (*Pytelia afra*) as well as a Jameson's Finch, both of which were not for competition. Mr. Watts showed his beautiful Queen Whydah, and Mr. Beaty a Gold-collared Paradise Whydah, a rare bird. Mr. Ezra's Blue Chaffinch was a very rare exhibit, as this bird is very scarce, even on the island of Teneriffe, where they are known to occur, and is not found except on one or two of the Canary Islands.

In the Class for Sunbirds, etc., Mr. Ezra showed five different species of these exquisite creatures. They were the Southern Malachite, the Greater Amethyst, the Cape Lesser Double-collared, the Black-breasted, Yellow-backed, and the Amethyst-rumped Sunbirds. Numbers two, three, and four were new to shows. Major Horsbrugh sent a rare Brown-eared Bulbul and a Blue and Black Jay from Yucatan, both new to the show bench. Mrs. Warren Vernon exhibited a most lovely Hunting Cissa—the tamest bird in the show.

In the rare-feathered Class Mr. Ezra showed a beautiful

Yellow Ring-necked Parrakeet and a very rare yellow variety of the Blossom-headed Parrakeet, the head in this instance being pale pink. Mr. Sutton and Miss Clare benched some good Blue Budgerigars.

In the Class for Flycatchers, etc., Mr. Ezra showed the Small Minivet, the Red-flanked Bush Robin, the Large Niltava, a pair of Fire Caps and a Short-billed Minivet. All except the last shown for the first time—an exceptionally rare lot of birds.

In "All other Species," Lady Kathleen Pilkington showed a lovely pair of Yuhimas, and a Black-throated Wren Babbler, and Mr. Ezra a very rare and fascinating bird, the Red-tailed Minla—all three new to the show-bench. Mr. Townsend showed a charming pigmy Woodpecker and a splendid Indian Kingfisher, Mr. Maxwell a good specimen of Levaillant's Barbet and a Pink-crested Touraco.

In the Class for Tanagers Lady Kathleen Pilkington showed a very rare Black-cheeked, Mr. Ezra a good pair of Pretres, Miss Bonsfield a splendid White-capped, Mr. Maxwell a Red and Black, an exceptionally rare bird. Mr. Townsend's Black-shouldered was a perfect beauty and in splendid condition.

OBITUARY.

We regret the passing away of Mrs. NOBLE, of Park Place, Henley-on-Thames, who had been a member of the Society since 1900.

ILLUSTRATION FUND.

Will not some more Members follow the good example set by a few, and very kindly give something: otherwise it will be quite impossible to keep up the standard and number of our illustrations month by month.

EDITOR.

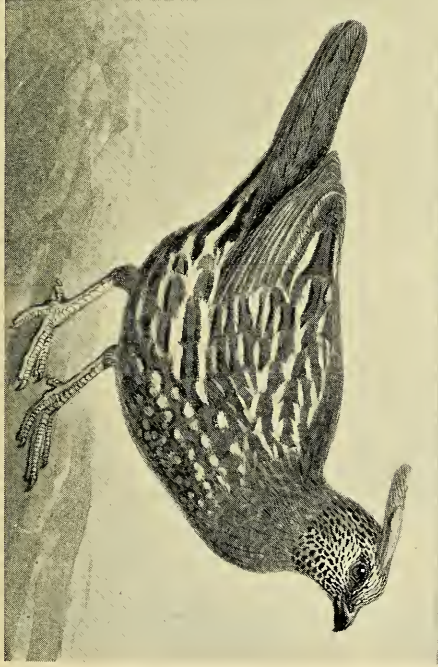
Phlogothraupis sanguinolenta.



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THE AVICULTURAL MAGAZINE.



Stachyris nigricaps (Black-throated Babbler).

FOUR RARE EXHIBITS AT THE L.C.B.A. SHOW, NOV. 1913.

Lophortyx douglasi.

CORRESPONDENCE, NOTES, &c.

LONGEVITY IN CAPTIVITY.

SIR,—In the October number of the Magazine there was an article by Dr. A. G. Butler on ‘‘ Longevity in Captivity,’’ etc. It may be of interest in this connection to place on record the following cases:—

In February, 1874, I bought a Red-headed Cardinal (*Paroaria cucullata*). This bird died in June, 1899. He thus lived twenty-five years and four months in captivity, occupying the same cage during the whole period. During the last three years or so he showed some signs of age, much thickened scales on the legs and a difficulty in the autumn moult, otherwise he remained in excellent plumage with a brilliant red crest, mostly raised, and was very lively to the end.

In July, 1872, I bought a Lesser Sulphur Crested Cockatoo (*Cacatua sulphurea*), he was then a year old. This bird was killed by an accident in June, 1906, being then about thirty-five years old and showing no signs of age. He enjoyed a good deal of liberty about the grounds. Of course this is not so interesting a case as the first, since some species of parrots are known to live to a great age, over 100 years probably.

WALTER CHAMBERLAIN.

SEXING PARRAKEETS.

SIR,—I was glad to see that my humble paper had called forth such a hearty response. Lord Tavistock’s article is extremely interesting and should prove most helpful to keepers of Parrakeets. Since writing my paper I have bought several more Broadtails and in every single case the broods have either been sexed wrongly or the birds have not been sexed at all.

With regard to young Redrumps I am glad to be put right. I understand from one who had bred them that one could not sex them until the first moult. Personally I have never had them although I possess a pair.

The Red Rosella question seems to have caused a good deal of heart-burning and I fear I was a little precipitate in bringing Dr. Butler’s name into the discussion. I do not possess Dr. Butler’s ‘‘ How to Sex Cage Birds,’’ but a friend allowed me to consult his copy one day and I quoted from memory with regard to the green spot. Like Dr. Butler I have been a very keen entomologist and I dare say he will recognise the name in that capacity. It was the Red Rosellas that first led me to doubt whether they were a true pair. One or two senior aviculturists took a good deal of trouble to point out the green spot in the one bird but not in the other. But I couldn’t see it myself and I felt more and more convinced I had two cocks. Subsequent history proved I was right, and from that moment I have never ceased to carry out for myself the differences in the sexes of birds in general and Parrakeets in particular. The result of my investigations are chronicled. They are absolutely original as far as I am concerned, and, with the one exception of the unfortunate green spot, I neither

referred to nor consulted a single book of any sort. True I used Mr. Page's book as a reference to this extent. I referred to the illustrations in his book to illustrate my points and for all I know he may have in the text entirely reversed my opinion. I hold that if you want to effectually check all progress in any subject (and aviculture no less than any other) you will write papers with "reference" books spread thickly on the table before you and be fearful lest you say aught that does not entirely agree with the authorities. If then any remark or phrase of mine occurs which has appeared in some book or paper or journal some years previously it is because the writer of that book, paper, or journal and I had made a similar observation; which being corroborated is therefore probably correct. At any rate I can plead guiltless of plagiarism.

But I still feel unconvinced about the green spot, as far as my experience goes that part of the Rosellas anatomical colouration seems to me to be absolutely variable and inconsistent. The fact that hen Rosellas are more green about the head and neck than cocks would *ipso facto* tend to the assumption that a bird with a green spot was a hen. But to say that hens had a green spot, or that all birds who have a green spot are hens, seems to me more than one can say. Such a variable quality cannot be constant and an inconstant characteristic cannot be a certain sign, and an uncertain sign cannot be a reliable guide. In saying this I impugn no lack of respect to Abrahams' extraordinary and innate genius. I have no doubt he could spot a hen Rosella the moment he saw it. Having found a hen Rosella or perhaps several with a green spot he inferred that all had, and we know quickly the wish becomes father to the thought. Besides, I ask, who would want to waste time looking for the green spot in a bird so easy to sex as a Red Rosella.

I must apologise for occupying so much space, but I felt that certain points needed clearing up, especially from my point of view.

L. LOVELL-KEAYS.

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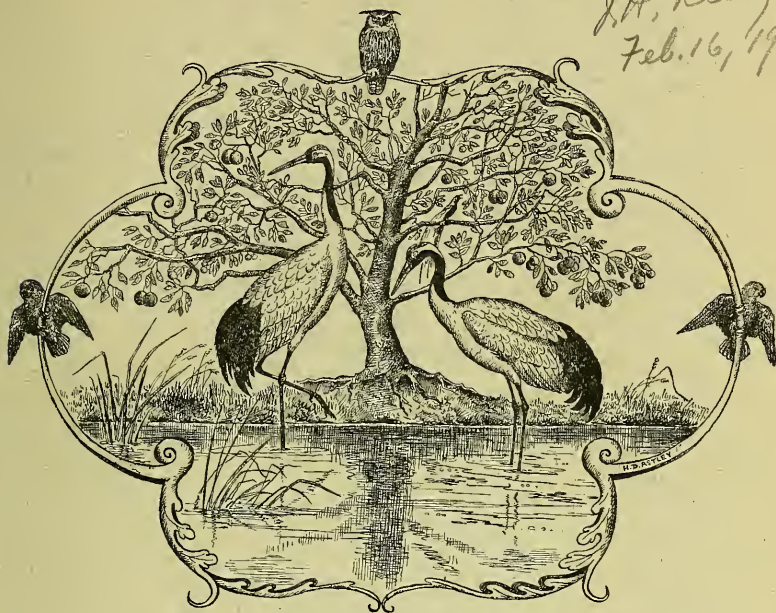
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THE DISPLAY OF THE SUN BITTERN (*Eurypyga helias*).

After a photo by D. Seth-Smith

THE

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Third Series.—Vol. V.—No. 4.—*All rights reserved.* FEBRUARY, 1914.

THE SUN-BITTERN.

Eurypyga helias.

By D. SETH-SMITH, F.Z.S.

(Curator of Birds, Zoological Society of London).

This very elegant and graceful species is more often seen in Zoological Gardens than in private collections of living birds, but it is one that would well repay the attention of aviculturists if only it could be procured. It is but seldom imported however, and always commands a high price.

That enterprising and reliable dealer Herr August Fockelmann, of Hamburg, received a consignment some few months ago, of which the Zoological Society of London procured a pair. These were placed in a compartment of the Western Aviary, next to that in which was a male example of the same species which has lived in the Gardens for some time.

The latter bird saluted the new arrivals through the wire partition with a series of displays of his wonderfully marked wings, but whether this was a sign of pleasure or disapproval I am not certain. I am inclined to think the latter was the case, for the "display" of this bird, when I have seen it, has not been one of love, but one evidently intended to frighten away the object to which it is directed. The sexes are alike in plumage, and I doubt if there is any definite sexual display. I was very anxious to obtain a photograph of the Sun-Bittern with wings expanded, so one morning I had a Kagu run through into the compartment in which lived the then solitary male of this species. The Sun Bittern commenced to display

to the Kagu at once, and I had no difficulty in securing some good pictures.

There are two species of Sun-Bitterns, *Eurypyga helias* of Brazil, Amazonia, Bolivia, Guiana, and Venezuela, and the slightly larger *E. major* of Central America, Columbia and Ecuador.

These birds are said to inhabit the Swamps, feeding on all kinds of insects, small fish and probably small frogs. In captivity they live well on a diet of finely-chopped raw meat, mealworms, small live fish and any insects procurable. Fly-catching appears to be one of their favourite occupations. The insect is approached with slow stealthy steps until the bird is within striking distance, when the thin, snake-like neck darts forward and the insect is secured at the top of the spear-like bill.

When at rest amongst vegetation the Sun-Bittern is practically invisible, the undulations on its plumage being wonderfully protective, but no sooner does it rise and expand its large butterfly-like wings than it becomes a most conspicuous and very beautiful object.

The late Mr. A. D. Bartlett contributed a very interesting account of the breeding of the Sun-Bittern to the *Proceedings of the Zoological Society* in 1866. It appears that the year 1865 was remarkable for the long continuance of dry hot weather during the summer and autumn, which probably influenced the breeding and tendency to breed amongst animals that had previously shown no such inclination. In May, a pair of Sun-Bitterns, the first apparently that the Society had possessed, commenced to show signs of wishing to breed. Bits of stick, roots of grass and similar materials were carried about, and the birds were noticed constantly walking round the water pool apparently in search of something. The idea suggested itself that they were searching for mud, so this was supplied, with the result that they commenced at once to use it.

An old straw nest was placed at the top of a ten-foot pole and was adopted by the birds, both of which carried up mud and clay, mixed with straw, roots, and grass. The sides of the nest were raised and thickly plastered with mud. The first egg was laid in May, but was dropped on the ground, and so much did the fragments resemble the egg of a Moorhen that, as there was a single blue

Waterhen in the same compartment, Bartlett was inclined to think at first that this bird had laid the egg. However, in the early part of June another egg was laid, this time in the nest, and it agreed with the fragments discovered earlier. The two birds took turns in incubation and in twenty-seven days the egg hatched.

Bartlett describes the young bird as one of the prettiest he ever saw, being covered with fine short tufts of down, and much resembling the young of Plovers and Snipe. It remained for twenty-one days in the nest, being regularly fed by its parents on small fish and insects. It grew rapidly, and at the end of two months was indistinguishable from its parents. A second young bird was hatched later on in the same year and was also successfully reared. It is much to be hoped that we may be able to repeat this success in the coming summer.

[The Sun-Bittern I have, is ridiculously tame, and does not resent being picked up; and placed on the palm of the hand.

H. D. A.]

FOREIGN DOVES AT LIBERTY.

By THE MARQUIS OF TAVISTOCK.

To anyone inclined to embark on that form of aviculture in which an attempt is made to induce foreign birds to remain unconfined in the vicinity of their owner's home, the dove family affords a not unpromising field for experiment and a fair chance of success. Many exotic doves are, in the first place, quite indifferent to cold and some of the hardiest are reasonably well endowed with the necessary homing instinct. Unlike finches and parrakeets, they can generally be relied upon to arrive free from infectious disease: they are easily and cheaply fed (I refer of course to the grain-eating species only) and under no circumstances are they destructive to trees and shrubs.

Our experiments with doves at liberty have now been carried on for a considerable number of years, and in a few cases interesting and satisfactory results have been obtained. The number of failures has certainly been large, but in some instances it is only fair to conclude that they have been due to unfavourable local conditions

which do not exist in every part of the country, and that species which have not done well with us might succeed in establishing themselves amid more suitable surroundings. Our garden is unfortunately by no means an ideal home for any bird needing shelter and seclusion, as it is very scantily provided with winter cover, a defect which the heavy clay soil makes it extremely difficult to remedy, since many of the most useful evergreen trees grow slowly and thrive none too well. It is also more or less surrounded at a distance by large woods which tend to draw the birds away; and last, but not least, it is the happy hunting ground of owls—both brown and white,—endowed with a perverted appetite for feathered game which an unlimited supply of rats and mice renders wholly inexcusable. It is, therefore, not to be wondered at that our losses have at times been heavy and disappointing, and that more than one promising experiment has ended in failure.

Australian Crested Doves (*Ocyphaps lophotes*) were among the earliest introductions, and although they do not appear to increase from year to year, their numbers are well maintained, and no fresh importation seems necessary. Most of the original birds were turned out with cut wings, so that they had plenty of time to become accustomed to their surroundings before they gradually regained their powers of flight. Their welfare has twice been seriously threatened by outbreaks of disease, but, fortunately, on neither occasion did the mischief get quite beyond control. About six years ago, the wild Turtle Doves, which visit the gardens in large numbers, were found to be suffering from canker, a highly infectious disease of the throat, well known to pigeon fanciers. How they started it will always remain a mystery, but probably one of them had come into contact with a diseased domestic bird and soon spread the infection among his fellows. The results were most disastrous; large numbers of South American Spotted Pigeons were lost, and practically the entire stock of Barbary Doves, Senegal Doves, and other foreign members of the genus *Turtur*. When the infection had become really bad, the Crested Doves also began to die, and for a time things looked very bad indeed. Fortunately, however, when the autumn migration removed the Turtle Doves, an improvement set in, and by the beginning of winter the disease had apparently

disappeared. The next summer, on the return of the Turtle Doves, it broke out afresh, but by immediately destroying all sick birds, discouraging the presence of the healthy ones on the foreign birds' feeding trays and dressing large areas of ground with salt, a serious outbreak was fortunately averted. The following season a few cases again occurred; but, this last year, I am glad to say there has been no outbreak at all, and I am hoping that the disease will not return. Canker is quite distinct from the diphtheria which in certain seasons carries off the Woodpigeons in such vast numbers. A Woodpigeon suffering from diphtheria will be found to have its throat covered with whitish spots: a dove suffering from canker has the entire gullet choked with cheesy matter and much distended. It has great difficulty in swallowing food and often throws away a grain of seed after making several ineffectual attempts to get it down. Another bird which picks up the same seed afterwards, will, if susceptible to the disease become infected on the spot. I have never seen any kind of dove suffering from diphtheria, except the Woodpigeon; but many species, including the Stock Dove, readily contract canker.

During the winter following the first canker outbreak, tuberculosis made its appearance among the Crested Doves. A good many were lost from this cause also, but I managed to save a few of the sick ones by keeping them warm and feeding them on stimulating food; avian tuberculosis, even when very advanced, is by no means so incurable as some people imagine, although, if the diseased bird is not a valuable one, it is usually better to destroy it at once. The same methods as were adopted in dealing with the canker outbreak, viz., salt dressings and the removal of sickly birds at the earliest opportunity, did a good deal towards checking the ravages of tuberculosis. The wretched disease has not been entirely got rid of, as I know to my cost, probably owing to the large area over which the infection is spread and the difficulty of treating the whole: but the cases which occur now are isolated ones and it is long since a Crested Dove has been among the victims.

When at liberty Crested Doves attempt to breed nearly the whole year round, but during the winter months they are seldom or never successful in rearing their young. The latter, on leaving the nest, may be distinguished from their parents by their duller colours

and very large crests, which, curiously enough, are at that time more developed than when the birds are fully adult.

In disposition the Crested Dove is little better than the majority of the pigeon family, which, contrary to popular ideas, are jealous, quarrelsome, and greedy, and much given to bullying their own wives and running after their neighbours'.

When courting, the cock raises his tail vertically over his back and makes a succession of rather rapid bows, each bow being accompanied by a gulping coo and a spreading of the tail and wings; an exactly similar performance is gone through to intimidate a male rival. The Crested Dove shows little inclination to molest other birds, but is quite able to take its own part when attacked, and in a dispute in which I once saw one engaged with a Roseate Cockatoo, the cockatoo, who had been the aggressor, came off rather second best.

Although largely arboreal in their habits, Crested Doves spend a good deal of time on the ground as well, and run with great rapidity. Their flight, which is accompanied by a loud whistling sound, is tremendously rapid, and I know few birds which can equal them in point of speed: the wings are flapped several times in quick succession, after which they are held rigid for a few moments until the impetus begins to slacken. On alighting, the bird throws its tail up over its back, apparently with a view to keeping its balance.

South American Spotted Pigeons (*Columba maculosa*) were introduced about the same time as the Crested Doves and treated in the same way on their arrival. They have done well—except during the canker epidemic already mentioned—and a flock of about eighteen maintains itself from year to year, the number of young birds bred each season being apparently just sufficient to make up for the losses among the adults. The flight of this bird is not unlike that of the Ringdove, but when seen on the wing it is not easily mistaken for any other species as the rather large head and neck give it a peculiar appearance which distinguishes it from other doves of the same size.

The Spotted Pigeon begins to nest very early in the year, and frequently selects the prickly branches of an Araucaria as a site for building operations. During the breeding season the cock may often be seen sitting at the extreme top of some bare tree, uttering his peculiar call, a hoarse rhythmical *cōrrrrw, cōr, cōr, cōrrrrw, cōr, cōr*

cóorrw, at frequent intervals. Should a rival attempt to answer him from near at hand, a battle generally ensues, for the species is decidedly pugnacious. When courting, the male bird makes a deep, quick bow to the hen, accompanying it with a short "corw," followed by a shiver of the wings.

Bronze-necked Wood-doves (*Haplopelia larvata*) were a later introduction than the two species already mentioned, our first and only consignment reaching us about seven years ago. This rare South African Dove is so little known to aviculturists that it may be well to give some account of its appearance. In size and general build it bears a very close resemblance to the Australian Green-winged Dove and probably also to the Rufous Dove, a bird which I ought however to say that I have never seen alive. The adult male has the back, wings, and tail a uniform dark vinous brown and the breast dark vinous, becoming more or less chestnut on the abdomen and under tail coverts. The face is greyish white and there is a good deal of metallic green on the back of the neck. The hen is smaller and duller than the cock and has little or no white on her face. Young birds at first possess a speckly, rather grouse-like plumage, which is moulted shortly after leaving the nest.

The Bronze-necked Wood-dove appears to be quite hardy; our birds spent their first winter out of doors without injury, although during a brief spell of severe frost, the thermometer on one occasion actually fell below zero, and the following summer they bred and successfully reared their young. The nest is generally built in a thick bush, about 8ft. from the ground, and is composed of fibrous roots and fine twigs; it is rather a slipshod affair, as is usual with pigeons, but a certain amount of stability is sometimes ensured by the use of an old Thrush's nest as a foundation. Two white eggs are usually laid and both sexes take part in their incubation; two or three broods being reared in one season. When breeding, the cock becomes very jealous and quarrelsome, fighting with other doves, attacking and driving away any small birds which happen to approach him and pursuing his mate with low humming coos.

The Bronze-necked Wood-dove is mainly terrestrial in its habits, walking and running rapidly over the bare ground underneath thick evergreen shrubs and never venturing into the open. The flight is

low, rapid, and silent, and is not unlike that of a Woodcock. In their diet these birds appear to be largely insectivorous and I have found them extremely fond of mealworms, although they have some trouble in killing them and evidently feel uncomfortable if they happen to swallow them alive. They eat a considerable quantity of maize and often seem to prefer it to smaller grain.

The first year we bred them a good many late hatched young died during the early winter, so next season I attempted to increase our stock by catching up all the immature birds I could get hold of and placing them in an aviary. I managed to secure four, but the experiment was not a success as two died shortly afterwards of septic fever and a third killed itself by flying against some glass. As far as I can tell we have at present about four or five pairs of Bronze-necked Wood-doves at liberty in the garden, but their retiring habits and unsociable disposition make them extremely difficult to count. They appear to be immune to canker, but occasionally suffer from tuberculosis.

Wonga-wonga Pigeons (*Leucosarcia picata*) were imported in small numbers on several occasions, but it is only quite recently that they have begun to establish themselves and do really well. At first, many succumbed to tuberculosis and the few young that were hatched were destroyed by the American Grey Squirrels before they were able to protect themselves. For the last two years, however, the ground has been less contaminated, and the squirrels being as far as possible removed, the Wonga-wongas have done much better and a number of young were successfully reared this season. *Leucosarcia picata* is mainly terrestrial in its habits, only perching in trees when alarmed or engaged in nesting or when uttering its peculiar call—a loud, high-pitched *coo-coo, coo-coo, coo-coo, coo-coo, coo, coo, coo, coo*—often continued for five or ten minutes without a pause. The nest is usually placed in an evergreen tree from ten to twenty feet from the ground. The method of building is rather peculiar, the hen sitting on the selected site, while the cock searches for the materials. Having found a suitable stick he flies up close to his mate, walks round her two or three times and then steps on to her back and gently offers his burden which she takes and arranges under her, while he goes off to obtain a further supply.

Like many other Australian Doves, the Wonga-wonga has a fatal habit, when at liberty, of attempting to fly through closed windows and wire netting. In the case of the window, the bird's great weight and the tremendous impetus of its flight sometimes carry it off victorious to the detriment of the glass, but where wire netting is the obstacle, a broken neck or a cracked skull is the sad and inevitable result of the collision.

A small importation of Peaceful Doves (*Geopelia tranquilla*) did not promise well at first, and after twelve months had elapsed, a solitary cock alone remained. It did not seem worth while to get any more, as such small birds appeared to stand a poor chance against the relentless harrying of the owls; but the little fellow's musical *coia-coo*, *coia-coo*, sounded so persistently throughout the day that I at length took pity on his loneliness and got him a mate. Some weeks after she had been turned out she injured her wing and had considerable difficulty in flying, although she was just able to elude my attempt to capture her. In the end, however, rather to my surprise, she made a good recovery and brought up three broods during the course of the summer. The latest hatched did not survive very long after they had left the nest, and two more fell victims to a neighbour's escaped Goshawk, which for many months paid the most unwelcome visits to the garden. Four however, were left at the end of the winter and more young were reared during the ensuing summer and again this year. With luck, therefore, and the importation of a few fresh birds, this pretty little species may eventually become established.

Barbary Doves (*Turtur risorius*) which are kept at liberty in many gardens with considerable success, have never done well with us. Many of those first liberated proved unable to stand the winter without artificial shelter, and of the survivors all but one perished during the canker outbreak, together with the Senegal and Half-collared Doves. About a year ago a few more were obtained, which have proved hardier than their predecessors, but they have not bred well.

Bronze-winged Pigeons (*Phaps chalcoptera*) at one time promised well, being hardy birds, indifferent to cold, not susceptible to disease and little inclined to stray when first released. In the

end, however, they gradually used to disappear, and although we tried them on several occasions the result was always the same. The hens, for some reason, invariably vanished sooner than the cocks, some of the latter remaining about for nearly two years.

Thibetan Pigeons (*Columba leuconota*) were released full-winged. They stayed well for a short time and then deserted us. I believe we should have had more success with them had they been provided with a dove-cote, for they are naturally rock-dwellers and spent most of their time on the roof and ledges of the house. Cinnamon Doves, Scaly Doves and White-crowned Pigeons have all been tried but soon grew discontented with their surroundings and left. Tambourine Doves, Bleeding-heart Pigeons and Crowned Pigeons stayed better, but were unable to survive the winter without artificial heat. Triangular Spotted Pigeons also proved sensitive to the cold: a hen of this species we once had was extremely tame, delighting in being stroked and petted, and showing her pleasure at the approach of her friends by cooing and shaking her wings. For quite a long time she was much attached to me and I could do anything I liked with her, but after I had been absent from home for a few weeks she would have nothing more to do with me, pecking and striking in the most spiteful manner whenever I attempted to touch her. I could never understand this sudden change in her behaviour, for she was as affectionate as ever towards her other friends, and birds as a rule have good memories and seldom forget those of whom they have once been fond.

About eighteen months ago I started an experiment with Smith's Ground Doves (*Geophaps smithi*), obtaining eight of these curious little brown and white birds, which look more like partridges than pigeons. On their arrival I cut their wings and turned them into the grass quadrangle round which the house is built and which, being sunny and sheltered, I hoped would provide them with a satisfactory home. They did well for a short time, but after about a fortnight four died very suddenly, from what exact cause I was unable to discover. The remainder, however, were more fortunate and lived for some months in perfect harmony. Then, one day to my great surprise, three of them suddenly attacked the fourth and scalped his head badly, and would doubtless have killed him had

they not been prevented by a timely rescue. They had always seemed so peaceable, sitting together huddled up in a heap for hours at a time that I was much astonished by this murderous outbreak. The victim was kept shut up until he had recovered from his injuries and was then released in another part of the garden.

Not long afterwards, one of the three in the quadrangle was killed by a dog, but the others, which proved to be a pair, survived the winter and showed no disposition to stray when their wings had grown. They spent their whole time on the ground, never attempting to perch, and if anyone approached them they would squat until nearly trodden on, rising at the last moment with a loud whirring flight which carried them up and over the roof like rockets, almost before one had time to realize that they had gone. In a very short time however they would be back again in their old quarters.

The courting display of Smith's Ground Dove bears a very close resemblance to that of the Crested Dove, the bird bowing and half-spreading its wings and raised tail and uttering a loud purring "corrw" with each bow. Both sexes indulge in this performance, and may sometimes be seen bowing and cooing to each other, alternately, a habit I have not observed in any other pigeon. When moving about, feeding, the birds have a rather different call to the one already described, a kind of "corrw—coo" uttered at frequent intervals with a short pause after the first note. I have found mine, on the whole, quite peaceable with other birds, but occasionally the persistent quarrelling of the Crested Doves would irritate the cock *Geophaps smithi*, causing him to rush upon the disturbers of the peace and chase them until they took flight, when he would indulge in his funny little display as a last defiance to the retreating foe and return in triumph to his wife. As the pair appeared to be in the best of health I had great hopes that they might breed this summer. They have not, however, done so, and recently the hen became partially paralyzed in her legs, apparently in consequence of some injury, but is now I am glad to say well on the road to recovery. The single bird stayed for some time in the enclosure in which we had placed him and then vanished entirely for about three months. I had quite given him up for lost and was therefore considerably surprised one day to hear that he had been seen walking along the

stone terrace in front of the house. After that he again disappeared, but when in June I obtained a second lot of *G. smithi* and put them in a large glass aviary surrounded by high wire netting, he had joined the newcomers within three days of their arrival. How he succeeded in discovering his relations so quickly is rather a mystery to me, as he could not possibly have seen them and was separated from them by many obstacles. From that time on, he has been constantly in evidence, but what will be the ultimate fate of the little flock time alone can show.

In concluding an article dealing with the acclimatization of a family of birds which includes among its British representatives such a notorious evil doer as the common Woodpigeon, it may not be out of place to say something in answer to the arguments of those people who view with horror the introduction of exotic birds and regard it as a certain menace to fruit-growing and agriculture. They point out continually the disastrous results which have followed the introduction of the Sparrow into America and the Starling into Australia and appear to imagine that because British birds multiply abnormally in foreign countries, therefore foreign birds will multiply abnormally in Great Britain. The analogy is, I can confidently say, quite unsound and their fears are not in the slightest degree likely to be justified. Of the many species of foreign birds we keep, or have kept at liberty, (most of which have been carefully chosen as being particularly likely to establish themselves) one and only one, if certain eminently desirable species of Waterfowl are excepted, has shown some promise of becoming a truly wild bird, viz., the beautiful and harmless Hill Tit (*Liothrix leutea*) or "Pekin Robin." Such an addition to the British list, no one surely could find any objection to. All the rest—doves, finches, parrakeets, etc.—*must* have artificial feeding throughout the year, and even with this assistance, a maintenance of numbers and not an annual increase is, as a rule, the most that can be expected.

SOMETHING ABOUT HOODED PARRAKEETS & OTHER BIRDS

OF "THE NORTHERN TERRITORY" OF AUSTRALIA.

By G. A. HEUMANN.

Reading not long ago Mr. Astley's article in No. 3, Vol. IV. of the *Avicultural Magazine* as to the breeding of the Hooded Parrakeets, and later in No. IV. his remarks on the colouration of the head and hood, it may be of interest to members to hear a few words on this question from one who has seen and studied them in their native home, the Northern Territory of Australia.

Six years ago I conceived the idea of "doing" the Northern Territory with a friend, and leaving Sydney early in June by boat, we arrived in due course, *via* Brisbane and Thursday Island, in Port Darwin. The train leaves here twice a week for Pine Creek, the last outpost of civilization, and takes 9—10 hours to do the 140 miles, providing the driver does not see a "turkey" along the line, when he will stop the train to shoot the "turkey" first. We were fortunate enough to be able to hire donkeys to take us into the interior, but I will not be wearisome with a description of my travels but come straight to the point on which I wanted to write. Camping in a place called Granite Rocks, we were fortunate in having picked a spot where parrots, pigeons, and finches abounded, more so than in any other place we camped in during our trip. These granite rocks are most interesting in themselves. Huge granite boulders lie strewn about; above them again would lie one, sometimes two, or even three separate boulders. One wonders at the wonderful energy required to roll these boulders on the top of each other. Two water-holes, each one about 100 feet in circumference, are the attraction for the thousands of birds which come to visit this dreary spot. The weather in these regions is very hot during the day-time, even in the colder months, registering 120° and more in the sun, but sinking to 40° at five or six in the morning at times, and I may say that not expecting this low temperature we had not sufficiently provided for the cold and felt it at times most intensely. The sun rose (July) about 7 a.m., but already, at about 6.30 the

common Parrakeets flew past, screeching as they always do; after them came the Hawks, waiting for the flocks of Doves and Finches to feast on. I shot as many as six to ten every morning, amongst them the beautiful white variety. The first of the smaller birds to arrive were the Blue-eyed Doves, and in countless numbers. When a hawk would swoop down on them whilst drinking, the whirr of their wings reminded us of the roar of the incoming waves on the ocean beach. Then appeared the Parrakeets, the Browns and the Hooded, and here I may mention that those I handled all had the hood coloured black; the younger male, only half coloured, showed a more dirty sooty colour. All the specimens I handled—speaking of males of course,—showed either the black or sooty colouration. None, either from this part or those from the Mary River or Driffield way, had a hood that one might call brown, even with a certain amount of imagination. Of course the Northern Territory is a vast country and other forms may exist elsewhere, but within 300 miles south of Port Darwin, they are all alike. I often wondered where the real Golden-shouldered, “the yellow frontal banded,” might be at home, but no information was available, so that I have concluded they must be found in the southern part of the Golf Country, down the Roper River or thereabouts.

After the Parrakeets had quenched their thirst, the Finches arrived in untold quantities. Gouldians, the red and black-headed ones in grey and coloured costumes, Masks, Longtail Grassfinches (the red-billed variety) and Double-bars (the black-rumped kind)—they all came, not in hundreds but in thousands. The Blood-finches seem to me to be the elite of this rabble, always keeping to themselves, taking their drink apart from the others. It is generally supposed that all these birds are very delicate, but to live through the cold and bleak nights up there would convince anyone that they are as hardy as any hard finch. All they really want in an aviary is a family nest, so that, as in their native home, they can roost in company inside and keep one another warm during the colder nights. One may see their nests almost on every bush. As the sun rises, the different kinds of Honeysuckers come flitting across the water; those gorgeous Bee-eaters are there in great numbers, probably their winter quarters; and during the day, Pelicans or Jabberoos would

visit the water-holes, but, strange to say, all the birds would only come to one and the same water-hole for their drink. The Parrakeets I have only seen drinking in the morning; the Finches again at about 2 p.m., when also the Pigeons would come for their only daily drink. I have counted as many as ninety Squatter Pigeons run single file to their favorite spot, take their drink and march out in the opposite direction. About 20 miles away from here we met flocks of hundreds of Black Cockatoos and Corellas, but they were very shy and it was hard to get a shot at them. What we found a great nuisance were the native cats at the Granite Rocks, they would carry off anything not under lock and key: it was most annoying to me to lose my spectacles and my toothbrush.

Undoubtedly the Northern Territory is a paradise for the sportsman, if it *can* be called "sport" to sit at the side of a "billabong" (*i.e.* large waterhole) and shoot at a flock of ducks till one is tired: they will just rise at the shot, circle round and alight again. They have probably never seen a white man and most likely never before heard a shot. On the Alligator swamps, Pigmy Geese are in thousands, as are in fact every other kind of Waterfowl, and their species are numerous. I forgot to mention the beautiful Tree Creepers I saw up there. Towards evening they would play in the air, having kind of games as it were, and so display their beautifully marked wings, they always appeared to me to be as looking, when gracefully displayed, like beautiful lace.

Of course expeditions like these are not all "beer and skittles" as the saying goes, for there are humorous and sad experiences, and though nothing in the bird-line, I would like to give a humorous incident in concluding this article. Riding alongside of me was one of our black boys who had a smattering of English and civilisation—coming from Pine Creek. Having lived on hard biscuits the last days, my mouth was dry and very sore. To give myself relief I removed my top plate and the nigger saw it. He got away from me, fear depicted in his face. In his pigeon-English he informed my friend of the fact that I had removed my jaw, asking him to make me do it again. I showed him, to convince him it was not my jaw. Yet a few minutes later his hands went up to his teeth as he had seen me do it and he rattled them in the hope to remove

them ; but in vain, they would not budge ! The result was that no present, tobacco, knife, or anything else would tempt him to come near me again, and that night he deserted us. He took me to be a witch doctor.

There is yet another point that might interest some of our members, belonging perchance to the Aquaria-keeping fraternity, They would find these Billabongs and small water-holes veritable treasure-troves. Nearly all saltwater fish may be caught in fresh-water, the reason is that in the rainy season these water-holes are connected with creeks, which in their turn join the Mary or Daly Rivers, emptying themselves into the sea. No doubt the fish find their way up, and when the floods recede must stay in enforced confinement and accustom themselves to fresh water. But it is the smaller species of fish, suitable for aquaria, which I want to draw attention to. There is one species—"Five Guns" we called them—the shape of a South American Chanchitos, but silver in colour, with five black spots on each side, lessening in size from head to tail, the adult fish about three inches. Then a little mud Carp, very small, between one and one-and-a-half inches, in colour shining all shades of the rainbow in the sun ; this Carp, like the Needle fish of evil remembrance—which once stung by, one never forgets it—will bury itself in the mud and lie dormant whilst the water-hole is dry and sun-baked. When the rains come, up comes the fish to enjoy new life. And there are many more, small pied fish, greedily eating the breadcrumbs one feeds them with, and others striped red and blue. Every water-hole seems to have a gem of its own. But as this is a bird-journal, I will say no more about fish.

Much to my regret, I had to leave the Territory before the scheduled time, for Malaria,—the curse of the tropics,—proved too much for me, and were it not for the recurrence, even now, of this awful illness, I would have nothing but delightful recollections of what was, with that one exception, a most interesting and very enjoyable trip.



CELEBEAN GROUND-THRUSH
(*Geocichla erythronota*).

THE CELEBEAN GROUND THRUSH.

Geocichla erythronota (Selater).

By HUBERT D. ASTLEY.

This extremely handsome Ground Thrush was discovered by Dr. Alfred Russell Wallace (who has only lately passed away) near Makassar in the island of Celebes, to which it seems to be confined, occurring in both the southern and the northern parts. Dr. Meyer, who spent some months in Celebes, in 1870 and 1871, states that he observed this fine species a few miles from Menado on the way to Lotta in February and March, at Tumumpat near Menado in March, and in the churchyard of the Europeans at the latter place, from April to July. It lives chiefly on the ground, and is very shy.

In the *Ibis* of 1859, p. 113, we find the following:—"Another interesting bird in Mr. Wallace's last Macassar collection is a curiously marked Thrush of the section *Geocichla*, allied to *G. interpres*, of Java and Sumatra, but having the whole back as well as the head chestnut-red. For this bird, of which only two examples were sent, we propose the name *Geocichla erythronota*. From Lombok Mr. Wallace has transmitted the true *Geocichla interpres*."

It seems that the female resembles the male in colour, but I should imagine that as in others of the group, the male would be distinguishable by more purity of colouring, as for instance in the case of the fairly well known *G. citrina*—the Orange-headed Ground Thrush; where the back of the female is not nearly so pure a grey as her mate's. The adult bird has the general colour of the upper parts orange-chestnut; lores white; eye-stripe black; etc. I will not weary readers with an elaborate and detailed description, suffice it to say that except for the forehead, crown of head, back of neck, back, and upper tail coverts, which are, as I have said, orange-chestnut, this Thrush is black and white, as seen in the illustration. A fine distribution and mixture of colouring, a bird much to be desired, especially if it be as melodious a songster as the Orange-headed. Bye-the-bye! why "orange-headed," considering the whole of the underparts are conspicuously that colour?

There is a good coloured figure of *G. erythronota* in Seebohm's 'Monograph of the Turdidæ'—Vol. I. It is a pity that naturalists

and travellers cannot manage to write more details of the habits of birds than they often do. Looking through the *Ibis* from the years 1859 to 1912, I can only find the Celebean Ground-Thrush little more than *mentioned*, some three or four times. Surely, Dr. Meyer, for instance, could have stated whether he heard this species sing, etc. since he observed it in more than one place, and on more than one occasion. It is tiring, to say the least of it, to search through volume after volume of some periodical, and find for one's pains—" *G. erythronota* " on the page to which one has been guided, when the index filled one with hope! All the more reason for one of our Members to try to secure this fine Ground-Thrush alive.

A FEW BIRD NOTES FROM SOUTHERN PROVENCE.

By THE LADY WILLIAM CECIL
(BARONESS AMHERST OF HACKNEY).

It has often been said, and again and again repeated, that there are very few birds in France, and that nearly all are shot as "game" by the sportsman who goes out walking with a small gun charged with small cartridges, and who "pots" every "cock-sparrow that sits on a twig!" Perhaps to some extent this sweeping statement is true, for certain it is that annually hundreds, perhaps thousands of small birds are destroyed for mischief, fun, or sport, by those whose best interest it would be to preserve these little "feathered friends," who feed on the grubs and insects, by which the crops are so often ruined."

The well-to-do sportsman stalks his quarry carefully and, I am told, that it needs considerable skill to shoot even a Robin sitting on a branch in a leafy tree? The small birds are shot sitting either on a tree or on the ground, very rarely on the wing. The peasant shoots for food, or anyhow as an addition to his frugal meals.

A man once showed me triumphantly the result of his day's sport; it consisted of two Lesser Whitethroats and a Sparrow. He was taking them home to be roasted for supper!

One evening we had driven some distance along an unfrequented country road and stopped to rest in the shade of some big

cork trees, and in the brushwood below them a little flock of Golden-crested Wrens were flitting about from twig to twig, seeking a resting-place after their long migratory flight. I pointed them out to our Provençal coachman, and his remark was truly characteristic, "Oui, oui, Miladi, ils sont très gentils et ils sont très bons 'à la broche'?"

Some few years ago an excellent law was passed in France, which to some extent protects small birds; so that now, even in Southern Provence, there is a "close time" for "petit gibier." Already there is a marked difference in the larger number of birds found in this neighbourhood. We also protect our own birds as much as possible by putting up boards with "chasse gardée" in all out-of-the-way places, and we rarely hear a shot fired or meet a bird-catcher on our land. In this rather lonely neighbourhood there are numbers of birds to delight us "with gay plumage and merry song." Provence can show many rare and interesting specimens to the bird-lover, who looks about him with seeing eyes.

On the hill-sides, clothed with evergreens and aromatic shrubs and endless flowers, there is plenty of bird-life. Among the groves of olives, and in the branches of wide-spreading "umbrella" (stone) pines, and in the vast forests of "Maritima" and "Alleppo" pines, that cover the Esterels, in the wild summits and rich valleys of the Maures, where Spanish chestnut and other deciduous trees grow, and where the cork, the ilex, and the vine flourish, there birds are also to be found; by the rocky, ferny banks of little streams, or by the reed-fringed rivers and in marshy estuaries, indeed everywhere from the seashore to the far-off Basse Alpes there are birds. Here in the mountains the Golden Eagle may be seen soaring far up in the blue sky, and I believe Bonelli's and the Short-toed Eagle, and the Booted Eagle may also be found, though I have not heard of their being identified.

In the shady ravines of the fir-clad Esterels, the big "Grand Duc" Owl blinks by day and hunts by night. The peasants say he can see by daylight quite as well as in the dark. The Wood Owl, large and fluffy, is occasionally seen, and the knowing looking Long-eared Owl builds in old hollow cork trees, or often in some disused remains of a Magpie's nest, returning year after year to the same

place. In nearly every pine in the more open country the little "Chouette" (Scops) Owl may be heard calling in high-pitched voices, "ay-oo," "ay-oo," to his neighbours. On the hill-side, or near the cultivated farm-lands, a Hen Harrier; or the rarer Lanner Falcon circles and swoops, or a Sparrow Hawk hovers and drops on its unsuspecting prey.

There are literally hundreds of Magpies, who chatter continually from March to June, after that, like the good little girls in the nursery rhyme, they are generally "seen and not heard." The Chouettes too are nearly silent in the summer.

In the mountains, Ravens croak and flap their sable wings and I have seen Jackdaws at Rocquebrune, but they are rare and I think only stragglers.

Perhaps the most numerous of all our bird-neighbours in the spring and early summer are the Nightingales, from sunset to dawn, and often too in the daytime, they sing, and sing, and sing; and at night close to our windows,

" Philomel with melody,
Sing in our sweet lullaby."

sometimes so loudly, and so constantly that they keep us awake while they hold their concerts, and "one cannot choose but hear!" I think the same pairs often return to their old nesting-places, and the male bird sings from the same branch to his mate as she sits snug on her nest in the long grass below. For several years we knew one Nightingale with a little "catch" in his voice, who sang every evening and most of the night in a tree close to the house, near the dining-room window. Last year he was there again, and all April, and for the first two weeks in May he bravely sang "Jug, jug, jug!" but finished his melody with a tiny squeak, which seemed more pronounced each day; and one morning we found him under the tree, quite dead! If one may judge by claws and bill he must have been a *very* old bird.

On opening your windows some morning in early April, you may hear 'Hôo, Hôo, Hôo,' oft repeated, then you know that the Hoopoes have arrived, and a few minutes walk will take you to the tree where the first pair invariably rest on their journey from the South to this district. The Hoopoes stay with us all the summer, and if warm weather continues, sometimes to the middle of October.

They may be seen constantly fluttering among the trees, or strutting along the terrace walls of vine and olive yards, peeping into every nook and corner in their inquisitive fussy way.

Among the elms and ilex that border the streams, and in shady clumps in the plain and lower hillsides, a sweet song and a flash of orange colour will betray the presence of the Golden Oriole, who comes early and stays late, often from March to October if the season is mild. Rather late in the afternoon, in the middle of May, if you follow the road across the plain from Frégus to Les Arcs, at a certain bend of the road, where the telegraph wires take a short cut across a stretch of scanty grass-land, you will find the first flock of bee-eaters, arrived from Africa for their summer season in Provence, —a string of exquisite yellow and green jewels do they seem as they sit on the wire; or more lovely still as the sunlight catches the emerald sheen on their backs as they hover and dart at some passing insect. Various sections of this same wire are popular with the flycatchers, too; both the Common and the Pied Flycatchers are met with in Provence.

Among the low bushes that in places border the field paths and vineyards, the common Wren is nearly always to be found, I think all the year round. I have seen them in seasons as far divided as December, June, and September. The Golden-crested Wrens I mentioned before are very numerous sometimes in October and again in the late Spring. They seem to collect here before migration. I counted as many as twenty-two one afternoon during a short walk. There are numerous Tits, including some that are rare. Perhaps the most interesting is the Penduline Tit, or 'Mesange de Narbonne.' It is a very pretty little bird with a whitish head and red-brown body, black cheeks and tail and dark brown wings. It builds the most wonderful nest, a big round ball-like structure, which it hangs on a branch, something after the manner of the Mocking Birds. Mesanges are more plentiful in the Rhone Valley than in this drier district, and I have never found a nest here.

The 'Continental' Coal Tits are often seen; they differ rather from the British species, the under parts being more buff all over, and the two bars on the wings more distinctly white and the back more slaty blue. The Great Tit and the Blue Tit are here,

too, among the birds common to the South and to Great Britain. Another sweet little bird is the 'Scieur' (*Provençal lou Sialla*). As he flies he makes a noise just like sawing with a fine saw.

Between Frégus and the peach orchards of the Bosen Valley the Meadow Bunting may be seen, and probably in many similar localities; the French call it "Le Bruant fou" as it is supposed to let itself be very easily caught.

The Serin Finch (*Le Serin vert de Provence*) is found in most of the orchards and gardens in the neighbourhood. It is probably a resident, though more numerous in the Spring. It begins to sing quite early in March, and is among the first to build. The nest is a neat and cosy little one, and is generally placed in the lower branches of a large tree, not in bushes or shrubs.

The Citral Finch is found nearer the mountains, and in the higher hills beyond Bagnols and Fayence; it is probably a much rarer bird here than the little Serin.

Several Warblers are both to be seen and heard in the neighbourhood. "Beccofico" is a common name given to those who habitually frequent the gardens and orchards along the coast and inland as far as the mountains. Among the rarer ones may be found the Sardinian Warbler, the Olivaceous Warbler and the Spectacled Warbler; the large Barred Warbler (*Fauvette épervière*) has also been noted. The Black Caps and the Chiff Chaffs warble and twitter in Provençal Gardens as they do in "Old England."

Among other rare birds, the Russet Wheatear is found occasionally in the plain of Frégus. In the meadows and in the valleys of the Argens, the Pédégal, the Nartoby and Verdon there are various Wagtails; among them, the grey, the yellow and the white Wagtails. In the tall canes and reeds of the marshy parts of the river beds, the Moustached Sedge Warbler builds, and I think, in Spring and Summer, the nest of the Great Reed Warbler would probably be found.

In the oak woods between Draguignan and Moustiers, and in the Maures Mountains, and other districts where there are deciduous trees, there are plenty of Blackbirds and Thrushes in April and May: Goldfinches, Linnets, Greenfinches, and many other 'old familiar friends' from 'Beyond the parting sea,' visit us here

in Spring and Autumn, on their migrations south and north. The voice of the Cuckoo is now and then heard, and in the woods 'the Cuckoo's mate,' the Wryneck, feeds on the tree insects, with its long tongue, while sometimes the Great Spotted Woodpecker makes the forest resound with his hammering. There are Night-Jars too, the common 'Europaeus,' and also, I believe, the Red-necked Night-Jar might be found; it has been seen near Marseilles.

Swifts circle and scream round the old tower of the Cathedral at Frégus and many another ancient building in this country-side. The Swallows come in the Spring time, though I believe some hardy birds remain here all the winter if it is fairly mild. They build under our eaves and in the cloister on the north side of the house, and in the "Miradou" (loggia) on the south. They come in and out quite fearlessly, and smear the cornices in all directions with building material, before they fix on a suitable spot on which to fasten the permanent nests of the season. There are Martins, too, and in the mountain gorges of the Basse Alpes near Castelane, Crag Swallows are found. It is curious how many pure White Swallows breed in our neighbourhood; year after year several nests are reported, and the young birds as well as the parents are pure white. This spring (1913) a pair of white Swallows built in the tower at St. Raphael and hatched out four pure white nestlings. The extremely rare Rufus Swallow has, I believe, been noted in this district.

Another very rare bird, the 'Two-barred Crossbill,' appeared here only this morning (September 15th). We saw two of them (a pair?) in a pine tree close to this house, and were able to observe them for several minutes before they flew further afield. A few common Crossbills come every spring and autumn.

Among the brushwood in the hills, and even close to the side of paths and far up into the Esterels, coveys of Partridges are met with, and of late years, since 'game birds' from Golden-crested Wrens to Golden Eagles, have been more 'protected,' their numbers have greatly increased; they are very tame, just rising in front of a pedestrian, and after flying a few yards close to the ground, they quickly settle again among the bushes. They are also often seen on the main road, in the hills, 'dusting' in the roads, or picking up tiny insects and bits of grit.

It is quite impossible to enumerate all the birds in a district so wide and so varied as this ; bounded as it is on one side by the sea and level plain, and more distant marsh land, and on the other by mountains both pine-clad and bare and interspersed by deep ravines, fertile valleys and grassy uplands. The gulls and other coast birds might be a study by themselves. They include, among many others, the ' Yellow-legged Mediterranean Gull,' the Audouin Gull and the Slender-billed Gull. One of the favourite breeding places of the latter used to be, and I believe still is, the mouth of the Rhone. In the marshy districts are various duck and also teal, as well as snipe. Among the rarer waders are the graceful Avocet and the handsome Purple Heron.

These short notes may perhaps serve to show that the ' Fair land of Provence ' is not devoid of bird-life, and that any morning

" When all the birds have Matin said
And sung their Thankful Hymn "

the bird-lover or field ornithologist may sally forth armed with field-glass and note-book, and he will surely find much to amuse, to interest, and may be, to instruct him further in his favourite study.

Lou Castén, Valesune, Var.

BREAKFAST GUESTS.

By KATHARINE CURREY.

There are so many instances recorded of the remarkable tameness of the Tit family, that now that winter has come, I resolved to put it to the proof by placing ground-nuts and maize and other ' tit-bits ' on an upstairs window-sill early in the morning, and waiting to see what would happen.

The Great Tit has always been one of the most frequent of our winter guests, fearlessly feeding in the verandah off maize, or dari, or ground-nuts, which he flies off with to some good hammering point, such as a garden-chair or table or a forked branch, but beyond the verandah and into the house he has never ventured. The wee ' Blue Bonnet ' flashes up on to the winter supply of lard and bones on the bird-pole, but neither he nor the Cole Tit have ever trusted themselves long in the verandah.

To return to the window-sill. On the first morning, when I put out the nuts and waited to see what would happen, the Great Tit appeared on an ilex tree opposite and looked and called "Weetle! weetle!" There lay the ground-nuts and nobody in sight. But it might be a trap set by the Human Giant, whose hand he saw place them there. But *oh!* those ground-nuts! After a bit, he made a dart towards the window-sill, seized one, and whisked off with it into the ilex, where he fixed it into the fork of a branch and began to hammer. More nuts lay on the sill, and after a few minutes spent in devouring the first nut, he again ventured, repeating the same performance. Again and again he came, flying away across the garden with some, to, I presume, a winter storehouse, but he managed to eat several. After a week, he came regularly at 6.30 for his breakfast, and brought his mate, who is more shy, ringing his little bell of two or three consecutive notes, in reality untranslatable into human language, but which I can only render by the words "Pingle! Pingle!" I have noticed that he has three call-notes: "Weetle! weetle!" "Weetle! weetle! wee!" And if he wants anything, "Pingle! Pingle!" These sounds are of course very roughly translated. Sometimes the "Weetle! Weetle!" changes to "Weet! Weet!" The clearness of sound I could only liken to a tiny bell. If his breakfast was not there, he fluttered before the window and called for it but he never calls when on the wing. Needless to say his summons was at once obeyed! If hazel nuts are cracked for him, a Robin purloins them. Now, after nearly a month, the Great Tit waits on the ilex tree regularly for the window to be opened, and even flies towards an outstretched hand with a ground nut on it, but has not yet ventured on to it. After hovering near it, he flies away again. I often wonder at the boldness of a tiny bird. What an amount of courage is required to approach a being whose ear, say, is about the size of one's whole person!

Day by day we advance further in our friendship with our lovely little breakfast guest, but he never fails to come at a call or whistle. If he sees no nuts in the original window, he flies to the next, and hovers before it to attract attention, and so on to a third window. He comes after me now in the verandah.

REVIEW.

INDIAN PIGEONS AND DOVES.*

Mr. Stuart Baker has written exhaustively and interestingly in this companion volume to his work on "Indian Ducks," neither need he apologize for "the egoism in the whole programme." When a work is produced, we want just that; the experiences, the views, the personal observances of the writer, rather than quotations from books already published.

And Mr. Stuart Baker has been a close observer of a beautiful family of birds; a good example of this being found in the chapter on the Bengal Green Pigeon, where the description of how he listened in silence to these birds' soft mellow calls amongst some Mango trees will appeal to aviculturists, more than to the graphic account of shooting them, fun though it may be for those who take pleasure therein! to my mind a *very* selfish one!

There may be no danger of these Indian Pigeons, etc., going the way of the late Passenger Pigeon of the United States, but nevertheless the insatiable love of killing for mere enjoyment finds no sympathetic chord in one's heart. There is too much killing: with men, for the sport of it, with women, for the wearing of it. "I have seen parties bring in over two hundred birds," Mr. Stuart Baker writes in a chapter on the "beautiful little" Pink-necked Green Pigeon. This sort of thing may be considered "sport," but it may also be written down as slaughter, and even butchery!

It was Professor Osborn who himself told the writer of this critique that when a young man he visited a certain part of Canada, and found it teeming with every possible kind of game; he some years afterwards, with the *wonderful* picture of wild life still clearly in his mind's eye, took members of his family to see, promising them something worth looking at. They arrived: the place was a wilderness! Man had stepped in and had shot down everything. "From that moment," Professor Osborn said, "I who had delighted "in shooting, put away gun and rifle, and vowed never to use them "again."

* *Indian Pigeons and Doves*, by E. C. STUART BAKER, F.Z.S., F.L.S., etc., with twenty-seven coloured plates from drawings by H. Grönvold & G. E. Lodge. WITHERBY & CO., 326, High Holborn, London, 1913.

The aviculturist will find Mr. Stuart Baker's book full of information, and will learn much of what has been hitherto vague. Enhanced as it is by fine coloured plates, the book is worthy of a place on the bookshelves of the ornithologist's and aviculturist's library.

Some of the plates are a little wooden, but several are excellent, notably that of the Bronze-winged or Emerald Dove (why not *green-winged bye-the-bye*?) the Snow-Pigeon and the Barred Ground Dove. Others are very good too, but not so artistic.

H. D. A.

CORRESPONDENCE, NOTES, &c.

NOTES FROM BRINSOP COURT,

On the moat which surrounds the house, Mr. Astley has a pair of Black-necked Swans, ten Tufted Duck, four White-eyed Pochard, a pair of Red-Crested Pochard, some Shelduck, and Brown Call-Ducks. These are all becoming quite tame, and can come on the water so close to the house that bread can be thrown out of the windows to them. The moat is fed by a small stream of running water, and several springs, so that it is clean and clear.

Mr. Astley hopes to obtain some Smew before long, as there are quantities of small dace for them to feed upon.

The melodious whistling of the Black-necked Swans at night, under the windows, adds to the charm of the 14th Century house.

All Mr. Astley's other Ducks are in a large paddock, in which there are springs, so that a series of small ponds have been formed.

Here there are about 80 ducks, including such species as Cinnamon, Falcatid, Ringed, and Japanese Teal; Red-billed Tree Ducks; etc., etc.

An addition to Mr. Astley's collection of birds, is a pair of handsome little Senegal Bustards (*Trachelotis senegalensis*) which is about the size of a pheasant. The male has the head marked not at all unlike that of a male Ringed Teal, with the same creamy face, black crown and ring coming down round the neck. The body is a bright sandy chestnut, and on the throat and upper breast there is a patch of rich grey. The female is lighter, and whilst her eyes are pale yellow, her mate's are dark brown. These birds are not at all shy.

Two scarlet Flamingoes, from Mexico, are another addition. They are brilliant shrimp-red: *boiled* shrimp, that is to say!

Mr. C. BARNBY SMITH would be glad to hear from any member who may have a practical knowledge of keeping Grebe in captivity.

WILD DUCKS FROM AN INCUBATOR.

SIR,—I have read Mr. Job's article under this heading with the greatest interest, and I feel sure that all lovers of Waterfowl will join with me in heartily congratulating him on his success in what appears to have been "new ground" to him altogether. It is a great pity that he did not succeed with Scoters and

Ruddy Ducks, for I feel sure it must be possible to rear them, since Mr. St. Quinton has succeeded with Eiders and a Harlequin, perhaps he would be good enough to make a few suggestions for Mr. Job to try on a future occasion. Personally I think he would stand a better chance if it were possible for him to use hens instead of incubators. I have found it perfectly hopeless to try forcing food down duckling's throats, they invariably throw it up. I believe if Mr. Job could manage to use a few hens and enclose a little pool of water and feed the ducklings with flies (which could be caught very easily in a butterfly net and quashed and sprinkled on the water) as well as prepared meal, etc., the hen might show them the way to feed. I should also recommend him to try chopped worms and maggots. I cannot see that Mr. Job used maggots at all, these could surely be easily procured, and I have always found them the finest food possible for ducklings, they wriggle and sometimes tempt ducklings who have previously showed no inclination to feed. Mr. Job seems surprised that Canvasbacks and Redheads should do well; they are both nearly related, I understand, to the Common Pochard, which in my experience is about the easiest of all ducklings to rear, although usually very shy. Mr. Job will find the Cinnamon Teal quite as easy to rear as the Blue-winged Teal; both these are great maggot fanciers. I cannot understand Mr. Job's statement that the young of "Gadwall and Baldpate are identical." In this country young Gadwalls and American Wigeon are no more alike than Pintail and Mallard, and I cannot believe that young Baldpates in America can differ greatly from young Baldpates bred in this country from stock originally imported from America, and it seems likely that the young of American and British Gadwall will be the same.

I fully endorse Mr. Job's remarks *re* the difficulty of persuading various ducklings of different ages to live amicably, and he was lucky in that he did not lose more from this cause.

With regard to transporting fresh ducks' eggs, I do not think that the one clutch of eggs experimented with is sufficient evidence, one can get no proof that they were fertile to start with! though I acknowledge that it is extremely rare to take a nest of wild bred ducks' eggs which are not fertile, although I have done so on more than one occasion, but surely if eggs can travel from Iceland to England and hatch they should be able to stand the journey which those Mr. Job mentions were subjected to, I am not sure that his eggs did not suffer from too much care! I think if the eggs were packed carefully in wood-wool and then left to take care of themselves, the jolting of the cars would do all the turning necessary. At the same time, I know that duck eggs, for some obscure reason, will not travel so well as other eggs—Pheasants, for instance—which I have sent to Russia from Norfolk, and they have hatched out 76 per cent.; these were packed in wood-wool (which must be absolutely dry) in baskets of 300, the baskets were then packed in a large wooden crate and the spaces between the baskets being carefully stuffed up with straw, the lid of the crate was then screwed down the crates started on their journey to Russia; these eggs were certainly never turned on the journey!

H. WORMALD.

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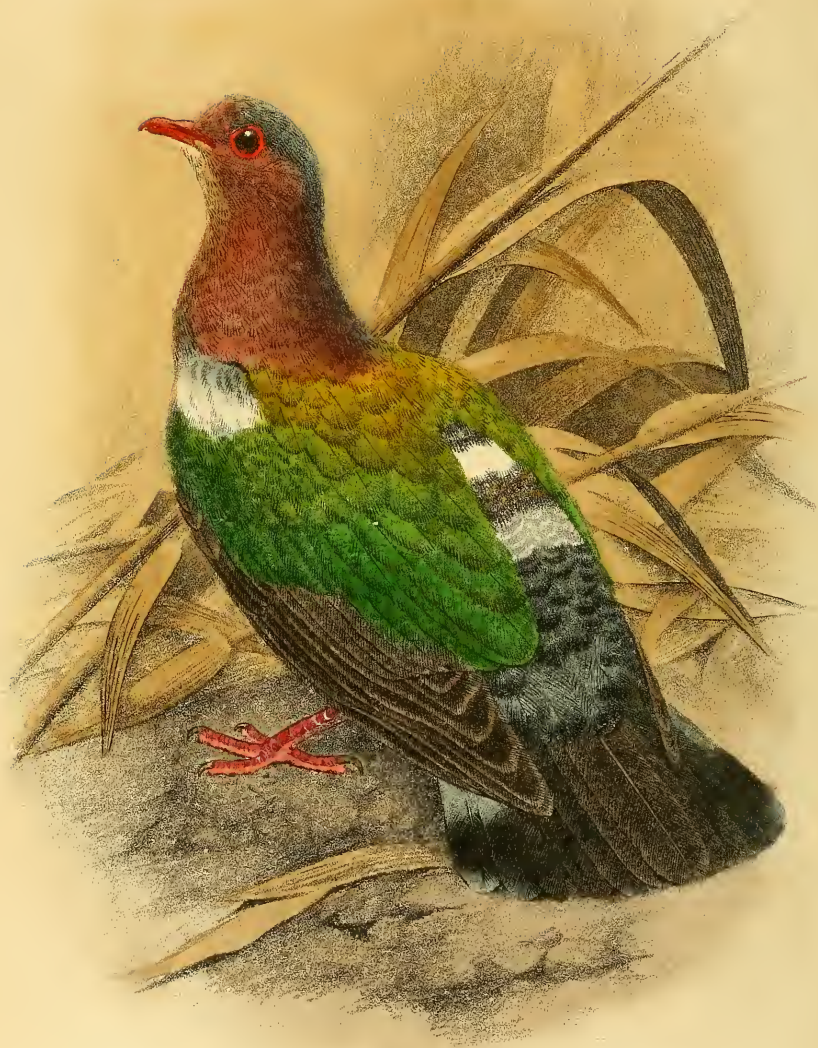
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GREEN-WINGED DOVES.

By Miss R. ALDERSON.

There are two varieties of the Green-winged Dove that are commonly kept in captivity. That, figured in the plate, known as the Australian Green-winged Dove (*Chalcophaps chrysochlora*) and another, known as the Indian Green-wing (*Chalcophaps indica*). To most bird-dealers, and indeed to many other owners of the birds, the two kinds are hardly distinguishable, and go by the general title of Green-wing.

The price of these doves is usually about 7/6 a pair, never less and often more. Dr. Greene in "Notes on Cage Birds," published in 1899, quotes the price for the Australian variety at 30/- to 40/- a pair, though in 1900 I paid 18/6 for four birds, but which variety these latter were I cannot remember. I noted at the time that the average price then was 12/6 a pair. The Green-wing is a dove that cannot always be had when wanted, for it does not seem to be imported regularly all the year round, though the Indian variety especially, seems common enough in its native country, but even there it is not often seen offered for sale.

The Green-wing seems a very long-lived bird. One of my four original birds only died last year, thirteen years since I bought him as an adult bird, and Dr. Butler mentions one (the Australian variety) that he kept for over twelve years.

I have found the Green-wing a very hardy dove, though, as there is an exception to every rule, I have twice nearly lost birds through collapse from cold. In both cases the birds recovered after

help had been given them, though they were almost unconscious when found. One bird was a young hen, not long out of the nest, and though she is now quite healthy and strong I shall always think the shock checked her growth, for she is undersized and habitually droops her wings. The other bird affected was one of my original four. I found him laid on the ground and moaning, but warmth and a little weak brandy and water brought him round, though for a day he would eat nothing.

I have noticed this cry of distress, when ill or frightened, in one other dove, the Aurita, who really cries before it is hurt. If you only catch the bird it begins to make a sobbing cry, most distressing to hear. Most doves, and I think other birds too, suffer pain in complete silence. I shall never forget a little Dwarf Turtle that had injured itself most terribly on the head, and though the dressing I put on must have smarted very badly, the bird never uttered a sound, but kept quite still in my hand during the operation.

I find the Green-winged Dove is a general favourite whenever any visitors—those especially who know nothing about birds—come to see my aviary. I have got quite used to hearing “Oh! what are those green ones—that one with the red beak?” Just as it is always said of my Bleeding Heart Pigeon that it *really* looks as if it was wounded; indeed on one occasion a visitor took the “heart” quite seriously and thought some tragedy had happened.

The Indian Green-wing was first kept at the Zoo in 1856 and the Australian five years later. Both varieties were bred by Mr. Seth-Smith some years ago. Dr. Russ bred the Indian freely in his bird-room. In Dr. Greene’s “Notes on Cage Birds” there is a most interesting account of the nesting of the Indian Green-wing in Wales in an unheated aviary. This pair had five young birds during the season, and three were reared, the other two died through falling out of the nest. Some of the winters these birds passed through were very cold, especially in 1881 when the thermometer went down to three degrees below zero.

The Green-wing is an easy dove to keep. I have read of some being fed on maize, some on Canary seed and millet, others on hemp, and in each case the birds seemed to thrive and do well. My own birds have a choice of about six seeds—as there are other

inmates in the aviary to consider—and they always seem to keep in good health. It is one of the great advantages of doves, they are so easy to provide for.

Dr. Butler tells us how an hen Green-wing that he had, picked up a worm and shook it to pieces, eating it all, and in a wild state these doves are said to be very fond of white ants. They are also very partial to wild strawberries, and in a lesser degree raspberries and blackberries.

I had long wanted to breed the Green-wing, but never succeeded in doing so till the year before last. The eggs, two in number, are very dark in colour, almost buff. My birds sat exceptionally well and the young when hatched I found to be the most curious baby doves I had ever seen, with blackish skins. Many eggs were laid and most of them hatched, but whether the young doves were more restless in the nest than most of their tribe I do not know, but several were lost through straying to the nest side and getting caught in the nesting material or branches, and dying before they could be found or rescued. At the end of the season I had only reared three, they turned out to be two cocks and one hen.

The young Green-wings were very pretty when fully feathered, the feathers dark blackish brown with lighter brown markings and just a few bright green feathers—as if one had dropped a spot of metallic paint—on the back and wings. They were not at all timid and allowed themselves to be photographed at very close quarters.

In “*Indian Doves and Pigeons*” it is recorded that in a wild state the Green-wings’ eggs have been found at an elevation of over 4000 feet, though this height is exceptional. The nest is generally well concealed, and more substantial than that of most doves. It is composed both of dead twigs and live ones plucked from the tree. The nests are mostly built in bushes at a distance of about five feet from the ground. The favourite breeding season is from January to May, according to the different locality; there are generally two broods, sometimes three. In the case of my own birds in captivity I found that, having once started, they would go on having nest after nest all through the summer, and had we been more fortunate I ought to have had quite a small flock of young birds.

It is a good plan to always provide a lump of rock salt (placed in a glazed pot to keep it clean) in every aviary. The cost is very slight and the salt is a valuable addition to the birds' ordinary diet to help to keep them in good health.

In India, the Green-wing much frequents the "salt-licks," and so well known is this fact that it has become a saying that "the elephant and deer *like* salt-licks, buffalo and gour *must* resort to them at times, but that the Emerald Dove (as the Green-wing is sometimes called in India) *dies* if it is kept from them more than a day."

The Green-wing in its wild state is often seen in pairs or singly, though sometimes a flock of about six may be seen together, the flight is very strong.

To anyone starting to keep doves, or adding a few of the brighter-coloured ones to a mixed collection of birds, either variety of Green-wing Dove will prove a very attractive addition. As a rule they are good-tempered compared to many doves, though occasionally one will have a sudden outbreak of spitefulness, but this fault is shared by many other birds besides the Green-wings. Sometimes indeed I have known these doves form strange attachments. I have a very pleasant remembrance of a little Long-tailed Tit that used to nestle most lovingly against his big friend, one of the Green-wings; and again where a small Diamond Dove and a Green-wing were close companions.

I have lost my old Green-wing hen, and do not expect ever to replace her, she was such a good nesting bird, but I have hopes of again rearing some young ones, for my young hen laid eggs and sat well last season. Unfortunately she was disturbed by another bird, but this year, under quieter surroundings, she may do better.

NOTES ON SOME CONURES OF THE *EUOPS* GROUP.

By THE HONBLE. WALTER ROTHSCHILD, F.R.S., PH.D., etc.

Some few months ago a number of living Conures were distributed in this country under the name of *Conurus gundlachi*, and were said to have come from Mona Island. Upon examining three of these Conures I at once saw that they had nothing to do with *Conurus gundlachi*, whose proper name is *Conurus maugei*, (De Souance) and whose home WAS Porto Rico, but the bird is now quite extinct.

On comparing the birds with *Conurus chloropterus* of St. Domingo it was at once evident that, though they agreed absolutely in colour, they were much smaller; in fact they agree perfectly with *Conurus euops* of Cuba, except that the bill is larger, being half-way between the bill of *C. euops* and *C. chloropterus* in size. On questioning the vendor as to the real origin of these birds, I was informed they had been shipped from South America with other South American live stock, and having believed them to be in fact *C. gundlachi*, he assigned them as having come from Mona Island, the supposed home of *C. gundlachi*. The fact is that it is highly doubtful where the two wings, which form the TYPE of *C. gundlachi*, came from. Gundlach, was however on Porto Rico, and these wings really belong to the extinct Porto Rico *Conurus maugei*.

It is evident, therefore, that the living birds are a new race of the *C. euops* group from an unknown South American locality. The Mona Island bird, according to Dr. A. Wetmore, of Washington, is hardly if at all distinct from *C. chloropterus*, but as only one specimen could be procured on the island it might have been an escaped cage bird of the St. Domingo race.

SOME NOTES ON TAME SERPENT EAGLES.

Spilornis cheela.

By E. C. STUART BAKER.

In the last article I had the pleasure of writing for our magazine, I gave an account of one of the smallest but at the same time fiercest of our Indian raptors; in the present article I deal with one of the largest and at the same time most easily tamed of the same family.

The two birds whose life with me I am about to describe were brought to me as nestlings; yellowish-white fluffy youngsters with pale yellow eyes, pale lead-coloured feet and bill and a gape, which gaped continually for food, matching the eyes in colour.

For a day or two after they were taken from the nest they displayed all the ferocity of their kind and though they readily accepted food, struck savagely at the hand which gave it, not with their bills as one would have expected, but with their feet. Very shortly, however, they became quite reconciled to me and from thenceforward I had no further difficulty with them; they soon began to recognise me when I approached their basket with food, and hailed each visit with loud and harsh squawks of welcome. Their usual attitude in the basket, which took the place of their nest, was squatting well back on their haunches, a position which made them look as if they were on the point of falling backward. In this posture they always received their food and when they first came, struck out with one leg without losing their balance. When replete, however, they lay down full length with their heads and necks stretched out in front of them, their legs either both tucked under their bodies or one stuck out and grasping one of the small branches with which the basket was lined. In this position they lay asleep or dozing but it was a light foot which could approach within five yards of them without putting them on the *qui vive*. They grew with extraordinary rapidity and within a month of coming into my possession were almost fully fledged, though it was more than another month before the quills of their wings and tails had attained their full size.

They were never confined in any cage or aviary, having the most absolute freedom in every way, but after they were big enough to get about by themselves they selected a perch in my fowl house where they nightly roosted in perfect amity with a large assortment of fowls, guinea-fowls, ducks, etc. In a state of nature, these beautiful eagles roost at night on very lofty trees, almost invariably selecting one which has very dense foliage amongst which they sit and, not as some other eagles do, on a lofty bare branch. My birds, however, although there was not the slightest restriction placed upon them, never showed any inclination to roost on high trees and when as occasionally happened in my absence, they were shut out of the fowl house, they roosted on one of the lower boughs of some pine trees in my garden.

They took a remarkably long time to learn to feed themselves and before they had got as far as picking up their food from the ground were in the habit of snatching it from one another. This the female bird, who was very much larger than the male, soon ceased to tolerate, so that the male eagle then began to hunt around for and pick up scraps of meat for himself, after which fired with his example, the female also began to feed herself. It was weeks, however, before they relinquished all idea of being fed, and whenever food was brought them they would throw themselves back on their haunches and demand to have it given them with all the energy and noise they had displayed as babies.

They were, I think, quite the most tame birds I have ever kept, and their kindly confiding ways were not displayed towards me alone but equally so to the large circle of pets which at that time shared my ménage. Amongst other animals were four bears, three of whom were most estimable characters, but the fourth was quite the reverse and the two eagles soon learnt that whilst they could take any liberties they liked with the former it was advisable to give the latter a wide berth. For a short time the bad-tempered bear made life very hard for them, for although these eagles in a state of nature seldom visit the ground, these particular birds were very fond of walking about both in the verandah and also in the garden round about the house. This procedure the bear resented for some reason best known to himself and he was constantly making rushes at them,

uttering hideous noises as he did so, most unsettling to the birds. It was with a sigh of content, I think, that they eventually saw him led away by some Nagas to form the *pièce de resistance* at one of their wedding feasts. With the other bears they were on very friendly terms and had regular games; the bears, like all other young bears, used to have wrestling matches, two of them wrestling whilst the third did referee and also sometimes at critical moments rushed into the arena and bowled over both the contestants. The eagles took an intense interest in these matches, and when as often happened, the wrestlers suddenly stopped the match and rushed headlong upon the birds, they merely hopped up into the air over their heads and waited for the next round. My tame deer never really liked the eagles though they tolerated their presence, but the dogs, cats, and monkeys were all on good terms with them and their special favourites amongst these were a beautiful greyhound and a large civet cat.

It was possibly because they had so many four-footed friends that these eagles spent so much time on the ground, but it certainly was a very curious sight to see these two birds following me round the compound on foot with the rest of my pets, only taking to wing when they had fallen too far behind and had to catch us up again. Sometimes when the stag beetles had been playing such havoc with my orange trees that it was necessary to take determined action against them the two eagles would accompany me round as I went from tree to tree cutting out the fat larvæ from the boles and larger branches. Whilst the extraction was going on they would stand one on either side of me watching the proceedings with the most intense interest, getting frightfully excited when the tempting morsel came at last into sight. Their bushy crests were then erected to the full and they danced from one foot to another uttering harsh cries until one bird was given the grub when both subsided again with quiet expectation until the next lucious mouthful appeared.

They never uttered their wild shrill calls except when soaring in the air, high up and often out of sight or, very rarely, when perched on the summit of a huge Bombax Tree which grew beside my garden. Sometimes very early in the morning when they were fastened up in the fowl-house they began their cry but it was always

cut short in the middle. Later on when I had made an opening for them just under the roof, they got out of the fowl-house through this and I never again heard them call inside the house. They were very early retiring birds and were generally on their perch in the fowl-house before the fowls themselves went in to roost and after the window had been made for them they were always out first also and would soar up to great heights to greet the morning sun, welcoming the first rays with their shrill notes. This call can be heard from an immense distance and I nearly always knew of the advent of my eagles, first by ear and afterwards by eye. When I had been away from home out in camp and was returning, the two birds would often spot me as they soared overhead, although they were quite invisible to me, and would come to meet me when I was within some three or four miles of the house. They would occasionally come right down, and more than once actually settled on my shoulder, but as a rule they came to the roadside and perched on some tree, from which they would take short flights from one tree to another as they followed me on my route home.

I was often away from home for weeks at a time, but it seemed to make no difference to the eagles, and they always resumed relations exactly where we had left off. Curiously enough, when I went away from home they never accompanied me, though they so often met me on my return, and probably they ranged over a very restricted area for such powerful winged birds. I do not think I ever met them five miles from the house, so that a diameter of ten miles would have probably covered their special extent of country.

About the same area would also seem to form the hunting ground of wild pairs, and in many instances it is possibly much smaller even than this. In North Cachar, and indeed all over Assam, these eagles are extraordinarily numerous, and it would be impossible to take a walk of 20 miles in any direction in well-wooded country without seeing one or more pairs. In spite of this, however, its nest is one of the hardest eagle's nests to find that I know of, and even when found it seems to be nearly always empty. The reason for this is probably that the birds do not lay season after

season in the same nest like most eagles do, and also because their laying season extends over several months, *i.e.* March to August.

With most eagles, once having found a nest, you have a certain yearly take of eggs, as long as you leave the second laying to the birds, but with the Serpent Eagles this does not hold good. My own birds never attempted to nest, and it is just possible that the larger eagles, whilst certainly taking two years, may even take three before they commence breeding.

I do not know what became of my eagles eventually, but believe when I left North Cachar for good they were still alive and well, being then about twelve years old. After I had had them for some three years I was transferred on special duty for five months, and though the birds came into my compound and slept nightly in the fowl-house, they were certainly more like wild birds on my return than when I had left them, though they were just as friendly with me personally. Then long furlough home followed close upon this shorter absence, and when the man who acted for me inhospitably closed the fowl-house door upon them, the eagles appeared to be disheartened and took to the jungles entirely. They did not however desert the neighbourhood, and when eventually in 1900 I was transferred from North Cachar to another district in Assam, a pair of these fine eagles still haunted my old home in Gungoug, which pair the Nagas declared were my former tame birds.

The Genus *Spilornis* is one which is very well represented in India, there being at least three species, and yet other sub-species to be found within its limits. These are as follows:—

Spilornis cheela cheela, the largest form found in India proper, ranging throughout Central India, extending well into the West and North West, and again throughout Southern India both in the West and East.

In the North East of India and thence into Burmah, Yunnan, Northern Shan States etc., its place is taken by Rutherford's Serpent Eagle (*Spilornis cheela rutherfordi*) distinguished by its smaller size and more barred under plumage.

Smaller races yet again in *davisoni* and *pallidus* are found far South in the Malay Peninsular and Archipelago, whilst in Southern India, breeding in a part of the same area as that occupied by the

Crested Serpent Eagle, is to be found a much smaller bird known as *albidus*, to which must be given the rank of a species.

In the Andamans, yet another species is found, the Andaman Serpent Eagle (*S. elgini elgini*), whose place is taken in the Nicobars by a very closely allied form *S. elgini minimus*, a very small bird, with a wing of only 11—12 inches or about two-thirds the size of the big Indian bird.

The Crested Serpent Eagles are amongst the most handsome of the Raptores; the plumage itself is very handsomely barred and spotted, and all the species are provided with a magnificent erectile crest of black and white feathers which is very thick and full. The eyes are a brilliant golden yellow and the cere and gape are also a bright lemon yellow; these colours against the dark plumage having a very striking effect.

As its trivial name shows, this bird in a state of nature is very largely a snake-eater, and every individual must destroy yearly hundreds of these reptiles. Its mode of attack appears to be to descend on the ground, sometimes striking at and disabling its quarry as it descends, but more often knocking the snake down with its wings after it has settled, and the snake erects itself to attack. I once came on an eagle attacking a large cobra which it was buffeting furiously with its wings. I did not see the commencement of the attack, and the grass in which it was carried on prevented a very good view of what was happening, but the only weapon used by the bird, as far as could be seen, were the wings, still when I examined the snake I found its head and neck had been badly torn, so that probably the eagle had struck with its talons as well. They will occasionally stoop at jungle fowl, pheasants, and partridge, but they do not seem to be very successful at such quarry, and after snakes, lizards, frogs and small water birds would appear to form their principal diet.

They are bold birds, but vary very much in temperament individually, and whilst some will defend their nest, eggs or young with the greatest bravery, others will flop away from their nests when these latter are rifled without any attempt to resent the robbery.

THE GOLDEN-EYE DUCK.

Clangula glaucion.

By HUBERT D. ASTLEY.

The Golden-eye is one of the most handsome of British Ducks. Like the Scaup, it is only a winter visitor, but frequents inland waters as well as the coast, whilst the Scaup prefers the latter. On the Continent the Golden-eye breeds as far South as Germany, Switzerland, and Bohemia.

It is curious that the adult males are so seldom seen in England. As to whether this species has ever bred in Scotland, seems to be doubtful, but Mr. A. G. More stated that a pair nested in the hollow of an old larch tree at Loch Assyn—that is talking of about 50 years ago—and that the nest with the young birds was found by a shepherd. In Shetland also, a female with young ones has been seen.

In Finland, Sweden, and Norway, it nests not infrequently in boxes hung up in trees by the peasants.

The display of the males is worth seeing, the feathers of the cheeks and crest being erected so as to enlarge the appearance of the head; then the birds spring forwards, elevating the breast, after which the neck is stretched out, and the bill pointing upwards is opened, a rasping note being emitted. The head is then quickly jerked back until it almost touches the root of the tail, and as quickly brought to its normal position, whilst the bird springs forward, kicking the water in a spurt, and displaying the orange legs.

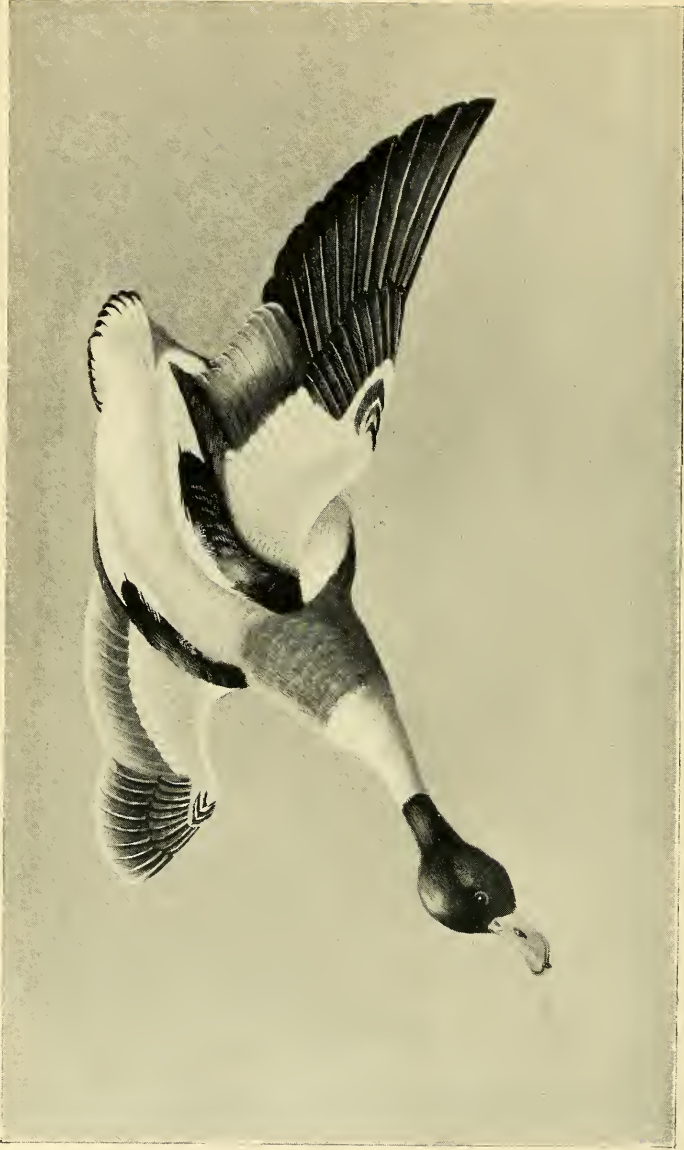
It is said that one male Golden-eye will drive away another by diving and attacking his rival beneath the water. This sounds effective, after the manner of a submarine.

I kept a pair of Golden-eye for some years on a lake (at Benham Valence), in which was an island, with plenty of hollow logs lying about beneath the trees. I was assured by the keeper who fed the ducks that the female Golden-eye had laid four eggs in one of these logs, and had been seen coming out; but I was away at the time, and unable to verify the statement. If males were pinioned, and females turned down with cut flights, one would think that on growing them afresh, they ought to remain with their mates



GOLDEN-EYED DUCKS (*Clangula clangula*).





SHELDRAKE (*Tadorna cornuta*).

and nest in hollow logs placed among neighbouring trees, overhanging the water. Mr. F. E. Blaauw succeeded with them, when both parents were, I imagine, pinioned ; but the female did not hatch her own eggs, after having laid them in two boxes placed on poles in the water. [*cf. Avic. Mag.*, Vol. VII., p. 37].

The Golden-eyes are splendid divers, and the male with his head of glossy dark green, his bright yellow eye, black and white plumage and orange legs and feet is a conspicuous bird in a collection of ducks.

* * *

THE BRITISH SHELDUCK.

Tadorna cornuta.

If these birds were imported from some far-off part of the world for the first time, duck fanciers would tumble over each other to obtain them, for there is no duck more strikingly handsome. Moreover they become exceedingly tame, but are inclined to be very bullying.

The male is easily distinguished from the female, being a good size larger, and his colouring more brilliantly and definitely defined. The crimson knob too of the male (especially in the spring time) is very much larger and more vivid in colouring.

As with other ducks, and geese too, the voices of the sexes differ, the female Shelduck emits a distinct 'quack,' as well as a sort of bark, whilst the drake's notes are more whistling, and in the breeding season they take the form of a clear rapidly-repeated trill.

Shelducks are known as Burrow Ducks, from their almost invariable habit of nesting in burrows near the sea ; although they do sometimes lay their eggs under bushes, and amongst bracken, if the coast is too rocky and shingly for them to burrow. They will also resort to rabbit-warrens which are not far from the sea.

On Wolferton Heath in Norfolk, the old birds will pass through the village street with their young ones en route for the sea-coast, where several broods collect together. Shelduck take two, if not three years to fully mature.

They are not naturally divers, but can do so when playing on the water, or in the event of escaping from a Peregrine.

The Shelduck is a link between the ducks and the geese, and the handsome New Zealand Shelduck has a very goose-like appearance.

A NOTE ON SEXING BLACK-CHEEKED LOVE-BIRDS.

By Dr. L. LOVELL-KEAYS.

I thought perhaps the following notes might be of interest to readers of the *Avicultural Magazine*, as showing the great difficulty in sexing these beautiful little parrots.

I had two pairs of these birds: one in an outdoor quite unprotected aviary, and the other, a more recent addition, in my new covered shelter flight. The former I got from Mr. Fockelmann in June, 1913, and they very soon went to nest. The birds were as like as two peas, but the cock (?) was a shade larger and the beak a little fuller. I could detect little or no difference in colouration or the size of the white circumorbital ring. The first clutch of eggs proved infertile, and I came to the conclusion I had two hens. However, no sooner had I come to this conclusion and advertised for a cock than to my joy I found them pairing one day. This was the first occasion I had noticed any amativeness on the part of either bird. However, I had noticed that only one bird carried nesting material, and the whole time this bird sat, the other (which of course subsequently proved to be the cock) took no notice of his persevering wife. The hen bird carried nesting material in her beak. My Madagascar Love-birds appeared to carry nesting material under the wing and tucked very closely in the rump feathers.

For weeks nothing happened with the second clutch, and as later the hen left the nest fairly frequently I took the nesting barrel down, but could see no sign of life, nor did I ever hear young birds. However, the hen bird so frequently visited the shelter that I felt convinced there was something there, and later on I again took the nesting barrel down and saw three young birds fully fledged. Whether the cock fed the young I cannot say; the two birds are so exactly alike that no casual observer could tell them apart, and it is only when sitting next each other I can tell them even

to-day. At the time when I still doubted that I had a true pair, I bespoke a pair from Mr. Frost. They duly came to hand last November and I noticed one had a slight bald patch on the head, quite slight and over one eye. That bird was by far the larger bird. The circumorbital rings were noticeably larger and the beak fuller and larger and the colour rather brighter than in the smaller bird. To sex these birds was easy. Eggs had already been laid before they came to me, and on turning them into a small aviary with a pair of Guiana Love-birds and other species they quickly settled down and went to nest. But alas! one morning, on going to feed the birds, I found the "cock" bird in one corner with the crown of the head bleeding and featherless. As I had frequently detected the Guianas fighting with the Black-cheeks the case seemed clear. I caught the "cock" up easily enough. The hen was sitting in the barrel, incubating. In trying to catch her she escaped and I detected three eggs. However, she did not return to the nest, so I caught her up and caged the two together, having first given the wounded bird a good roasting, the sovereign remedy, as Lord Tavistock points out, for all sick birds. In two or three days an egg was laid, and in a couple of days after that I turned the birds into another aviary with a covered inner flight. They quickly settled down again and the hen bird was very busy carrying nesting material and spent much time in the outer flight when the birds were let out. I thought it odd the cock bird did not appear more often, but put it down to timidity and to the fact that it had been almost scalped. But he often did appear and even carried nesting material at times. Things went well for quite a while, but on December 29th I went to look at my birds at night and found the cock bird with his scalp quite raw again, evidently from recent injury and as dead as a door nail. I was perplexed. On picking it up and examining it, I found to my utter astonishment the bird was no cock but a hen, and died from egg-binding. There had been a sudden cold snap and no doubt that caused it. My theory is that the pain caused the bird to rub its head on the roof of the nesting barrel or against a tree trunk and was not caused by another bird at all, as the scalp wound did not appear to be caused by another parakeet's beak. If I had only searched more carefully night and morning, before it was too late,

I might have found the bird alive, roasted it up again, and if it had laid an egg my experience would have been bought without losing my bird. I must say that this is the greatest surprise in aviculture I have yet experienced, and I reproach myself bitterly for not having diagnosed the cause of the first illness, and I write this note in the hope that it may save somebody else from falling into so blameworthy an oversight as to omit to thoroughly examine a sick bird no matter how apparent the malady or injury. I may add that I have no doubt that the birds were a true pair and both were adult birds.

THE GRASSHOPPER WARBLER.

Locustella naevia.

By P. F. M. GALLOWAY.

This species is always a scarce one, and has been so ever since I can remember. It is certainly not through the egg collector, for the nest is one of, if not the most difficult to find. I have only found the nest of this species once, and if it had not been that I saw what I took to be a mouse run along the ground from my foot, which I found was almost on top of the nest of eggs, I do not suppose for a moment that I should have found it then. I am certain that the reason why this bird is rather scarce is through the nest being right on the ground, the eggs and young are destroyed by mice and other vermin.

When this bird first arrives, which is generally about the 10th of April, it may be found in very unusual situations. I have seen it in a thin piece of hedgerow beside a main road, close to Caversham, Oxon., where people were passing to and fro at short intervals, and I got within almost arms length of him, so near that I could plainly see his throat moving whilst he was reeling loudly.

During the severe snowstorm, on the 25th of April, about four years ago, I saw one come out of a tuft of grass on a bank and flutter across the snow on the road and go down into a garden on the opposite side, in fact it practically tumbled down into the garden, for it was numbed with cold and half-starved, and I should doubt if it lived through the night.

These birds soon find their way to a common of furze and heather, or to a reed or sedge bed by the river; these seem to be the favourite haunts of this species.

I have seen it stated in books, when writing of the Grasshopper Warbler, that this bird is so shy that it is impossible to get a glimpse of it, and that it will even run out to the end of a bough, deliver its song and return to its cover at once; all I can say is that the habits of these birds have wonderfully altered since these books were written. If one knows the habits of the bird and is careful to step quietly, one can come right up to within a few yards of it and watch it, but anything like snapping of sticks or brushwood under the feet and the bird will turn and run down a stick to the undergrowth below the bush just like a mouse, and after a short time, if all is quiet, will work its way up to the same place and almost on to the same twig and commence reeling again. I have had these birds run almost over my feet. I once stood on a common about sunset, quite close to where the bird was, and two of them came running after each other round and round me, my foot was not more than three inches off the rabbit run which these birds were using and I bent down and watched them pass my foot, round they would go behind me and then run past my foot again and again, taking not the slightest notice of me and reeling loudly all the time and carrying their wings up over their back, after the fashion of a Plover when first alighting on the ground. They were evidently two male birds.

From the time this species arrives, and up to about the end of the first week in May, it can be heard at intervals throughout the day, but after this time not a sound can be heard all day until after sunset, and often not until nearly nine o'clock at night and again just at sunrise.

The note is very difficult to imitate; the noise made by a new free wheel of a bicycle does not quite do it, the nearest approach to it is to pull out evenly and continually the fishing line attached to a check reel on a fishing rod.

The Grasshopper Warbler in captivity soon becomes very tame. The gait of this bird is unlike any other small insectivorous bird, it can run fairly fast, seldom hops, and when walking slowly,

it walks in a proud manner after the style of a game bantam cock, picking its feet up well and putting them down carefully, and has occasionally a peculiar habit of stepping backwards a couple of steps or so, and with its tail often spread out fan-shaped. When reeling, the tail is generally dropped and is then closed and pointed.

Some years ago I was anxious to have some young of this species and I had a clutch of fresh eggs sent me by post, six in number. The difficulty was to find a suitable wild bird's nest with eggs freshly laid in which to exchange the eggs. It would have been useless to place the eggs in an open nest on account of the difference in the colour of these eggs, which are a beautiful pink tint, and the fine spots on them look as if the eggs had been sprinkled with cayenne pepper. I found a Chiffchaff's nest, built a foot off the ground, and being an oval nest with hole at side, the Grasshopper Warbler's eggs were in shadow as it were and the Chiffchaffs would take no notice of the exchanged eggs. The birds incubated them straight away and hatched five, the other egg being addled. As soon as the young Grasshoppers began feathering I found one missing from the nest, and the next day another was gone, leaving only three; vermin had found them out, probably mice, and the other three would have been destroyed, the same thing would have occurred to her own young if she had not had the eggs exchanged. Finding that vermin were certain to destroy the remaining three, I took these and the pair of Chiffchaffs and placed them in a large cage fitted up with ivy and boughs. I provided the old birds with smooth green caterpillars, various other insects and fresh live ants' eggs; the result was that they fed themselves and reared the young without the slightest trouble from the moment they were placed in their cage.

I fancy the young were two cocks and one hen, but it is difficult to tell for certain except by the size, as the young males do not assume their necklace of tiny black Thrush-like spots on the throat until after their second moult.



THE NEW BIRD HOUSE IN THE AMSTERDAM ZOOLOGICAL GARDENS.

Graham Renshaw photo.

AVICULTURE AT THE AMSTERDAM ZOOLOGICAL GARDENS.

By GRAHAM RENSHAW, M.B.

Amongst recent improvements in aviculture, a prominent place must be assigned to the handsome installations of the Amsterdam Zoological Society—better known as the “Artis,” from its famous motto “Natura Artis Magistra.” When the writer visited the collection some years ago, the smaller birds were well displayed in roomy cages and aviaries: to-day they are lodged in a veritable palace.

The new Bird House is a magnificent structure, with its handsome, lofty outdoor aviaries, well provided with perching accommodation, well planted with growing shrubs, well stocked with healthy birds. Inside one stammers with admiration at the fine spacious hall, reminding one of the buildings in the New York Zoological Park. Quite odourless, the Bird House at Amsterdam presents internally a double row of cages, the larger of these being practically aviaries. These large cages have impervious concrete floors, and are enclosed by diamond-meshed netting. The house is flooded with light through the roof, and in winter is heated by neat, compact installations of hot-water pipes. Large palms planted in tubs add to the pleasing appearance of the building. The floor is laid with tiles in tasteful patterns, and the house painted throughout in an unobtrusive colour scheme of cream and buff. The bird house is continuous with an equally fine monkey-house: in the roof will be noticed the famous Falconnier bricks, made of glass and each containing a vacuum. In the outside aviaries, at the time of the writer's visit, there was a fine laburnum tree which had begun to grow through the roof.

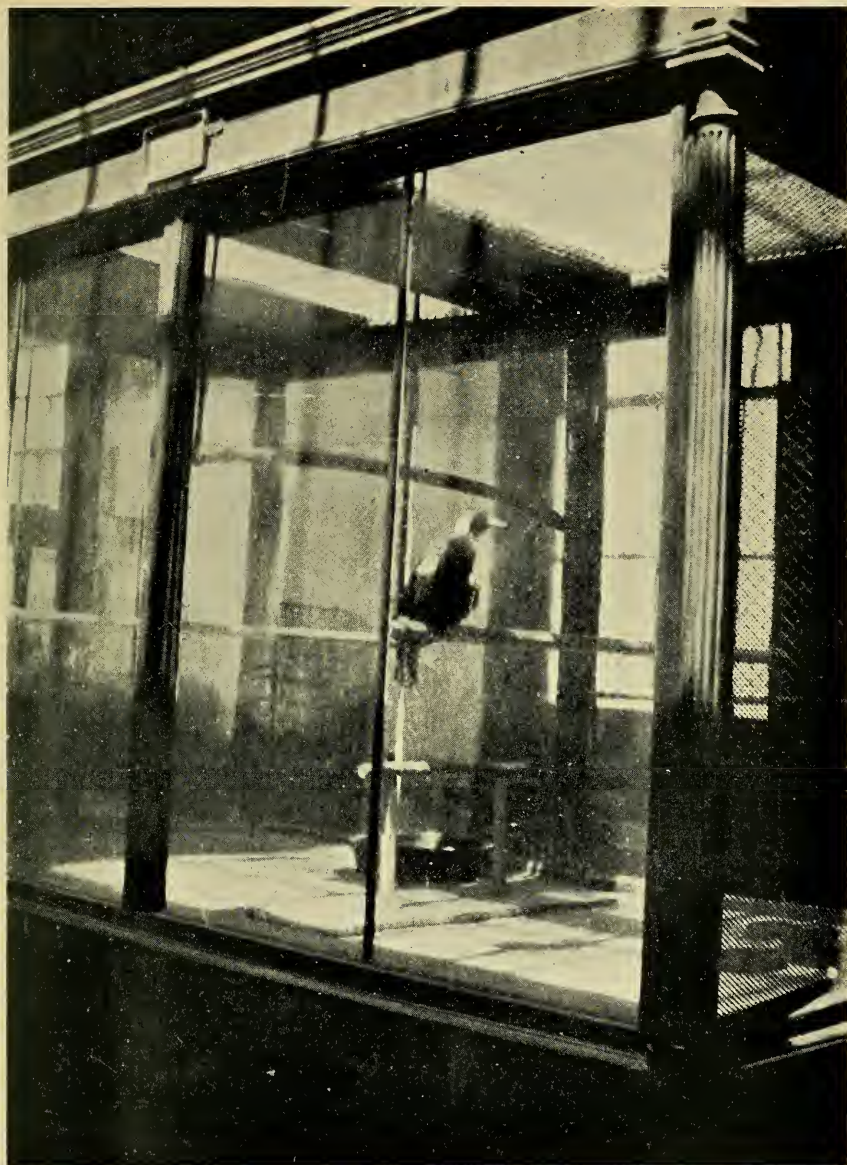
Many of the labels in the Bird House exhibit pictures of the birds, excellently done in oils. In the larger cages several species are kept together. Amongst the more notable exhibits may be mentioned: a Cuban Thrush (*Mimocichla rubripes*), a Himalayan White-collared Ouzel (*Merula albocincta*), Temminck's Himalayan Thrush (*Myiophoneus temminckii*), Andaman Starling (*Spodiopsar andamanensis*), Pagoda Starling (*Temenuchus pagodarum*), Malabar

Starling (*Spodiopsar malabaricus*). The building contains two especially rare birds—the Rhinoceros Hornbill (*Buceros rhinoceros*) from Sumatra, and the Red-billed Hornbill (*Lophoceros erythrorhynchus*) from Africa. The Cape Masked Doves (*Cena capensis*) at Amsterdam are very lovely; the grey portions of their plumage exquisitely tinged with blue. Then, again, there is a fine brilliant Gallinule (*Porphryriola martinica*), a Drongo (*Dissemurus paradiseus*), Red-cheeked Mouse-bird (*Colius erythromelon*), Bell-bird (*Chasmorhyncha nudicollis*), together with various Troupials, Jays, Toucans and Pigeons. Both common and Victoria Crowned Pigeons are very well represented: the booming note of these birds reminds one of Bougainville's sailors. When these heroes first landed in New Guinea they fled in terror from the concealed pigeons, mistaking their booming cry for the signals of ambushed savages!

The small cages on the opposite side of the Bird House contain much of interest. There is exhibited in this series: (1) a Senegal Parrot, (2) a species of *Pionus* (*Pionus menstruus*), (3) a very fine male Lesser Bird of Paradise, (4) a Timneh Parrot (*Psittacus timneh*) (5) a Black-headed Siskin (*Chrysomitris magellanica*), (6) a Vasa Parrot (*Coracopsis vasa*), (7) an *Eclectus* (*Eclectus pectoralis*), and (8) a very good pair of *Dinemellia dinemelli*, the species well termed by Sir Harry Johnston "the King of the Sparrows." The series also contains the Paradise Whydah, Pintailed Whydah, Lavender Finch, Scarlet Tanager, Purple-capped Lory, and other well-known birds.

Amsterdam is justly famous for its rich exhibit of Storks and Cranes and Herons. This delightful installation consists of a neat, double row of tiny houses, each with a little yard in front of it, through which flows a stream of water. The shelter houses are beautifully finished, almost like doll's houses with their doors and windows. It is charming to stand at one end of the avenue viewing this bird town and its inhabitants, so well set off by the rich greenery in the background. Amongst the exhibits may be mentioned: the Australian Crane, Stanley Crane, White-necked Crane, Common Crane, Demoiselle Crane, Goliath Heron, Adjutant or Marabout, Malacca Heron, African Tantalus, Indian Tantalus—and so forth.

Then, again, the Cassowaries are pleasingly located in a series



Graham Renshaw photo.

AMSTERDAM ZOOLOGICAL GARDENS.

CAGE IN THE OLD BIRD GALLERY.

(Showing method of exhibiting the Lesser Paradise Bird.)



of neat shelter-houses, almost like sentry-boxes, with ample yards for exercise. The fine mass of vegetation adjoining the yards, with the great birds running about and playing, almost suggests a forest scene in New Guinea! It is amusing, too, to see the domestic fowls walking unconcernedly about the feet of the Cassowaries, who do them no harm. There are also fine pheasantries; a very pretty Ibis aviary; and a big enclosure for water-birds extending across the Gardens.

NUTCRACKER versus CHOUGH.

AN EPISODE AT THE ZOOLOGICAL GARDENS, LONDON.

By Miss LILIAN M. MEDLAND, F.Z.S.

I witnessed a very amusing and interesting incident at the Zoological Gardens the other day, between the Nutcracker (*N. caryocatactes*) and the Chough (*P. graculus*). I offered the Chough a grape to see what he would do with it. He took it, promptly laid it on the ground, dug a shallow hole with his bill, placed the grape therein and covered it up, as a dog will bury a bone or biscuit for which he has no immediate need. He came back quickly for another grape, which he took to the same place, dug up the first one, and taking both grapes in his bill, carried them to another spot and buried them together. He came back a third time, took a grape and hurried back to the other two, dug them up again and proceeded to try and carry all three in his bill. He picked two up, and in trying to get the third one, dropped one of the others. This went on for several moments, and after a successful bit of juggling he managed it, and took the three grapes to a place about three yards away under the bushes, scraped a hole and buried all three grapes together and carefully covered them up. Again he returned to me, and immediately his back was turned, the Nutcracker, evidently with evil intention in his mind, hurried to the hidden grapes, unearthed them and took one away and buried it in a spot far removed from the others and remained there on guard, with his back turned to the Chough, who meanwhile had found the uncovered grapes which the Nutcracker had left. The Chough, with his fourth grape which he

laid with the others, again covered them up and came back to me for another. Immediately the Nutcracker, who had been watching his opportunity, hurried along to the Chough's hidden treasure and dug it up again, captured another grape and came back and hid it with the first theft.

The Chough began to notice something amiss by this time, and the fifth and sixth grapes he hid in different places and covered them up with some leaves which were lying under the bush. He then unearthed the first lot of grapes, minus two which the Nutcracker had appropriated, and hid them in fresh places. He came back to me and finding that I was not going to give him any more, went back to the bush, carefully looked around and walked into the sleeping-place at the back. The Nutcracker watched him out of the back of his head apparently, and as soon as the Chough was out of sight ran up to the bush and commenced digging it up all round. The Chough came out again and the Nutcracker ceased his nefarious task and deliberately turned his back on the Chough, and one could see as plainly as possible that he was trying his utmost to annoy the Chough without being detected. The Chough then came back to the first patch of ground and turned it all over to see if he had overlooked any grapes, or to find out where the missing ones had gone to. Meanwhile the Nutcracker had found one of the hidden grapes and took it a couple of feet away, dug a hole and covered it with five or six leaves which had fallen from the bush. The two birds never attempted to disagree, and in fact held no converse, as it were, with one another at all. The Nutcracker assuming a nonchalant air the whole time, succeeded admirably in nonplussing the poor harrassed, but persevering, Chough.

At this moment the keeper arrived to put them to bed, thus closing this decidedly amusing and certainly instructive incident. It showed perseverance on one side, and perhaps the mischievous qualities on the other side.

NOTES ON 1913.

By Miss R. ALDERSON.

It seems rather late to write notes on last year, but with the task of arranging the birds for the season of 1914, one's thoughts fly backwards to the past summer, and how certain birds failed and others were a success, and what mistakes are to be avoided in arranging the birds afresh.

For when a separate aviary cannot be given to each pair of birds so much depends on whether the inmates will live happily together. If they will there is some hope of a smooth nesting season, but where they disagree it is impossible for the young birds to have the care and attention they need if they are to thrive. I have even known one instance of doves molesting the young one of another pair with whom they had disagreed; the poor little thing was defenceless, and when found was so injured that it died.

So it is as well, when arranging for a coming season, to think over the past one with a view to making any changes needed, but if you have found several pairs of doves that will be friendly together it is far wiser to let them alone, and to neither increase nor decrease their number. No *set* rule may be given about any one variety of dove; it is more the individual character of the bird that determines the question. I cannot claim to keep regular notes on my birds, though I feel that it is what everyone who keep any ought to do. Such notes as the date the bird was acquired, its price, late owner, and all nesting notes especially, would make an interesting after-record, not only to the owner of the bird, but to others also.

My largest aviary has seven divisions. Five of these are practically the same size—7ft. by 16ft.—and are divided into shelter and flight. The doors of the shelter always stand open, and a passage running at the back of the aviary is heated by a coke and gas stove. I will take the compartments as they come.

* * *

No. 1 DIVISION :—1 pair of Diamond Doves; 1 pair of Brush Bronze-wing Doves; 1 pair of Violet (or White-fronted) Doves.

In 1912 I tried keeping two pairs of Diamond Doves together in this house, but it did not answer. Both pair of birds wanted the

same side of the house to nest on, and though they did not fight it ended in hopeless confusion, and only four young birds were reared altogether by the two pairs. I found that eggs were laid in the nest, then more material added, then eggs laid again, and which pair of birds they belonged to would be difficult to say; I can hardly think they were all laid by one hen.

This last season the pair have reared five fine young ones: two others died, one when in adult plumage, the other a late-hatched bird that seemed to feel the cold, so I put it in a cage near the stove in the passage. It did not occur to me at the time, but I think the bird's death was hastened through the fuel I was using giving off gas fumes. Now I am using another kind, and, though much more expensive, it is far more satisfactory and gives off a clean heat with little smoke.

I left all my five young Diamond Doves in with their parents till the end of the season, and they were a very happy little flock together. There was such continual nesting going on in the house that it was almost impossible to at any time do any catching up without the risk of disturbing some sitting bird or young ones still in the nest.

I find in every house where more than one pair of nesting birds is kept there is this difficulty, and if the young birds *have* to be left in, room must be allowed for them even if the aviary looks only half full at the beginning of the season.

The cock Brush Bronzewing in this house is the survivor of my first pair of this dove. I have had him a number of years, but he shows no sign of age. The hen is a young bird about three years old. I am always specially interested in her because she was hand-reared by me from the egg till she was about a fortnight old, but her earlier destiny has nothing to do with these notes, which only concern her as she is now, a very shapely bird, though smaller than some hens I have had.

This hen laid several eggs during the season, but only one young bird was reared. It turned out to be a hen, and did very well and is now as large as its mother, but I have never seen a hen with such a large round head. The shape is entirely different to that of most Brush Bronze-wings, and I am curious to see how

the bird turns out. At present all three birds are still together and agree perfectly.

The Violet Doves have done nothing. Early in the summer I had a third bird (a cock) in the aviary, but I took him away as the other two seemed inclined to nest. They now and then sat in one of the nest-baskets but that was all. I have never reared any Violet Doves since 1903, and these two birds are not my original breeding pair. I have kept a good many of this dove at different times, but have never found they nested very readily, save the one pair I once had. The Violet is one of the most beautiful doves imported, and I shall never forget what a pretty sight a flock of fourteen were when altogether, just as they were sent to me from Jamaica by a friend. * * *

In No. 2 DIVISION I have: 1 pair of Bronze-wing Pigeons, 1 pair of Diamond Doves; 1 pair of Senegal Doves; 1 cock Rufous Dove.

The Bronze-wings were both adult when they came to me, and I have had them over ten years. They still show no sign of age, but the cock is quite blind on one side from an injury done before he came to me. Besides rather spoiling his beauty, it makes him somewhat clumsy on the nest with eggs or young birds, though he is very steady when sitting, and a good parent.

When first this pair of Bronze-wings came to me, I also bought at the same time, and from the same owner, a second cock, a very fine bird. I gave the hen her choice, and without hesitation she choose the blind bird, and they have been a devoted couple ever since. I have watched the hen showing off to the cock, spreading her gorgeous metallic wing to attract his notice, and giving him affectionate little dabs with her beak, which I suppose in the bird world we may look upon as kisses. The cock took it all very quietly, but no doubt he was pleased with such flattering attention.

These Bronze-wings have reared many young ones, but I almost thought they were too old to nest, though the hen laid eggs and both birds would sit. To my surprise this year they reared a very fine well-coloured cock bird. It was very strong and grew very fast, perhaps being a single bird it got extra attention from its parents.

The Diamond Doves in this house reared three young ones. A further pair—very late hatched—died of cold when out of the nest. I had put them up a shelter and a good bed of hay, as I do for all young doves just out (as it is seldom a young dove returns to the nest, and as a rule it still needs warmth and protection) and in the morning they were all right. Unfortunately they strayed away and got on the cold cement floor and one was found dead, the other cold and unconscious. Warmth and patience revived it, and I took it in the house and hand-reared it for some days. The little bird was easy to feed, with a shaped quill tooth-pick, on soaked small seeds. It was so tame, and loved to sit nestling on my finger before the warm fire, and as it grew and the plumage began to mature, I began to hope I should rear it, and pictured what a nice tame pet it would make. But my hopes came to nothing. One day my fox-terrier puppy got to the cage through someone leaving the room door open, and though he could not get to the bird, he upset the cage and I have no doubt gave the poor Diamond a bad shock and bruised it. I do not know whether it was this or not, but the bird began to get weaker and in a few days died.

The pair of Senegal Doves had five young ones, but one died when full grown. The old birds hardly ever stop nesting all through the summer, and would go on all through the year if allowed. They seem to come off the eggs frequently, and yet they always hatch and the young are generally reared. When I first had these Senegals I was in despair with them because they would not brood their young ones properly, and time after time the poor little things died of cold, now I never have any trouble, for the old birds seem to have learnt wisdom as they grew older.

The Rufous Dove cock in this division I have had eleven years, and being an imported bird I do not know his age when he came to me. His mate died some years ago, and he is too old now even to fly, but he enjoys his life in a quiet way for none of the other doves molest him. The two Rufous Doves were almost the nicest and gentlest doves I have ever kept, and perfect parents to the many young ones they reared whilst the hen lived.

In No 3 DIVISION I had—for it is re-arranged now—1 pair of Brush Bronze-wings ; 1 pair of Diamond Doves ; 1 hen Solitary Ground Dove.

These Brush Bronze-wings I have had for several years and I used to consider them a good nesting pair, but latterly they have done very badly, and this year did not rear a single young one. They make nests and the hen lays many eggs, but the birds either will not sit out their time, or else they let the young ones die when a day or two old. Now and then I find several eggs laid in one nest and the birds not sitting at all. I have tried to hatch the eggs under Barbary Doves but without success, though the eggs are generally fertile.

It is the more disappointing as in their earlier years—in the same aviary—these Brush Bronze-wings used to rear such fine young birds.

The Diamond Doves in this house did the worst of all my four nesting pairs. They only reared two young ones : the hen was shy and would often leave the nest, though I think she generally returned to it later.

The hen Solitary Ground Dove I have had eleven years. I put her into this aviary in the summer because she was being tormented by other birds in the next division and I was forced to move her, though I very much disliked altering the arrangement of the birds when once the season has started. The Bronze-wings did not at first care for the Solitary hen, but finally settled down. I have, however, had to move her again just recently, as I found her one day with her feathers plucked and only the Bronze-wings could be the culprits.

The hen Solitary Ground Dove is a very rare Dove. I only once remember seeing some offered for sale. This hen I bought for 5/-, she being offered me at that price as a rough plumaged unknown Dove and I did not know at the time what she was. My delight at getting her was great and as I had already a cock—bought under a wrong name. They nested, but I only once reared one bird to full maturity.

* * *

No. 4 DIVISION contained : 1 pair of Green-winged Doves : a hen Madagascar Dove ; 2 cock Spotted Pigeons.

In this house I bred nothing all through the summer. The Green-wings made several nests, and some of the eggs were hatched but no young ones reared.

The Green-wing eggs are so deep a cream as to be almost buff, the young birds have very dark, blackish skins, making them look like little negro birds I always think, and such a contrast to the young White Java Doves whose bodies are a soft clear pink with no down on at all, almost like baby mice. The hen Green-wing is a bird I bred some years ago, at a time when I reared several. She nearly died of cold after she left the nest and I think this gave her a check and caused her to be rather undersized, but she is a healthy little bird all the same.

I was rather sorry for the Green-wings, because one of the Spotted Pigeons took a fancy to their nesting basket and persisted in sitting in it. Often when I have come in the house I have seen the big pigeon's head peeping over the edge of the nest, though I do not think it ever harmed the Greenwings themselves. I had to separate the two Spotted Pigeons, for being two cocks they fought, and later I sold them both. I was very sorry to part with them for they were lovely birds, but too large for my small places. The colouring of the Spotted Pigeon is most harmonious, the tints are so soft and there seems almost a bloom on the plumage which is always tight and smooth, the eye is light coloured and seems of just the shade to perfectly match the surrounding feathers.

The Madagascar there is nothing to chronicle about. She was just an odd hen, whose mate died the year before.

(To be continued).

PROTECTION OF BIRDS.

IMPORTATION OF PLUMAGE (PROHIBITION) BILL.

We are asked to announce that a Public Meeting in support of the above-mentioned Bill will be held at the Caxton Hall, Westminster, on March 19th, 1914, at 5.30 p.m.

This Bill, a non-party measure, will prohibit the importation into the United Kingdom of the plumage of wild birds, such as Egrets and Birds of Paradise—Ostrich feathers being especially exempted—and it is confidently believed that such legislation will have far-reaching effects towards the preservation of many rare and beautiful birds now in danger of extermination.

Mr. Sydney Buxton, ex-President of the Board of Trade, and Mr. Page Croft, M.P., who introduced the Bill into the House of Commons last year, will speak, among others; and since it is desirable that the Meeting should be as representative and influential as possible, it is hoped that all members of the Avicultural Society in favour of the measure will attend, if possible.

Free tickets for the Meeting may be obtained from:

Mr. R. I. POCKOCK, F.R.S.,

Hon. Sec. Avicultural Society,

Zoological Society, Regent's Park, N.W.

THE COUNCIL MEETING.

NOTICE TO FOREIGN MEMBERS.

Since members living abroad are by the rules of the Society ineligible for the medal for priority in breeding, the Council decided to offer an annual prize for the best article or series of articles or notes upon foreign birds, either wild or captive, submitted by such members and accepted for publication in the magazine; the prize to consist of a bound and inscribed copy of "Practical Bird-Keeping," or some suitable book on Aviculture or Ornithology. The award of the prize, which is offered for the current and following years, will rest with the Editor of the Magazine.

THE SOCIETY'S MEDAL.

The following medals were awarded :—

Mr. W. E. Teschemaker for breeding the Scaly Finch, Crested Lark,
Black Redstart, Whinchat, and the Sprosser Nightingale.

Dr. Amsler for breeding the Hooded Siskin.

Miss Drummond for breeding the Great Eclectus.

Mr. H. D. Astley for breeding the Hooded Parrakeet.

If any member is acquainted with previous cases of the breeding in captivity of the above-mentioned birds, he would oblige the Council by forwarding particulars to the Hon. Secretary before March 15th.

THE SOCIETY'S TEA.

It was decided to give a friendly and informal tea to members of the Society in the Zoological Gardens after the summer meeting of the Society in the latter half of June of this year, the exact date and other particulars to be announced in the number of the Magazine issued in May.

R. I. POCKOCK,

Hon. Business Secretary.

CORRESPONDENCE, NOTES, &c.

CONTRIBUTIONS NEEDED.

Will members very kindly do their best to send articles and notes? I *must* have sufficient copy in hand to carry on the Magazine with any success.

BLUE BUDGERIGARS BREEDING IN A CAGE.

My pair of Blue Budgerigars, when I moved my birds from Berkshire to Herefordshire last October, were put in a small cage, in my new bird-room, for the winter. The hen laid a clutch of four eggs in a very short time after the move, two of which were hatched. The eggs were laid anyhow on the drawer of the cage, which was covered with sawdust, but the birds scratched that away, so that the eggs were on the bare wood, and were repeatedly rolled about from one end of the cage to the other. Except for the female, who performed the incubating, coming off her eggs when the daily food was given and for feeding, she never left them. There were eight days between the birth of the two young ones,

the youngest dying when a fortnight old. The first-born still survives and is blue, but rather undersized, and nothing like so robust and brilliant in colouring as were two from the same parents hatched in my former aviaries at Benham Valence last summer, both of which birds most unfortunately killed themselves against the wire meshing when they left their nest in a large hollow log. They were almost as brilliant a blue as their parents, and almost as large. The old birds are in robust health, so that it is puzzling to know why this, their latest progeny, should be undersized, for its life in a cage until leaving the nest would be exactly the same as that in a wild state. The parents had plenty of green food all the time,

Now, they will be turned into an outdoor aviary, where I hope they will rear a good brood.

H. D. ASTLEY.

FOREIGN DOVES AT LIBERTY.

SIR,—I was interested to read Lord Tavistock's article on Foreign Doves at Liberty in the February number, and the difficulties he had to contend with in the shape of 'canker.'

I have myself known the ordinary Collared Dove to catch the disease from the wild Turtle Dove, which also gave the disease to his Foreign Doves.

But I am especially interested, because I am a Pigeon fancier as well as a Foreign Bird enthusiast, and during the 1913 breeding season lost a great number of youngsters through canker.

This disease I had not experienced during the last five years, and the exact reason for it is hard to account for among Pigeon Fanciers, I believe. But the curious thing is that the disease only affected young birds in the 'squeaker' stage, and that the old birds, though feeding the youngsters in some cases before it was discovered, did not contract it, in a single instance.

In both the cases I have instanced I have examined specimens, and the 'canker' outwardly appeared the same—a yellowy cheesy matter which choked the gullet and stopped the free passage of air.

But why did the Doves contract it from feeding on the discarded corn, perhaps of the Turtle Doves, while the old Tumblers, though feeding youngsters when choked with canker, were not affected in a single case.

I thought that the parallel cases would not be irrelevant to the *Avicultural Magazine*, and that some member might throw some light on the subject.

Bale Rectory, Melton Constable, Norfolk.

TREVOR OLIPHANT.

WAXWING IN YORKSHIRE.

SIR,—I was fortunate enough to see a beautiful Waxwing at Malton on Dec. 15th, 1913. It was extremely tame and allowed me to watch it for several minutes from a distance of a few yards, whilst it fed on something on a small shrub in a nursery garden. A week later there was an account in the *Yorkshire*

Post of a Waxwing having been shot at Hunmanby, about twenty miles from Malton, and I greatly fear it would be the bird that I saw.

MARGERY L'ESTRANGE MALONE.

PLUMED GROUND DOVE.

SIR,—I am not a member* of the Avicultural Society but read the monthly magazine and was interested to read Mr. Blaggs notes on the Plumed Ground Dove. I have a pair which laid several times last summer and sat their full time, the last pair of eggs being left when the young birds were partly hatched, two other lots of eggs were fertile but failed to hatch. In the case of my pair there was certainly no change of any sort in the plumage. The birds were in an outdoor open-air aviary and in perfect condition. They were very wild and shy at first and deserted the first two pairs of eggs, after sitting a few days, but afterwards settled down and were quite comparatively tame. You might like to have my experience with these doves, so I thought I would write you a few lines.

HERBERT BRIGHT.

SIR.—I thought the following would be interesting to the readers of the *Avicultural Magazine*.

A *Sand* Martin was flying up and down the river Thames, close to Tilehurst, which is two miles from Reading. It was seen there about ten days before Christmas. I have never heard of or seen a *Sand* Martin at such a time of the year, although I have seen *House* Martins as late as the third week in November.

A fortnight ago a most unusual thing occurred. A large brood of *Partridges* hatched off at Silchester Manor Farm and were all doing well.

P. F. M. GALLOWAY.

[* Will not Mr. Bright *become* a member.—ED.]

NEW MEMBERS.

- The Revd. RICHARD H. WILMOT, Bishopstone Rectory, Hereford.
Mr. O. J. STONE, "Cumnor," The Drive, Lawrie Park, Upper Sydenham, S.E.
Dr. BERNARD E. POTTER, 58, Park Street, London, W.
The Honble. SIR SCHOMBERG McDONNELL, G.C.V.O., K.C.B., Dalness, Tainhuil, Argyllshire. (*Present Address*: La Florida, Naples).
Miss O. DE PASS, 6, The Orchard, Bedford Park, London, W.

ELECTION OF AN HONORARY MEMBER.

Mr. W. P. PYCRAFT was elected an Honorary Member of the Society.

CANDIDATES FOR ELECTION.

- Mr. G. H. ACTON, Bytham, Kidmore Road, Caversham, Reading.
Proposed by Mr. P. F. M. GALLOWAY.
The Rev. H. A. SOAMES, F.L.S., Lyncroft, Bromley, Kent.
Proposed by Mr. R. I. POCKOCK.
Mr. THOMAS HEBB, Brooklea, The Downs, Luton, Beds.
Proposed by Mr. HUBERT D. ASTLEY.

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The Magazine can also be had from the Publishers by **NON-MEMBERS** at a Subscription of 15/- per annum.

NOTICES TO MEMBERS.

The Subscription to the Avicultural Society is 10/- per annum, due on the 1st of November in each year, and is payable in advance. The entrance fee is 10/6. The *Avicultural Magazine* is sent free to members monthly. Members joining at any time during the year are entitled to the back numbers for the current year, on the payment of entrance fee and subscription.

All MSS. for publication in the Magazine, Books for Review, and Private Advertisements should be addressed to the Editor, HUBERT D. ASTLEY, Esq. Brinsop Court, Hereford.

All Queries respecting Birds (except *post mortem* cases) should be addressed to the Honorary Correspondence Secretary, Dr. A. G. BUTLER, 124, Beckenham Road, Beckenham, Kent. [*Enclose Stamp for reply*].

All other correspondence, should be sent to the Honorary Business Secretary, Mr. R. I. POCKOCK; Zoological Society's Gardens, Regent's Park, London, N.W. Any change of address should at once be notified to him.

Dead Birds for *post mortem* examination should be sent to Prof. G. H. WOOLDRIDGE, Zoological Society, Regent's Park, N.W.

Advice is given, *by post*, by members of the Council to members of the Society, upon all subjects connected with Foreign and British birds. All queries are to be addressed to the Hon. Correspondence Secretary and should contain a penny stamp. Those marked "Private" will not be published.

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Cases for binding the Magazine (in art cloth, with gold block on side, can be obtained from the Publishers, post free and carefully packed, at 1/6 each; or the Publishers will undertake the binding of the Volume for 2/6, plus 8d. for packing and postage. Members are requested to state whether they want the wrappers and advertisements bound in at the end or not.

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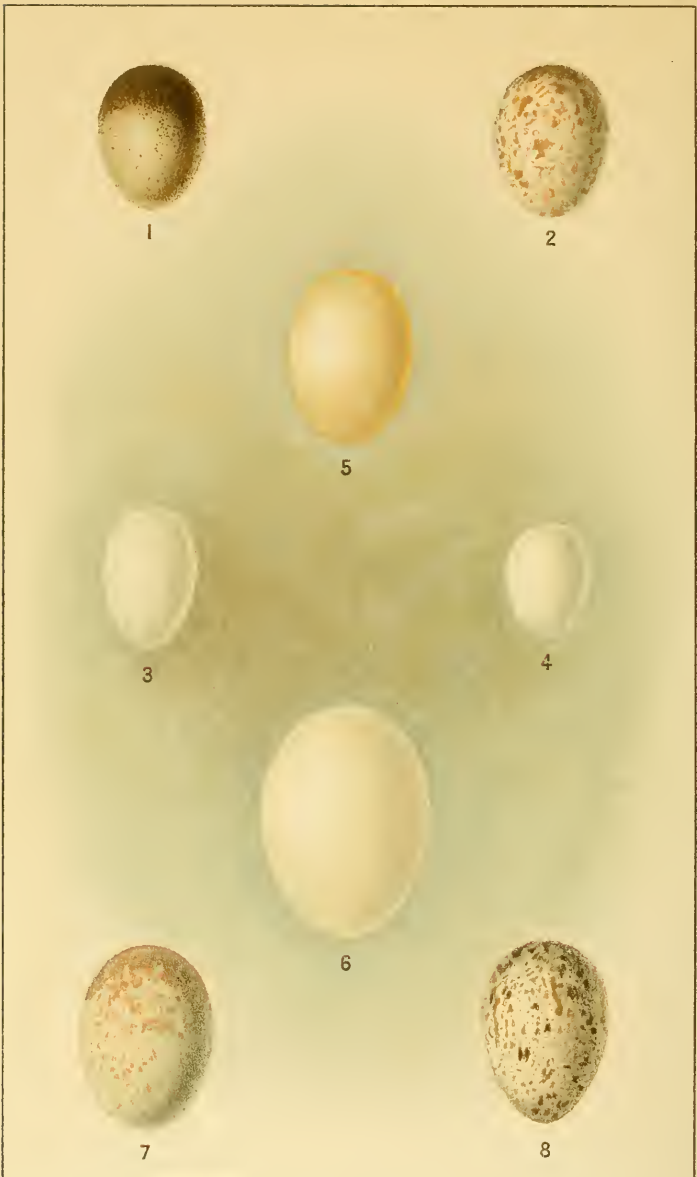
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APRIL, 1914.

EGG-LAYING & NESTING EXPERIENCES.

By Dr. A. G. BUTLER.

If all the eggs produced in our cages and aviaries became birds the market would soon be glutted; but as it is many eggs are infertile; and many others, though hatched, result in youngsters which either die or are killed in infancy. The following is a summary of my failures and successes to date: I do not include domesticated Canaries, because everybody either has bred or could easily breed more or less decent examples of these sports, and because our rules exclude them, but hybrids between the Canary and any wild type are admissable.

Beginning with the Thrush-like birds then, this is my modest record:—

Merula bouboul × *Merula merula* bred 1895 and 1896.

Accentor modularis. An unpaired hen built and laid a full clutch of eggs.

Sialia sialis, one bird bred in 1890.

Saxicola monticola unpaired, lays every year.

Fringilla cœlebs × *Sérinus serinus* var *canaria* infertile eggs.

Fringilla montifringilla. A hen in one of my aviaries, unpaired, laid several bright green eggs.

Carduelis elegans, three in one nest reared and a second sitting hatched in 1895. Of course I have also bred mules with the Canary, the cock bird helping to rear the young, but then the birds were not confined within the limits of a Canary breeding-cage, but had a cage 18 inches cubic measure to themselves: in a confined

space a cock Goldfinch sometimes becomes unreliable, breaking the eggs.

Petronia dentata and *albigularis*. Unpaired hens: they built a neat nest, but dropped many infertile eggs on the floor of the cage.

Sycalis flaveola. Formerly I used to breed this species every year: I also bred hybrids between it and *S. pulzelni*, and in 1898 I bred several hybrids between a Canary and a hen of this species: unfortunately only one (a female bird) survived the moult and with each successive moult became more and more like its mother, nevertheless a cock Saffron-finch associated with it ignored it utterly.

Sycalis arvensis—built in 1907, but the hen died without laying, possibly egg-bound.

Serinus flaviventris. An old hen of this species paired with a cock Canary in 1912; built, but laid only one egg which she reared:—a fine cock bird, hardly distinguishable from ♂ *S. flaviventris*, but with Canary song.

Serinus icterus. Built and laid on several occasions in my aviaries, but the eggs invariably disappeared, apparently eaten by the cock bird.

Serinus leucopygius. Built and laid, but the hen generally died from egg-binding before the clutch was complete. A hen paired with a Canary hatched young, which however died before they were fledged.

Alario alario. Built a nest and laid in August, 1901, but failed to hatch.

Acanthus cannabina. Of course I have bred hybrids between this species and a Canary.

Pyrrhula europæa. This species built, laid and incubated in one of my aviaries; but died on the nest just as the young hatched: I handed them over to the tender mercies of a Canary which failed to rear them: perhaps this was as well, for I believe it was the same bird which, after bringing up an infant Goldfinch, plucked it so unmercifully that it died.

Emberiza citrinella. Built a beautiful nest in 1889, but was disturbed and did not lay.

Cyanospiza cyanea. Paired with Canary which built and laid in 1896; the Indigo Finch would not let her sit, but repeatedly pulled out the nest so that nothing resulted.

Gubernatrix cristata. Built, laid and hatched out four young ones in a Chinese wicker cage hung up in one of my aviaries, in 1895; but three of the four young ones were thrown out of the nest when half grown, because the parents could not get sufficient living insect food to satisfy them. The fourth bird was reared and flew, but did not take kindly to the soft food and consequently died in the young plumage.

Paroaria larvata. Built, laid and began to sit in 1904, but deserted the nest and died just as the eggs were beginning to develop.

Paroaria cucullata. Built several nests and pulled them to pieces again, but did not lay.

Chloris chloris. Built, laid and reared its young without the least difficulty, the nest being formed in an ordinary Canary nest-box hung on the wire-work of the aviary.

Spermophila albigularis. Built several nests from fine tough fibre, but never laid.

Sporæginthus amandava. A pair built in one of my bird-room aviaries in a potted box-tree, but the nest was seized by other Waxbills successively and consequently there was no result.

Stictospiza formosa has both built nests and laid in my aviaries, but has always been disturbed by other birds, so that I have never bred it.

Estrilda cinerea. This Waxbill has also built and laid in my birdroom, but never succeeded in hatching its eggs.

Poephila mirabilis. After many attempts to breed this species in cages and indoor aviaries, I at length succeeded in an outdoor aviary in 1905 and 1906. The two eggs illustrated were from the same clutch.

Poephila acuticauda. A female paired with a male *P. cincta* built but did not lay: she was of the race to which the name *hecki* was given.

Poephila cincta. I have only once bred this species, the hens being very liable to egg-binding.

Steganopleura guttata. Went to nest on one occasion but the hen killed her husband because he entered the nest when she was sitting in the daytime, so there was no result.

Bathilda ruficauda. A female paired with *Teniopygia*

castanotis in 1896 built but did not lay. A pair purchased in 1905 built and began to lay but were driven from their nest by a pair of *Munia pectoralis*.

Taeniopygia castanotis. I bred dozens of this common little species without difficulty.

Aidemosyne modesta. Built in a bush in one of my indoor aviaries and laid a full clutch of eggs, but the parents suddenly and unaccountably disappeared. I suspected mice of having carried them off, since no trace of the birds could be found.

Amadina fasciata. My first pair of this species bred without the least trouble, but all others received later suffered from the usual fault,—egg-binding, which causes the death of most of the hens.

Amadina erythrocephala. I never succeeded in breeding this species, all the hens died from egg-binding.

Uroloncha acuticauda. Readily nested in a flight-cage, but never succeeded in rearing young until paired up with a Bengalee (*U. domestica* of Flower). Of the latter, which I regard as of hybrid origin, I have bred all three varieties at various times.

Munia punctulata. Has built and laid in my aviaries, but has never hatched out.

Munia maja. Nested and laid, but was too restless to hatch its eggs.

Munia atricapilla. Repeatedly built and laid, but never hatched an egg.

Munia oryzivora. I have bred this common species freely, both in cage and aviary, in all its varieties.

Spermestes cucullatus. A hen paired with *Poephila cincta* built repeatedly, but never laid.

Hypochoera chalybeata. Hens which went to nest in my bird-room died from egg-binding.

Hypochoera ultramarina. The same observation applies to this as to the preceding species.

Pyromelana franciscana. Built in a cage in 1885, but both sexes died before eggs were produced. In 1899 one egg was laid in another aviary, but not in a nest.

Quelea quelea. Built frequently, and on one occasion laid two eggs which subsequently disappeared from the nest, probably devoured by some other bird.

Hyphantornis cucullatus. Nests built, but there was no hen to lay in them.

Hyphantornis melanocephalus. Built, but the females never appropriated the nests.

Ploceus baya. My males built many nests, but there were no females with them.

Ploceus manyah. The same observation applies to this as to the preceding species.

Anthus pratensis. In 1890 a female in one of my aviaries laid an egg in a Canary's nest built about two feet above the ground.

Alauda arvensis. In 1889 a hand-reared hen laid an egg in one of my aviaries.

Calopsittacus novæ-hollandiæ. I bred one young cock in my birdroom in 1907. Some years previously I had fertile eggs, but the hen died during incubation. In an outdoor aviary, breeding with this species is well-known to be easy.

Palæornis rosæ. I bred one female in an indoor aviary in 1894.

Agapornis roseicollis. Two hens kept together in a flight-cage laid several eggs in a nest-box.

Melopsittacus undulatus. I bred nine young ones in the winter of 1892-3, but they were all delicate and eight of them died in 1893: even in an indoor aviary it is not advisable to let one's birds breed in the winter.

Zenaidura aurita. Built in an outdoor aviary, but did not lay. In July 1900 it laid one egg on the floor of an indoor aviary.

Turtur risorius. I suppose everyone has bred this domesticated species, certainly anyone could do so: I bred numbers both of the typical form, the white sport and hybrids between the latter and the Necklaced Dove.

Turtur semitorquatus. Laid many eggs on a hamper-lid in one of my aviaries, but were so much disturbed by other birds that they never succeeded in hatching.

Turtur tigrinus. I bred this in an outdoor aviary in 1897.

Geopelia cuneata. After repeated failures to breed this common Dove indoors, I in 1907 turned a pair into a large garden aviary where they reared young without trouble; I however left them out

too late and lost them; but I bred the species again in the two succeeding years.

Columbula picui. In 1900 I found an egg of this species on the floor of the birdroom.

Chamæpelis passerina. Built, but the hens died from egg-binding.

Tympanistria tympanistria. I bred this species in an outdoor aviary in 1906, 1907 and 1908; but indoors, although many eggs had been laid and one youngster partly reared in 1903, I had never been successful.

Chalcopelia chalcospila. The hen occasionally laid an egg in a basket-nest in an indoor aviary; but the cock would not take his part in incubation, so that none was hatched.

Chalcophaps chrysochlora. The hen of a pair purchased in 1896 occasionally laid an egg, but never built: a pair turned into an outdoor aviary in 1907 (after building but not laying in 1906) made some pretence at courting but did not even attempt to build.

Phaps chalcoptera. I tried a pair of this species for many years both in indoor and outdoor aviaries, giving them a hamper-lid to nest upon, the hen laid many eggs, mostly fertile, and did her duty in incubating them, but the cock had gouty toes and always managed to injure the eggs before they were ready to hatch.

Ocyphaps lophotes. The hen of a pair purchased in 1896 laid an egg on the ground; but though I kept the birds until 1903, no further attempt was made at breeding.

Leptoptila wellsi. A female received in exchange in 1898, although unpaired, laid eggs incessantly during the whole of 1905, and steadily incubated unless they were removed. I secured quite a number of eggs for collections, but the bird so enfeebled itself that it died early in the year following.

Leucosarcia picata. Although I could not persuade this species to breed in an outdoor aviary, the birds were no sooner brought indoors than the hen began to lay on a loose platform of branches through which many eggs fell to the floor and others half way through the twigs, so that none could be incubated.

Excalfactoria chinensis. Laid many eggs, but none were hatched.

Lophortyx californicus. Laid, but did not sit.

Thus, of the seventy forms or thereabouts which have either built, laid, or both, in my aviaries, only twenty have been successfully reared. Had I kept fewer birds and in outdoor aviaries only, I do not doubt that I should have bred quite double that number. At the same time, in spite of all our successful friends may say and think respecting luck in breeding; the fact that many birds difficult to breed have been reared in aviaries more crowded and smaller than mine, looks suspiciously like sheer luck: on the other hand it is just conceivable that, when the owner (as in my case) looks after his birds himself, they may become too comfortable, fat, and lazy, to trouble about rearing families. I have heard bird-owners say, that a day of starvation occasionally is as good for birds as for dyspeptic human beings; but I should not like to put it to the test.

It is an odd thing that those bird-owners who laugh at the idea of success being more or less a matter of luck, do themselves occasionally speak of having had an unlucky season: it is perhaps natural to think that another's misfortunes are the result of carelessness and one's own of sheer ill-luck.

AVICULTURE IN PARAGUAY.

By LORD BRABOURNE.

An "embarras de richesses" will beset any attempt at aviculture in Paraguay. It is enough for it to be merely known that an interest is taken in birds and apparently every boy for miles round forsakes the daily routine of his life in the mistaken pursuit of every bird, from a King Vulture to a Humming Bird.

The spot, to which these notes refer, was situated 27 miles north of Villa Rica (the second town of Paraguay) and but a few hundred yards or so from absolutely virgin forest; across this small distance nothing but forest primeval and uninhabited intervened between the Parana River 100 miles to the westward.

In a country where all the world outside the towns lives in open thatched huts and where houses in the European sense of the word are unknown, aviculture must necessarily be rather a haphazard

affair, and the following subjects all lived unfettered in their captivity, coming and going at their own sweet will, and for the most part sooner or later roamed away to their native forest or swamp. Indeed, in a spot where a Humming Bird's (*Chlorostilbon aureoventris*) nest was discovered under the eaves, where Toucans, Trogons and Parrakeets would perch in a tree not 50 yards from where one fed daily and where Tinamous (*C. Tataupa*) would be calling and answering each other in the garden itself, any kind of restraint would seem veritable sacrilege.

On arrival in Paraguay the menagerie consisted of but one bird, a Red Macaw (*A. Macao*); beyond the fact that his wing was cut he was entirely free; this to the detriment of a vine-covered "pergola" and the thatched roof. His usual perch was on the half-walled-up side of the hut, and from there he descended with regularity at meal times and climbed up on to the back of the nearest chair, if his demands were not attended to with the utmost speed, he would draw attention by gently worrying the neck or shoulder of the occupant of the chair. The intelligence with which he understood the reproof or caress implied by the intonation of his name was a marvel. If the former he would scuttle down from off the chair, pausing every yard or so in his bow-legged shamble to look upwards and listen for the least sign of relenting, and, if this was detected, he used to return shamelessly to his original spot to pursue his persecutions. Macaws occasionally flew overhead, upon which the captive would call and the passing birds answer. Once a flock of six came right down and flew several times round the house within a few yards, and the tame bird became quite frantic in his efforts to use his clipped wings.

At a spot some 40 miles northwards, where there are large grassy openings in the forest, sprinkled with many low palms bearing in March a yellow fruit called "Yataity," the Blue and Yellow Macaws (*A. Araruma*) collect in numbers to feed, and a native makes a yearly custom of netting them with a call-bird and selling the birds in Villa Rica and Asuncion. He had just returned, and his catch of over 50 was loose with wings cut in the garden. The noise may be imagined: also the state of some half-dozen orange trees, in which the birds were placed; but oranges in Paraguay are as

plentiful as acorns in England, and as cheap. So it was decided on the return journey to provide a companion for the Red Bird. How to convey him home on horse-back was a difficulty. However, a cloth was wrapped firmly round the barrel of a 12-bore shot gun, whilst a stout leather thong was bound round the Macaw's feet, and bird and gun were attached. Words fail to picture the discomforts of the journey, the bird's attempts to fall off the perch, his attempted frantic assaults on the bearer of the gun, and the difficulty of dismounting and re-mounting, etc. It happened to be heavy rainy weather, and at that time Parrots both tame and wild are most voluble, and the Red bird was heard at some distance proclaiming the fact that he still lived; the Blue Macaw as soon as he arrived in earshot gave the most piercing shrieks of joy at the near proximity of a fellow; and a concert of shriek and counter-shriek was maintained during the time it took to bring the birds to closer quarters. But the new-comer once placed beside the Red bird the latter's attitude changed to one of suspicion. He backed before his new-found friend with one claw raised deprecatingly, and kept the intruder at a distance for some time. Still, at the end of a few days they became on the very best of terms, never more than a few feet away, and scratching each other's heads continually. Under the civilizing influence of the older prisoner the Blue and Yellow Macaw at the end of a month had become comparatively tame, though he never quite reached that degree of familiarity which the former displayed. When it is considered that six months before acquaintance with the Red bird he had possibly never even seen a man, that he had been captured more or less violently and when adult, and that in that short space of time he had become as docile and almost as intelligent as a dog, whose ancestors have been bred in captivity for countless generations, it is impossible not to wonder at the truly marvellous intelligence and adaptability of these Macaws.

The Parrots cannot be left without mentioning an amusing incident that occurred just before the arrival of the Yellow Macaw. A Toucan (*Pteroglossus castanotis*) that had met with some accident and could not fly, but that was otherwise sound, had been brought in from the woods by one of the men. He was placed alongside the Macaw and remained apparently lost in reflections on his unhappy

state. The Macaw, brave as a lion and very curious, approached, and seemed to have some intention of making himself acquainted, when the Toucan suddenly awoke and in a fury made lunge after lunge with his long beak at the Parrot, who was driven simply to fall off his perch to the ground before his small adversary. This bird could not be persuaded to eat, so at the end of 24 hours it seemed better to kill it, and his final resting-place is the Bird Department of the South Kensington Museum.

"Isabel" was an Urraca Jay (*Cyanocorax chrysops*), the "Acahé" of the Guaranis, and was taken from the nest at a very early age; it was some time before it could be persuaded to forage for itself, and required a deal of personal attention, but seemed to thrive well on a diet of chopped raw meat. Still, when after a few weeks it was able to leave its box and see life it became an almost insufferable nuisance. The perpetual croaking cry for food could be ignored so long as it was confined to its box, but when one was awakened at the very early dawn by unceasing pleadings from under the very bed, and when in a few days later the bird would flutter on to the very bed itself, sudden death nearly overtook it more than once. By-and-bye the Jay began to use its wings, and becoming less and less familiar soon vanished altogether, probably to join one of the numerous flocks in the neighbourhood. These Jays play a conspicuous part in the bird-life of Paraguay, and by their lovely blue and primrose colouring and strange inquisitive notes are amongst the first birds to attract the attention of a stranger. They are always seen in flocks of from about 6 to 12.

An interesting pet whose captivity was of the shortest duration was a Tinamou (*Rhynchotus rufescens*), the Large Partridge of Argentina and Paraguay. This was at a time when Locusts in the "hopper" stage were swarming everywhere. The bird was only about the size of a 10-day old chicken, but well able to forage for itself. Several of these Locusts were placed near it, and in spite of their jerking efforts to escape, the Tinamou caught them one after another with all the stately strategy and deliberate greed of a mature old hen. This young bird showed not the slightest fear of man, but its powers of upward movement were underestimated; it was placed in a large open box and in the morning had vanished. As Locusts

continued to be abundant for some time, it doubtless grew to be a fine healthy bird.

A Wood Partridge (*Odontophorus capueira*), a bird of unsociable nature, was not a success. This "Uru," as the Guaranis call it, was captured when adult, and flatly refusing all sustenance moped with its head in the corner of its box. So after twenty-four hours' captivity the bird was liberated.

Every country in South America seems to possess what may be termed the "national tame bird." In Argentina it would appear to be the Cardinal (*Paraoria cucullata*); in the coast region of Peru the "Huarakéké (*Burhinus superciliaris*); in Venezuela the Sun Bittern (*Eurypyga helias*), and certainly in Paraguay it is the Whistling Heron (*Syrigma sibilatrix*), the "Quarah-mimbi" (mean- in "Child of the sun") of the Guaranis. It is appreciated not for its beauty only. The idea of the natives, that it destroys beetles, cockroaches, etc., is probably correct. But large indeed would be the flock necessary to make an impression on a Paraguayan "rancho." Many of these birds were always for sale in the Hotel in Villa Rica, where rich Argentines come to spend the winter. Several other species were also kept, Egrets (*Egretta egretta*), Curassows and Guans (*Craz sclateri* and *Ortalis canicollis*), Cariamas (*Cariama cristata*), "Teru-terus" (*Belonopterus griseus*). No great trade can have been done in these last, since they swarm throughout Argentina. From this Hotel on returning south a King Vulture was bought. He was an interesting bird, and his first feat was to escape from his cage on the docks in Asuncion. Luckily his powers of flight were as yet merely sufficient to provide exercise for the obese, which infirmity was prominent in our two porters; and he was not very easily secured. On arrival at his destination he was given complete liberty and soon became very tame, and would pull one's bootlaces or take one's hand and hold it in his beak. As his wings grew stronger he developed a most unbirdlike "trait." Small Tinamous (*Nothura maculosa*) abound in most parts of Argentina, and in that locality they were sufficiently abundant. So, when shooting, no great distance had to be covered before the first was flushed. At the near sound of a gun-shot the Vulture would immediately fly towards the shooter and attempt to perch on his

shoulders, and would follow up shot after shot in this manner for some distance. The favourite perch of this bird was on the highest point of the roof, where he could be seen in the early morning motionless with wings widespread, as if to catch the fullest warmth of the first rays of the sun; a well-known position of all the South American Vultures. He was discovered one day dead, and a post-mortem examination disclosed a badly contused skull. The assassin was never discovered.

Amongst birds of interest to aviculturists and easily to be obtained may be mentioned Blue Tanagers (*Thraupis sayaca*), Yellow Tanagers (*Tangara flava*), the Long-tailed Manakin *Chiroxi-phia caudata*; various members of the Troupial family, of which perhaps the most interesting was the Red-rumped Cacique (*Cacicus aphanes*). Previous to arrival these birds had actually had a nesting colony in the garden. The remains of their swinging nests were still to be seen but the birds themselves had unhappily been scared away, though they frequently returned in small parties, as if to view the site of their former home. There was a whole colony about half-a-mile away on the edge of the forest, possibly the same tribe. The beautiful Magpie Tanager (*Cissopis minor*) and the perhaps even more lovely Swallow Tanagers (*Procnias caerulea*) were amongst the rarer birds. Of the former only two were seen in fifteen months; the latter were migratory and common only for about a fortnight in two consecutive years in September. They were in small flocks and kept to the tops of the tallest possible trees, feeding on a small black fruit.

The comparative prices of birds in their native countries may be of interest to aviculturists. The Red Macaw referred to cost 5/-; the Yellow one, 8/4; the King Vulture, 16/8. But it must be remembered that these were birds particularly appreciated by the Paraguayans themselves, and in Asuncion would probably have cost double as much. The average price of smaller birds, such as Tanagers, Troupials, Finches, etc., may be fairly put at 1/-. The Jay was bought for one Paraguayan paper dollar, worth at the time 4d. A Curassow (*Crax sclateri*) was once offered to the writer for 6/8.

A more ideal country than Paraguay for aviculture can

hardly exist; ideal in climate, in variety and abundance of species, and in the fact that it is in the most southerly latitude, where many of those families distinguishing the great Brazilian sub-region of South America are still fairly plentiful and well represented, and where these may be seen without venturing into those countries where the perennial tropical nature of the climate makes even the effort of existence a wearisome burden.

The only deterrent might be whether pleasure at the sight of caged birds might not become somewhat vapid with their wild confrères within calling distance of those in captivity.

MY BIRDS AT BRINSOP COURT.

By HUBERT D. ASTLEY.

For months it was on my mind. That move from Berkshire into Herefordshire. I could not move all the birds at once. I could not be settled in my new home, yet I must prepare *their* homes, and have someone in one county and someone in another to look after those that would be moved and others still left behind. People asked me how many birds I had? I didn't know! About 100 Ducks, including some 16 or 17 species, six species of Geese, Black-necked and Coscoroba Swans, 14 enormous Cranes, which wouldn't exactly go into one portmanteau; the contents of a bird-room, in which were such rarities as Red Sun Birds, a Crested Ixulus, Blue-headed Rock Thrushes, Blue Budgerigars, Yucatan Blue Jays, etc., etc.; about 90 birds in outdoor aviaries, and other etceteras, such as Japanese Bantams (the Duckwing variety). And at the other end all confusion, a 14th Century Manor House in a state of resurrection from what it had become of late years, a decidedly dilapidated farm-house, adorned outside with every conceivable untidiness and rubbish; the drainage of the house and farm emptying into the surrounding moat, the farm-yard staring at one from the other side of the water, offending both eyes and nose, rats gaily gambolling in broad daylight; no garden, unless a strip of ground rich in chickweed (which, by-the-bye, encouraged me to take the place!) with a "summer-house," whose windows were adorned

with blue, red and yellow glass of the most vivid hues, could be called a garden. Pleasaunce, it certainly was not! Builders, stonemasons, and all the rest of it everywhere, and relays of carts laden with stone turning every inch of ground (after rain) in a rich soil of old red sandstone, with a soupçon of clay, into a quagmire up to the very windows. There was more soup than soupçon, for it was mud of that nature through which one waded.

And only an occasional day on few occasions to strive amidst all that turmoil, scrimmage, and mess inexpressible, to settle upon the future residences for the birds, and edit the *Avicultural Magazine*! The architect said, "Where have you been?" "Settling on a spot for my Crane's paddock." "Whereabouts?" "Over there," I answered, pointing across the moat, "in that meadow where the other moat is." "You will, of course, put them quite the other side; it will never do for any wire fencing to be seen." I answered, "Oh, *of course*," not having the slightest intentions of hiding away my Cranes, especially as a whole field intervened between the paddock I intended to form and the verge of the garden which was being brought into being. I *did* argue at first that the wire would be almost invisible from the windows, and that Cranes were in existence in 1346 A.D. when the house was built and bath-rooms were not; which latter were to have *their* place within the house itself. "I should have a bath-room for the Cranes; why not?" was the retort.

It was plainly useless to invite him to become a member of the Avicultural Society!

"Ducks on the *moat*? The water will be filthy; you must have water-plants."

"*Aviaries*! Where do you propose to put them, they cannot be in sight of the house. They would do over there," and he pointed to a far-off spot behind a hedge of about 30 feet in height, where the future kitchen garden was to be. But the aviaries are up, in the place I meant them to be, within view of the windows too, with only the moat and an old stone wall intervening; so that I can hear the shrill calls of Queen Alexandra Parrakeets, the booming of Bronze-winged Pigeons, the soft cooing of Diamond Doves, and the softer notes of Blue Birds, etc., from my bedroom, outside which,

almost sweeping some of the windows with its branches, stands a giant cedar, planted by Wordsworth, the poet; into the shelter and shade of which same tree come the Palm and Crested Doves, and even Kingfishers at times, whilst beneath it, on moonlight nights, I see the white forms of the Black-necked Swans swimming in the moat, and listen to their melodious whistling.

The Aviaries occupy the site of a barn, decidedly on its last legs, which did not perish in vain, for its roof was a roof of ancient stone moss-grown tiles, and its timbers, which it must have feared were to be shivered, were of ancient oak; both tiles and timbers having found an honourable place in the restoration of the house itself, so that all is well. The aviaries are surrounded by open lawn, but a short time ago a foul farmyard quagmire, which ground is enclosed by stone walls. Six flights, somewhere about the size of those which form part of the new Bird House at the London Zoological Gardens, perhaps a little smaller; with roosting houses, in each of which is a radiator and electric light.

The shelters are under the roof, higher within than the top of the open flights, the eaves projecting two feet over the latter, and the roof is good both in form and material, being composed of old Georgian grey-green slates of the thickness of stone ones, beneath which dwelt for some time the celebrated Lady Craven, afterwards Magravine of Anspach, so that even the architect busy across the moat had to acknowledge them to be not only inoffensive, but distinctly good. A passage runs the whole length at the back of the roosting houses, not only giving access to them but also to four chambers on the other side of it, one for the heating apparatus, one for a hospital, one for food, and the last for washing up, where hot and cold water is laid on.

In each flight is a cement pool, with water running from one end of the aviaries to the other. The floor of the aviaries is raised two feet above the path that runs round them, and beneath the flights thick steel wire meshing has been embedded, deep enough to allow shrubs to be planted, the meshing being welded into the cement of the foundations, so that no rats can possibly get in.

Running water, radiators, electric light, good food and shelter! What more do birds want? They are like the bull that

Dr. Johnson imagined might say, "I have a green meadow, and my cows; what more can anyone need!" or words to that effect.

And here in my aviaries are Queen Alexandra and Hooded Golden-shouldered Parrakeets, Diamond Doves, Rose-breasted Grosbeaks, Blue Birds, Robin Chats (*Cossypha caffra*), Chestnut-breasted Blue Rock Thrushes, Blue Budgerigars, Douglas and Cuban Quails, Sun Bitterns, Seed Snipe, Orange-headed Ground Thrushes, Bar-shouldered, Green-winged, Violet-necked Doves, and others.

They can enjoy the sunshine all day, when that luminary is enabled to pierce through the veil of clouds which but too often obscures it, and on a chilly February day I have heard the Blue Birds warbling and the Rose-breasted Grosbeaks tuning up; quite a chorus, with the Bronze-winged Pigeons acting as big drums in the orchestra!

(*To be continued*).

THIRTY-TWO YEARS OF AVICULTURE.

BY DR. A. G. BUTLER.

I have written so much respecting my personal experiences in bird-keeping, that I feel some diffidence in taking up the pages of our Magazine by an account of my work upon this branch of ornithology from the time when, as an utter ignoramus, I first attempted to keep birds in cages: however, our editor asks me to do so, and therefore I must beg our members to forgive me if I weary them.

Of course I began by breeding domesticated Canaries; but, although I was moderately successful with them, I soon wearied of fanciers' sports, and (as already noted in my article on hand-rearing British Birds) took up the study of species. I knew nothing about their correct food beyond what I could glean from various books respecting that eaten by the birds when at liberty, but I speedily made the acquaintance of a few other bird-keepers about equally well or ill informed, and we used to compare experiences of failures and successes, which may possibly have been of some slight use.

When I began to keep birds I knew of no books which would give me information on the subject; doubtless there were such books



YOUNG GREEN-WINGED DOVES.
(IN MISS R. ALDERSON'S AVIARIES.)

in existence, but I was not aware of the fact ; so that when Cassell's Cage-Birds appeared I was only too glad to secure it. The perusal of our late friend Wiener's chapters on foreign birds introduced me to the excellent work done by the well-known Dr. Russ and first stimulated me to try and produce something in the same line myself, as a help to the ever increasing number of aviculturists in the British islands ; but of course I could not attempt anything of the kind until I had learned by bitter experience how to house and feed birds in captivity.

I am afraid my eagerness to acquire a general knowledge of cage-birds led me into keeping too many at a time ; consequently there were at first more quarrels and fewer successes in breeding than there might otherwise have been ; but at least it taught me what species might be safely kept together. On two occasions my birds numbered 250, and (excepting during my holidays) I only had my evenings from 5 p.m. in which to attend to them ; my aviaries also were not constructed as they would have been had I possessed greater experience of the requirements of birds at the time when they were made.

Altogether I suppose I have kept 230 species of birds, British and Foreign, and many of these owing to their aggressive or predacious natures had to be kept in separate cages, but they were almost invariably accommodated with enclosures sufficiently large to enable them to use their wings and bathe at will. A small cage is an abomination and surely not conducive either to the health or happiness of its inmate.

Of Thrush-like birds the following have lived for longer or shorter periods in my possession :—The Missel-Thrush, many Song-Thrushes both hand-reared and trapped in the garden, a pair of Red-wings, a Fieldfare, numerous Blackbirds both hand-reared and trapped, and a Grey-winged Ousel. Hand-reared birds are sometimes better for exhibition but not as songsters ; because they cannot learn their wild song without instruction. I greatly preferred birds of the year captured during the winter : in severe weather these soon become tame and confiding, and, after their first moult in confinement, they are quite as tame as hand-reared

examples. I have not found any of the true Thrushes ill-natured towards the smaller birds.

Of Chats I have kept the European Wheatear, the South African Mountain Chat, the Whinchat, the Stonechat, and Redstart, all of them amiable birds which can be safely trusted in an aviary with finches. I also found the American Blue-bird (Blue Robin) peaceful; but the Shama I have always kept in a flight-cage. The English Robin I have kept both in cage and aviary; it is a most fascinating little bird, but too tame by nature to be confined at all; I much prefer to see it at liberty.* Of the common Nightingale I have kept both hand-reared and trapped examples, but found them disappointing as regards their song: in my opinion a captive Nightingale's song is very inferior to that of its free brother; it is uncertain and scrappy. I have two gramophone records of the song of a captive bird produced in Germany: they are very fair reproductions of that of the majority of caged Nightingales, but there is no comparison between them and the songs which I have heard in the Kentish woods and copses.

With the Warblers I have had less success than I should have liked: my hand-reared Lesser Whitethroats died very young. I kept a Blackcap for some time but eventually it was killed by a Parrakeet; a Garden Warbler lived for ten months in one of my aviaries but died from disease of the lungs; a Gold-crest which I had, refused to eat, and only survived for about twenty-four hours: it was brought to me, or I should not have attempted to keep it. Willow-Warblers caught in my garden would eat so long as they were provided with living insects, but as soon as these failed they died; they ignored soft food although they saw other birds eating it, so I soon gave up catching them. My hand-reared Sedge-Warbler only lived about two months.

I have kept many Hedge-Accentors and I once caught, and for a time kept, a young Alpine Accentor: they are not attractive either as cage or aviary-birds, for they take a long time to become reconciled to captivity; or perhaps to the proximity of mankind, since they always seemed happy enough when they could not see

*The Robin is sometimes a dangerous associate for other small birds which it has been known to kill by piercing the skull with its bill.

me; but I rarely heard one sing even in an aviary: I have found both Warblers and Accentors quite safe companions for the smallest finches, but one of the latter killed some Pipits as I note further on.

I have kept two Mocking-birds (*Mimus polyglottus*): they are always excellent songsters; but my first bird, which I purchased from Abrahams, was far more talented than the second. If kept in an aviary with other birds they are mischievous, owing to the pleasure which they take in scaring their associates: their flight is noiseless, and they can turn and twist in the air in a marvellous manner: they are hardy and easy to keep, almost as graceful as Wagtails and altogether fascinating.

Of the Jay-Thrushes I have only kept two species:—the Collared Jay-Thrush, a very handsome bird which became tame enough in time, but which had such a penetrating and monotonous whistle that at times it was quite exasperating, and the Spectacled Thrush, which is said to have a delightful song; my bird however only uttered a few notes, owing perhaps to the fact that it was not in vigorous health, since it only lived with me for about three months. Although I saw several examples of this species in a small aviary at Abrahams' place flying in company with other Babblers, Larks, Weavers and Doves, I did not venture to trust my bird in a mixed community, knowing as I did that the Jay-Thrushes are to some extent predacious in their habits: perhaps confinement in a large cage may have shortened its life, but it did not have the same effect in the case of *Garrulax picticollis*.

Of the Red-billed *Liothrix* I have had dozens of examples, the majority of which proved to be hens; but of cock birds I have owned some superb songsters. I may be wrong, but my experience has led me to the conclusion that the Indian race is more talented in this respect than the Chinese, the notes being fuller, more varied, and better sustained. As is well known this is one of the hardiest and most pleasing of all imported birds, but it is an inveterate egg-stealer.

Counting the Spotted-wing (*Psaroglossa spiloptera*) of which I wrote in our Magazine n.s. vol. i., pp. 51—54, I have kept five species of Bulbuls, the others being the Red-vented, Persian, Chinese and Red-eared. They are naturally long-lived birds with lively

dispositions, bright notes as a rule (though the Persian bird far excels the others as a songster) confiding; but jealous of other birds at whom they swear vigorously if they conceive that the latter are encroaching upon their rights.

The only Titmice which I have kept are the Ox-eye or Great Tit, the Coal-Tit in the nestling stage, the Marsh-Tit and the Blue-Tit. Of these the first is a heartless butcher and far better free than in captivity; the Blue-Tit is delightful, but unfortunately is very sensitive to cold, and has a nasty habit of killing and eating the brains of its invalid brethren; but the tameness of hand-reared Blue-Tits is marvellous. On the whole I found the Marsh-Tit the most suitable for aviary life.

I have once had the Nuthatch, which I kept in a flight-cage, but it did not live many weeks with me: it was a pretty bird and I was sorry when it died. The English Wren I have attempted to keep once or twice, but I could not persuade it to eat soft food, so after it had caught all the spiders and small insects in the aviary into which I had turned it, it speedily died.

Of Wagtails I have had several examples each of the Pied, the Grey, and the Yellow: I consider them the most graceful and pleasing of all the British soft-bills: they soon become tame and, if hand-reared, are astonishingly so: in an aviary of small mixed birds they are inclined to be somewhat aggressive; but, as house-pets with plenty of freedom I know of nothing to approach them. I have kept ten Meadow-Pipits; but, though not disagreeable to other inhabitants of the aviary, they fought each other incessantly; so that of the last nine which I purchased at one time some killed one another, others were killed by a Hedge-Accentor, and eventually only one hen was left alive: I cannot recommend them therefore as aviary birds, and as cage-birds they are not much to look at.

I have had one Golden Oriole which lived in a flight-cage for about two years: it was blind in one eye which possibly may have been the reason for its uninteresting dulness. It rarely whistled, and; in spite of its bright colouring, I am afraid I did not grieve much when it passed away. A Red-backed Shrike which was caught in its first year and given to me in 1896 was so wild, ill-tempered and dirty that I found it more trouble than pleasure: it used plenty



REED WARBLER ON NEST.

Photo by J. H. Symonds.

of bad language, but never sang, although there were plenty of song-birds round it from which it might have learned to sing well, as some members of its species do. A young Spotted Flycatcher which had stunned itself by flying against a street lamp was brought to me, but I could not induce it to eat, so that it died the day following. Forcible feeding rarely has satisfactory results.

Of the Swallows I have only had hand-reared House and Sand-Martins, as noted in my little article on rearing British birds, and of White-eyes I have only kept the Chinese species; a pair of which was given to me by the late Joseph Abrahams: I found them altogether charming, though at first they were rather delicate.

Tanagers I regard as ideal pets for the bird-lover: they are not only, for the most part, splendid in colouring, but they are by no means difficult to keep, provided that their flight is sufficiently large to enable them to take plenty of exercise and a daily bath; they usually become confiding fairly quickly, so that they will take mealworms, caterpillars or spiders from one's fingers, and some of them, in addition to the harsh song which many of them possess, occasionally sing very prettily. Unfortunately they are rather expensive birds, so that I have only kept five species:—seven Superb Tanagers (purchased); two Archbishop Tanagers (given to me by our present editor); two male Scarlet Tanagers (purchased); two young Black Tanagers (given to me by Mr. Teschemaker), but which owing to delay on the railway were so weakened that they both died within two months of their arrival; and one male Orange-billed Tanager which unhappily also only survived for a similar period after I purchased it. Of these fourteen birds the two Scarlet Tanagers and one Archbishop are still in excellent health.

(To be continued).

THE REED WARBLER.

Acrocephalus streperus.

By HUBERT D. ASTLEY.

Before very long the hosts of summer immigrants will commence to wend their way northwards, and amongst them towards the end of April or beginning of May the dainty little Reed Warblers will return to marshy and swampy localities, to dense thickets of reed and sedge, climbing amongst the aquatic herbage, and seldom going on the ground. It is not a particularly shy bird, although it objects to coming out into open places, but it can be observed in the early part of the spring before the rushes and sedges, which it loves, have become thick and tall as the summer goes on.

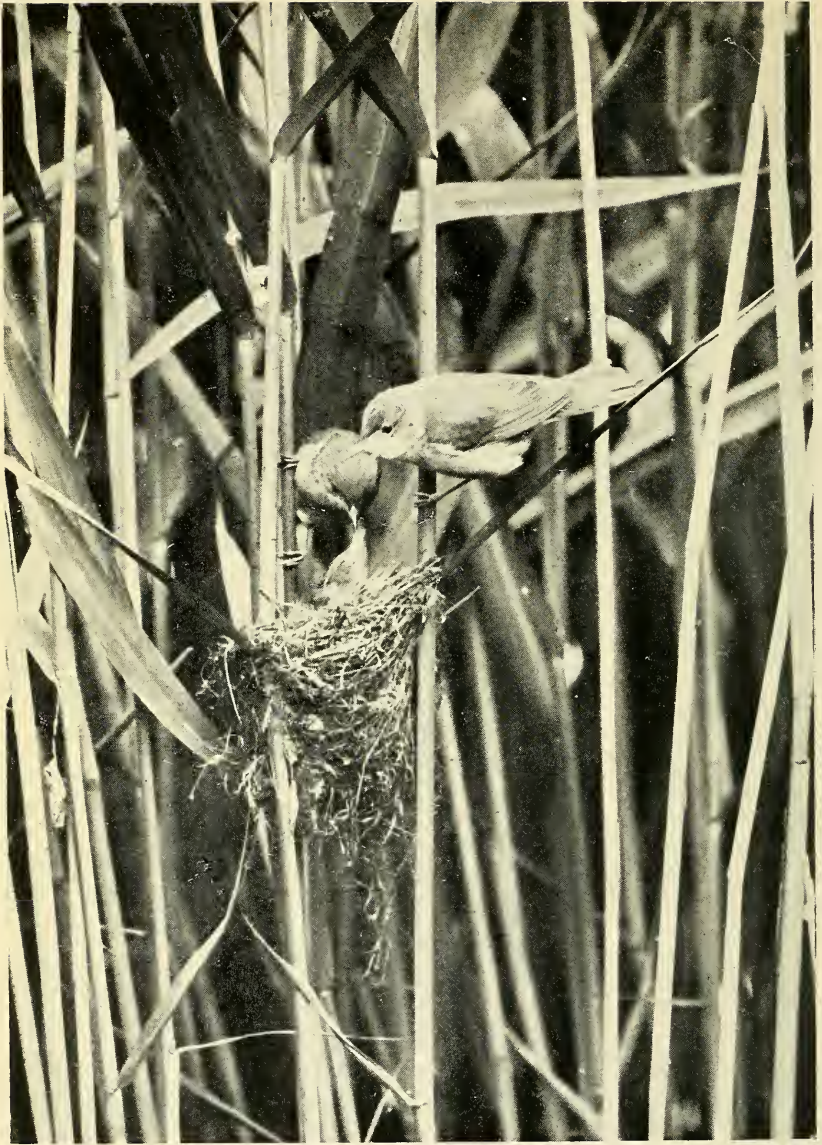
The nest, as is well shown in Mr. Symonds' excellent photographs, is carefully suspended on the stems of the reeds, three stems as a rule being woven round to sustain it. It is composed externally of dry grass, with small pieces of wool studded about it; the interior having a layer of moss, and lined with sheep's wool, willow flax and feathers. I once found a Cuckoo's egg in such a nest (not an unusual site, I believe), although I could never quite make up my mind that it did not belong to a Marsh Warbler, and how the Cuckoo managed to cling on to the slender stems of the reeds and place the egg in the nest was a puzzle. At any rate, it could not have *laid* it there. The nest I found was very deep, and was built in the reeds (not over water) which grew in a large copse of willows.

The Reed Warbler is an incessant songster, especially during the hours of twilight. On calm summer evenings the music of these birds has a charm all its own.

Mr. Stevenson wrote:—"Its lavish notes are associated in my mind with many a calm summer's night in the open broads, the stars shining brightly overhead, and the soft breeze sighing through the rustling reeds. All is still, save those murmuring sounds that seem to lull to sleep. Presently, as if by magic, the reed-birds on all sides are teeming with melody; now here, now there, first one then another and another of the reed-birds pour forth their rich mocking notes, taken up again and again by others."



REED WARBLER BY ITS NEST. Photo by J. H. Symonds.



REED WARBLERS AND YOUNG. Photo by J. H. Symonds.

The Reed Warblers are later in arriving in their breeding quarters than the fussy little chattering Sedge Warblers, and in the first week in June are at the height of their singing.

Mr. William Farren writes:—"Retiring as all the Acrocephali undoubtedly are, their wonderful industry in song suggests that the skulking is not so much for concealment as because their livelihood is so closely connected with the insects and small aquatic creatures that abound on the stems of the plants. But when singing they frequently leave the cover for more exposed positions; the Reed Warbler may be seen perched on a high reed, and sometimes it sings as it flits from one reed-bed to another."

Although Stevenson has written of the melodious notes of the Reed Warbler, there is much in the song, as Mr. Farren has written, that is harsh and incoherent, but the Reed Warbler's notes are less grating than those of the Sedge Warbler.

Naumann described it as resembling the syllables tiri, tiri, tiri, tier, tier, tier, zäck, zäck, zäck, zäck, zerr, zerr, zerr, tiri, tiri, scherk, scherk, scherk, tret, tret, tret. These Acrocephali are great mimics, especially the Sedge Warbler and the Marsh Warbler.

The subject of these notes is not so generally distributed in England as the Sedge Warbler, and is more numerous on the Eastern side than the Western.

Over the greater part of Europe this bird is common as a breeding species. In Switzerland it is common, breeding even at an altitude of 4,000 feet. As far as is known its range in its African winter quarters is extensive, occurring as far south as Rhodesia, the Orange River Colony, and even Cape Colony.

CORRESPONDENCE, NOTES, &c.

ANOTHER ARRIVAL OF HUMMING BIRDS.

On the 25th of March the Editor heard that a Member of the Society had just returned from S. America with 14 live Humming Birds in show condition, comprising three varieties, of which one is exceedingly small. We hope to be able to publish a more detailed account later on.

The three species are *Eulampis jugularis* (Garnet-throated Carib); *Eulampis holosericeus* (Green-breasted Carib) and *Bellona exilis* [which latter could drown in a thimble!]

NOTE ON THE COCK OF THE ROCK.

[The following note, which may interest readers of the Magazine, is extracted from a letter sent to me by Mr. W. K. Pomeroy, F.Z.S., a generous donor of valuable birds and beasts to the Zoological Gardens.—R. I. POCKOCK.]

“Camp Rio Recio, Colombia.

“ . . . I am now camped on a ridge looking over the Rio Recio, a river which comes down from the snowy mountain, Tolima, about twenty miles away. The view is simply magnificent, forest-clad mountains and meadows with the snowy range in the background. In the precipitous forest by the river is the home of the Cock of the Rock. It seems rather strange that they should be found here in a temperate climate at an altitude of 6,500 feet, for although in the day the weather is like June at home, at night it is much colder.

“I was surprised at finding them so common. They have a habit, which will be fatal to them as soon as the plume-hunters discover their haunts, of assembling every afternoon in a particular part of the forest to have a grand singing match. It is a wonderful sight to see them all collected together like a lot of brilliant vermilion flowers. They build in the precipitous rocks by the river, and as the forest down to the river's brink is as steep as the side of a house and absolutely impenetrable unless by cutting a path through the undergrowth, it is not easy to find the nests, even if one could rear the young ones. I have seen one empty nest near a bridge, and am employing a man to look for the nests as well as those of the Colombian Trogon, which builds in holes in trees, and would be an even more difficult job than the Cocks of the Rock.

The assembling places of the Cocks of the Rock are called *Gallineros de los Gallos de Monté*, the fowl-yards of the Cocks of the Forest. Humboldt mentions these birds as being sold in cages by the Indians at the cataract of the Orinoco. However I am afraid my chance of getting living specimens is small, the people here, unlike my friends on the Rio César, having no idea of catching or taming anything. . . .”

SIR,—Mr. P. F. M. Galloway's note on an early brood of Partridges at Silchester Manor Farm is of interest, but he does not say if *he* saw them, or how many, or date *first* seen?

He states “a fortnight ago,” and assuming Mr. Galloway wrote on February 24th, that makes the birds hatch on February 10th, and the hen bird must have begun to sit by January 20th, and to have begun laying by January 1st at latest.

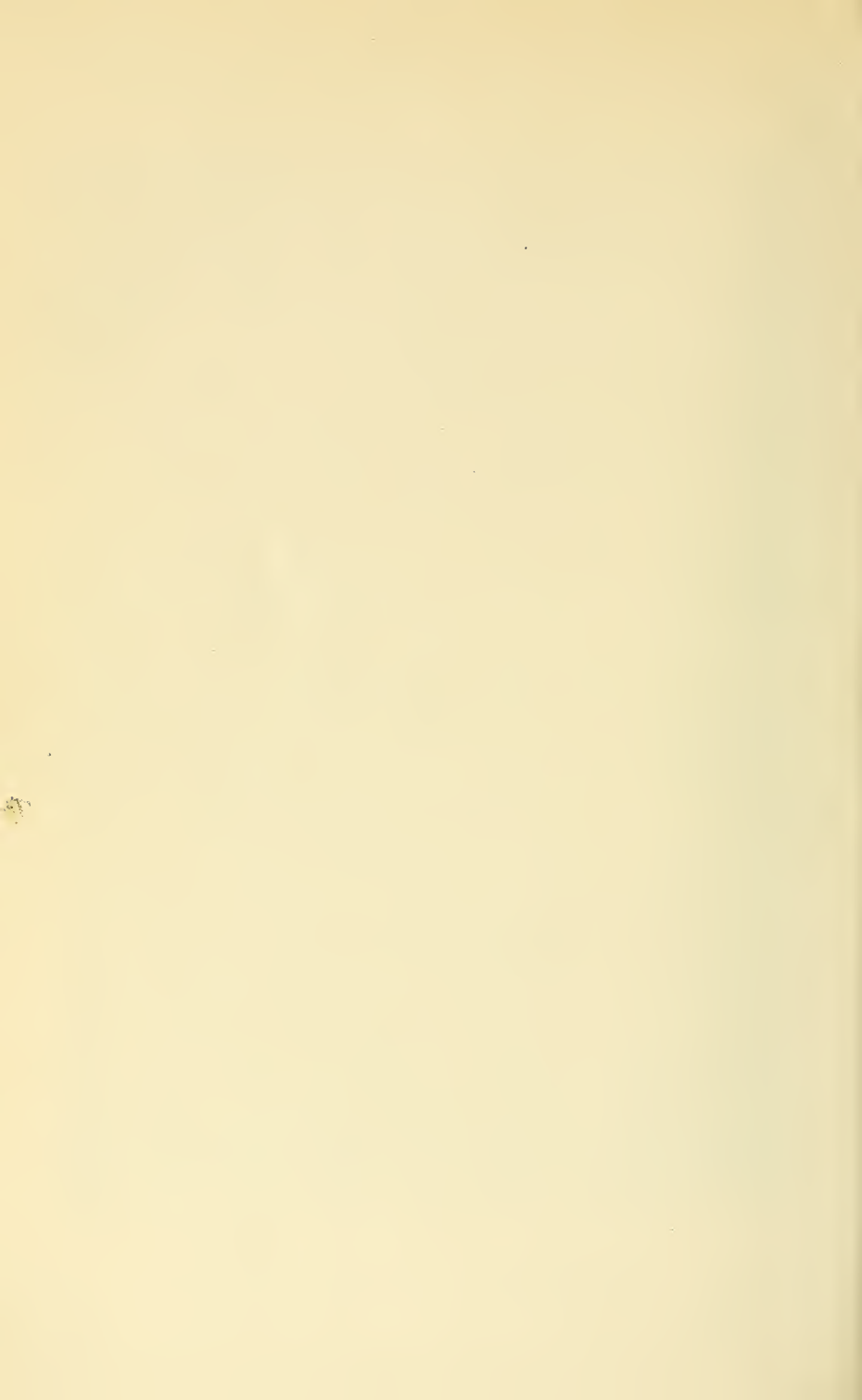
Perhaps Mr. Galloway would kindly give us some details.

M. PORTAL.



Photo by J. H. Symonds.

REED WARBLERS FEEDING NESTLINGS.



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*J. H. Riley
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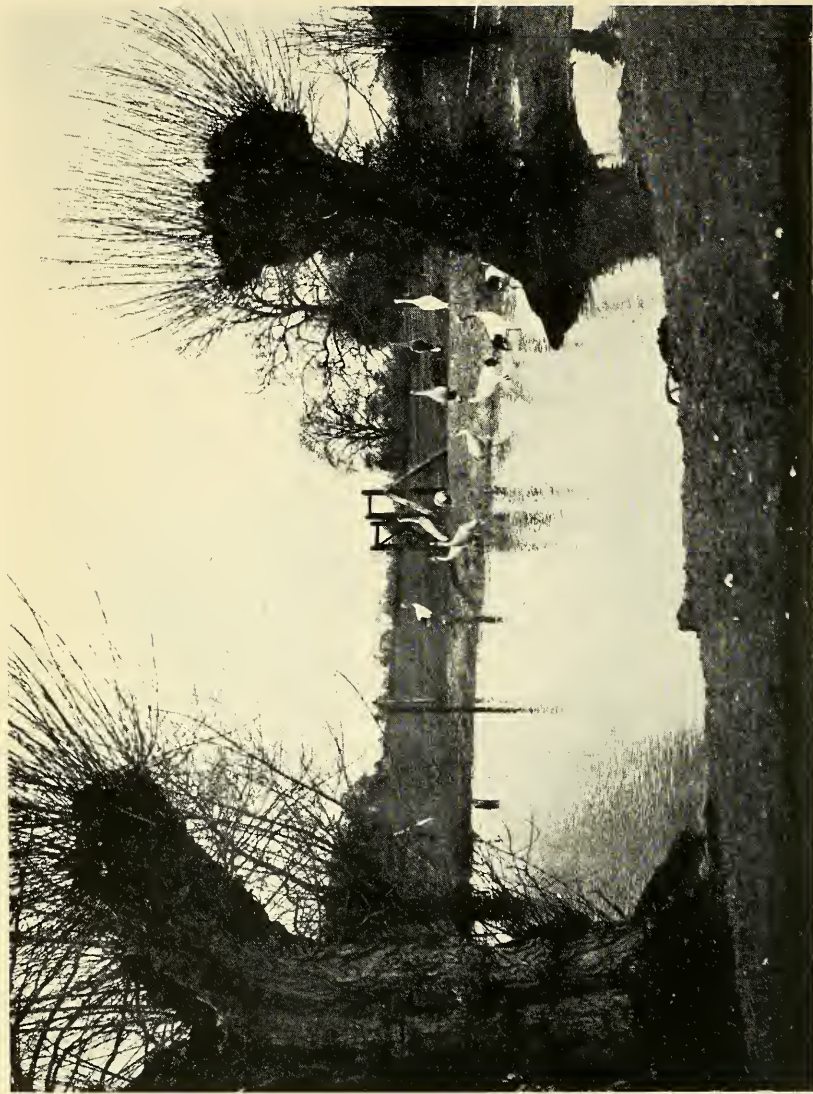
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CRANES AT BRINSOP COURT.
MANCHURIAN, AUSTRALIAN, SARUS, AND WHITE-NECKED.

Photo by A. Ezra.

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MAY, 1914.

MY BIRDS AT BRINSOP COURT.

By HUBERT D. ASTLEY.

(Continued from page 194.)

Picture an ancient Manor House built for the most part of grey stone, brought from a quarry in one of the wooded hills near by, a house with gabled roofs and moss-grown stone tiles. Grey walls that have been standing since the reign of Edward III., 1340. A house added to or perhaps partly restored in the time of Queen Elizabeth, with a remodelling to a small portion of it in that of Queen Anne. One storey high, but covering a large square of ground surrounded by the moat, and itself in turn surrounding a court-yard, the latter paved, the paving stones interrupted by beds of lavender and monthly roses. In the centre an old stone font of the 15th Century, or maybe a stoop for holy water. Italian, and discovered in a carpenter's yard in Italy.

Only on the west side; that is where the house shows all three episodes of its existence, Gothic, Elizabethan and good Queen Anne; on that side there is a length of lawn, just wide enough to give room to the great cedar planted by the poet Wordsworth, yet not wide enough to keep it from spreading great branches of eternal shade over the moat; whose water encroaches very much closer to the house, north, east and south; within a few feet.

And it is not often, looking through the casement windows towards any of the four aspects, that *some* ducks cannot be seen outside. Walk on to the old stone bridge and whistle. From the east side some are sure to come, steaming vigorously round the

corner of the low stone wall which retains the banks. Perhaps three or four pairs of Tufted Duck and some Summer Duck, which we always call "sweety-drops," to which a child once likened them, the white stripes and curves on the dark ground colour of the drakes recalling, I suppose, peppermint bull's-eyes!

From the west side another and larger flotilla, headed by the pair of Black-necked Swans; several Pochard, some Scaup, Chiloe Widgeon, Brown Call-Ducks, Shelduck, Ringed Teals, Cinnamon Ducks and others. But I have already mentioned these. A pair of Golden Eye keep at a distance, and the White-eyed Pochard never become tame like their commoner, but equally handsome, cousins. Yet the White-eyes were hatched in captivity, and the Common Pochards were caught in a wild state, as were the Scaup, and the Scaup becomes perfectly tame. At night, even when their voices are not sounding, one hears the "plop, plop" of the divers as they dip below; and there are times when I think they have midnight dances, such a splashing is there; wild galops and old-time country dances, none of your languid one-steps and tangos. They engage the Owls to play the flute perhaps, for certainly the brown ones perch in the cedar tree and hoot, which at any rate *rhymes* with flute! And the Black-necked Swans are the "piccolos." I love this orchestra. As I lie in bed, with sometimes the full moon shining through the tracery of the cedar's stately boughs, my windows open and the curtains drawn aside, not only do I listen to the music on the moat, but to the gaggling and grunting of the Flamingos wading in the pond, separated from the moat at its north end only by a narrow causeway floored with old red bricks, edged by irises, and adorned by quite a stately pergola constructed of large and ancient oak beams and timbers, up which climb roses, wistaria, honeysuckles, and jasmine; not only do I hear those quaint, guttural notes, but, as I have already said, there comes a sudden wild chorus of musically discordant cries from all the cranes across the meadow, heads uplifted and wings beating time.

Never does such music distress or disturb me. Unlike one who, on having the place described to him, answered, "I suppose you hear the d—d ducks all night long?" "Yes," was the answer, "and I love it." I think some people's minds are not



BRINSOP COURT, SOUTH FRONT.
With the moat where various species of Ducks reside.



BRINSOP COURT, WEST FRONT. Photos by A. Ezra.
Black-necked Swans, Tufted Duck, &c., on the moat.

attuned to Nature's sounds, nor can they see and hear in the actions and voices of birds what one sees and hears oneself. If a bird does not behave as a human, it is called a fool, and even a d—d fool! I often think that to higher spirits *we* might possibly appear in that light. To them may we not be what apes and gorillas and kangaroos are to us? To them we probably appear to gibber and jump in foolish ways; that is, we *should* appear to, were those in higher planes not more understanding than we. It is good to be endowed with a faculty, an insight, an appreciation to see beauty in everything. There is beauty in the bellow of the blast, as Gilbert wrote.

And so that curious rasping grunt of the Flamingos takes me away to some sunlit lagoon, which I have never seen in *this* earth life, where I can picture rank upon rank, squadron after squadron of the spindle-legged giraffe of the birds, rosy in the full light, rosier still as the rays of rising and setting sun fall upon them.

This pond at Brinsop is ideal, shallow with a good foundation of soft mud, and springs to keep it clear. Eight European and one of the beautifully coloured Red Flamingo from Mexico. The eight Common Flamingos passed last winter at the Wonder Zoo at Olympia, and when the show was finished Herr Hagenbeck sent them to me. They arrived at 10.30 p.m. on the 7th of March. I had given them up, and was going to bed, when a loud banging at a side door leading into a paved loggia made me exclaim "The Flamingos!" The man who had knocked said that they had arrived at Hereford (6½ miles distant) in such large crates that he had taken upon himself, with assistance, to remove them and put them all into a small motor van, loose!

Fetching a lantern, I traversed an orchard to the gate outside which the taxi stood. When I flashed the light of the lantern to the window I could have believed that eight damsels, all dressed in pink and white and showing a good deal of leg, had returned from a ball, or else from the theatre, where they had taken part in a ballet. How they had all managed to keep on their legs whilst being driven rapidly for 6½ miles I don't know, especially as the last 200 yards of the road was all ruts. My bird-keeper came out, and the odd man. Four of us tucked a Flamingo under each arm, and stumbling along

in the dark, the Flamingos occasionally pinching every part of one's face, including one's nose, we landed them for the night in a large barn.

And next morning the great doors were flung open, and the *corps de ballet* stepped out. Oh joy! There was a lovely pond within a few yards, the mud teeming with water-shrimps, the water fresh and wind-swept. The contrast after Olympia! From Olympia to Elysium! They all promptly sat down in the water with their bodies all but immersed, their long necks twisting and writhing like so many blush-pink snakes. The Red Flamingo withdrew, haughtily, its nose turned very much down, for a Flamingo cannot do the opposite. Never had it seen such faded-out things. But the Europeans were too busy with their ablutions to study colour, and if they have done so by now they have probably come to the conclusion that to dress in flaring shrimp-red is vulgar. There is nothing left to the imagination, whereas in *their* case surprises come when they lift their skirts, as it were, and flash out rich rosy pink on their wings. On still sunny mornings, instead of nine Flamingos, their number is exactly doubled; upside down are nine more, so clear and bright are their reflections.

Occasionally there are debates and bickerings, especially when the Red one claims to be King. Outstretched necks and long pointed wing feathers raised on the back, looking uncommonly like a Field Marshal's plumes. At other times, siestas; when they stand with the water just touching their breasts, their necks twisted round, their beaks tucked amongst the feathers of the back. Then they resemble large water vessels of pale pink enamel, the twisted neck forming a very distinct handle.

They possibly have their jokes, for one hears guffaws of what might be laughter, "Haw, haw," in guttural tones. And when feeding they mark time in the mud, the long necks stretched down, the head immersed, searching for the water insects which they disturb with their pink webbed feet. There is one part of the pond which is out of their depth, and until they discovered this they would swim across it, looking like ungainly swans, the rose-pink knee joints working up and down beyond the tails.

(To be continued.)

SOME HINTS ON PARROT-KEEPING.

By THE MARQUIS OF TAVISTOCK.

There are three ways of keeping parrots,—using the term “parrot” in its widest sense to include everything from a Budgerigar to a Red and Yellow Macaw. They may be kept in close confinement in cages or on stands; they may be kept in aviaries; and they may be kept at complete liberty. The first method is the commonest and the most simple; the second is the most satisfactory and the most lucrative; the third is the most attractive and the most exasperating.

It must be borne in mind that all parrots do not bear close confinement equally well, and many even of those which will survive for some years in cages are in reality quite unsuited to cage life. Anyone, therefore, who desires a parrot as an indoor pet should make sure of getting a bird which is at least likely to turn out long-lived, contented and affectionate, even if there is not much hope of its ever possessing remarkable linguistic talents. Grey Parrots, Senegals, Amazons, Vasas, Cockatoos, Caiques, some Conures, Quaker Parrakeets, *Brotogerys* Parrakeets, and Budgerigars are all more or less suited to cage life. Some *Palæornis* Parrakeets (Ring-necks and their allies) also become very talented and amusing, but with this family the cocks only should be selected as pets. A hen *Palæornis* in close confinement is usually the dullest bird imaginable.

A parrot cage should be rectangular; a bell-shaped cage is apt to spoil the bird's plumage, as it is always rubbing and pressing its feathers against the bars whenever it climbs about. Most parrot cages are provided with a swing, hanging from the top, and a kind of metal grating at the bottom. The swing *may* amuse the bird, but as often as not it only irritates it and gets in its way, in which case it is best removed. The grating is a senseless contrivance which serves no useful purpose whatever. It in no way adds to the bird's comfort, and greatly increases the difficulty of keeping the cage clean. A sliding metal tray well covered with grit and sand is all that is required, and it is important to use enough sand to absorb the moisture from the droppings before it reaches the tray itself.

In the case of very valuable or delicate parrots, a metal "shield," shaped like an empty book cover, is useful to put round the back and sides of the cage as a protection against draughts, but on no account should the cage be covered with a cloth at night. A large rectangular cage, three feet or more square, composed of wire netting on a metal framework and provided with detachable perches of hard wood, a shield of the kind above mentioned, a sliding zinc tray, and a small door in the front for the insertion of food, water and baths, will be found very useful for birds requiring a fair amount of wing and leg exercise. It is particularly suitable for new arrivals which need a period of rest and quarantine before they can safely be placed in an aviary, as well as for aviary birds which cannot be left out-of-doors during the winter months.

All parrots should be kept constantly supplied with pieces of soft wood to bite up and amuse themselves with and they should be allowed baths. An unglazed earthenware dish, shaped like a pie dish, makes the best form of bath. China dishes will do if nothing better is available, but they are too slippery and the birds are often afraid to step into them. Parrots which refuse to bathe should be gently sprayed or sprinkled with tepid water, or in summer put out in a shower of rain; they ought afterwards to be kept in a fairly warm place until quite dry. Budgerigars never bathe in the ordinary way, and may be provided with a piece of wet turf in which they are often fond of rolling. Caged parrots should, if possible, be allowed out daily for exercise. This is not, of course, absolutely necessary, but it is very beneficial, and all true bird-lovers wish their pets to find the conditions of captivity as little irksome as possible. It must be borne in mind that parrots are very intelligent birds, loving variety and amusement, and that when in a wild state many species take a real pleasure in flying for its own sake, and do not merely employ their wings as a means of getting from place to place, and of escaping from the attacks of their enemies.

Macaws, on account of their huge size, cannot as a rule be accommodated in cages, and are usually kept chained by the leg to a stand. The spectacle of the unfortunate bird perpetually fastened to the same hard perch until its legs grow stiff and its wings lose their power is not a very agreeable one, and I would not therefore advise

anyone to keep a Macaw unless it can be given plenty of liberty in or out of doors, or proper aviary accommodation.

Parrot-keeping in aviaries is, as I have said before, the most satisfactory and the most remunerative of the three methods. Not only do the birds usually appear happier and in more perfect plumage than when confined in cages, but there is also a fair chance of successful breeding, and a prolific pair of some rare species may constitute a substantial pecuniary asset to their fortunate owner.

The size of the aviary must, of course, depend upon the money and space available. As a general rule the larger it is the better the birds will thrive, but it must not be forgotten that more satisfactory results are usually obtained when each pair have a comparatively small compartment to themselves than when the whole stock is kept together in one large flight. At the same time, if the species and individuals are carefully chosen (never forget that with birds as with humans "extremes meet," and that while near relatives may quarrel, distant ones may agree), two, and even three, pairs may be kept together and rear their young in perfect harmony. The great secret is to select birds differing considerably in size, and to make sure that the larger, while being masters of the smaller, are yet of a gentle disposition and not given to meddling in their neighbours' affairs. As an additional precaution the nest boxes should be provided with entrance holes of different sizes, for parrots, as a general rule, instinctively select breeding quarters with the smallest entrances capable of admitting their bodies. A nest box or barrel should be fixed high—close against the roof, if possible—for a sitting bird dislikes having her neighbours constantly alighting on the roof of her home. The bottom should be concave and covered with a layer of soft decayed wood or sawdust, and the entrance should be only an inch or two above the level of the floor, otherwise the young may find difficulty in making their exit.

In building an aviary the materials used must bear some relation to the destructive powers of the birds which it is intended to introduce. Ordinary wire netting and stout woodwork will confine most *Platycercinæ* and *Polytelis* Parrakeets, the smaller *Palæornidæ*, Lories and Lorikeets, Lovebirds, Kings and Crimson-wings. Conures, Quaker Parrakeets, and the smaller parrots

require rather stronger netting, and no unprotected woodwork will long resist their attacks. Large Parrots, Cockatoos and Macaws can only be kept in by something of the same nature as the metal-work which covers the large flight cages at the Zoological Gardens. The young of certain species of Parrakeets are very apt, on first leaving the nest, to dash themselves violently against the sides of the aviary and sustain fatal injuries. It is therefore advisable to cover, the end at any rate, of a long wire flight with sacking when a valuable brood is expected to make its appearance.

When Finches and other small birds are kept in the same aviary with Parrots, it is advisable to protect the roosting and nesting quarters of the former with large-mesh wire netting through which they alone are able to pass. In the open they can, unless very young, keep out of the way of danger, and it is when asleep or cornered in a nest-box that they are likely to be caught and injured. Not all parrots, however, can be trusted in mixed company even with these precautions. Blue-bonnets and Lovebirds are impossible neighbours for anything weaker than themselves, and I, personally, would never trust Conures, Caiques, Lorikeets, *Brotogerys* Parrakeets or Budgerigars, though amiable individuals do sometimes occur even among the most mischievous and aggressive species.

No portion of the interior of a Parrot aviary should ever be painted or varnished or the most disastrous results will be sure to follow. Parrots are extraordinarily sensitive to mineral poisons, and I have found to my cost that Australian Parrakeets, which can stuff themselves with laburnum seeds and yew buds with absolute impunity, will die in convulsions within a few hours of nibbling fragments of painted wood.

Where the aviary consists of an inside shelter and an outside flight, the former must be absolutely free from draughts. It is best to arrange for all ventilation to come from the front only. I dislike top ventilation as it nearly always produces a continued upward current of air, which draws in from the door and, striking the birds underneath, is very likely to cause enteritis.

If artificial heat is provided it is very important to secure an even temperature irrespective of outdoor weather conditions. This is by no means easy to arrive at, and I have always obtained far

better results from the use of a stove or gas radiator than from any system which involves the employment of hot-water pipes, which are usually most ineffective and troublesome. When turning birds into an aviary for the first time it is a wise precaution, where an inner compartment exists, to shut them up for the first few nights. It may also be advisable, especially if the nights are cold, to give a little artificial heat, even though they may not previously have been kept in a warm room. Parrots, when first placed in unfamiliar quarters, have a perfect genius for selecting the draughtiest and most exposed places to roost in, and it is most disheartening to turn a valuable breeding pair into a new aviary and then to go out next morning to find the cock or hen dead of enteritis. I have more than once experienced this calamity in the case of species reputed to be extremely hardy.

In concluding these hints on aviary management, it will be well to say something about the important art of bringing birds into breeding condition. This is chiefly a matter of feeding, and with Parrots, more perhaps than with any other class of birds, are satisfactory breeding results dependent on the judicious provision of extra dainties at the right moment. Green food must be supplied *ad libitum*, and it is particularly important to continue giving it after the young have hatched. Grass, chickweed, shepherd's purse, dandelion, sow thistle and lettuce are all good, as well as the shoots and leaves of non-poisonous trees. Lettuce is sometimes said to be bad for Parrots, but I have given it to Cockatoos, Amazons, *Platycerci*, *Eclecti* and Grass Parrakeets and never found it in the least degree injurious; it must of course be perfectly fresh and unfrosted. When at liberty in this country the Australian Parrakeets feed their young largely on the leaves and flowers of the common daisy, and although I cannot say I have ever offered the plant to my aviary birds, I have not the slightest reason to suppose that it would prove harmful. Fruit, particularly apple, is an important item in the menu during the breeding season, and meal-worms may also be offered, though not all Parrots will eat them. A full ration of hemp and sunflower should be supplied in most cases, though this can generally be reduced again, with advantage, after the moult is over.

In giving green food, etc., do not think that because the birds will not touch it the first time it is offered that it is no use trying it again. Many Parrots are extremely suspicious of new foods, and only summon up courage to try an unfamiliar article of diet after it has been placed before them many times. Do not grow discouraged, either, if they only seem to touch the tiniest fragment of what is given them. Little as they may actually eat, it may make the whole difference between eggs and no eggs, or between fertile eggs and clear ones.

When it is desired to breed from a hen bird which has been kept for a very long period in a cage, it is often prudent to keep her for some time alone in the aviary on a very plain diet before introducing her mate and the nest barrel. In this way the risk of egg-binding is a good deal lessened.

The plan of keeping a number of parrots at liberty is one which not many aviculturists will care to attempt since the conditions indispensable to success are not to be found everywhere and heavy losses are likely to be sustained, especially at the outset of the experiment. Nevertheless there is a charm about it which atones for many disappointments, and successes, when they do come, are perhaps all the better appreciated for the failures which may have gone before. The beauty of the birds' plumage is certainly most apparent when they are living in complete freedom, partly because they attain a depth and brilliance of colour seldom seen, even among the inhabitants of the largest and best-kept aviaries. There is, too, the satisfactory knowledge that *if* a true pair can only be induced to stay they are practically certain to make an attempt at breeding, and the results are likely to be satisfactory; for, while bad weather and accidents do, often enough, spoil one's hopes, infertile eggs and neglected young are almost unknown where birds are nesting under more or less natural conditions. Lastly, there are many interesting facts brought to light about the wild life of both rare and common species which can never be discovered as long as the birds are in any degree confined.

The three conditions most necessary to success are:—

- (1) Good winter cover.
- (2) Good natural nesting accommodation.

(3) Trustworthy neighbours who can see an unfamiliar bird without instantly trying to shoot it.

A really thick spruce wood provides about the best form of winter cover, but any kind of tall, dense evergreen will answer the purpose well enough. *Abies orientalis* gives even better shelter than *abies excelsa*, but is seldom found planted in any other way than as a single specimen tree.

For nesting purposes English trees unfortunately appear to furnish very indifferent accommodation, especially for Long-tailed Parrakeets, which will sometimes spend many weeks in an unsuccessful search after a home to suit their taste, and finally leave the neighbourhood in disgust never to return.

Very old oaks, elms, beeches and poplars are most likely to provide Parrots with habitable quarters, and where these are absent some good may be done by fixing up artificial nest barrels. These should always be placed as far from the ground as possible, and where small or medium-sized birds are kept they should have entrance holes narrow enough to keep out Brown and White Owls, which are apt to play havoc among the nestling and sitting hens.

To exclude a Barn Owl the hole should not be more than $2\frac{5}{8}$ -inches in diameter ; to exclude a Brown Owl $3\frac{1}{8}$ -inches, $2\frac{3}{8}$ -inches will keep out a Jackdaw, and $2\frac{1}{8}$ -inches a Little Owl.

Cockatoos, the larger Parrakeets, and, in fact, most members of the Parrot family are usually, in the first instance, best turned with cut wings into a roomy grass enclosure out of which they cannot climb. If released full-winged they are more than likely to be lost at once, but where the other plan is adopted their powers of flight are restored gradually during the course of the moult, and they are for a long time only capable of going short distances in the neighbourhood of their home.

The enclosure, which should contain no valuable trees or shrubs (since cut-winged Parrots are ten times more destructive than those which are able to fly) must be provided with plenty of branches for the birds to perch on, good temporary shelter from rain and wind, and a feeding tray of the same pattern as those on which the birds will find their seed after they have scattered about the wood or garden in which it is hoped that they will make their home.

A certain amount of trouble is often caused by fighting, and it is an unfortunate fact that where both assailant and victim are unable to fly, the latter for some reason has usually great difficulty in making its escape. The only plan is to shut up the worst offenders—usually old cocks in breeding condition—until such time as their mates, if they have any, are able to fly, when they may be allowed to join them without much risk of straying.

Very tame Amazon Parrots and Macaws can generally be allowed the full use of their wings from the first; but it is desirable that they should become thoroughly familiar with their surroundings before being released, and it is also well to allow them a little preliminary flying practice in an aviary or large room. It sometimes happens that Parrots which have been long confined in cages are very clumsy and erratic in their flight during the first few days of their unaccustomed liberty, and having settled in a tall tree they will starve for many hours before they can summon up courage to attempt a descent to the ground. Lovebirds should also be released full-winged after having been kept for some weeks in an aviary containing a feeding tray of the same appearance as those they will find outside. They behave like small Finches similarly treated, and seldom give trouble by straying on the day they receive full liberty. In dealing with Cockatoos, Lorikeets and certain Parrakeets, it is sometimes safe in the case of mated pairs more or less in breeding condition to allow the male bird to fly, and some weeks later, when he has become thoroughly familiar with his surroundings, to permit his wife to join him. In following this plan it is of vital importance that the hen should remain in full view of her mate when he first goes out, and it is most risky to attempt it unless the mutual affection of the two birds is obviously very great indeed.

When new arrivals will find other individuals of their own species already at liberty the necessity for wing-cutting may or may not exist, and will depend on circumstances. In the case of sociable and highly gregarious kinds the strangers may usually be expected to join their companions at liberty and give no trouble, especially if they are released one at a time. On the other hand, in dealing with birds not particularly sociable and gregarious, considerable care must be taken, or losses will be sure to follow. Let us take the

Platycercinae as an illustration. If you have three adult pairs of Rosellas flying at large and desire to add to your stock by importation, it is perfectly useless to turn the new birds out full-winged in the hope that the others will induce them to stay; they will do no such thing, and will only bully them and accelerate their departure. If you have a small flock of *young* Rosellas which have not yet paired, the case is rather different, and it is usually safe to allow other young birds and even adult cocks to join them full-winged. Adult hens, on the other hand, are intolerant of the presence of young birds which do not belong to them, and are apt to resent rather than welcome their company. If you have an old unpaired cock at liberty and provide him with a wife, the latter may be allowed to fly out and join him as soon as he begins to show an active interest in her and visits the cage or aviary in which she is confined. If you have a hen at liberty and get a cock to turn out with her, the latter must be more or less in breeding condition before he is released (particularly in the case of Parrakeets). If he is not, the hen will either ill-treat or ignore him, and he will probably be soon lost. Unmated Parrots of either sex will, unless very tame and attached to their owners, wander off in search of a companion as soon as the nesting season approaches. Cockatoos, however, which have nested at liberty and afterwards lost their mates, seldom leave altogether. Occasionally, when a mate cannot be obtained for a solitary bird, a companion of the same sex will console it sufficiently to prevent it from straying and getting lost.

Assuming that the first stage of the acclimitization experiment has gone off well and the inherent tendency of most Parrots to wander on being released has been in some manner restrained, future success will depend largely on the constant supply of seed or other food, preferably in more than one place if a number of birds are kept. Any system of feeding on what I may term an "open" tray or board is quite impracticable, as after a very short time immense hordes of Sparrows, Starlings, Greenfinches, Pigeons, Jackdaws and other unwelcome visitors will be attracted to the spot, and it will cost a perfect fortune to feed them and the Parrots at the same time. It is therefore necessary to employ a "trap-tray," *i.e.*, a feeding tray which can, at a moment's notice, be converted

into a kind of box-trap for the capture of unbidden guests. The simplest form of trap-tray is a kind of box consisting of a stout metal framework covered with wire netting, the mesh being sufficiently fine to exclude mice. Two of the sides, at right angles to each other, are fastened to the top by means of hinges in such a way that by placing a **T**-shaped prop at the corner of the trap, the two sides can be simultaneously kept raised on a level with the top and the birds allowed to pass under them and reach the food contained in the shallow metal tray (perforated with two or three holes for drainage purposes) which lies on the floor. One end of a line is fastened to the stem of the prop and the other is carried behind a screen erected at some little distance, and so arranged that a person behind it can observe the birds feeding on the tray without making himself visible to them. A sharp pull at the line from behind the screen causes the prop to jump away, thereby releasing the sides, which fall downwards and inwards by their own weight, and the trap-tray becomes a closed box. Electric bell-wire makes the best line; common string is most dangerous, as with the first shower of rain it shrinks considerably and pulls the trap shut by reason of the increasing tension,—usually selecting for the manœuvre a moment when those birds are feeding on the tray which it is least desired to interfere with. Where there is any chance of meddlesome persons working the trap out of mischief or for the purpose of catching and stealing the Parrots, it is advisable to lock the end of the line in a small box fastened securely to the back of the screen, which should in this case be of a very substantial description. If this is done, it is impossible for anyone to pull the line without first showing himself to the birds and scaring them away to safety.

In the centre of the top of the trap there should be a small hinged "door" which can be opened for the insertion of the hand and arm when the sides have fallen and the birds have been caught. The whole contrivance can either be placed on the ground or on some kind of raised stand. In the latter case it is usually wise to peg the line down, or rather to run it through swivels on the ground level, for if it is swinging loose, large birds flying against it or falling branches of trees striking it are apt to dislodge the prop at inconvenient moments. When the trap-tray is on the ground it is as

well to shut it at night, anyhow during the winter; otherwise the seed attracts enormous quantities of mice, which in turn attract the Owls,—and then good-bye to your smaller Parrakeets!

I need hardly say that the Parrots themselves should never be caught on the trap except in case of illness or other urgent necessity. Not only does it make them exceedingly shy of returning to feed, but there is always a slight risk of their being struck and injured by the falling sides.

Lastly, it is, as I have already pointed out, absolutely necessary to familiarise them thoroughly with the appearance of the tray before they receive their liberty. As a general rule, the larger the bird the longer it will take to learn to recognise a trap-tray, wherever encountered, as the "*fons et origo*" of a good square meal.

The ailments of parrots are many and various, and of all birds they make the worst patients, since owing to the peculiar formation and immense power of the mandibles it is almost impossible to forcibly administer in effective quantities either food or medicine, which, when really sick, they usually refuse to touch voluntarily. In most cases there is only one remedy to be tried, viz., heat, and it must be *real* heat,—a temperature of 85°—90° evenly maintained night and day, and not merely the comfortable warmth of a living room at 60° (which probably drops to 45° during the course of the night). The effect of great heat on a sick Parrot is often little short of marvellous, and I would strongly recommend everyone who owns a valuable collection of tropical or semi-tropical birds to have a small room specially fitted up as a "baking" hospital. Like the tiger recommended in the *Bad Child's Book of Beasts* to overburdened parents, "it well repays the trouble and expense," and time and time again it will save a rare treasure which otherwise would inevitably be lost.

I will now deal briefly with some of the commoner Parrot ailments, their symptoms, and what I have found from my own experience to be the best treatment:—

ENTERITIS.—One of the most frequent and fatal of bird diseases.

With Parrots, generally due to chill, but sometimes caused by the presence of some irritant or poison in the bowels.

The affected bird puffs its feathers, shivers, and often sits with

its head under its wing (to use a common, if incorrect, expression). The eye appears dull, and there is little or no appetite. Heat is the only really effective treatment, and if the bird is not too far gone will generally effect a cure. Little benefit is likely to be derived from medicine or dieting, as the patient will hardly touch food until it begins to mend. Where enteritis is due to the swallowing of some irritant such as paint or varnish the symptoms are more acute, and convulsions and paralysis of the legs may ensue. Recovery will depend on the strength of the bird's constitution and the quantity of poison taken, and little or nothing can be done but to keep it warm and quiet, hope for the best and expect the worst!

PLEURISY.—Often accompanied by pericarditis. Symptoms much the same as those of enteritis. Generally fatal in a few hours. Warmth the only remedy.

INFLAMMATION OF THE LUNGS.—Due to chill. The bird pants heavily and breathes noisily, the eye remaining fairly bright. It seldom puts its head under its wing as the labour of breathing is thereby increased. Treatment: Great heat and a fairly moist atmosphere.

BRONCHITIS.—Generally due to chill. Symptoms much the same as those of inflammation of the lungs. In enough distilled water to last for a week's supply put 30 grains of carbonate of ammonia, 30 drops of tincture of squills, and 50 drops of glycerine, and give the mixture instead of plain water. There is often no marked loss of appetite. Keep in a very warm and rather moist atmosphere.

PERITONITIS.—Generally the result of some internal injury, and almost invariably fatal in a few hours. The symptoms of chronic peritonitis are sometimes indistinguishable from those of tuberculosis, the bird feeding well, but showing extreme emaciation and some diarrhœa.

TUBERCULOSIS.—Most commonly met with in Cockatoos. Symptoms: Emaciation and diarrhœa, and, in acute cases, vomiting. A tame bird may become extremely savage, probably under the influence of pain. The appetite usually remains good. Tuberculosis is by no means so incurable as some

writers imagine, even when it has reached a very advanced stage. The bird should be kept extremely warm and fed on every kind of rich and stimulating food which it can be persuaded to take,—unlimited quantities of hemp and sunflower seed should be offered, cake and even meat, anything, in fact, which will not irritate the bowels. Avian tuberculosis (which is not known to be communicable to human beings) is seldom pulmonary, and fresh air—in the sense of a constant supply of *outdoor* air—is of no use whatever in effecting a cure. Far more birds develop tuberculosis in outdoor aviaries than in cages. The disease is highly contagious, but the germs do not appear to be carried by the air.

SEPTIC FEVER.—The term popularly employed to designate a highly contagious malady possibly allied to tuberculosis, though wholly distinct from it. The disease is most commonly found among the newly-imported birds which have been overcrowded in dirty travelling boxes; but, once introduced, it will flourish indefinitely in the cleanest and best-kept aviaries in defiance of the most thorough attempts at disinfection. The necessity for a lengthy period of quarantine in the case of all freshly imported birds likely to be suffering from the disease is therefore obvious. The micro-organism of septic fever is possessed of immense vitality, both as regards its power of surviving for long periods without a living host, and of resisting the action of disinfectants. It is also singularly, at times bewilderingly, capricious in its attacks. The disease appears in two forms, the acute and the chronic, the former being by far the most common. Both are incurable, and the symptoms are very similar to those of enteritis, the bird's eye always appearing sick, dull and watery.

GREY PARROT "FEVER."—A highly contagious disease often found among newly-imported Grey Parrots, *Pæocephalus* Parrots (Senegals, etc.), and Blue-bonnets. It is caused by the presence of a diplo-coccus in the blood, and is entirely distinct from ordinary septic fever, though it resembles that disease in its symptoms. Cases of recovery are extremely rare, but are not quite unknown. Great heat is the only remedy to try.

FEATHER-PLUCKING.—Is generally due to improper feeding, but may be also caused by lack of occupation, parasites, or, more rarely, by anxiety to breed where no opportunity is allowed of doing so. A feather-plucker should be placed on a plain diet of canary, millet, wheat and oats with dry bread and unlimited fruit and green food. It should be freely supplied with soft, rotten wood, and small branches to bite up and amuse itself with, and should be allowed as much freedom and exercise as possible. Baths should be freely supplied, and if the bird refuses to bathe it should be sprayed daily with quassia solution,—a dessert spoonful of essence of quassia to a tumbler of tepid water where the presence of parasites is suspected. Liberty to roam at will with a cut wing in a large grass enclosure will cure the most inveterate feather-plucker that ever existed.

LOSS OF FEATHERS.—Apparently due to debility. The bird becomes entirely destitute both of down and feathers, the head being often the first part to become bare. The disease which renders its unfortunate victim a most grotesque and unsightly object, is generally very intractable. It is best to keep the patient fairly warm, allow it plenty of exercise and occupation, and feed it on a nourishing and varied diet. A few drops of Parrish's Chemical Food should be placed in the drinking water.

FRENCH MOULT.—A popular term denoting a chronic inability to produce fully-developed feathers, particularly in the wings and tail, the bird being usually unable to fly more than a few yards owing to its primarus being very small and malformed. French moult is most commonly seen in Budgerigars, which are the offspring of nearly-related, immature, or weakly parents, but it sometimes occurs among other species, and is often met with among Hooded Parrakeets which have been caught too young and received a severe check in their early youth. Treatment, which is seldom efficacious, should be the same as that recommended for birds suffering from loss of feathers.

(To be continued.)



Photo by G. E. Low.

INDIAN SHAMAH.
(*Kittacincla macrura.*)

MY INDIAN SHAMAH.

By GEORGE E. LOW.

The Indian Shamah is very well known to all aviculturists. Amongst the many foreigners which come to us, there are probably very few which can be kept with so little trouble, and possibly none so delightfully tame and attractive in disposition, as well as charming in appearance.

My bird, "Bob" (whose photograph is reproduced) possesses a character and personality which quite separate him from any other bird I have ever kept.

In common with, as I understand, practically all the Shamahs in captivity, he was tame and confiding from the time of his arrival, although nothing like so familiar as he has since become.

His song is extraordinarily varied, and particular bars are reserved for certain purposes. For instance, "Mealworms, please," is invariably expressed by certain notes not utilised at other times.

When the cage is opened in the morning for cleaning and feeding purposes, my lively little "pal" generally manages to slip out, and entertains me with one or two of his best selections from the top of some picture or other point of vantage, until he considers it time to return home for breakfast.

His powers of mimicry, like other members of his family, are remarkable. A few mornings ago I was puzzled by a new whistle which he produced loudly several times in succession, until I remembered the starlings which are constantly whistling and chattering in the trees outside the windows. He has also picked up the not very musical squeak of a young Rock Thrush in the next cage.

Charming and amenable as he is with human beings, I regret to say "Bob" is a perfect tyrant where his own kind are concerned, and always ready—not to say anxious—to tackle anything with feathers on it. For this reason I have been obliged to keep him in solitary confinement, and as he never dashes wildly about his cage his plumage is always perfect.

It is difficult, even by the use of colour sensitive plates, to differentiate between the blue-black of head and throat and the

beautiful chestnut of the breast, but the illustrations give some indication of where these colours meet. Nothing but a colour photograph, however, could do anything like justice to the appearance of this lovely little bird.

DESIRABLE WADERS & WATER BIRDS.

By C. BARNBY SMITH.

When trying, as I do in various ways, to get the members of our Society to take an interest in some of our Northern birds, I am never quite sure whether I should be best likened to a Pelican in the wilderness or to a Sparrow sitting alone on the house-top. The distinction is perhaps not material, but I do think it would be of great advantage to the Society if members could be induced to take more interest in birds occasionally found within the limits of the British Isles. To give a few examples. There are few more interesting birds in their way than Water-Rails. They are always in good feather, quite easy to keep, and look most charming running in and out of rough herbage in a large grass run. There are lots of details about their nesting habits which are still, I believe, obscure; yet does anyone ever make an attempt to try to get them to nest in captivity? If the attempt has been made a record of the result would be interesting. It is worthy of note that Land-Rails have readily nested, and the Australian Rails nest several times a season even under adverse conditions.

Another example is the Turnstone. I wonder how many of the somewhere about 420 members of the Society ever keep these birds or take any interest in their quaint turnings of stones. I have always found Turnstones quite at home in captivity, and ready to assume breeding plumage at the right season; and if I had the time and money nothing would give me personally greater pleasure than to make experiments with a view of getting them to nest. I gather (from what is not stated in the Natural Histories) there is still something to learn about their nesting habits.

Another most interesting bird—or rather, I should say, a bird that one would have supposed to be interesting had the facts



Photo by G. E. Low.

INDIAN SHAMAH.
(*Kittacincla macrura.*)

next stated been otherwise—is the Red-necked Phalarope. Yet I doubt if at this time more than one member of the Society has any of them in captivity. When once established they do very well, and are delightfully tame. A photographer will compass sea and land to get a few photos of Phalaropes, when with a little more trouble he might view perfectly healthy Phalaropes, at a yard or two distant, all the year round.

Again, the Editor inserted in the February number of the Magazine a note asking any member of the Society who had practical experience of keeping Grebe in captivity to communicate with me. I have not had a single communication of any description in answer to the enquiry, which seems to point to the fact that no one takes an interest in these birds. I am sorry, as I wanted in the interests of aviculture to get some Slavonian Grebe for the Zoo, or for some suitable member of the Society who has a place for these birds. [I shall be delighted to try them on my moat, which has plenty of small dace in it. And I have a beautiful place for Phalaropes, if I could only *obtain* them.—ED.] Of course the real trouble is how to manage them and feed them on the voyage to England. When swimming with their young round them in their native haunts they look to me very attractive birds.

To mention another Northern bird; it has often occurred to me that it would be delightful to see a Great Northern Diver or two swimming at the Zoo. Mr. Beebe once reared one from an egg, and a captive bird has been kept in the New York Aquarium.

Two years ago I had some nests watched in Iceland, and got eight eggs over here for incubation. The experiment was a failure, probably owing to the eggs being shaken in transit. They were certainly nearly all fresh. There seems no reason, however, why another attempt should not be more successful if anyone is sufficiently interested in Great Northern Divers to make further attempts.

The last bird I should like to mention is not, strictly speaking, a Northern bird, though it used to visit the British Isles. I refer to the Black-winged Stilt. If anyone is keeping this bird I hope he will tell particulars to the other members of the Society.

Personally I have never heard of it being kept in captivity in England, though this has been done successfully in the South of Spain, whence it can be obtained. Certainly the public took great interest in the young Avocet at the Zoo a few years ago. Would Stilts be more difficult to keep than Avocets, and, if so, why?

The above are only a few instances of birds that seem to me to be neglected by aviculturists, but if I am wrong no one will be more delighted than myself. If experts as to all or any of these birds exist, I sincerely hope they will not keep to themselves the results of their experience, for

“What delights can equal those
That stir the spirit's inner deeps,
When one that loves but knows not reaps
A truth from one that loves and knows?”

THIRTY-TWO YEARS OF AVICULTURE.

BY DR. A. G. BUTLER.

(Continued from page 199.)

It is probably supposed, because my first avicultural book was “Foreign Finches in Captivity,” that Finches are my favourite birds; but this is far from being the case. They are easy to provide for; but, with a few exceptions, are by no means easy to breed unless one possesses large and suitable outdoor aviaries: indoors they are more subject to egg-binding than most birds. They certainly do not possess the intelligence or the endearing confidence of most soft-billed birds; still they are pretty, some of them beautiful in plumage, and the small size of many of them renders them charming. I have at various times kept the following:—

A pair of the Madeiran Chaffinch which I kept in a flight-cage: quiet tame birds, which I might perhaps have bred in an aviary, but which made no attempt to do so in a cage. The cock bird sang well, the performance being more varied and longer, but with a strong resemblance to that of the European bird. Of the latter I have kept many examples, mostly caught in the garden in the winter months. Bird-catchers assert that there are two forms

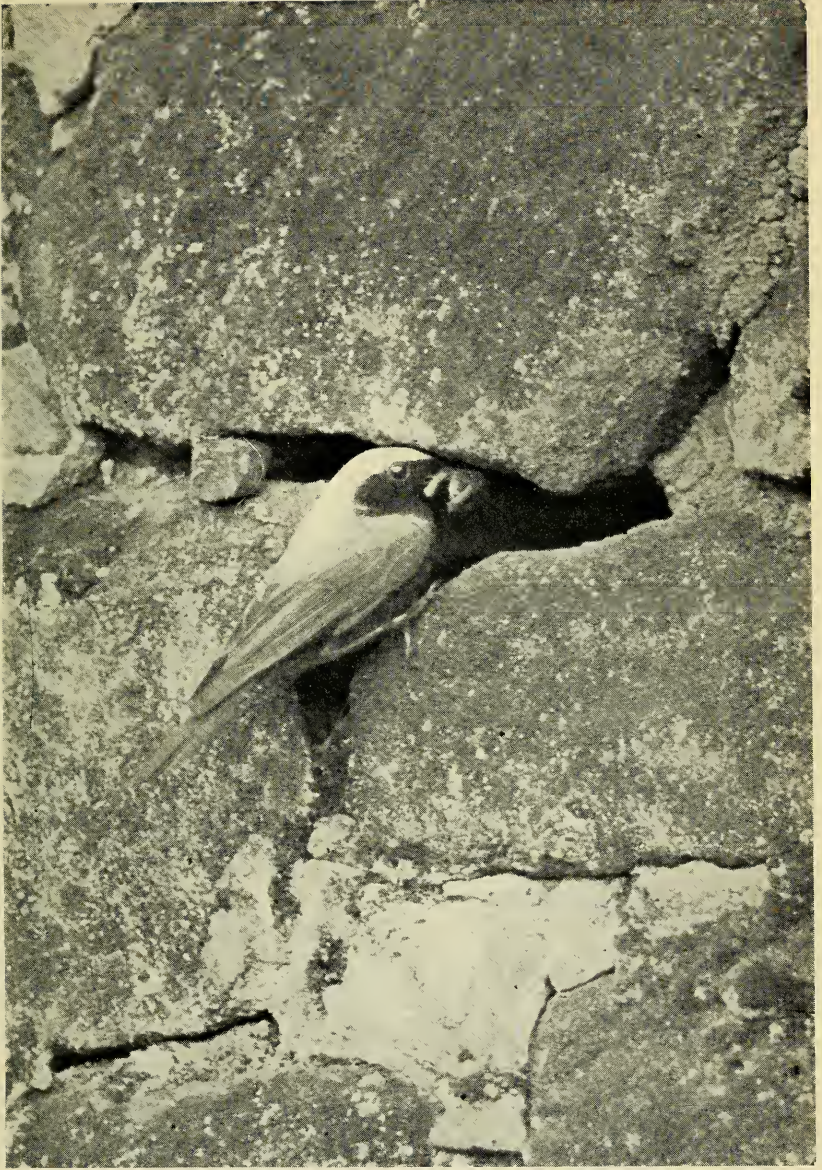


Photo by J. H. Symonds.

MALE REDSTART CARRYING FOOD TO NESTLINGS.
(*Ruticilla phœnicurus.*)

of Chaffinch in England which they call *chuckwados* and *kiss-me-dears*, from the terminal notes of the songs—" *chucha churr*" and "*tissiear*" or "*wheatear*": they consider the Essex birds the best songsters. For many years I had a fine Essex bird (a *chuckwado*), it certainly was a very strong singer. Of Bramblings I have kept a fair number; but, unless kept with Weavers or other powerful birds they are quarrelsome and dangerous, though cowardly; their song is ruined by its harsh terminal note.

I have hardly ever been without several Goldfinches, for I consider them the most beautiful of our British Finches; in an aviary they are masterful, but not at all dangerous: they are by no means so confiding as the European Siskin of which I have kept many examples, some of which would come on to my hand to eat maw-seed even as early as three days after they came into my possession. The song is pretty but not to be compared for a moment with that of Yarrell's Siskin of which I once purchased a pair from Mr. Abrahams; unhappily, however, they died almost immediately. A Black-headed Siskin which I imported in 1893 also lived a very short time, being in poor condition when it arrived.

I have had a good many European Bullfinches, but I did not find them long-lived in captivity, indeed I have seldom succeeded in keeping them alive for more than eighteen months; they are essentially wild birds and seem to resent any curtailment of their liberty. If hand-reared, they may live in confinement to a good age; but caught birds, even though they may pair and go to nest, seem discontented, and, in my experience, soon die; on which account I eventually gave up all attempts to keep them.

I have only had hens of the Lesser Rock-Sparrow and its race the White-throated Sparrow; I did not trust them with other birds, as Mr. Abrahams told me they were of a very murderous disposition. I purchased a male of the Grey-headed Sparrow in 1895 which lived a silent uneventful life in one of my aviaries until 1900. Of the Tree-Sparrow I had a pair given to me by Mr. Silver, the hen of which is still alive: I cannot recommend it as an aviary bird, as it never becomes tame and I have never heard it sing; this is my experience, as also that of Stevenson in his *Birds of Norfolk*. On the other hand, the late Lord Lilford says that the species

becomes very tame in confinement, and the late Rev. H. A. Macpherson informed me that it had "a very sweet song." I can hardly imagine any Sparrow having a sweet song, but perhaps his bird had acquired the song of some other Finch by imitation: young Sparrows are rather clever in this respect.

Of the common Saffron-finch I have had and bred many examples, but of Pelzolu's Saffron-finch I only had a pair, which I imported in 1893; the male soon died, but the female lived for some years. Of Yellowish finches I have had several differing not a little in size and colouring, so that I am rather sceptical respecting the value of two or three of the forms kept separate by Museum ornithologists. The song of all the species of *Sycalis* is very poor, and many of the notes would no doubt be excruciating to any person likely to have his teeth set on edge; I never suffered from that nervous affection myself.

Of Serins (or Canaries) I have kept the Cape Canary, the Sulphur Seed-eater, the St. Helena Seed-eater, the Green Singing-finch, a hen White-throated Seed-eater, the Grey Singing-finch, and the Alario-finch. Some of these birds quarrel fiercely with other male Serins, the little Grey Singing-finch apparently fighting more for fun than in earnest; it is a beautiful and indefatigable songster, and a great favourite of mine. Oddly enough I found the more powerful species with the heavier beaks the least inclined to be aggressive.

Of Rose-finches I have kept the Scarlet Rose-finch and the Purple Rose-finch, quiet pleasing birds, without much constitutional vigour apparently, for they both died early. Of Pine Grosbeaks I received half-a-dozen in 1896, delightfully tame birds, but before the end of the year they all died. A pair of Crossbills which I had, used to undo the fastening of their cage and work havoc in my greenhouse; I did not regret their loss. Like our Linnets, all these birds are rather unsatisfactory from the fact that the beautiful rose-colouring of the males disappears at the first moult in captivity and is replaced by yellow or orange. Of course I have had numerous Lesser Redpolls, Twites and Linnets; they are rather selfish and quarrelsome in an aviary, and Redpolls are a nuisance from their



Photo by J. H. Symonds.

FEMALE REDSTART AT ENTRANCE TO NEST.

propensity to interfere with the nests of other species, which they pick to pieces for sheer mischief.

Of Buntings of the genus *Emberiza* only British species have come into my hands. I have had several Yellow-Buntings, a Cirl-Bunting or two, three Ortolan-Buntings, and a fair number of Reed-Buntings. I found the Ortolans aggressive towards smaller and weaker birds, but the other species were quite inoffensive. Reed-Buntings are rather inclined to skulk, so that if there are bushes in the aviary in which they can hide, one may not see them for days. An example of the Grey-headed Song-Sparrow was given to me in 1897 upon condition that, when it died, the body should be presented to the Natural History Museum: as it died the same night I did not see much of that species; but of the allied Chingolo Song-Sparrow I have had several pairs, the last being a pair bred by Mr. Teschemaker which he kindly gave to me. Oddly enough these birds were hatched from eggs with a white or creamy ground-colour, yet the hen (before she was killed) laid eggs with a pale greenish ground-tint (see my plate, fig. 2). Hudson speaks of the Chingolos as quarrelsome birds, but I have not found them so; perhaps they only quarrel with other members of their own species.

The Nonpareil Bunting, of which I have had a fair number of examples, but only two hens, is quite amiable excepting towards species of its own genus: it is a pity that this lovely bird loses much of its beauty after the first moult, and that with each successive moult (unless kept in an open-air sunny aviary and supplied with plenty of insect-food) its brilliant scarlet under-surface becomes more and more yellow. I found the Indigo-Bunting* (absurd name for a brilliant blue bird!) far more interesting, and I rarely missed an opportunity of purchasing specimens when offered to me; the gradual assumption of the summer plumage interested me, since it was quite evident that the feathers slowly changed from brown or whitish to blue without a moult. Both the Nonpareil and the Indigo Buntings are confiding species which soon learn to take meal-worms from one's fingers, and both have pretty little songs.

Of Pileated-finches (*Coryphospingus*) I have had several pairs, the first two hens I received from Mr. Abrahams in exchange for a

* Indigo Blue is a very rich colour and need not necessarily be dark.—ED.

male of the much rarer Red-crested finch, of which I imported three males. These birds are innocent, pretty, but not otherwise interesting; they seem to have no song, only call-notes. Of Cardinal Buntings I have had a pair of the Green Cardinal which reared one young one (the latter, however, dying before its moult), five Yellow-billed, two pairs of Red-headed and a good many Red-crested Cardinals; though powerful, they are not aggressive birds; but their songs (in spite of Hudson's praise of them) are nerve-wracking and cause sensitive persons to clap their hands over their ears. I have had three cocks, but no hens, of the Virginian Cardinal (or Cardinal Grosbeak): it is a lovely bird with a powerful, though somewhat monotonous, song; it must be kept cool if it is to live any length of time in captivity; cold it does not object to in the least, but great heat speedily kills it; I lost my last two males from heat-apoplexy: I foolishly kept them in flight-cages on a sunny shelf. Unlike the Bunting Cardinals, this species should not be trusted with small and weak associates.

I have kept plenty of Greenfinches, caught in my garden; one of them was a superbly coloured bird and had a song equal to that of a Norwich Canary, but of course with the hideous terminal note of defiance. I fancy, from its tameness when first caged, that this must have been an escaped cage-bird; but I have not found Greenfinches at any time very wild, and in an aviary they settle down at once: this however may be due to the fact that they had not previously been kept for days or weeks in small cages and foul air; for a pair of Goldfinches, turned out the day they were caught, were equally tame. I bought a common Hawfinch from a bird-catcher; but, unlike the Greenfinch, it resented captivity greatly, and did not live very long: I consider it the least attractive in every respect of all the British finches.

A Tropical Seed-finch, given to me by Mr. Harper in 1907, lived an uneventful life in a flight cage until early in 1912. Of the species of *Spermophila*, or *Sporophila*, as Ridgway more correctly calls it (the name *Spermophilus* having been previously used) I have kept the White-throated, Lavender-backed, Fire-red, Reddish, Bluish, Guttural, Black-headed Lined, and Lined Finches: they are delightful little birds, some of them with pretty songs and, with the ex-

ception of the White-throated finch, are perfectly amiable and peaceable: this last is sometimes aggressive.

So much for the true finches which have at various times occupied my cages and aviaries: I now proceed to the generally more popular Weavers, of which, almost from the first, I have had numerous specimens and not a few species. Unquestionably the latter give more satisfactory results when kept during the summer months in outdoor aviaries with plenty of cover, and undoubtedly my failure to breed many of them is due to the fact that I have never had more than two outdoor enclosures, and neither of these altogether suitable for the purpose.

(To be continued).

CORRESPONDENCE, NOTES, &c.

NOTES.

My aviary is not a large one, but a few notes on my birds nesting may be of interest. I started my aviaries two-and-a-half years ago. This last season one pair of Long-tailed Grass Finches brought up four strong young ones. The first lot came out of the nest too soon and did not live. Masked Grass Finches, first nest, young one died after two days. Second nest, one young one fully reared but disappeared when grown up and I never could find it. Parrot Finches, four fully reared. Diamond Doves, one pair, six young fully reared. Cordon Bleu, one young fully reared. Zebra Finches, about 15 fully reared, first nesting, three died. Black-faced Love Birds, one pair, three fully reared. Lavender-headed Love Birds, two pairs, eight fully reared. The Masked Grass Finches had three eggs each time, but they all disappeared but one. Mice I suppose took the eggs as, though the wire is fine, they manage to get in when small. I give my birds a great quantity of flowering grasses of all kinds, which they seem to much enjoy. Orange-breasted Waxbills hatched out three young ones, but they died in a few days. One pair Green Singing Finches hatched out one young from two eggs, but it died in two days. This is the first season I have had my birds in pairs so I think I have done well. I have now some Blue-banded Grass Parrots (*N. venusta*) which I hope to induce to nest this summer, and I hope this season will do better with all my other birds.

ELEANOR TURNER-TURNER.

HARDINESS OF RAINBOW BUNTINGS.

Miss CHAWNER writes:—"I am surprised to find how little my pair of Rainbow Buntings care for weather; they scarcely ever avail themselves of the shelter, but stay in the flight through frost or rain without turning a feather.

“They are very skulking, always preferring the thickest bush to sit in, and though far and away the most brilliantly coloured bird in the aviary, the male usually escapes notice unless one knows exactly where to look for him.

“Both birds are usually lethargic in the daytime, but become lively just before dusk.”

ENGLISH NAMES OF BIRDS NOTICED IN ARTICLE ON EGG-LAYING &C. IN THE APRIL NUMBER OF THE MAGAZINE.

On the coloured plate and in my paper I used only the scientific names for the species mentioned, as I wished to render them especially of use to Museum workers in Ornithology, and I concluded that any aviculturist who was not familiar with the scientific names could easily find out their English equivalents by referring to my “Foreign Birds for Cage and Aviary.” However, as every member may not have the book, our Editor has asked me to send an index of the English names for publication in the Magazine.

On plate—fig 1, White-throated Rock-Sparrow; 2, Chingolo Song-Sparrow; 3, 4, Gouldian Finch; 5, Emerald Dove; 6, Wells’ Ground-dove; 7, S. African Mountain-chat; 8, Red-headed Cardinal.

p. 179—Grey-winged Ouzel and Blackbird hybrid; Hedge-Accentor; American Bluebird; S. African Mountain-chat; Chaffinch and Canary hybrid; Brambling; Goldfinch.

p. 180—Lesser Rock Sparrow and its race the White-throated Rock-Sparrow; Saffron finch; Pelzeln’s Saffron finch; Yellowish finch; St. Helena Seedeater; Green Singing-finch: Grey Singing-finch; Alario finch; Linnet; European Bullfinch; Yellow Hammer; Indigo-finch.

p. 181—Green Cardinal; Red-headed Cardinal*; Greenfinch; White-throated Finch; Amaduvade Waxbill; Green Amaduvade; Grey Waxbill; Gouldian finch; Long-tailed Grassfinch; Parson finch; Diamond finch; Star-finch.

p. 182—Zebra finch; Cherry finch; Cutthroat finch; Red-headed finch; Sharp-tailed finch; Spice finch; White-headed Mannikin; Black-headed Mannikin; Java Sparrow; Bronze Mannikin; Steel finch; Ultramarine finch; Bronze Weaver; Red-billed Weaver.

p. 183—Rufous-necked Weaver; Black-headed Weaver; Baya Weaver; Manyah Weaver; Meadow Pipit; Skylark; Cockatiel; Rose-headed Parrakeet or Rosa’s Parrakeet; Peach-faced Love-bird; Budgerigar; Martinican dove; Common Barbary dove; Half-collared Turtle dove; Necklaced dove; Diamond dove.

p. 184—Picui or Steel-barred dove; Passerine dove; Tambourine dove; Emerald dove; Australian Green-winged dove; Bronze-winged pigeon; Australian Crested pigeon; Wells’ Ground-dove: Wonga-wonga pigeon; Chinese Painted quail.

p. 185—Californian quail.

A. G. BUTLER.

* I see that, by a slip, I have put the Linnean name *dominicana* on the plate: it is doubtful whether Linneus intended this species; if so of course his name would take priority over *larvata*.

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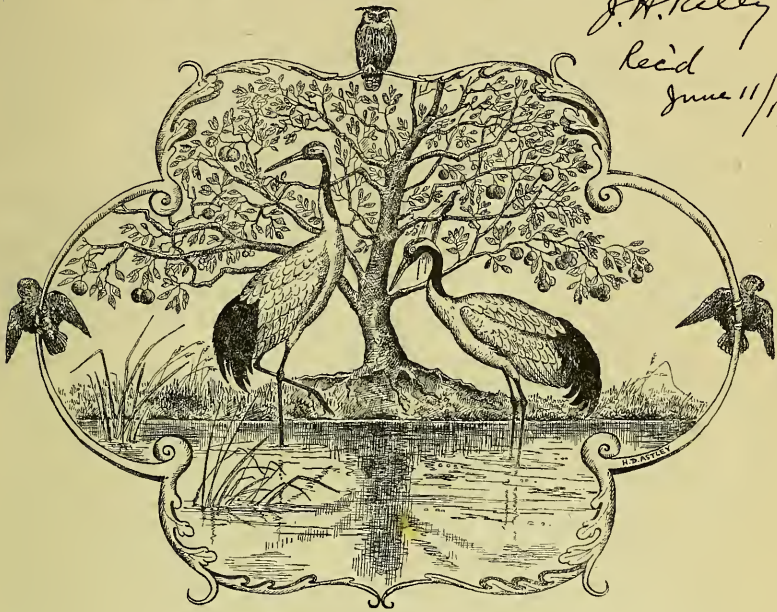
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AMETHYST SUN-BIRD.
Cinnyris amethystinus.

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BEING THE JOURNAL OF THE

AVICULTURAL SOCIETY.

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JUNE, 1914.

THE AMETHYST SUN-BIRD.

Cinnyris amethystinus.

By HUBERT D. ASTLEY.

The Amethyst Sun-bird is found in South Africa, ranging as far as Angola on the Western Coast. It belongs to the "dark brown" group, named *Chalcomitra* by Reichenbach, and to that section in which the front of the chest is not scarlet.

It is distinguished by its velvet-like deep colour. It is common in many parts of South Africa, but appears not to occur from that portion of the South-West coast lying between the Orange River and the Cape of Good Hope. It is abundant in the Eastern provinces. It has been procured in the neighbourhood of Swellendam in the mimosa trees which line the banks of the rivers. Also in the Transvaal and Natal it is common, as well as Swaziland. In Natal this handsome Sun-bird is said to remain in the bushy country about Pinetown throughout the year. Mr. Atmore found a nest at Oudtshoorn on the 24th of January, "hanging on a branch of an apple tree, very rough outside, composed of short bits of stick, grass, and spider's web—arched, as are the nests of all the tribe. The number of eggs appear to be two; before they were blown they were of a soft creamy-yellow colour."

Other observers say the eggs are a beautiful creamy-grey, with indistinct confused blotches, spots and streaks, chiefly at the obtuse end. The male has a short period when the plumage is duller, and when assuming the breeding colours the metallic lilac feathers on the throat grow first, after which the bird becomes generally mottled with black feathers, while the metallic green crown

gradually appears. The metallic lilac feathers of the upper tail coverts are assumed later, and those on the bend of the wing last of all.

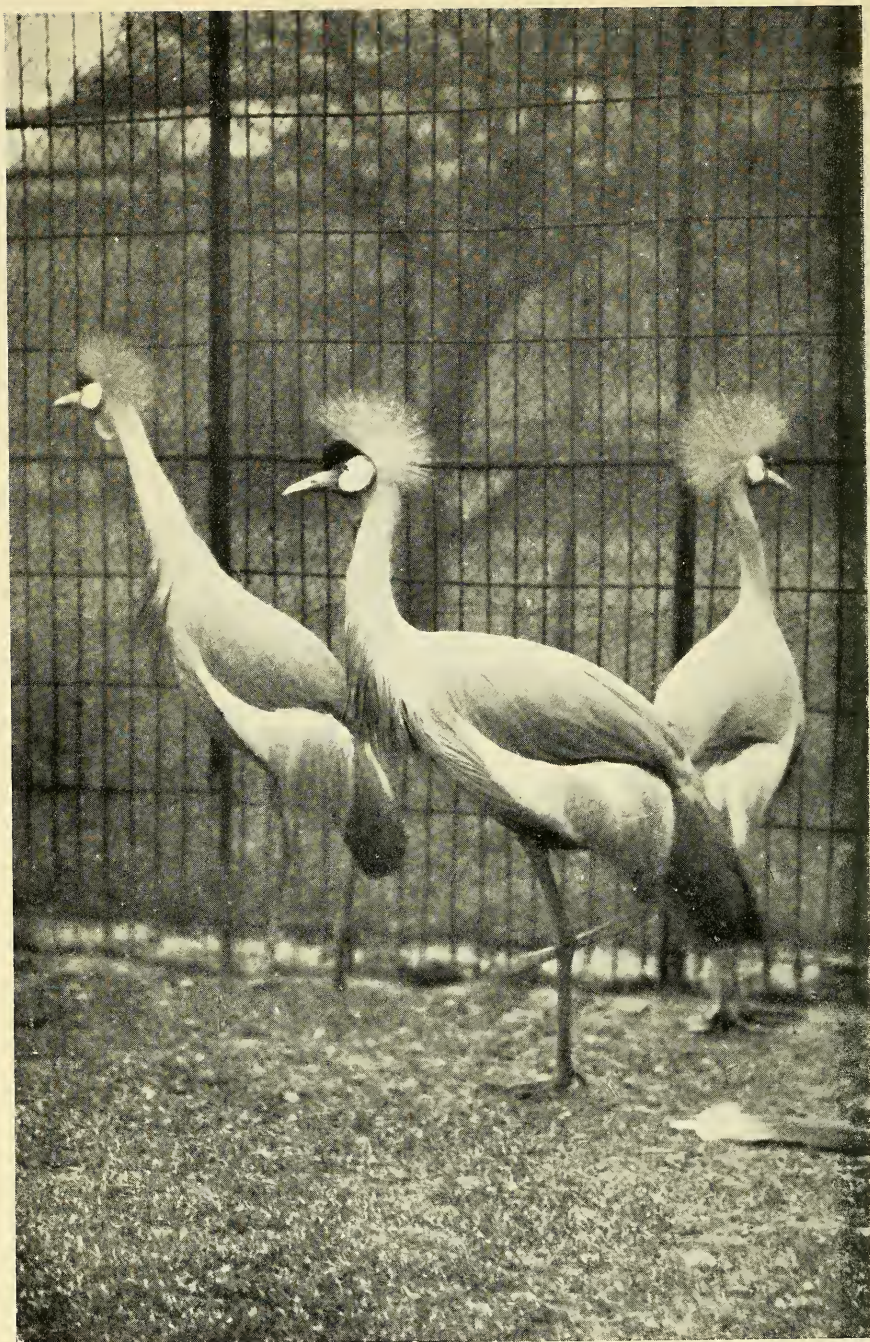
* * *

By A. EZRA.

I consider this beautiful bird, though of sombre colours, one of the handsomest of the African Sunbirds. In perfect plumage the cock bird is a beautiful velvet black with metallic purple on shoulders, tail coverts and throat. The crown a bright metallic emerald green. They do not go into eclipse plumage, but when moulting the bird loses its velvet black, becoming a dull black, but in a few weeks is in full plumage again.* In good light it is a marvellously rich colour, and to do the bird full justice it has to be seen at close quarters. The hen has olive wings with a dark brown tail of which the outer feathers are tipped with white. Eyebrows and breast buff, the latter mottled by dark feathers. Throat a dusky black. A young cock in immature plumage is similar to an adult hen but with the throat jet black. I have had a couple of these exquisite birds for eighteen months and they have done splendidly never causing me the slightest anxiety. They are undoubtedly quite hardy and very easy to keep. Both the sexes have a broken loud song which is not at all unpleasant. Of all my Sunbirds these are the only two that eat only the syrup and grapes, thriving on it, and refusing spiders and green flies which all the others devour with relish. They always look in perfect trim and are most peaceful in my Sunbird aviary, in which I have about twenty Sunbirds of eight different species.

A couple of days ago I found one of my tiny Indian Amethyst-rumped Sunbirds sitting on the back of the Amethystinus on the floor of the aviary, fighting him and pulling out several of his tail feathers, and the larger bird allowed it without making the slightest attempt to protect himself or to get away. The culprit was caught at once and caged separately and I hope this punishment will cure him of his bad temper. Strange to say the Indian Amethyst-rumped Sunbird seems to be the most pugnacious and

* Shelley writes of this bird as assuming its full breeding plumage. This sounds as if there is something corresponding to an eclipse plumage.—ED.



CROWNED CRANES.
(*Balearica regulorum.*)

Photo by M. Portal.

always makes trouble in the aviary. The Amethystinus is most keen on his bath, and in the mornings when the plants in the aviary are being sprayed he will always come right up to me and open out his wings and ask to be sprayed. One of my birds is so tame that he will let me stroke him and nothing frightens him.

The two cocks I possess seem to moult at different times and never together, so I am lucky enough to have one at least in perfect plumage always. They generally roost in amongst the leaves of the bay trees I have in my aviary, and it is very difficult to find them, they hide so carefully. It is a pleasure to see them enjoy life and fly in and out of the branches at a great pace. Needless to say they are most charming pets and a source of great pleasure to me. Of the two cocks I possess, one began moulting in February and was in perfect plumage by the middle of March, the second one started moulting the end of April and is very nearly in full plumage now.

My Sunbirds are kept in an aviary in a bird-room, where I always have plenty of light and sunshine. The aviary is a very light structure made entirely of iron and linked wire netting, measuring 9 ft. long by 6 ft. and 7 ft. high, a few growing bay trees and some dead branches serve for perches. I also put in some sweet-smelling flowers in vases, and the birds will fly at once when these are put in fresh, to suck the nectar.

No coloured-plate can possibly do such a lovely bird justice, partly owing to the metallic colouring of the throat and crown, which is not fixed, but flashes out more brilliantly according to the light upon them, when at other moments they are much less observable.

CROWNED CRANES AND STANLEY CRANES.

By MAURICE PORTAL.

In 1912 mention was made in the *Avicultural Magazine* of the nesting of the Sudan Crown Crane (*Balearica pavonina*) at Logan, in Wigtonshire. Mr. K. McDouall kindly furnished me with some further details, and allowed me to go and see the birds at Logan. Originally six Sudan Crown Cranes were sent home in 1906

but two died of malarial fever a few months later; three still survive, and two of them are full-winged and are to be seen flying about the estate, often four miles away from the house, but always returning at night to sleep, which they do, either roosting on the house top or up in a tree. The birds at Logan do not appear to feel the cold or suffer from frost and snow, though of course the climate there is no doubt milder than in most parts, and the sea on both sides of the point tends to prevent long frosts or the snow from lying for any length of time.

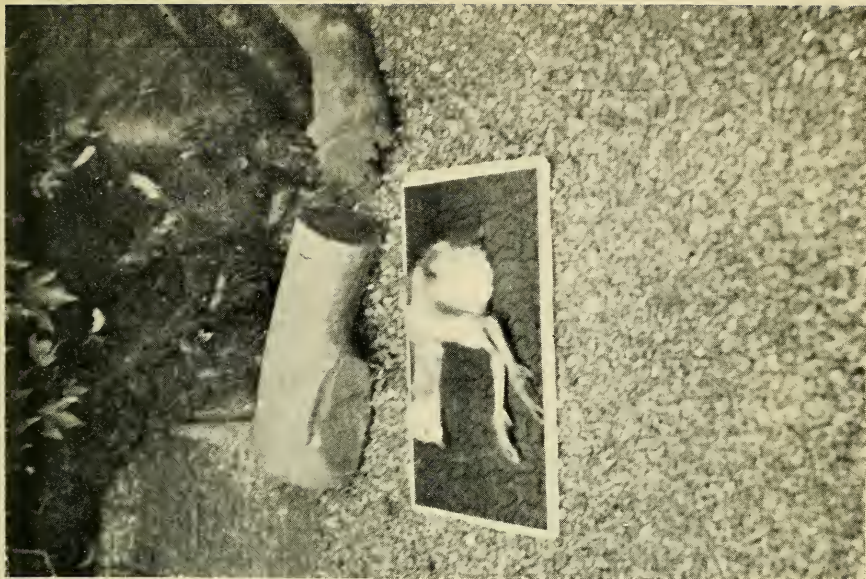
The Crowned Cranes, like most of their allies, suffer from frost bites on their toes as a rule, and Mr. St. Quintin told me he had known a Crane lose its toe from this. Probably the fact that the Logan birds have full use of their wings assists to keep them free, combined with the milder climate.

The Cranes chiefly feed themselves in summer on insects and various grubs and seeds, but they are fed on dari and maize if they come up for it to the house. In the Kordofan it has been noted that the birds feed in the open early on in the day, and then fly to the river banks and water and spend the rest of the day there, flying off at dusk to roost in the tops of trees. In 1912—or six years after they came—a pair made a nest near the water's edge at the loch, and laid three eggs of a greenish hue, devoid of any markings. The nest was a round one, raised on rushes and reeds and not particularly finished off; both birds helped in the incubation which lasted 30 days. One young bird hatched and was carefully guarded and fed on insects by the old birds, but when six weeks old a weasel unfortunately killed it.

When first hatched it much resembled a long-legged Pheasant chick, but the tuft on the head was visible from the early days, the upper parts of body brown with reddish brown markings; and under parts light yellowish down, white patch on cheek, and legs of an olive brown hue. In 1913 the same pair nested again, but in July, and laid three eggs, hatching all of them, and all went well until the end of September, when the birds died off, one after another—probably from lack of insect life, which was very scarce last year. Altogether very unfortunate, but one hopes Mr. McDouall will have better luck in 1914.

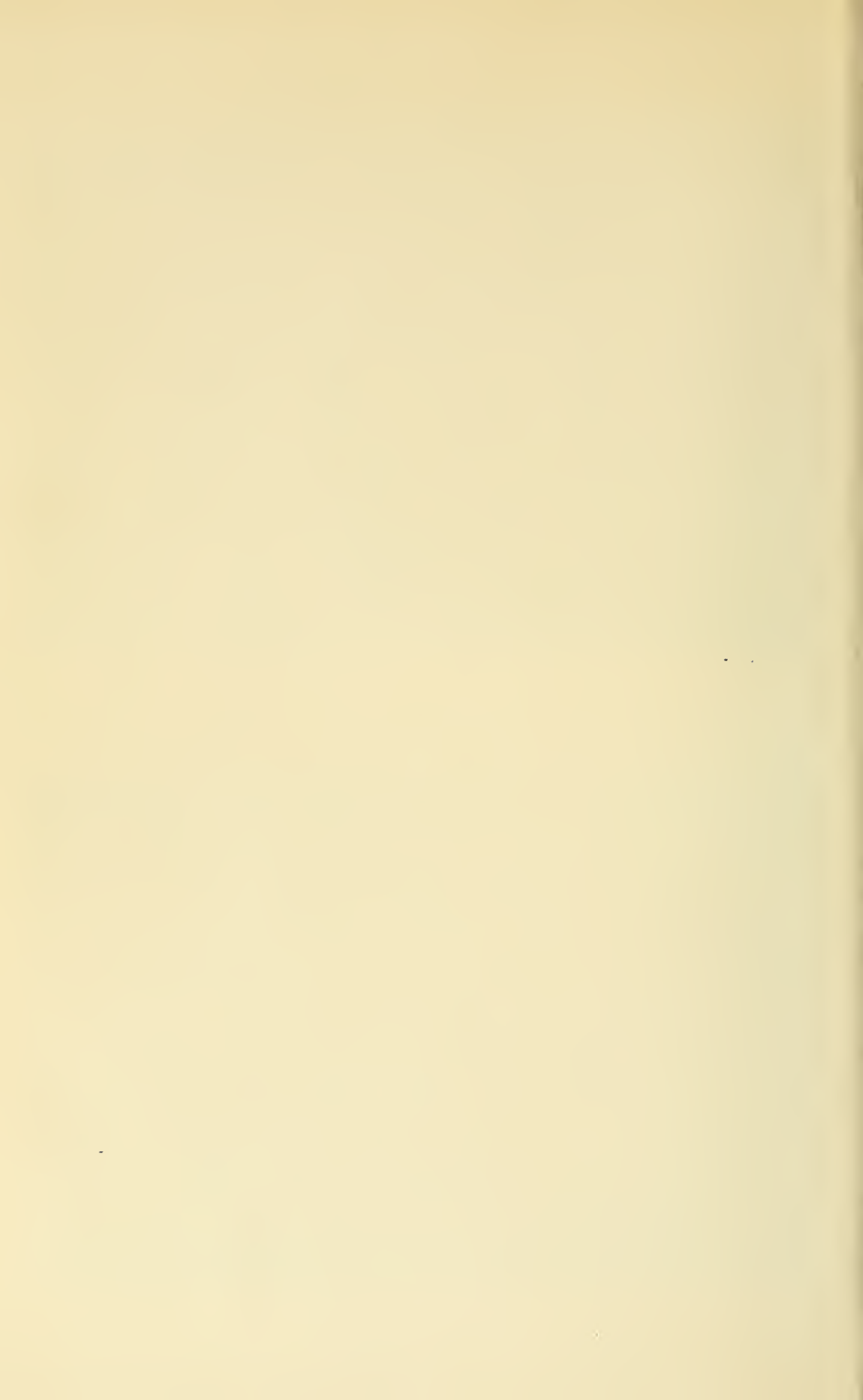


NEST AND EGGS OF CROWNED CRANE.



Photos by K. McDouall.

YOUNG CROWNED CRANE.





STANLEY CRANE.
(*Anthropoides paradisea.*)

Photo by M. Portal.

Von Heuglin was told that the Crowned Crane nested in the trees in Kordofan, but it would seem unlikely.

Though these Cranes have laid occasionally at various places in England and Europe, the only place where they have reared their young appears to be in Holland. At the Giza Zoological Gardens in Egypt a pair laid in 1910 and in 1913, but with no result. The length of the egg varies from 73mm. to 75mm., and the breadth from 53mm. to 55mm. *B. pavonina* is not a migratory species, and extends roughly across Africa north of the Equator.

The other variety of Crowned Crane (*Balearica regulorum*) is no less beautiful and attractive, and is rather the tamer of the two as a rule. It extends all over South Africa, though probably in less numbers than formerly. In 1892—95 I saw considerable numbers in Bechuanaland and up to the borders of Matabeleland, also in the Kalihari, and I once saw two young birds with the old ones in the Potchefstroom district. The natives stated they nested near a Vlei, and a Dutchman gave me two eggs of a bluish-white colour, which he declared were Crowned Crane eggs, and said they only laid two. I was never fortunate enough to see any large number of these birds, and about 20 was the most on a sandbank on the Limpopo river. They are easily distinguished from *B. pavonina* by the large wattle under throat and the cheek being white with the exception of a very small portion at top, which is a reddish-pink.

Another nice Crane is the Stanley Crane (*A. paradisea*), which soon becomes tame in captivity, and does not interfere with others of its species. It is a resident of South Africa, and is found up to Mashonaland and across to Demararaland and in the district of Gordonias, where I once saw a few between Taungs and Upington in the winter months. At the time I was astonished at the distance they were from water, but it is possible that they were following up belated Locusts. They were reputed to breed down there, but I personally never obtained any proof of it. The general appearance is pearl-grey colour, lighter on head, and the tail feathers dark, and in an old bird touching the ground, legs black. It is partially migratory only from all accounts.

The Stanley Crane stands our climate, and has nested and reared a young one at Woburn and at another place. The nest is

merely a scrape in the ground like a Demoiselle Crane's, and no attempt made to build a nest like the Crowned Crane's do with reeds, etc. A Dutchman told me that these birds often spent the day with the herds of game out in the open, and were very wary. The eggs, he said, were brown coloured with spots of a darker brown at the big end. The bird tames easily, and once at home does not appear to have any desire to leave, even in its native country, as a storekeeper had one which the natives brought in, and it used to spend its day walking about and picking up stray Mealie or Millet seeds. When I first saw it the bird was moulting and unable to as it had cast its flight feathers in both wings.

BIRDS OF N.S. WALES I HAVE CAUGHT AND KEPT.

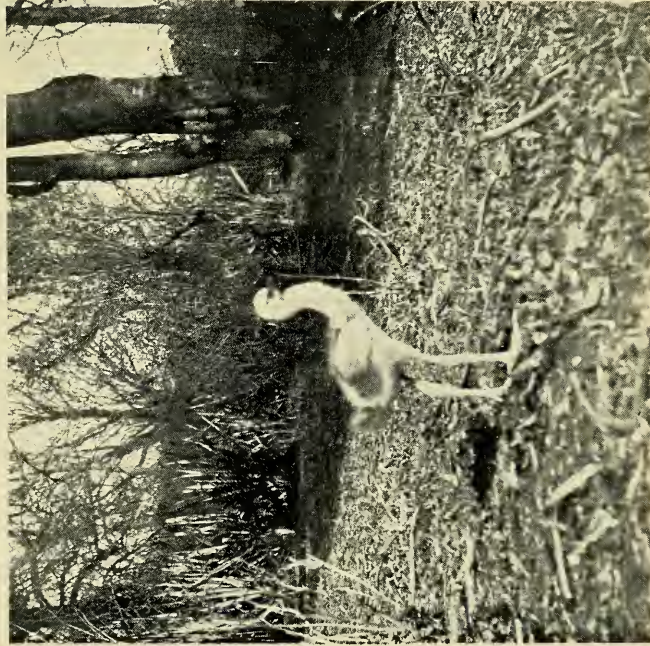
“SCRUB-BIRDS.”

By G. A. HEUMANN.

For years it had been my wish to see some of our Scrub-birds in my aviaries, such as Regent, Rifle, Cat, Satin and other Bower-birds, Mountain-thrushes, Pittas (Dragoons), and many other feathered inhabitants of the Australian bush, but for years it remained but a wish. There was no chance of “picking” these birds up in any of the bird shops either here or in Melbourne, and how they had found their way, as I knew they had, into the aviaries of English fanciers I never learned. Talking the matter over with a friend, also an enthusiastic bird-lover, we decided that the only way to get these birds would be to go and catch them ourselves. Spending the winter generally in a more congenial situation than Sydney, we put in, for several years running, the coldest months in various parts of the northern rivers of New South Wales. On the Tweed river we were fortunate in possessing the friendship of the oldest resident there, a retired Police Magistrate, who came to those parts at a time when the Nulla-Nulla and the Boomerang still played a conspicuous part in the tribal warfares of the natives. Then the thick scrub still abounded with all kinds of native birds and animals. Alas and alack! the sight of a native now is as



CROWNED CRANE (*Balearica pavonina*). Photo by M. Portal.



YOUNG CROWNED CRANE. Photo by K. McDouall.



much a curiosity as even the once plentiful native bear. With the Scrublands they too have gone, for little of the original virgin forest is left standing, and up to the present day acre after acre is ruthlessly and needlessly cut down, and valuable timber burned up even to mountain heights which no cow will climb to look for food. These sun-baked and barren ridges are now forming a melancholy back-ground for the more fertile fields at their foot. I mention this to show that it will not be long before the Australian Scrublands are a thing of the past, and with them will go the many birds which once enlivened those dense forests. Going—as the black fellows and the native bears have gone. Every lover of nature must therefore be grateful to the old gentleman mentioned for setting aside a small tract of maiden scrub where no shooting is allowed, and where the native birds of this locality find a refuge and an asylum. As may be imagined, this sanctuary is thickly populated with Scrub-birds. Situated on the banks of an arm of the Tweed river, it commands an ideal position. Stepping out on the lawn from the bungalow opposite early in the morning, the heart of the bird lover is gladdened by the calls and songs of the hundred and one birds in the opposite Scrub. The Coach-whips are heard on every side, cracking, so that they almost make the air vibrate. The mournful call of the Koël, the booming of the Wonga-Wonga Pigeon, the croaking of the Regent birds, the whistle of the Honey-eaters, and the crying of the Cat birds mingle together in weird harmony. From the plains floats across the call of the Swamp Pheasant and the cry of the Orioles. Once in a way the peculiar whistle of the Dragoon birds (*Pitta*) mixes with the rattle and milling noise of the Satin Bower-birds, and so I might go on enumerating many more calls and songs which greet the morning. But as the sun rises behind the forest, and the huge trees, overgrown with creepers of all shapes and sizes, throw their shadows in the tranquil waters of the river, little by little the many voices cease, and soon only a solitary crack of the Whip-birds or the croaking of the Bower-birds floats from the thicket across the river to break the peaceful tranquility of the winter's hot forenoon.

It was here we decided to try our luck, and having received kind permission from the owner as well as the authorities—for all

Scrub-birds are protected—we commenced operations. We had brought with us loquats, apples and bananas, and displayed these invitingly on the boughs of likely trees. By-and-bye we had the satisfaction of seeing Cat birds, Regent and Satin bower birds, as well as other fruit eaters, and Honey-suckers, enjoying the dinner set before them, and later on a number of them had to leave their happy homes to enjoy themselves or make the best of it in our aviaries in Sydney. Of course it took weeks to accustom the birds to overcome their shyness and eat the fruit set out for them, and the catching was not as easy as falling from the proverbial log, but the main point was that we got them. The Regent birds in their gorgeous costume of satin black and orange are, next to the Riflemen, the cream of the bush. They are easily kept on fruit, raw beef, bread and milk and cake, and will soon learn to take a meal-worm from the fingers; indeed, all my Scrub-birds do well on this simple diet. The hen is brown, mottled white, with a black cap, as also are the young males, and it is said that it takes three years for a male to fully moult out. Personally I am inclined to think it takes longer, by observations on my own birds. The hen and young birds have dark brown eyes with black pupils and black beaks; the young cock in an advanced stage has the eyes of the adult male, a straw yellow, and the beak is also light horn colour, whilst over the brown plumage is a hue or bloom of yellow which is missing in the hen. I saw in an article in the *Avicultural Magazine* by a prominent aviculturist that his Satin Bower-birds (*Ptilonorhynchus violaceus*) would not become tame, and were to him unattractive. This gentleman must have got hold of a very old and recalcitrant pair. Those in the aviaries of my friend and my own are not only tame, but actually build bowers, and any bit of blue glass, blue ribbon or blue marble is greatly appreciated by them. It seems a remarkable thing this love of theirs for blue. I ventured the opinion once that the reason of their love for blue is probably because the male sees not only the blueish purple eyes of his own sex but also takes much notice of the lighter shade, more of a dark heliotrope, in the eyes of his lady-love. My theory has not met with general acceptance, but, unless someone gives a more plausible theory, I hold on to mine! This reminds me of an incident worth recording. On the northern

side of the cottage was a patch of violets in bloom. At dawn the Satin birds would come to get the fresh blooms and carry them to their bower not 100 yards away from the house. Here they would display, walking almost erect with drooping wings through their bower, uttering deep guttural sounds. Perhaps, if the English aviculturist who had some of these birds had given them a supply of twigs and blue flowers, beads, etc., he might have had a different account to record of these interesting birds. I often sit concealed in the aviary to watch them and listen to their peculiar song, which resembles a sawmill at work. Like all Scrub-birds they are easy enough to breed. It is supposed to take seven years for the male to assume full colour.

I would not recommend anyone to keep Cat-birds who is not fond of babies, for they cry at four in the morning till late in the afternoon, their voices resembling something between the cry of a cat and that of a baby. They are the size of Satin Bower-birds, their plumage being dark green, spotted with white across the wings, breast and abdomen; a delightful bird in a large aviary. An English mulberry tree laden with ripe fruit proved a great attraction to many Fruit-eaters and Honeysuckers, and especially so to the Australian Oriole (*Mimetes sagittata*). The cock bird is very striking in his dark sea-green coat and whitish streaked breast and abdomen. Around the eye and extending behind the ear is an oval-shaped bare patch of dark scarlet—very brilliant in a wild state, but the moment the bird is in captivity the red disappears and becomes a very pale sickly pink. Probably the fright causes this change, for after long periods of captivity. I have not been able to bring back that flush to their cheeks which gives them in nature such an aristocratic appearance.* One of the most beautiful of Cuckoos is the fruit-eating Koël, a handsome bird of the same steel-blue coat as the Satin Bower-bird, but the eyes are a carmine red, the bill hooked and the tail long and fan-shaped. To catch a rare bird like that is an exciting event, and the only pity is that to get the bird is one thing, but to get it to eat and so to live is quite another. With this species they will live as

*Red is a colour which fades in many birds, e.g. the Sepoy Finch, the Red Sun birds, etc. It generally becomes orange or yellow. But this change does not take place until the moult.—ED.

long as they are being stuffed, which only means to delay a little the inevitable end. I have met with very many refractory birds like this, and my experience has taught me that it is far better to give them their freedom. The Rifle-birds are undoubtedly the cream of the Australian bush, though the species here is not quite so gorgeous as the one from New Guinea which has been imported into England. They are shy birds, and I have not been so fortunate yet as to catch one. When insects are scarce in the bush they will feed on fruit, and during one of their raids on a loquat tree one fine cock got on a lime stick set for Regents, which my friend was watching at the time. However, before he was able to take the bird it had dropped off the stick by its own weight. This trick, when finding that the legs stick, of falling backwards and gradually dropping off without moving a feather, shows certainly a great deal of intelligence, for should one feather adhere to the lime there would be no escape. I found a number of birds do this, such as Silver Eyes, Red Heads and others. I regret even now that, in mistake for a Honey-sucker which I did not know, I once shot what proved to be afterwards a young male Rifle-bird. I have not given up hopes yet of seeing this bird in my aviaries. A fine bird is the Pitta, commonly called "Dragon," on account of its proud and upright walk or run. A gorgeous bird, not unlike the Kingfisher. In the early morning or towards evening their mournful call may be heard sounding like "I lost my wife," twice repeated. They are curious birds, and can easily be whistled up. A trap set with a dead bird in it will never fail to catch them, even whilst one looks on. Feeding principally on snails in the bush, these birds have the remarkable habit of carrying them to a certain stone in the bush which serves all the Pittas in the neighbourhood; here the snails are cracked and eaten. It is, of course, only by chance that one finds the spot, which is apparent by the quantities of broken shells lying about, but, when found, to catch Pittas is like shelling the proverbial peas. In the aviary they live on raw beef, and if a smaller bird comes within their reach they go for its brains: yet, with all their faults, they are most desirable birds. Another lovely bird we caught was the Mountain Thrush (*Turdus lunulata*). These resemble the European Thrush, but are larger and more stately. They live on the ground in the dense

scrub. Unlike their relatives, the Grey melodious Thrushes, they are much easier to keep alive, living principally on bread and milk. Of all the Scrub-birds, if not in plumage yet in interest, I like the Coachwhip best (*Psophodes crepitans*). The shape is that of the cardinal, principally dark green, a trifle mottled on the breast and abdomen, the large white cheek and black crest set the bird off well. It is the tail, however, which gives it its stateliness, long, edged with black and white, they have a knack of spreading and closing it as a fan ; in fact, they use their tail in the same coquettish way as a lady her fan at a ball. They are remarkably quick birds afoot, and it requires a fast trap to catch this bird. When the male bird cracks, no sooner is the last note emitted than the hen will answer with two weaker cracks, the pair always keeping close together. It is wonderful what a volume of sound a Coachman *can* emit ; to see him perched above the call-bird letting out an especially strong and angry crack is a sight worth seeing, a sound worth hearing. His crest stands then very straight, the wings drooped, and the tail spread out to its full capacity ; with head proudly thrown back he whips out his defiance and challenge. Often have I seen the bird overbalance himself through the recoil of the volume of his own sound. In captivity they do well, soon repaying the care bestowed on them, and sounding their whips ; yet it is not advisable to keep them with smaller birds on account of their fondness for brains. Pigeons, such as the Wonga and Bronzewings, are still plentiful in the scrubs, and though I have tried hard, whilst the Bronzewings breed easily, the Wonga I never succeeded with. Then there are the King Parrots, Lyre Birds and Brush Turkeys. The latter come down from the ridges early in the morning to scratch for food along the creeks and narrow flats where the undergrowth is not so dense. They are stupid birds, and I never relished the " sport " of shooting them. If hunted with a dog the bird will, when flushed, fly to the nearest tree and sit there gazing down at the dog not fifteen feet below it ; in that position a noose may be thrown over its head without fear of hunting it away ; how different from the chase of his brothers in the plains ! The only way to get at them is by riding or driving straight at them, and only then a quick eye and a good gun will land the bird. I suppose I ought not to mention hunting in this paper, but

the difference between hunting in these rugged parts and at home is worth comparing. The country is very rough and rugged; one gets across the creeks best as one can, and some are fairly deep. The trees are very tall, covered with Elk and Staghorns, their crowns meeting and shutting out all sunlight. Below twilight reigns always, whilst the atmosphere is damp, heavy and mildewy. The undergrowth is so thick that it is often impossible to get through even with a brush-hook. Creepers and climbing plants are interlaced between and from tree to tree, often making beautiful caves and bowers. The greatest curse of all vines are the so-called lawyer and barrister vines, a species of trailing palm with hook-like thorns. It is little use trying to tear away from their embrace; they hold tight, and only patience will get one out of their grasp by undoing hook after hook separately. The reason they are called lawyer and barrister vines is, I am told, that the former will only retain the cloth, the latter will take your flesh as well! On the Brunswick river, where I was shooting once, these vines are called "Wait-a-bit," and most appropriately. Of course, in those virgin forests, fallen and decayed trees are everywhere hindering progress, and as one makes an effort to climb them hundreds of leeches stretch out their slender bodies like small brown flames, feeling upwards for a support. One invariably carries a few away, and it is not until there is a squeching sound in one's boots that one realizes that some of these brutes have got home! It is not so much the bite or loss of blood which makes these leeches so loathesome, but the frightful itching the bite causes later on, lasting often for days. Then there is the stinging tree; the sting of its leaves is about the limit of stings! Adding to these troubles the scourge of mosquitoes, one begins to wonder whether the sport of hunting Pigeons, Parrots, Turkeys and the like is worth such unpleasant experiences,—yet one goes again. The wild fig trees come in specially for visits of nearly all the fruit-eating birds in the Scrub, but a strong glass is required to discern the various species, in fact to see them at all in the dense foliage.

In my next article I will write about the smaller soft bills of New South Wales, some of which I hope to bring with me to England during my forthcoming trip in June.

SOME GRASS FINCHES IN MY AVIARY.

By DR. L. LOVELL-KEAYS.

Lest our members should think I have lost my reason over sexing birds, I have taken refuge under the above heading to give my experience with certain of the Grass finches. To my mind the Grass finches (*Muniinae*) are among the most captivating and interesting of all the hard-bills. Their love-dances and their extraordinary affection for their mates, or, if a bird of the opposite sex is not available, for one of the same sex is simply wonderful to behold. My first Grass finches were a pair of Diamond Sparrows, or better called the Spotted-sided finch (*Steganopleura guttata*). They were simply perfect, and I was assured that they were a true pair. They had been sexed by several leading "fanciers" (Ugh! the hateful term). One at least had been discarded by a well-known aviculturist as a cock; in fact both were dubbed cocks, and as such by half-a-dozen well-known and experienced aviculturists. I am beginning to lose faith in my fellow aviculturists, and if you will bear with me to the end you will see why. The first surprise came when cock No. 1 laid an egg and was in no wise ashamed of the fact, but after being lectured on the unseemliness of a cock laying eggs proceeded to lay another. However, the second bird did not so far forget himself as to lay eggs, but displayed his crimson beak to all and sundry. In this guise they came into my possession last May. They built and laid and sat in a way that would shame any advanced woman. But all to no purpose. I got Butler's "How to Sex Cage Birds," and further advice was sought and taken. Great pity was expressed for my lack of experience and sanguine hopes of a brood of young from every pair of birds. Like Agrippa, I was almost, but not quite, persuaded. The affection of my birds was manifest and unquestionable. At last, November's dreary night-like days appeared, and one of my Diamond finches got very humpy, and evinced that degree of uncanny tameness that speaks of a happy hunting ground where there are no bars, no cats, and no Owls at night, and where every mother bird can hear the music of hungry nestlings calling for their ministrations. I easily caught her up and put her in my warm bird-room, where she became my closest friend, but death, the evil

and thirsty one, gathered her one night, and Charon took her on that journey whence the wayfarers never return. But I am digressing. I examined the eggs, they were all clear, and once again I was rash enough to think for myself, pink base or no pink base. I saw a cock advertised in Edinburgh; I sent for him and he made the journey down south during that very cold weather of this winter. But he never turned a hair until I put him in the flight, and that only after 36 hours resting up on the warm pipes. When he, for it was a "he," saw the other supposed "he," the real and new "he" nearly had a traumatic dislocation of the cervical vertebræ, and as to the other and original "he," she simply proved a little minx. Subsequently I obtained another cock from the Rev. John Paterson, who, I regret to say is leaving us again for Cashmir. But by that time my other little friend was feeling too ill to take any stock of the male article, and his gavottings and neck twistings were simply lost on the desert air. But he was, and still is, a cock, and the first introduced cock doesn't forget to let him know it either, even if I did. Curiously enough Mr. Sich (our fellow member) had two cocks all last season and I had two hens. We both suspected it and yet both forbore to suggest an exchange. His, too, were sold as a true pair. I have thus been brought in contact with eight birds for Mr. Sich, subsequently obtained a hen bird from Mr. Frost. This last has, alas, also gone to the happy hunting ground. The result of my observations is this. The beak of all the four hens that I have seen has been a bright coral red with a slight pinkish stripe at and around the base of the upper mandible. All four cocks that I have seen and handled have had a dark, almost magenta, red beak with a lighter band at the base. But the mandible is so much darker than the hen that I can tell mine apart instantly even with only one in view. Is this a coincidence or a constant? I am utterly unable to detect any other difference, except as regards behaviour. In that respect the difference is so marked that the veriest tyro could sex the birds. The hen, of course, *never* displays or bobs up and down, like a lady at the end of a bathing machine rope, with a piece of grass in her mouth. With the cock, however, these antics seem to be his chief amusement. The notes are of course entirely distinct, but as musical expressions generally fail to convey any impression to average

readers I will forbear,—besides which I don't know anything about music. I have already dilated all too much on our Diamond finches, so with the Muses we will join and sing, "Sic transit gloria guttatae," and pass on to the next.

If there is one more charming bird than all the rest it is the super-elegant, vivacious, charming Long-tailed Grass finch (*Poëphila acuticauda*). During the last year or two aviculturists have discriminated between what used to be the better known Yellow-billed variety and the more often introduced (recently, at any rate) Red-billed variety and called it Hecki. Speaking personally, I much prefer the latter, and I can detect, or fancy I can, a very distinct difference in colour as regards the body tint, especially in the chest and abdomen. In Hecki it is quite a shade darker with a dash of reddish tinge in it. That and the Red-bill does away with the anæmic and rather æsthetic appearance of the Yellow-billed variety. To sex these birds is indeed a puzzle. With all due respect to one or two dealers who have enlightened me, I don't believe the size of the gorget is any criterion at all, and I have, alas, had a good few through my hands which (whisper it not) have gone to swell the majority. One hen had a very tragic end. She had three times been egg-bound, and each time the dry heat treatment had cured her. But the last was the last, for on letting her out of the small cage she flew out with a joyous twitter to join her grief-stricken husband, for he had been inconsolable in her absence, when she dropped dead, as though shot, with a little thud to the ground. She never even breathed again. I am no pathologist. I am a sceptic instead, but I think we may venture ruptured blood-vessel as the cause of death. I thought the cock bird would die of grief, but by a great stroke of fortune I obtained a Yellow-billed hen for him, and he sits and curry-combs her toupée and kisses her neck all the livelong day. He is as happy as a king. Long may it last! In my humble opinion there is only one way of sexing these birds, and that is by the bill and by the behaviour of the birds towards each other. True the hen appears a little slimmer as regards head and neck, and less inclined to "boss" it over the other inmates of the aviary. But the differences, if any, are extremely minute. It is hardly necessary to specify the differences in the bill. Suffice it to

say that in the hen bird the bill is less massive than in the cock and narrower at the base. It is only fair to add that my wife, who is almost as keenly interested in my birds as I am, believes the gorget is larger and broader in the cock than in the hen. In some cocks I am sure it is, and when very broad it is almost indicative, but I am positive that it is not a constant distinction, and that some cocks have as small a gorget as many hens.

I must not write more or our Editor will be sharpening his blue pencil.* As it is I must apologise for using up so much valuable space, and crave indulgence once again.

THIRTY-TWO YEARS OF AVICULTURE.

BY DR. A. G. BUTLER.

(Continued from page 229.)

The Waxbills (*Estrildinæ*) are fascinating little finches, but unfortunately some of the most attractive of them are extremely delicate, especially when first imported; according to my experience, four to five years in captivity usually sees the end of the majority of them, even of the more hardy species. I have had examples of the following:—Common Lavender finch, an active but decidedly delicate bird when first imported; I have had many examples, a few of which lived for more than a month, and none for more than four years: its delicate beauty tempts one to purchase it in spite of its fragility. Common African Fire finch, a very attractive midget of which I have at various times bought many examples, none of which survived for much over a week; that vigorous examples do sometimes come to hand, however, is evident from the fact that it has not infrequently been exhibited, and that Mr. Farrar even succeeded in breeding it.

Of the common Amaduvade, one of the hardiest of the group, I have had dozens, in fact it was the first Waxbill and one of the three first foreign birds I ever possessed, and I paid a preposterous price for my first pair, having no idea of its actual value. I found this Waxbill quite indifferent to cold: it is an interesting bird from its frequent changes of plumage, the males at one time of the year closely resembling the females, thus invalidating the sole character

* On the contrary, my pen is saved much labour!—ED.

upon which Shelley founded the Sub-family: fortunately, if we restrict the group to the Waxbills alone, other features exist. The Gold-breasted Waxbill, of which I have also had many examples, is almost equally hardy, although my earliest specimens gave me the impression that it was delicate; it is one of the smallest and prettiest of the Sub-family.

The Orange-checked Waxbill, another hardy favourite, has often inhabited my aviaries; as pointed out by Russ, it is an extremely nervous bird, scared by the least sound or any sudden movement, thus sometimes creating a causeless panic amongst its tiny associates. Ridgway describes the females of specimens introduced into Porto Rico as having "no orange on side of head" (*Birds of North and Middle America*, vol. iv., p. 288), a curious change to have been effected by transference from the Old to the New World! The Green Amaduvade I found the hardiest and longest-lived of all the Waxbills; it is beautiful in colouring: I have had nine examples in all. It has a mischievous habit of attacking and partly denuding of feathers fresh examples of its own species introduced into its aviary. I believe it to be the easiest to breed of all the Waxbills; indeed I almost succeeded in breeding it myself in indoor aviaries.

Contrary to Dr. Russ' experience, I found the Australian Red-browed Waxbill very hardy, and I have had a fair number of specimens: as usual, in indoor aviaries the hens were liable to die from egg-binding, but most of the small Ploceid finches suffer in this way if they attempt to go to nest indoors; at any rate that is what happened to my birds. The St. Helena Waxbill, which many bird-lovers consider tolerably hardy, I found distinctly delicate; about eighteen months being the limit of its life with me, and I have tried to keep it many times. Though even more delicate when first imported, I found the Grey Waxbill, when acclimatized, tolerably long-lived and easy to keep.

I have had four Crimson-winged Waxbills, three males and a female, the latter only lived with me for four months and the male of my first pair died after ten months, the second male lived a little over a year; the fourth bird (apparently of the Northern type) was sent to me anonymously early in 1906, and it died after two years and seven months in my aviaries. This and the other species

of *Pytelia* always struck me as rather apathetic and sluggish birds: my Crimson-wings delighted to bask in the sun, but on dull days they used frequently to hide in a bush; excepting in disposition, they seemed to me to show relationship to the Lavender finch; but perhaps they may come nearer to Sundevall's Waxbill.

My first pair of Cordon-bleus was given to me by Mr. Johnston, brother of Sir Harry Johnston of Uganda fame; he used to exhibit at the Crystal Palace in those days. That was in the early days of my bird-keeping, and I remember that I thought that pair the most lovely example of delicate colouring that I had seen in any birds, and was much surprised to hear that they were quite cheap. After that, in spite of the delicacy of Cordon-bleus, I was never without them for many years. At one time I thought I had secured examples of the Blue-breasted Waxbill (I had not then had an opportunity of comparing living specimens of the two species, or I should not have been deceived): of course at the next moult the males acquired the crimson ear-patch. The colouring of the soft parts, apart from the extent of blue on the body, distinguishes the two species at a glance. I never had the Blue-breasted bird.

My experience of the Violet-eared Waxbill was most disappointing: Miss Gladstone sent me a perfect pair, which I turned into one of my two outdoor aviaries: but the hen died suddenly while flying, falling to the ground as if it had been shot, and the cock evidently got into trouble through fighting and only lived a little over a week. Like the Cordon-bleu it is a delicate bird when first imported, and is so expensive that only a rich man could afford to replace it continually until vigorous examples were secured: I never heard my cock bird sing, which was a further grief to me. So much for the twelve species of Waxbills which I have had, not one of which I succeeded in breeding owing to the unsuitability of my outdoor aviaries and to the fact that my indoor aviaries were, perhaps, too overcrowded.

With Grass finches and Mannikins I was rather more successful, though one of them—the Pintailed Nonpareil—owing to its delicate constitution was always more or less a source of trouble: its melamistic variations are interesting and worthy of a coloured illustration because of their extraordinary divergence from the normal

type: altogether I have had ten examples of the species and the longest-lived only survived for two and a quarter years. With Gouldian finches, of which, at different times, I have possessed about fifteen pairs, I was at first almost equally unfortunate; but later, owing perhaps to the greater number imported and the care taken of them during the journey over, I found these birds far less delicate, and, when kept out of doors, quite hardy and ready to breed; but undoubtedly the strongest birds are those bred here, since a cock which I bred in 1905 is still in vigorous health as I write.

Of the Masked Grass finch I have only had a pair; they used to pretend to build and sit about in nest-boxes, but they never definitely settled down: I found them rather uninteresting birds. Of Long-tailed Grass finches I have had two pairs, of which an example purchased in 1906 is still alive as I write, I have also had one female of the form with red beak; but the most pleasing of the group is the common Parson finch, an impudent little bird which always reminded me of our Blue-tit in its actions: of this species I have had about a dozen pairs. At times this little finch is apt to be aggressive and even spiteful towards other small associates, but one cannot help liking it; as previously mentioned, I only once succeeded in breeding it, but in an indoor aviary.

At fairly long intervals I have had three pairs of the beautiful Diamond finch: I did not find them very long-lived birds, my last male however far excelled the other five in longevity. Of the Rufous-tailed or Star finch I have had seven examples, and the first pair, for which I paid £2, died within six months; of those purchased at a much lower price about ten years later, the hens far outlived the cocks; they are pretty little things but not especially interesting. I must, since the commencement of my avicultural studies, have had at least a hundred of the common Zebra finch. Not only were these birds very cheap, but with me they bred freely either as single pairs in small flight cages or in indoor aviaries, accepting almost any kind of nesting receptacle. I turned twenty pairs into the central division of an ornamental wire-aviary in my conservatory, and even there several of them went to nest and reared one or two youngsters upon seed alone.

I have had six of the lovely little Bicheno's finch and one

pair of the Ringed finch ; most of them did not survive for many months, but one Bicheno's finch lived for three or four years, and one Ringed finch for over a year. I believe these little birds require plenty of small living insects to keep them in vigorous health. Of Cherry finches I have had three pairs, two of which attempted to breed, both building and laying, but in each case the birds were interfered with ; as they are quite hardy, I was a good deal disappointed when these birds died without leaving progeny to fill up the vacant place. Mr. Abrahams gave me a pair of the Indian Silver-bill, but they proved to be extremely delicate and did not live for many months : the African Silver-bill, of which I have kept many specimens, is far more hardy, but I never succeeded in breeding it.

I have had many Ribbon finches ; they are not altogether trustworthy with weaker birds : my first attempt at breeding the species was the only successful one owing to the susceptibility of the hens both of this species and the Red-headed finch to egg-binding ; of the latter finch I have had four cocks and one hen : males of both species are fairly long-lived as a rule. The genus *Amadina* is a group which might be placed either among the Grass finches or Mannikins, between which it is a connecting link. As a matter of fact the two divisions of the *Muniinæ* are purely arbitrary and merely a convenience for breaking up a long series of species ; in like manner the Quail finch might be placed in either division.

Of both Sharp-tailed and Striated finches I have kept many examples ; as also, of course, of the three varieties of the Bengalee. The Common Spice-bird was one of the first foreign birds which I purchased (at an absurdly high price) ; subsequently I had many examples, among which there were doubtless individuals of the true Bar-breasted finch (*M. subundulata*). Mr. Abrahams gave me a pair of Tugela finches in 1894. Of Pectoral finches I have had seven examples, two pairs which I bought and three specimens sent to me anonymously ; they are handsome birds, but rather inclined to interfere with the nesting-operations of other species and not especially interesting themselves ; they seemed fairly hardy, but several of them appear to have escaped from my aviaries through surprisingly small knot-holes in the wood ; unless, perchance, they

were devoured by mice, which seems unlikely since much smaller and weaker birds were untouched.

The typical Mannikins of the genus *Munia* I consider the most stupid and least interesting of all finches, so far as their habits are concerned: some of them are ready at any time to build and lay, but are too nervous to sit steadily; others make no attempt at breeding unless placed in a suitable outdoor aviary such as I never possessed; the songs of most of them are contemptible, and the efforts which they make when singing ludicrous. I have had nine Chestnut-breasted finches and found them hardy and long-lived; of the allied Yellow-rumped finch I have had ten, of which one still survives as I write: both of these birds have audible songs. Of White-headed Mannikins I have only had two pairs; of Black-headed, several dozens: this was one of the three first foreign birds I ever possessed, for each pair of which I ignorantly paid sixteen shillings and eight pence.* Since that time I have at different times purchased examples at five and six shillings the dozen. I have had two or three pairs of the Three-coloured Mannikins which I consider one of the prettiest of the group.

In the present day, when there is a tendency to split up both species and genera, it puzzles me greatly to comprehend why the Java Sparrow and its allies have not been kept separate from the other forms of *Munia*: to the eye they stand out at once as a very distinct group; and, as a generic name (*Padda*) already exists, I see no reason for ignoring it. I have had a considerable number of the common Java Sparrow, and at one time used to breed it in its grey, pied and white varieties in considerable numbers every year, but now I have only a solitary specimen still living.

Of Mannikins of the genus *Spermestes* I have had one pair of Magpie Mannikins, and they lived, one for four the other for six years, a most uneventful life; but this I found to be characteristic of the genus. The two-coloured Mannikin was caught outside the Natural History Museum and was brought to me by a policeman; whether the fact of its being taken up as a vagrant was too great a

* Perhaps I ought not to reckon them at quite that price since, in addition to three pairs of common birds, I got the cage (a metal one) which contained them.

degradation and broke its heart I should not like to say, but it died that night, so that I had no chance to study this most beautiful of its genus: of the allied Bronze Mannikin I have had a fair number, but the hens always died egg-bound. I purchased two or three of the tiny Bib finch in poor condition, but did not succeed in keeping them long; they were probably on their last legs when they came into my possession. The Mannikins (as a sub-group) are, generally speaking, hardy and long-lived.

(To be continued.)

MY BIRDS AT BRINSOP COURT.

By HUBERT D. ASTLEY.

(Continued from page 206.)

It never rains but it pours! I wonder whether other people find that if there is one loss or tragedy amongst their birds, it is sure to be followed by one or two more.

A few weeks ago my splendid Red male Flamingo, which arrived from Mexico last autumn, and which I had carefully tended through the winter, was found dead.

The crop was full of wheat, he was fat and well liking, and only the day before I had been congratulating myself on his improved appearance, his energy in sparring with his European cousins, his colour becoming more vivid, and on his whole demeanour being that of a bird gaining in health and strength. "Well," I said, "if that's the only loss I must feel fortunate," and tried to buoy up my fallen spirits with that poor comfort; but I had my doubts.

I was like a housemaid at a house I was staying in, who, having had a sharp misunderstanding with the cook, on its being put before her that the ruler of the kitchen really was not a bad sort and meant well, replied, "*Well! I 'opes Fanny will go to 'eaven.*" Her doubts have yet to be verified; mine have not.

I was about to take up my pen to write glowing accounts of my Cranes, how handsome they all look in one large paddock together, etc.: when it seemed to me by the calling and trumpeting that something was wrong, for some of the cries had a sound of distress. Looking out of the window, the first thing I realized was

that three of the Cranes, a Manchurian and a pair of Australian, had managed to flap over the six-foot wire fencing, and that some great commotion was taking place. Then to my horror I could see the pair of Indian Sarus dancing a war dance over a fallen Crane, every now and again digging at it viciously with dagger-like bills. Out I rushed like a whirlwind, over the stone bridge and paved terrace, across the lawn, vaulted the railings, and away over the meadow. By the time I reached the Crane's paddock I made certain the poor Australian was done for; she lay all of a heap, perfectly still, head and neck doubled under her body, and one big wing sticking up moved only by the April wind. My language was so strong that I looked round and felt relieved that no one was near.

Much to my astonishment, on lifting up the fallen bird I found it was still alive, but grievously wounded about the head, one eye being apparently destroyed. When I had carried it to a small stream close by to lave its poor head, and then made to put it gently on the grass, it rose up with a hoarse cry of terror, stumbled forwards a few feet, and then collapsed in a heap with its neck and head underneath its body, just as I had first found it.

I looked back at the pair of Sarus, stalking about in triumph, and shook my fist. Were I to record what I said to them, all the *respectable* members of the Avicultural Society would at once resign, and it goes without saying that that would embrace the whole Society!

After having taken the wounded Crane to the house, and summoned to my aid my Bird-keeper, I went out to look for the Manchurian—the pair of Australians which had got out were walking about the meadow fairly quietly—but the Manchurian was scared, especially as he was separated from his mate, and had already reached the far end of a very long meadow, apparently with some idea of walking to Hereford, $6\frac{1}{2}$ miles distant. We headed him, as luckily there was a high hedge to limit his peregrinations in that direction, walked him back towards the Cranes' paddock, and just as we thought we had him in, away he went with large flappings, dived through a gap in a hedge of overgrown hawthorns, and up a field of plough sloping towards a wooded hill. I ran, and he ran, and we all three ran. The great Manchurian first, I second, and the

Bird-keeper a bad third! The bird made for a shut gate, jammed his head through the bars, and struggled to get through. When within five yards of him, he started off up the slope and gained the wood. Now I shall get him, I thought, he'll have to come to a stop: for the wood was thick in undergrowth. Not a bit of it, I might have been chasing a deer, so quickly did that bird scamper through, dodging underneath nut trees and saplings of all sorts. Darkness coming on, and I, like "Charley's Aunt," still running; but the despairing part of it was, that whereas I was blown, the Crane was not. It was all I could do to keep him in sight, and that wood going up and up to hill-tops, and on and on for at least a mile, made my heart sink. Then at last I did lose him, and all I could do, and I only just did it, was to run up the hill beyond where I had seen him disappear, and come down again on him whilst he was still on the home side. Just as I was giving up the search in despair, I caught sight of his big white body among the trees below me. He saw that I saw! set up a great "kraur-r," and was off again, plunging down the hill amongst the thickets: but towards home. When I reached the outskirts of the wood, having nearly spiked an eye with a bough in my wild downward rush, there he was in a large field, going like the —, well! the *wind*! Stumbling and panting over the heavy, rich, red-brown Herefordshire plough, I turned him, so that he scrambled over a hedge into the adjoining field, and if he didn't make up hill again towards the wood! I verily believe that the winner of a mile race at the 'Varsity Sports would have sunk down long before; true I felt ready to drop, but head that bird off from the wood I must, and I did. Flapping madly towards his own moat, entangled for half a minute in the hedge he had to surmount, when for half a second I thought "Now I *shall* get him," he gained the island which the Crane's moat encircles, and I confessed myself partly beaten, and went indoors, or rather dragged myself there. To my relief he was still on the island next morning, separated from his mate only by the wire-mesh fence.

Such are some of the amenities and vicissitudes of aviculture!

Just on the other side of the moat, the water of which flows round the house, live in an apple orchard four Crowned Cranes, two



CROWNED CRANE.
(*Balearica regulorum.*)

Photo by H. Wilford.



of which are a nuisance. A stranger on walking by them would think for the first minute or two, "What charmingly tame birds!" for these two would walk forward, marching sedately by that stranger's side for some few paces. Naturally the stranger stops to speak to them. The two Cranes put their heads together (literally), hold converse of low guttural sounds, and are apparently saying "Not quite the society *we* are accustomed to my dear," and then without another word of warning they are at one, tooth and nail, and I prefer the former to the latter, for their claws are uncommonly sharp and have a slight hook to them, and they do really claw, and must I think be incarcerated. More unprovoked and vicious attacks than they make I never witnessed.

The first time it happened was when I stooped down with a bowl of melox to lay at their feet, whereupon I felt a sharp blow on my hatless head, the male Crowned Crane having jumped on it. I had a sore arm for several days where one of his talons had caught me.

"What *horrible* birds you do keep," a guest said, and really not without reason in that instance! The cry of these Crowned Cranes is not musical, it is monotonous and tuneless; when all four join in the chorus it sounds like two or three motor cars, or "*Har-hux, Har-hux, Har-hux*"; none of that wild-sounding "*kr-r-ar*" of European, Manchurian and other Cranes. No doubt at a little distance, which does often lend enchantment, the cries of a large company of Crowned Cranes on the shores of some African lake, sound better.

And these Cranes, though they can be gentle, have an expression of exceeding fierceness in their eyes of pale straw colour with the hard-looking and small dark centres.

(To be continued).

GARDEN FRIENDS.

By Miss ETHEL CHAWNER.

Birds have been cherished in this garden for the last twenty years, and it may interest some of our members to hear about them, though there is nothing at all remarkable to record.

Our chief friendships are with Robins, Tits and Chaffinches,

Blackbirds and Thrushes—though familiar enough to make their wants known when under stress of weather or when hungry families have to be provided for—keep their distance and obviously look on us as a kind of ‘Whiteley’ or ‘Harrod,’ to be patronised when occasion arises. Robins are differently constituted. For the last ten years at least we have never been without one or more finger-tame Robins, who invade our rooms, observe our exits and our entrances, and generally use us to suit their convenience. “Bounce,” our reigning Robin, does more than perch and away: he hovers in the air like a Humming Bird while the mealworm tin is being opened, and then sitting on a finger he picks out what he desires, perhaps stopping in the middle to sing a few notes or put a feather to rights. A short time ago he introduced his wife “Bet,” who at once showed herself as fearless as he, and comes just as readily to hand. “Bounce” will be four years old next June: he is the child of “Jane,” who was utterly fearless and who largely reared him on mealworms. “Jane” came to an untimely end, but fortunately we had already gained the confidence of her speckled nestlings, and “Bounce” we hope is good for several seasons yet. When callers come he is always to the fore, ready to show off and be fed; he appears in the kitchen, in the drawing room or in my bedroom with equal confidence, and I have more than once been awakened by his trill shouted literally into my ear, and have found him on my pillow demanding immediate attention. Or he comes in dripping from the birds’ bath on the lawn to dry himself on my towels. When mealworms are not forthcoming he will condescend to “pine nuts.” These nuts, really the kernels of the stone pine, are most useful in winning the confidence of birds, who all take to them at sight. Tits and Finches of all kinds delight in them; Blackbirds and Thrushes bolt them like pills as fast as they can swallow, and Warblers generally enjoy them slightly crushed. They are clean to handle and carry about in the pocket, and a pound, which costs about 1/2, lasts a long time.

Great Tits, Blue Tits and Cole Tits all visit my room regularly for pine nuts. They come attended by their families in the summer, and it is pretty to see a brood of young Great Tits sitting on the dressing table while father and mother ply them with pieces of the kernels. For some years I had a special friend, a kind of super-Tit,

who taught himself to fly down and dive into a bottle, which I held up, for his nut. This trick was entirely his own invention and I have never been able to persuade any other bird to attempt it. My little friend (a Blue Tit) was most particular and would only "oblige" if his own bottle was held up. During the summer he always disappeared and I saw nothing of him until the first frost brought him back spruce and confident as ever. This lasted three winters and then, to my deep regret, I saw him no more.

Tits are proverbially mischievous and inquisitive, and my familiars are no exception. When they have emptied their dish of kernels they examine books—my Spanish Authology, unwarily left on my bed table, has its wrapper torn and pierced in their search after knowledge—the dressing table (a favourite joke is to tug the pins out of the cushion, carry them to the edge of the table and drop them into space); the walls of the room: picture frames can be hammered and excavations made round nails and quite a respectable amount of paper torn away or plaster destroyed. I have even found the holes in my sponge neatly packed with pine kernels, a deed which I put to the credit of the Cole Tits, who are very fond of making stores and forgetting all about them. But in spite of these misdoings they are such dainty rogues and have such amusing ways that I have not the heart to banish them.

The Chaffinches do not as a rule come into the house, but lie in wait when we go round the garden, calling loudly until their demands are attended to. They also like to feed their young on pine kernels as well as mealworms.

It is curious that neither Marsh Tits nor Nuthatches, both common here and both domesticated in other gardens not far off, have so far responded to my advances. Only once have I had dealings with a Marsh Tit when, during a spell of severe frost about six years ago, one of these birds entered a garden aviary and refused to be turned out. He made himself quite at home, living on hemp seed and mealworms and became very masterful towards the other inhabitants. so that I was not very sorry when spring came and he took his departure.

I fear that I cannot lay claim to any particular discoveries from my observations of these species. Robins I find make "cast-

ings" nearly as freely as do Owls and Hawks, but this fact is as well known as the Cole Tits' habit of "casting their bread upon the waters" and forgetting all about it. I can only say that I derive great pleasure from my garden friends and they are a never failing delight to children of all classes. Errand boys, Sunday school classes and workmen are always greatly impressed by the sight of uncaged birds coming to hand, and in some cases have successfully tamed birds for themselves.

Last year a Thrush nested in the enclosure where a boy keeps his pigeons, finding her way in and out as they do, and she was allowed to rear her young and depart in peace with them when they were fledged. Another has a Robin which comes in at his window, and not long ago a boy gleefully told me that a Tit is nesting in a cocoa-nut which he had hung up. This, it seems to me, is a form of nature study which should be encouraged by all aviculturists.

CORRESPONDENCE, NOTES, &c.

DUCKS BREEDING AT DEREHAM.

Up to date (May 5th) I have some 300 Ducks' eggs in process of incubation, all laid here, composed of the following species:—Carolinas, Mandarin, Ruddy Shellduck, Cinnamon Teal, Common Teal, Blue-winged Teal, White-eyed Pochard, Red-crested Pochard, Common Pochard, Rosybill, American Wigeon, Chilian Pintail, Common Pintail, Gadwall, Shoveler Tufted Duck, Ruddy-headed Bernicle Geese. In addition to these I have found four or five nests containing four to six eggs, which I shall not be able to identify until I catch the owners on the eggs. It has been a very early season here, Rosybills and Ruddy Shellduck (usually late layers) "went down" on full clutches a fortnight ago! Chilian, Ringed Teal, and various other species appear on the point of laying. H. WORMALD.

Mr. A. Ezra has received from India, amongst other birds, some of the handsome Red-headed Bullfinches (*Pyrrhula erythrocephala*). In style and size resembling the European bird, the male has the head and breast a bright orange red, with small black mask round the bill.

* * *

Through the kindness of Mr. David Ezra, Mr. Astley has lately received a lot of Cotton Teal (*Nettopus coromandelianus*). For 30 years Mr. William Jamrach tried without success to import these pretty little water fowl, so that it became a fixed idea that they could not be kept in captivity. Mr. Astley has one in perfect health that landed in England on the 25th of January, 1914.

Mr. A. Ezra has presented a pair, out of the consignment sent over by his brother, to the London Zoological Gardens.

NEW MEMBERS.

- Miss M. BOUSFIELD, 58, Southbourne Road, Bournemouth.
Mr. D. MASON, 23, Prince of Wales Terrace, Kensington, W.
Mr. HERBERT BRIGHT, "Lynton," Eaton Road, Cressington Park,
Nr. Liverpool.
Mrs. PAGET STEVENSON, Cross Bank Hill, Hurworth-on-Tees, Darlington.
Mr. OXLEY GRABHAM, The Museum, York.
Mr. C. F. LEACH, Vale Lodge, Leatherhead.
Mr. INIGO THOMAS, 2, Mulberry Walk, Church Street, Chelsea, S.W.
Mr. G. E. HAGGIE, Bruncombe, Foxcombe Hill, Oxford.
-

CANDIDATES FOR ELECTION.

- Mrs. G. BRAMPTON, Queen Anne Lodge, Stoke Newington, N.
Proposed by Dr. A. G. BUTLER.
The Hon. Mrs. FITZGERALD, 18, Clyde Road, Dublin.
Mr. G. DAVIES, 96, Greenfield Terrace, New Tredegar.
Mr. JOHN W. HALKES, The Limes, 141, Monk's Road, Lincoln.
Proposed by THE EDITOR.
-

THE MEMBERS' TEA.

The Council of the Avicultural Society begs to invite the members to afternoon tea in the Fellows' Tea Pavilion in the Zoological Gardens, on June 19th, at 4 p.m. Those who wish to be present are requested to inform the Hon. Secretary not later than Tuesday, June 16th.

R. I. POCOCK, Hon. Sec.,
Zoological Society,
Regent's Park, N.W.

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The charge for members' advertisements under this heading is FOUR PENCE FOR TWELVE WORDS or under, and one penny for every additional three words or less.

Continued from p. iii of cover.

NOTES.

The Editor thinks that there are still members who might help with the *Illustration Fund*.

* * *

The Editor also thinks that as he does all the work for nothing, besides paying from his own pocket for all the postage of the numerous letters he writes, including those to the Publishers *and* Printers of the Magazine, that he need not hesitate to urge members who can afford it, to help to defray the big expenses in connection with the illustrations !

* * *

Another thing that occurs to the Editor's mind is that some members have apparently dropped out of their excellent habit of contributing Articles and Notes, which retrogression is rather hard upon *him* ! and the Magazine !

* * *

Editors who make plenty of money also seem to receive plenty of "copy." This is an unfair division of things. To work hard, and to receive neither one nor the other is somewhat disheartening.

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*J. H. Riley
Recd
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All MSS. for publication in the Magazine, Books for Review, and Private Advertisements should be addressed to the Editor, HUBERT D. ASTLEY, Esq. Brinsop Court, Hereford.

All Queries respecting Birds (except *post mortem* cases) should be addressed to the Honorary Correspondence Secretary, Dr. A. G. BUTLER, 124, Beckenham Road, Beckenham, Kent. [*Enclose Stamp for reply*].

All other correspondence, should be sent to the Honorary Business Secretary, Mr. R. I. POCOCK; Zoological Society's Gardens, Regent's Park, London, N.W. Any change of address should at once be notified to him.

Dead Birds for *post mortem* examination should be sent to Prof. G. H. WOOLDRIDGE, Zoological Society, Regent's Park, N.W.

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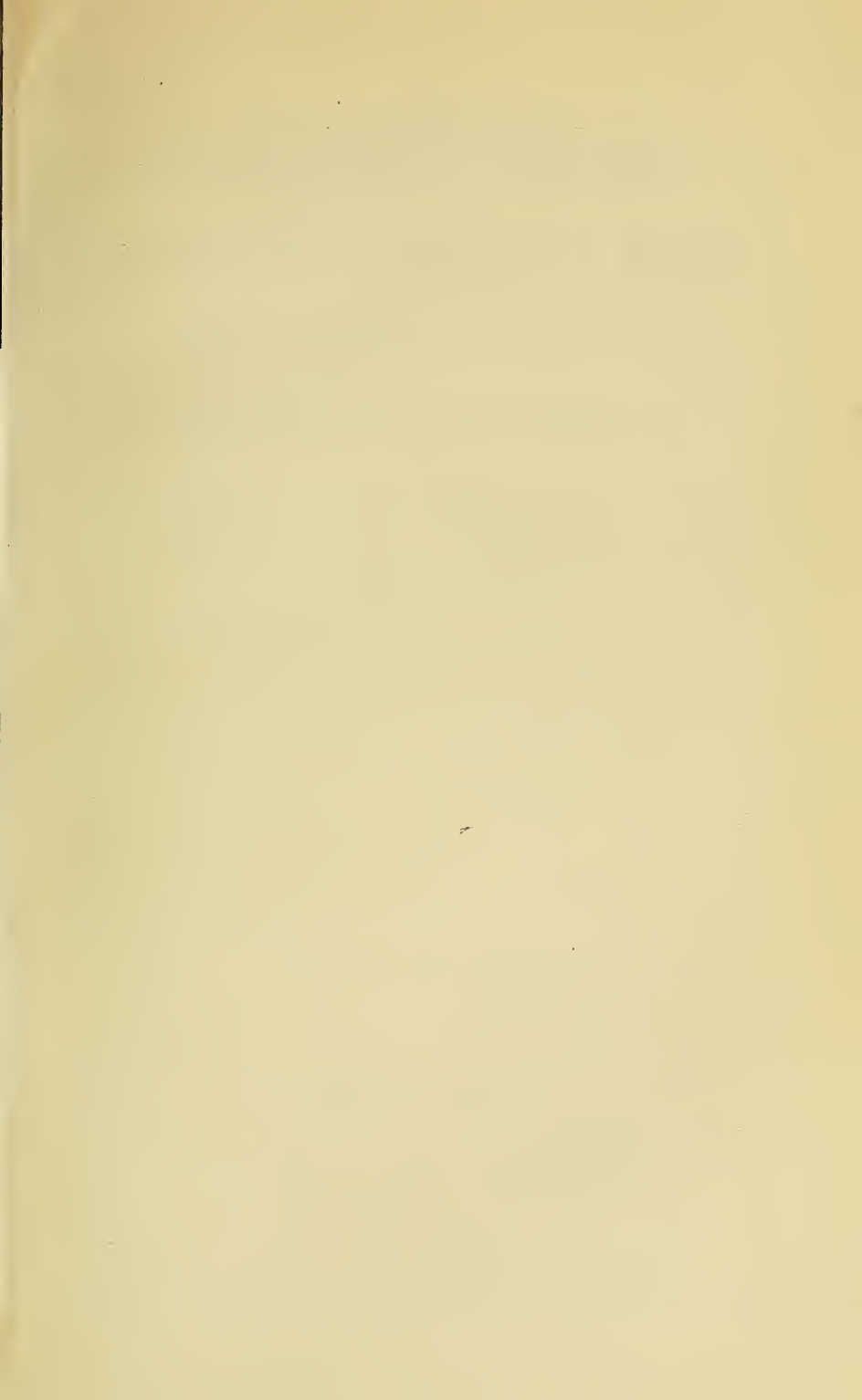
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YELLOW WAGTAIL (*Motacilla raiti*).
FEMALE OCCUPYING A FAVOURITE STAND.

Photo by J. H. Symonds.

AVICULTURAL MAGAZINE,

BEING THE JOURNAL OF THE

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THE YELLOW WAGTAIL.

By J. H. SYMONDS.

During my summer fishing excursions as a boy to a deep pool in the river Ivel some eight or ten miles north-east of Bedford, I well remember the Yellow Wagtail as my constant river companion. Perhaps only a few yards away he was to be seen daintily pattering about some floating patch of weed or on a mass of cut rushes that had come down stream and found an anchorage against the wooden piles that remained as evidence of a once existing boating stage. Often his dainty walk would break into a jerky little run, followed by some wonderful sudden turns in mid-air that almost defied the eye to follow as he sought some luckless winged insect, and, judging by the continuous snapping of his beak, many met their death. Sooner or later, however, a fresh cast of my line would send him looping to the next floating hunting ground. At the particular point mentioned the river runs through two or three rough damp meadows, freely sprinkled with tussocks of coarse grass, and thus admirably suitable as a nesting haunt for these birds.

One afternoon in June I wandered across these same meadows with my camera, keeping a sharp look-out for any movement on the part of the birds that would give me a clue as to the whereabouts of the nest. By freely using my field glasses I was not long in finding a nest of young, but, unfortunately for my purpose, they were too far advanced in life; in fact, they were on the point of leaving the nest. It now being late in the season, I abandoned all hope of photographing the Yellow Wagtail that year. However, I resolved to remember my little yellow bird friends when they returned from

their North African winter quarters in the next spring. But as fate would have it, I was obliged to see that spring and summer go by without result, and during the dull days of winter I forgot them altogether. With the welcome song of Willow Wren, White-throat and Cuckoo in the following April the Yellow Wagtails came back to memory, and towards the end of that month I set off to the rough meadows by the stream to find them. I was soon greeted by a slightly drawn-out high cry "Wheet," and a Yellow Wagtail alighted upon a fence near by with material for nesting purposes. After watching both birds visit a particular spot a few times, I went and found they were busy making their home cosy with a lining of horsehair, both birds meanwhile hovering overhead uttering a repeated anxious cry of "Wheesit," "Wheesit." Apparently the nest would be ready for eggs in about two days' time, and being thus satisfied with my mission I returned home. My next visit was early in May; the nest then contained four eggs indistinctly spotted over with ash-grey spots on a dirty white background, and five ultimately made the full clutch. Some bitterly cold weather whilst incubation was in progress reduced the number of fertile eggs to three, which had hatched out three or four days previously to my going over with a camera and "hiding" on the 19th of May. As the weather conditions were favourable I commenced work at once. The "hiding" was erected barely four feet in height about twelve feet from the nest, and then from a distance, by the aid of my field glasses, I watched the birds frequently go to the nest. Being thus assured they were not alarmed at the strange object, I left the immediate neighbourhood. Returning in a few hours I slipped into the hiding and hitched it up by degrees from the inside during the birds' absence until I got it within workable distance. I found the Wagtails uncommonly indifferent to any little sound proceeding from the tent, and the parent birds sat alternately quite unconcernedly on the nest whilst I arranged the camera, taking of course all care to work as quietly as possible. The hen Yellow Wagtail often retired to a favourite spot a yard or so from the nest for a moment's pause in the arduous task of foraging for the family, and here her actions were interesting. Should a fly venture near she would crouch low like a cat getting ready for a spring, then, at the opportune moment



Photo by J. H. Symonds.

NEST AND EGGS OF THE YELLOW WAGTAIL.
(*Motacilla raii.*)

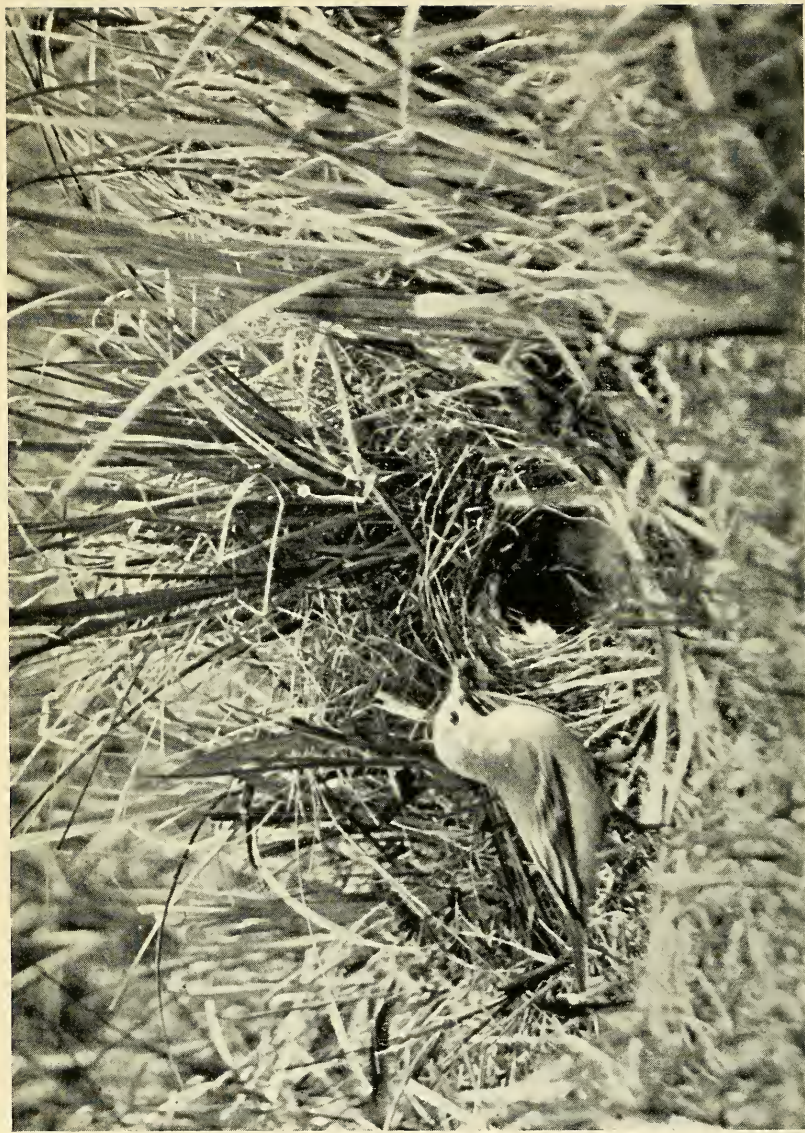


Photo by J. H. Symonds.

MALE YELLOW WAGTAIL BRINGING FOOD TO NESTLINGS.

dart forward in pursuit of the intruder. As is customary with other birds, both the cock and hen took part in the feeding of the young, the hen being, however, decidedly the most assiduous. Caterpillars and winged insects chiefly formed the diet of the young birds. Consistent with the traditions of small bird-life, the Yellow Wagtails were scrupulously attentive to the comfort of their charges; even the bed came in for an occasional shake-up. A good deal of energy was expended on this little duty while it lasted. It was undertaken by both birds; standing over the young, they pulled vigorously at the interior of the nest until arranged to their satisfaction. The characteristic inquisitiveness of a herd of Welsh cattle caused me some annoyance. They would, at frequent intervals, come and investigate my hiding, and it was disturbing to me as well as to the Yellow Wagtails that I should be constantly getting out to drive the cattle away. Some days afterwards I was again in the vicinity, and went to see if the little family had been duly reared. I saw a pair of old Yellow Wagtails feeding some fully-fledged youngsters a short distance away, so I concluded all had gone well.

THE CINNAMON TEAL.

Querquedula cyanoptera—VIEILLOT.

By MAJOR BOYD HORSBRUGH.

I must apologise for pretending that the ensuing article is mine. Mr. Hugh Wormald has been kind enough to send me the notes on the behaviour and habits of the Cinnamon Teal in captivity, and I think it will probably interest the members of our Society if I add to these some details on the distribution and habits of this beautiful little bird in its native home, as extracted from Bulletin No. 26 of the United States Department of Agriculture. The notes are written by Mr. Wells W. Cooke, Assistant to the Biological Survey. I consider Mr. Cooke knows more about N. American waterfowl than almost any other American Naturalist, and his notes are concise as well as most interesting.

For the benefit of English readers I may explain the following abbreviations:—

Nebr.	...	Nebraska.
Tex.	...	Texas.
S. C.	...	South Carolina.
Colo.	...	Colorado.

The breeding range of the Cinnamon Teal differs essentially from that of almost every other duck in the Western Hemisphere. It consists of a large area north of the Equator and a similar district south of the Equator, and these two homes are separated by a strip about 2,000 miles wide, in which the species is practically unknown. In North America the breeding range extends north to Southern British Columbia (Lac la Hache) and South-Western Alberta; east to Eastern Wyoming (Lake Como, Cheyenne), Western Kansas (Fort Wallace, Meade County); south to Northern Lower California (La Grulla, San Rafael Valley, and possibly San Jose del Cabo), Northern Mexico (Chihuahua City), Southern New Mexico (Carlsbad), and South-Western Texas (Marathon, Rock Spring).

The Cinnamon Teal occurs sparingly on migration as far east as Houston, Tex., and Omaha, Nebr. It has been noted as accidental at Oak Lake, Manitoba; Big Stone Lake, Minnesota; Lake Koshkonnong, Wisconsin; Licking County Reservoir, Ohio; Seneca River and Seneca Lake, New York; Lake Pontchartrain, Lake Cattawatchie, St. Malo, and Opelousas, Louisiana; Mount Pleasant, S. C.; Lake Iamonia and Key West, Florida.

Throughout this breeding area the eggs are deposited during May and June. About six months later the South American Colony breeds. The breeding range includes the pampas of Argentine as far north as Buenos Ayres, while in the Andes it extends north to Central Peru (Santa Luzia). Southward the species breeds as far as the Falkland Islands and Straits of Magellan. South American breeders of course are not the same birds which nest in North America, for it is true, without exception, that no bird which breeds north of the Equator breeds also in the southern hemisphere.

Winter Range.—The Cinnamon Teal of North America retires in winter but little south of its breeding range in Mexico as far as Mazatlan, Guanajuato, and the Laguna de Chapulco, Puebla. It is found at this season as far north as Brownsville, Tex., Central New Mexico, Southern Arizona, and Tulare Lake, California. South

of Mexico the only record is on an accidental occurrence in Coast Rica. There is no reliable record as yet for the West Indies.

During the winter season the Cinnamon Teal of the southern hemisphere has been noted as far south as the mouth of the Senger River, in Patagonia, latitude 44°S., and Chiloe Island, Chile, in nearly the same latitude. The northern range in winter is not determinable with exactness from present data. The species passes north to Rio Grande do Sul, Brazil, and to Southern Paraguay. It has been noted at Chorillos and Tungasuca, Peru; near Quito, Ecuador, at Bogota and Santa Marta, Colombia. These Ecuador and Colombia Teal may be accidental occurrences. It is significant, at least, that all the specimens from Colombia were taken half a century ago, and the species has not been noted there by recent collectors.

Spring Migration.—The northward movement of the Cinnamon Teal in the United States begins about the 1st of March, and arrivals have been noted at Ash Meadows, Nevada, March 18th, 1891; Grangeville, Idaho, April 11th, 1887; Chilliwack, British Columbia, April 24th, 1888, and April 22nd, 1889; Beloit, Colo., March 23rd, 1892; Colorado Springs, April 9th, 1882; Loveland, Colo., April 13th, 1890; Lay, Colo., April 20th, 1890; Omaha, Nebr., April 10th, 1896, and April 12th, 1897; Lake Como, Wyoming, about May 5th.

Fall Migration.—Southward migration occurs chiefly in September, and the northern portion of the breeding grounds from British Columbia to Eastern Colorado is deserted about the middle of October.

Migration in South America.—The Cinnamon Teal of South America is migratory in at least part of its range, for in Central Argentina it is abundant during the winter season, April to September, and rare or lacking during the breeding period. The species is migratory also in the southern portion of its range in Chile. In Northern Chile and in Peru migration records are wanting. The time and direction of the migration of this species in South America correspond closely with those in the United States, but of course the breeding and wintering seasons are reversed, since they are on opposite sides of the Equator.

Thus the Cinnamon Teal is distributed in two distinct

colonies, part of the individuals breeding far north of the Equator, and the rest about an equal distance to the south. The northern breeders migrate south after nesting, and the southern breeders migrate north. Whether or not the members of these two groups now represent sub-species, they are so much alike as to indicate a common origin and a former continuous breeding range. Whether isolation was gradual or was effected rapidly it is impossible to say, nor do we know the cause.

Mr. Hugh Wormald writes me as follows:—"This is one of the most beautiful of the whole duck tribe, though it seems to me that the name Teal is a misnomer. This duck is, in my opinion, a Shoveler; the bird's habits, shape and appearance are much more like a Shoveler than a Teal, and the courtship is identical with that of our Shoveler. These birds are now becoming fairly common in collections of ornamental waterfowl, though a year or two ago they were practically unknown; they are certainly among the most useful for ornamental purposes, being extremely beautiful, quite hardy, and, in my limited experience of them, very free breeders. Two pairs on my pond this spring produced four nests. One pair on each occasion nested at quite a distance from the water, and the other pair at the water's edge. A fact I have noticed time after time with all ducks is that when the first nest is taken or destroyed, and the birds nest a second time, the second nest is always, or nearly always, within about ten yards of the spot where the first nest was situated. The colour of the eggs of my Cinnamon Teal varied considerably; one bird produced rich cream-coloured eggs and the other laid very nearly white eggs. Cinnamon Teal are said to hybridise freely with Blue-winged Teal (*Q. discors*), though I have never seen a bird of this cross, but I am told that there are some at Falloden. Young Cinnamon Teal are easily reared, and are sturdy little ducklings, and may be fed in the usual way, and provided that there are no heavy rains while they are quite small there should be practically no deaths. I have found the glass top of a garden frame fitted into wooden legs most excellent protection from heavy rain. The front legs must be shorter than the back in order to allow the water to run off easily, and they must be made high enough to allow plenty of air to get in between the wooden sides of the "run" in front of the coop and the

glass covering. Cinnamon Teal are much tamer in confinement than most of the small ducks, which is greatly in their favour. The importation of some wild caught drakes would be a great advantage, as I fancy that the stock of Cinnamon Teal in this country is becoming "in-bred," all the birds on the market being bred either here or on the Continent, and I have seen no advertisement of wild caught birds. Moreover I believe that all the birds in this country are the descendants of a few birds bred on the Continent.

I regret that I have only a nodding acquaintance with the Cinnamon Teal in its wild state. I saw it on several occasions on the Pacific Coast in Southern California in company with Buffleheads, Shoveler and Ruddy Ducks, and was able to note the great speed it has on the wing. I was unable to see it during the nesting season as I was in California during the winter only. On various lakes in public parks where no shooting was allowed and where sanctuaries were carefully maintained, it was most interesting to see the various birds that fed tamely close at hand. Hundreds and hundreds of Shovelers, which are identical with the European bird, and small parties of a dozen or so of Cinnamon Teal, which, as Mr. Wormald says, closely resemble the Shoveler in habits, hundreds of White-winged Scoter (*Oi. deglandii*) came in to wash in fresh water and flighted out to feed towards the evening; parties of Pintail, Mallard, Green and Blue-winged Teal paddled about, while overhead floated Western Gulls (*L. vegae*) and the dark-plumaged Heerman's Gull (*L. heermanni*), and the reeds were filled with Brewer's Black-birds and Red-winged Starlings,—the whole making a picture of which one's eyes never tired.

THE GREATER SPOTTED WOODPECKER.

(*Dendrocopus major*).

By LILIAN MEDLAND, F.Z.S.

I am sending you a photograph of the Greater Spotted Woodpecker which I hand-reared from the nest. I obtained this bird in the spring of 1907, and he has just died at the age of 6½ years, creating, I believe, a record of the longevity of this species in cap-

tivity. This photograph I took in my studio, and the bird is clinging to a piece of wood placed up against the wall.

The first cage in which I put him he stayed in for just about one hour; the cage had a wooden back, and he pecked his way out of it almost immediately. I then got a cage made entirely of zinc wire, about $2\frac{1}{2}$ ft. by $1\frac{1}{2}$ ft. Occasionally I let him fly about the room, when he would always make straight for my skirt and climb up on to my shoulder and ask for meal-worms. In one instance he settled on the head of a friend who happened to come in, and commenced to peck his head (probably thinking he had found a new piece of wood!) Two of his great objections were hats and overcoats, and if anyone went near him when in out-door clothes he invariably hid himself behind his log of wood in the cage. Of strangers he was also very shy, but directly he got used to any person he would sit as close as he could get to them and utter his small, quiet "chipping" note, which, being interpreted, meant "Meal-worms!" I once gave him a companion of his own kind, which he inhospitably killed at once by pecking the new-comer's head. He would never tolerate any other bird or animal. I used to put his cage on a wide window-seat in which my bull-dog used to like to sit; this the Woodpecker resented, and used to peck the dog's back so viciously that he was forced to get down. Another animal he disliked was a black Persian cat, which usually sat on the cover on the top of his cage, and if by any chance the cat put its paws beyond this cover the bird would fly at it and peck its feet until it was compelled to beat a hasty retreat. The Woodpecker, in displaying anger, would loosen all its feathers, erect its crest, drop its wings, and literally shiver with rage, keeping its beak open meanwhile.

He was so lazy in keeping himself clean at first that I used to take him out of his cage, well lather him with a shaving brush and soap, and thoroughly wash; but after some time he would bath frequently, often twice a day. A peculiarity which he had was that of "sounding" any fresh piece of wood which had been put into his cage, and on finding a hollow-sounding spot would commence to peck a hole, in which he would place any extra large piece of biscuit or bread so that he had more power over it in order to break it up. On several occasions, when the wood had been too new, he broke



Photo by Miss L. Medland.

TAME PIED WOODPECKER.

(*Picus major.*)

the tip off the upper mandible, which however grew again after a week or so.

His food consisted of insectivorous food and meal-worms, but nothing came amiss to him, a special delicacy being a chop bone. He rarely touched fruit of any kind. He used to "talk" to me quite a lot in his way, and always at night he would respond to my "Good-night, Pecker" with a little quiet "chipping" sound. Another note was a prolonged scream, repeated several times as a rule. He also had a special, agitated, loud and repeated "Tchuck" which he used on hearing any unusual sound, a kind of alarm note presumably to give warning of approaching danger.

BIRDS OF NEW SOUTH WALES I HAVE CAUGHT AND KEPT.

By G. A. HEUMANN.

"Willst du in die Ferne schweifen,
Wenn das Gute liegt so nah."

These fine words might with good results be applied also to bird-keeping. It is human nature, however, to just want what is hardest to get, and so we commence to keep seed-eating birds, which before long are joined by the delicate and—if the purse can stand it—the most expensive Soft-bills and Honeysuckers often before we are able to or capable of keeping them alive. I was no exception to this rule, and during many visits to the Continent I always brought back of rarities whatever I could buy or exchange for such Australian birds I had taken home with me. In this way I often managed to get pairs of rare birds which I afterwards bred successfully out here, such as Scaly-headed finches, Red-collared Whydahs, Tanagers, and many more. However, I always had a warm corner in my heart for the native birds of my adopted country, and little by little, recognizing the charm of these home treasures, they filled my aviaries. Now, after 20 years of tending them, there are but few species of N.S.W. birds suitable for aviaries which have not been inmates in my flights and often bred there. Yet, I admit it to my sorrow, that before I managed to attain success I had to look down

on many a dead little songster, many a beautifully-coloured corpse, and I often felt as if I should like to give the hobby up and stop this murdering by my incapability to keep them alive. The majority I can now safely bring on to eat artificial food, set into my aviaries, and they will live with me for years. Others, like the Fly-catchers, are still a closed book to me, yet I believe even they may be kept in confinement if taken young from the nest and reared up. To sum up my experience of Australian birds and such from other countries, be they seed-eaters or otherwise, I have come to the conclusion that, as far as those are concerned which I have had the pleasure of handling, the Australian birds are infinitely harder to keep and their lives are shorter as well.

Judging by a number of letters I have at various times received from English fanciers, I thought it might interest not a few of the readers of the *Avicultural Magazine* if I tell them something about N.S.W. birds I have kept which were nearly all caught by myself, and I feel sure many of our beautiful Soft-bills could, with proper care and attention, be landed safely in England.

There is a wave of fashion just now passing through the bird-lovers of England. The magic word is "Sun-bird," so I will commence with the only Sun-bird we have just now in too sunny New South Wales.

Myzomela sanguinolenta,* commonly called "Blood-bird," and it richly deserves this name. The head, back, neck, and half-way down the breast is bright scarlet; abdomen mottled red, grey and white; wings and tail sooty black. The hen is all brown and the young like the hen. The bill is long, very slender, and slightly curved. These beautiful little birds come around Sydney early in September when the first gum trees begin to bloom. Never in quantities, they are still some years more plentiful than in others. They live high up in the big gums, and early in the morning when the sun rises their melodious call may be heard in every direction. November is the month for breeding. The nest is 10 to 20 feet high up in turpentine trees, wattles, or even fruit trees, but at any time it is hard to find, as the male bird gives no clue as to its where-

**M. Sanguinolenta* is not a "Sun-bird" proper, but allied to the "Honey-eaters."—ED.

abouts. They are very jealous birds, and will not allow another pair within their "sphere of influence," which I noticed in all Australian birds, and yet a dozen and more will select one water-hole and meet there quite amiably at a certain time, generally between 4 and 4.30 p.m. These birds are hard to catch, as they will take no notice of a decoy bird, and the only place to get them is the water-hole—if you can find it. For years I spent with my children one day a week in the bush, always with our eyes open for any bird we might meet, yet so far we found only one nest of the Blood-bird right out. It was built in a wattle tree and made of the dead blooms of the wattle laced together, a flimsy structure, looking just like a nest of a species of a hairy caterpillar often seen in the bush about here. This nest contained three eggs, but returning a week later we found it empty. No doubt a Butcher-bird was the culprit, the worst enemy of our small birds. I have never tried to breed the Blood-bird, but I should not think it more difficult than to breed any other Honeysucker. Many of them have lived in my aviaries quite a long time, doing well on brown sugar and water, and as the flight is large they catch of course a great number of minute insects as well. In the open I have seen them on dull days come right down low, hunting the turpentine and other shrubs for little spiders and insects. They are not susceptible to cold, but a draught will surely kill them. It is a pity that these vivacious and winsome little gems have not yet been introduced into England.

Acanthorhynchus tenuirostris. This bird is much lovelier than the beautiful name scientists have given it. We call them "Spine-bill" Honeyeater, and were it smaller it would make a beautiful Sun-bird. Not so gorgeously attired as the Blood-bird, this little treasure is much more interesting. Always near the ground, it will visit low shrubs, hovering over a flower here or clinging to the stem of another, and dipping its long, slender, curved bill into the flower. One meets this "flower kisser" always and anywhere in the bush or garden, and it allows one to come quite close, showing very little fear. Strange to say, they build very high; the nests which came under my notice were placed on the outer branches of high gum trees. We feed them as the Blood-bird; in addition they get sponge cake, bread and milk sweetened, soft-bill food and

fruit. They will last years in an aviary, and they become delightfully tame, especially when reared up out of the nest. As soon as I enter my aviary they will fly on my head and shoulders. Of all the Honeysucker tribe this one I would always keep; they are charming and affectionate pets.

Ptilotis leucotis : White-eared or White-whiskered Honey-sucker. This is another of our favourites, though harder to keep alive than the Spine-bill. They are essentially Bush-birds living on the nectar and insects of the bush flowers. The bottle-brush tree they are very fond of, and I noticed them also visiting the warratahs when they are just about to open. They are very cunning birds and hard to get on to the lime-stick, which is best set near their bathing place, for they love the water and will bathe numbers of times a day. It is a proud and handsome bird, the head and back greyish-black, throat black, chest and abdomen black and white striped, the cheeks pure white and fan-shaped. The wings are greyish-green at the base, becoming yellow towards the end; a really lovely bird. Once used to the aviary they are quite at home, and live a long time.

Ptilotis chrysotis : Yellow-tufted Honey-eater. This is doubtless a fine bird; yellowish green with a yellow crown and yellow tufts as whiskers. They are terrors on soft fruit. When the persimmons are ripe in my garden the tree is often more laden with Yellow Tufts than persimmons. They build in low bushes a nice compact nest, often close to the main road, and generally so that every boy can see it; yet they thrive and are always plentiful. In the aviary they are spiteful to small birds, sometimes taking the young out of the nests or whizzing past a smaller bird and lashing it with the wing. All the same, to an aviary with larger birds they are an acquisition. I have mine with Parrots, and there they have been for years now

Melithreptus atricanillus : Black-cap. General appearance yellowish green with white band across the neck, head black, abdomen white, bare rim round the eyes, metallic-brick-carmine-red, it is an indefinable colour. This bird is more like a soft-bill than a Honeysucker,—a small dainty creature without defined song, but always calling to each other. They readily descend to a decoy. They make tiny nests in turpentine trees, but in my flight they built

in the bamboo. Like most of my birds they will take a mealworm out of my hand. Other fine Honeyeaters in my aviaries are the Spiney-checked and the Blue-faced ones. They are both rather large birds, the size of a Mexican Blue-Jay, and similar to it in shape. Unfortunately the blue in the latter birds fades pale after the first moult in captivity. One of my greatest pets in Honeyeaters is the little tawny-crowned one—*Gliciphila melanops*. These are plain little birds of ashy-brown, with a tawny crown and whitish abdomen. They built their nest—a loose hanging structure of untwisted rope fibre—on a branch of the tree in my aviary. I asked ladies at the time to come into the flight without their hats, when these little birds alighted on their heads immediately and tried to pull the hair out for their nest. This led to many an amusing scene.

I have a number of other Honeyeaters, such as the “Chick-up,” the “Singing” Honeyeater, and others of less interest than those mentioned previously. Perhaps the Blue-eyed Honeyeater should be excepted and deserves special mention. Similar to the “Black-cap” generally, it is a trifle larger, and the ring round the eyes is bluish-green; a bright and lively bird. Its life in the aviary is, however, always short; the reason for it is not at all clear to me, as they are fed as the other Honeysuckers, which do well. Towards Christmas they come to feed on the late wattle blooms and abutilons, calling like the Black-caps to one another as they fly. They are very shy birds and hard to catch.

My experience with Honeysuckers has been undoubtedly encouraging. In the early days, when I first begun keeping them and knew little how to treat them, I had many losses. There was no one then who could advise me, as no one kept them; and even now I know of no fancier here who would take the trouble to look after them carefully. Feeding them on honey, or honey diluted with water, would send them surely into fits sooner or later. Condensed milk would not do, and many other experiments I tried failed. The result was always fits and death.*

Examining the tongue under the microscope, I found it

* Would not Mellin's Food, Nestle's and Honey do, a teaspoonful of each to a large cup of hot water? Sun-birds thrive on this mixture, which can be poured over sponge cake.—ED.

covered with little bristles wherewith to scoop out of the flower not only the nectar but also the millions of microscopically small insects which no doubt supply the main food. Taking my cue from this observation, I tried to mix ants eggs and dried lean meat powdered up finely with the honey; result: they still went on dying. I now changed the whole system by substituting unrefined (brown) sugar and water with a sprinkle of the powdered meat and ants eggs, sweetened bread and milk, fruit and sponge cake; result: my Honey-suckers live and are doing well. They are tight in feather and are in a general good condition. I am of opinion that honey in any form or quantity shortens their lives.

THIRTY-TWO YEARS OF AVICULTURE.

By Dr. A. G. BUTLER.

(Continued from page 252).

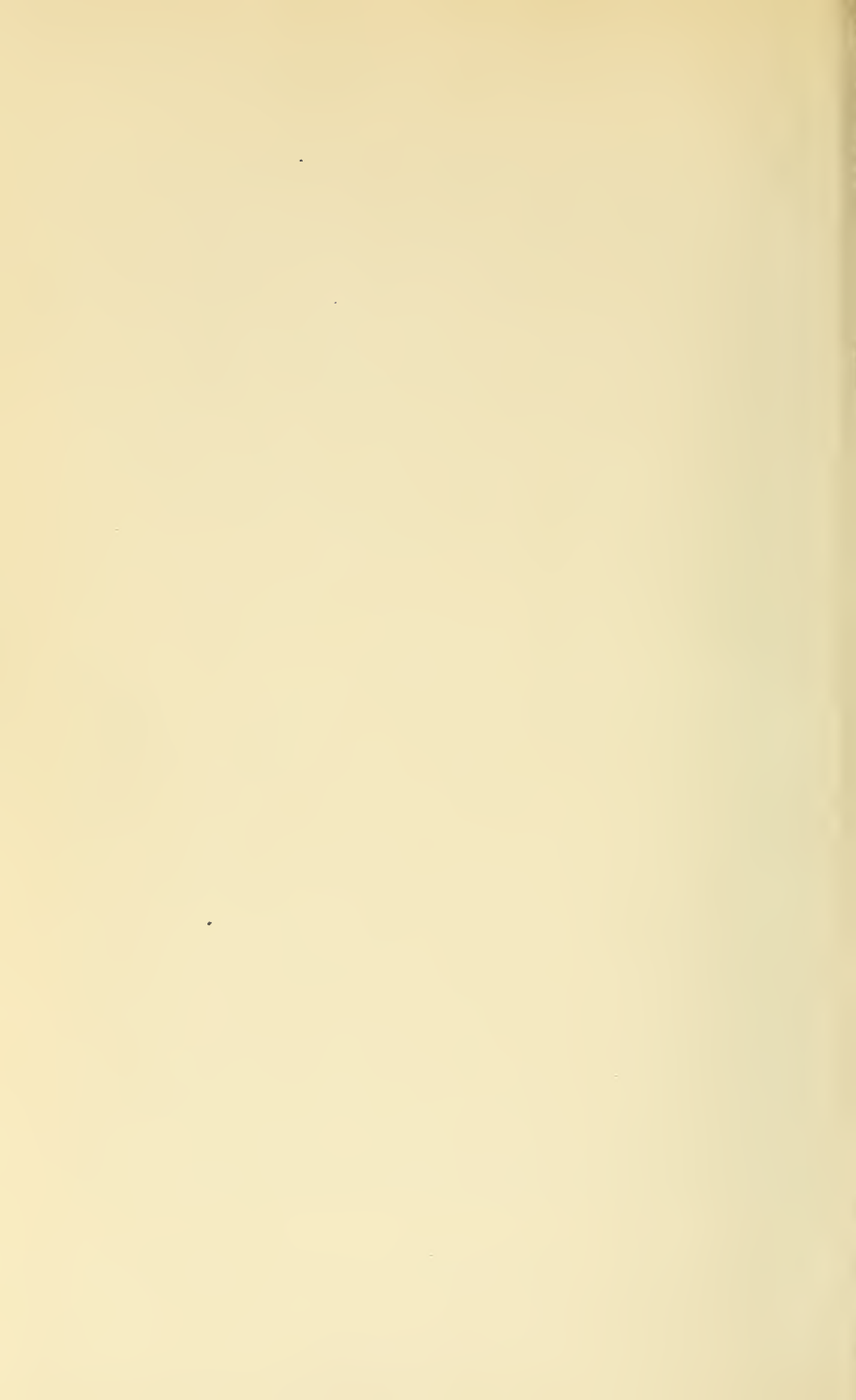
I have only had five species of Whydahs, but a fair number of Viduine Weavers: thus of the Short-tailed Whydahs I have kept many examples of both sexes of the Combassou and the Ultramarine Finch; they are harmless, excitable little birds, quite ready to breed when in colour, only my hens generally died from egg-binding; otherwise I found them hardy and long-lived. Like the Mannikins they will build in any of the usual nesting-receptacles, though my birds always preferred a prepared Hartz-cage to any other; like the Mannikins also, and unlike the Long-tailed Whydahs, their eggs are pure white and unmarked.

Many a time have I been tempted to purchase specimens of the Pin-tailed Whydah; but the two or three males which I have owned were so mischievous in scaring other species in the same aviary with them that I unwillingly refused them: they are most graceful and pleasing in flight and their colouring is attractive: I have had several females. As regards the reputed parasitic habits of the species, Stark's description of the nests which he himself saw containing young birds, and the description of the spotted egg given by Shelley, seem to me to be a sufficiently conclusive answer. I have had a fair number of Paradise Whydahs, and found them as a



THE YELLOW WAGTAIL (*Motacilla vaiei*).
CONJUGAL HAPPINESS.

Photo by J. H. Symonds.



general rule peaceable and inoffensive, but I had one spiteful individual in 1897 which I was obliged to place with birds as strong as itself. The Long-tailed or Giant Whydah, although a large and powerful species, is amiable and long-suffering unless persistently provoked by smaller birds: I have had only one male example myself, but Mr. Housden, of Sydenham, had a fair number at one time.

Of Viduine Weavers I have kept many examples of the Napoleon Weaver and still have five or six as I write; two males in the same aviary are sure to fight in the breeding season, but several hens can be kept safely with the same cock-bird: like most of the Weavers they are hardy and long-lived. I have purchased two Crimson-crowned Weavers from a mixed series in winter plumage, but both proved to be hens; I also secured a hen of the Black-vented Weaver in the same manner. One male of the Grenadier Weaver, still in excellent health as I write, was sent to me in 1906 by Major Horsbrugh: it is perhaps the most beautiful of the Fire-Weavers, and my example is in full colour by April each year; in the breeding season it is master of the aviary in which it is confined; but should any bird pluck up courage and stand up to it, this impudent Weaver retires at once, evidently considering discretion the better part of valour. I have had many examples of the lovely Orange Weaver, which greatly resembles the last-mentioned excepting in its inferior size and orange throat: two males in the same aviary are liable to dispute during the breeding season, so that it is better to keep each cock in a separate enclosure with several hens. Of Red-billed Weavers, the most long-lived of all and the most indefatigable of nest-builders, I have had many: under different conditions they vary greatly; one very abnormal male sent to me by Major Horsbrugh at a later date moulted into quite normal plumage, to my great disgust; but the albinistic form Russ' Weaver never reverts to the normal plumage after acquiring the buff cheeks of that form.

We now come to the typical or Ploceine Weavers, some of which are very interesting birds to keep on account of the compact snail-shaped nests which they build. I obtained one male of the Rufous-necked Weaver in 1893, and in 1896 and 1899 I purchased

examples of the Black-headed Weaver. In 1895 I purchased a male of what I then supposed to be an ordinary Black-headed Weaver; but, after its death on the 29th January, 1910, it was identified at the Natural History Museum as *H. capitalis*, which Shelley calls the Niger Black-headed Weaver; it is conspicuously smaller than the commoner species and differs in several other respects. I have also had the Half-masked Weaver. I have had three male Baya Weavers and two male Manyah Weavers: they built many nests, but having no hens to help them, they never completed them by forming the cup for the eggs or the entrance tube. I have kept two males and one female of the brilliant Madagascar Weaver and one male of the nearly-related Comoro Weaver; they are aggressive and quarrelsome birds, the latter especially so.*

Next to be considered are the Starlings, which I have always greatly delighted in on account of their intelligence and the readiness with which many of them become tame and confiding: they include some of the most brilliantly coloured of our feathered friends, and are interesting as links between the Finch-like and Crow-like birds; their nests, both in form and location, vary as much as they do in the whole of the two families of finches, while the cunning and mischievous propensities of some of them are similar to those which one finds amongst the Crows. Of the finch-like Marsh-birds I received single examples of the Bobolink and the Red-breasted Marsh-bird from the Argentine Republic in 1893: I had to keep them in a smallish aviary as they were too wild and nervous for a flight-cage; they did not appear to be spiteful birds. The Brown-headed Meadow-Starling, of which I have had two examples, were certainly quite amiable towards their associates. The Yellow-shouldered and Flame-shouldered Marsh-Troupials, with more slender bills, I only kept in flight-cages and therefore cannot say how they might behave if associated with smaller birds; I had two males of the former and one of the latter species, and should judge, from the age to which the last-mentioned attained, that if correctly fed and treated, both would be examples of longevity. I found a

* On April 7th, 1914, Mr. Silver brought me a male out of colour of what he understood to be a Comoro Weaver, but it has since proved to be a Madagascar Weaver.

pair of the Silky Cowbird and a second male which I received later long-lived, by no means aggressive, but extremely nervous and wild ; yet this species is said sometimes to become tame and trustful in captivity.

Of typical Troupials I have only had a pair of De Filippi's Military-Starling, rather wild birds, but attractive from their beautiful colouring ; with me they only lived about two years. To my mind the Hangnests are the most pleasing of the New-World Starlings : they cannot be safely kept with other birds, even though almost of their own size, indeed I am satisfied that in their wild state they are more or less predacious in their habits ; but on the other hand they are most companionable, delight in being noticed, talked to, and made much of. They are very clever at opening the doors of their cages, and should a plant stand anywhere within reach of their long bills it is quickly disfigured, pieces of the leaves being torn off and pulled to pieces : if turned loose in a room they are said to make havoc of lace curtains. Their notes are clear, flute-like and resounding, and a military band will start them off singing vigorously ; they are hardy, and if obtained in good condition are long-lived. I have only had two species, a pair of the Common and one of the Brazilian Hangnest, the latter was in a bad way when I purchased it and did not long survive, but the Common Hangnests (of two types which I believe to be continental and insular) are still in excellent health as I write.*

Of the Old-World Starlings I have had many examples of the European bird, both hand-reared and caught in the garden. This common species is a beautiful creature when seen close at hand ; it keeps itself in splendid condition so that it looks almost as though cast in metal, and it is naturally tame and easy to keep, being almost omnivorous. On one occasion I trapped thirteen in quite a short space of time with what is known to the catchers as a caravan-trap (at one fall of the trap I caught three, for these birds are most reckless in their greed for food) ; from these thirteen birds I selected one perfectly-formed snaky-headed specimen with extra brilliant colour-

* The form *limoneus* proved itself to be a female by dropping eggs to destruction on the floor of its cage early in April ; they were coloured as in *I. cayanensis*.

ing and perfect markings, and sent it about a month later to a show ; unfortunately the judge ignored its perfect form and preferred a thick-set ordinary example which had been forced into its summer plumage prematurely. I was naturally disgusted, and sold the bird to a gentleman who appreciated its good points for the price which its cage had cost me, and I am satisfied that I recognised it at several subsequent bird-shows as the winner of first prizes, but it had again changed hands before then.

Among the Starling-like Mynahs I have had a male of the Malabar Mynah, a pleasingly-coloured bird, extremely active, but less confiding than some of the Starlings, and unless one can get both sexes not so interesting. I got tired of it after a time and exchanged it for something which I considered more attractive. As I kept it in a smallish aviary I cannot say whether it is aggressive or not, but I hardly think it would be towards birds of about its own size. I had a Common Mynah, either in 1893 or 1894, which occupied the same aviary later in company with my pair of Blue-birds ; it is not a very handsome bird. My example was a great devourer of cockroaches of which one could not supply it with too many ; it was quite indifferent to the presence of the Blue-birds, but that may partly have been due to the fact that its health was failing when I received it, for it did not live for many months and I never coveted another.

In my experience the Crested Mynah is by far the most pleasing of all the Old-World Starlings as a pet ; from what I had seen of it I longed for a specimen for some years before I succeeded in obtaining one. It is a quaint-looking bird with its triple crest, but it is always in perfect plumage, in abounding health and spirits, eager for attention, absolutely trustful, and always ready for a fight with its owner. When spoken to it keeps making jerky bows, uttering at the same time queer creaky sounds ; it can be taught to talk, but its utterances are gruff and low-pitched ; it whistles clearly and makes trumpet-like noises. I fancy that my bird was too old when I purchased it to be taught to talk, the only word it ever uttered was "Joey," and I gave it that name. Although I do not doubt that the Crested Mynah is by nature partly predacious, killing and devouring small birds, mice, lizards, etc. (my bird was fond of

young mice), I do not think, from what I saw of a specimen in one of Mr. Housden's aviaries, that it would ever be spiteful towards birds of its own size.

I have only had one of the Crow-like Grackles—the Greater Hill-Mynah; it is handsome but heavy in its movements. A marvellous mimic, this bird can be taught to talk; but its voice is very gruff. My bird had never learnt any words, but any number of queer sounds which it had evidently heard on board ship. In my opinion this large Mynah, in spite of its somewhat Crow-like aspect, is not predacious; I believe I shortened the life of my bird by giving it raw beef, and that it would have done far better if soft food, fruit and living insects alone had been given to it. Even if it had a craving for fresh meat, I doubt whether with its ponderous movements it would be quick enough to capture small vertebrate animals, excepting perhaps newts, frogs or slow-worms.

Some years later, in the aviary previously occupied by my Malabar and Common Mynahs, I kept two Satin Bower-birds: charming creatures with the most beautiful eyes of any bird known to me. I have already published so much respecting these two birds that I will say no more about them here: they are essentially vegetarians, but are fond of insects.

I have only had two species of the Crow-family: The English Jay and the Blue-bearded Jay. They are most delightful birds to keep, but of course they need a large flight-cage or a smallish aviary to themselves. My English bird, one of the largest and most handsome of its species, was one of four taken from the nest by a Mr. Ginner and given to me while still a baby. I only succeeded in teaching him to say "Hullo Jimmy!" but he mimicked the cats which passed the conservatory in which his flight was kept, copying both their complaining mewing and their growls when fighting; he always growled when he saw a cat, and often cursed it in true Jay language. His imitation of a bird washing was wonderfully realistic; he was very jealous of attentions paid to other birds, and if I stood near his flight and took no notice of him he picked up stones and flung them at me. In the breeding season this bird used to show off to me: flying to the floor of his cage he would lower his head, wings and tail, erect his crest, curve up his back so that all the feathers

stood on end, and hop round and round in a circle of about eighteen inches diameter, making odd noises in his throat, and repeating all his imitative sounds: he looked absolutely cracked, and when my friend Mr. Frowhawk saw him I did not wonder at his remark "I say, what a fool!" Poor old Jimmy! he only lived thirteen years.

My Blue-bearded Jay was a great pet, but I have written fully about him in this Magazine before (n.s. vol. 1, pp. 227-230, with coloured plate). It was very fond of having its head scratched and its chin tickled, and liked me to hold its bill between my thumb and forefinger. I purchased it in 1895 and it died in 1909.

(To be continued.)

MY BIRDS AT BRINSOP COURT.

By HUBERT D. ASTLEY.

(Continued from page 255.)

Amongst my greatest treasures is a small flock of Cotton Teal (*Nettopus coromandelianus*), and I pride myself in being the first person to succeed in keeping this pretty little waterfowl in captivity out of India (its native country) with the exception of two which lived in the London Zoological Gardens for nearly a year in 1897. I have had one male since the 26th of January of this year (1914), and Mr. David Ezra most kindly sent me several more in May from Calcutta, a pair of which lot was presented by Mr. Alfred Ezra, his brother, to the London Zoological Society.

The Cotton Teal is very small, a good size smaller than the English Teal, and is said to be allied to the Geese. In certain structural points this may be so, but in habits it is totally dissimilar. The legs are very short, and the Cotton Teal is not a free mover on land, although the idea that has hitherto been prevalent that it cannot walk at all is quite a false one, which idea probably arose from the fact that those previously imported were paralyzed. All my Cotton Teal can walk about in their enclosure on the turf quite easily, and, moreover, spend a great deal of their time out of the water. They perch easily and naturally.

I had always supposed these birds to be divers, but I have

never seen any of mine attempt to do so ; when I let one out loose on a large pond and had to catch him again owing to other ducks and the Flamingoes starving him out, it was not until he was hard pressed by being harried by the boat which followed him that he finally dived, as any other surface duck would do under such circumstances.

The male bird is very pretty ; the face and neck snow-white, the crown of the head dark greenish brown with a darker ring coming down from the back of the neck and extending round the base in front ; flanks whitish-grey, upper parts deep bottle-green. The bill is goose-like, as in the Bernicle Geese. Cotton Teal have a curious way of bobbing their heads up and down, and (on land) wagging their tails.

They do well on smaller seeds, such as dari, hemp seed, millet, etc., and are fond of water-weeds. Up till now the flock I have and the pair at the London Zoological Gardens are, I believe, the only ones in Europe, and it is only through Mr. David Ezra's undaunted perseverance and kindness that these have reached England in good health, although I must not omit my thanks to the Captain of one ship and the steward of another who took the greatest pains to tend them on the voyage from Calcutta.

The next success to be obtained is to breed from them ! They are the smallest ducks that are known in the world. Real pigmies.

* * * * *

In my Bird-room, which is fitted with every convenience, hot and cold water, radiator, and electric light, the inmates vary to a certain extent from time to time. Some of the birds are out in the aviaries during the summer ; others, especial pets, are always there, except when their cages are hanging in the courtyard or the loggia, etc.

A beautiful Blue-headed Rock Thrush still keeps in excellent condition, his portrait having figured in a coloured plate in the Magazine. Mr. A. Ezra's pair of Great Niltavas are also there, having been sent to me for country air and for more exercise than they could have in cages in London.

The male is a magnificent shining purple-blue, the female a

rich brown, with a small patch of bright blue on the sides of the neck, and a wash of warm grey, over the brown, on the head. Both birds are extremely tame, and are as a rule flying loose in the Bird-room, so that when I approach the meal-worm box they instantly fly down close to me, and will take the worms from my fingers. The only pair in Europe.

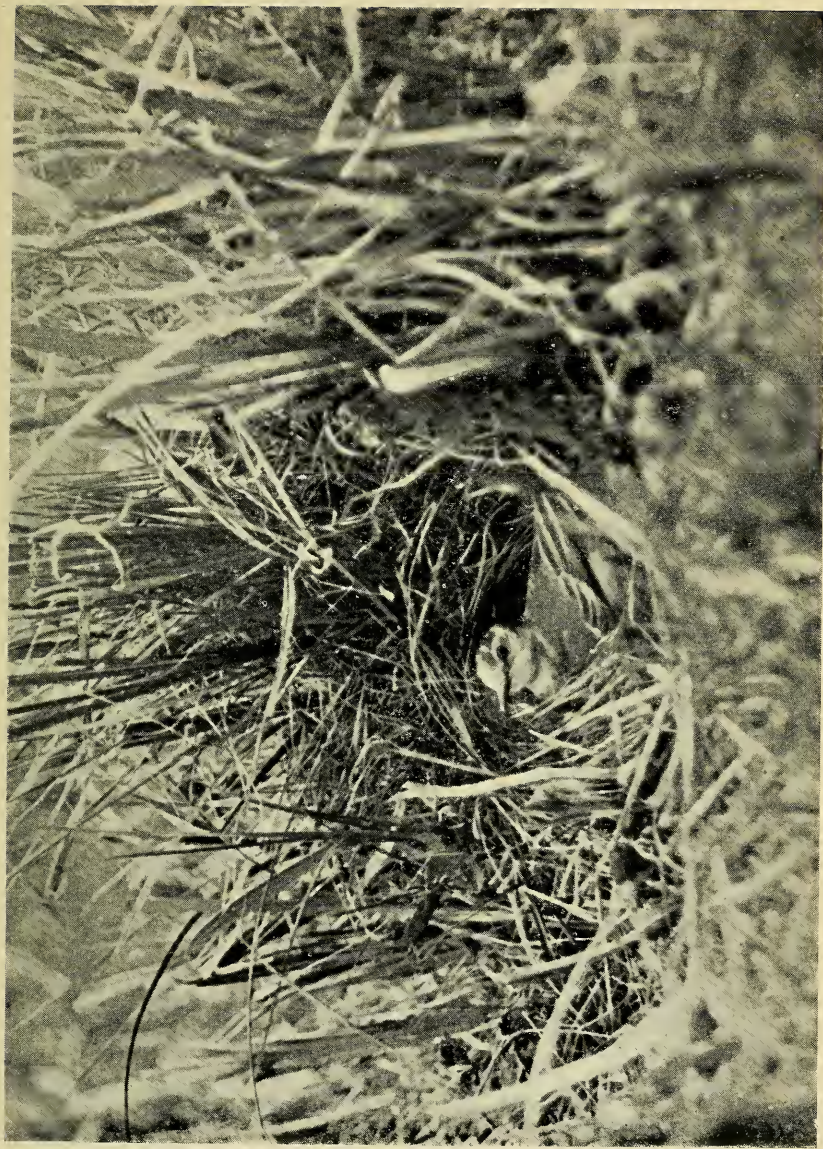
A pair of Red-headed Bullfinches (*Pyrrhula erythrocephala*) are charming birds, quite tame, although only imported by Mr. A. Ezra towards the end of May. They delight in a large bunch of flowering grass, chickweed, groundsel, etc. Except for a small mask of black round the bill, the male has the head and also the breast of a rich orange colour, otherwise he much resembles our British Bullfinch; the female has a wash of orange yellow on the back of the head and a grey-brown breast. Their call-note is softer and more tinkling than that of their British cousin, and the song is pretty, the notes more rapid than the British Bullfinch's, and more chattering perhaps.

A pair of Yellow-backed Red Sun-birds (*Ethopyga seheria*), also sent by Mr. A. Ezra, are generally allowed to fly about the Bird-room, and are remarkably fearless. The male, whose wondrous cardinal-red alas fades when he moults to a dull orange, looks very beautiful in his imported colours when perched on a large spray of wild cherry, apple blossom or hawthorn, sucking, with his long tongue, the nectar.

A fine Bullock's Hangnest (*Icterus bullocki*) gives a vivid splash of gorgeous orange in his cage; and he too, as do all the rest, comes out in his turn for a flight and a bath. This is perhaps the most beautiful of all the Hangnests.

A Shamah and a Gray's Thrush (*T. grayi*) make the room resound with their songs. A pair of Petz Conures, pretty little birds, make it resound, but only at moments, with their shrieks! The male is all green, with a frontal patch of orange above the bill, the crown of the head being a bluish-grey; the female the same, but less bright, the orange patch above the bill being considerably smaller. The large eyes add very much to their beauty.

The room is square and as large as a good-sized bedroom, and has a wheat-coloured composition floor rounded off at the skirting,



MALE YELLOW WAGTAIL COVERING YOUNG.

Photo by J. H. Symonds.



which can be washed down, and keeps beautifully sweet and clean. Roomy shelves go round two sides for cages, and strong hooks for the same hang on the walls. Large cupboards for food, etc., are at one end, and at the other a sink of white porcelain, with sloping grooved shelves adjoining it, over which are shelves with perforated zinc, on which sponges, empty baths, etc., are stored. The walls are of enamel paint of duck-egg green, and everything is as sanitary and clean as is possible.

I use sawdust for most of the cages, putting a little grit in a glass feeder. The seed-eaters have large bunches of all kinds of green food, which grows in abundance in the fertile red sandstone soil of Herefordshire. When I received the pair of Red-headed Bullfinches (they might have been called orange-headed!) their delight was great when I almost filled their cage with a bunch of flowering grasses, chickweed, wild cress, groundsel and Shepherd's purse; they dived in amongst it, nibbling with little piping notes of pleasure.

One of the delights of receiving freshly-imported birds is to feel what joy one gives them after their long voyage, and to see them improving daily. One of the sorrows is when they arrive too late, moving on to an unseen plane. I don't mind birds coming with shabby and immature plumage, so long as they will *but* move for it is so interesting to watch them moult, emerging from dull chrysalises, as it were, into fine butterflies. I think the water here has iron in it, which no doubt is beneficial, for some waters must be better for birds than others, and here it comes from beautiful springs.

(To be continued).

REVIEW.

FIELD-STUDIES OF SOME RARER BRITISH BIRDS.

Field-Studies of Some Rarer British Birds.—By John Walpole-Bond (London: Witherby & Co., 1914). 7s. 6d. net.

Let those who are interested in such birds as Dartford Warblers and the Woodlark, the Kite, the Hobby, etc., obtain this book. It is the result of first-hand information, of close and careful observation, of very keen interest in several species of birds, some of

which have all but vanished from the British Isles as residents. It is a book of original study, and not a mere compilation of facts already recorded in a hundred other books on British birds.

Mr. Walpole-Bond is very evidently a keen observer, endued with the gift of patience in watching and waiting. H. D. A.

ENGLISH NAMES FOR THE PARROTS.

By Dr. E. HOPKINSON.

FOREWORD. In this list I have arranged in alphabetical order all the names I have been able to collect in the different works on the subject I have had access to. Chief among these are:—

The Parrot Volume of the British Museum Catalogue. *My authority in most cases for the names used by Latham and other early writers of his time.*

Parrakeets: Seth Smith.

Gould's Handbook of the Birds of Australia.

The Parrot Volume of Jardine's Naturalist's Library.

The Dictionary of Birds: Newton.

The most generally used name for any bird is printed in LARGE CAPITALS. It is under this that the other names, by which the bird has been known and also its Scientific name (from the Hand List of the British Museum, Vol. II.) will be found. Names which are now obsolete are distinguished by an asterisk.

Vernacular, including native and dealers' names, are in inverted commas.

“AA,” Tahiti name for the RED-BACKED PARROT.

“ABACAY,” a native name in the Phillipines for some parrot, probably the RED-VENTED COCKATOO.

ABYSSINIAN LOVEBIRD, ABYSSINIAN PARRAKEET (Latham) = *Agapornis taranta*.

ACTIVE AMAZON, = *Amazona agilis* of Jamaica. The AGILE PARROT of Latham and *LITTE GREEN PARROT of Edwards. ? = also The *MODEST PARROT and *JAMAICA BLACK-BILLED GREEN PARROT of the first author. Known in Jamaica as the “BLACKBILL” and “BLACK-BILLED PARROT,” *teste* Gosse.

ADELAIDE BROADTAIL, the ADELAIDE PARRAKEET, *Platyercus adalaidæ*. “Pheasant Parrot” in Australia.

*AFRICAN INSEPARABLE, an old-fashioned book-name for the LOVEBIRDS, particularly for the RED-FACED L.

*AFRICAN PARROT, Latham's name for the BROWN-NECKED PARROT, *Pœocephalus fuscicollis*.

AFRICAN RING-NECKED PARRAKEET, = *Palæornis docilis* of West Africa, often also called the ROSE-RINGED PARRAKEET. Included with the Indian members of the *genus* in the general popular name, "RING-NECK PARRAKEETS."

AGILE PARROT, Latham's name for the ACTIVE AMAZON.

"AJURU-CURUCA," Native name (Marogrove) for the ORANGE-WINGED AMAZON.

ALECTO COCKATOO, an old book name for the GREAT BLACK COCKATOO ; see under COCKATOO.

ALEXANDRA PARRAKEET, *Spathopterus alexandræ*, also known as the PRINCESS OF WALES' PARRAKEET (Gould).

ALEXANDER PARRAKEET, a variant of ALEXANDRINE.

ALEXANDRINE PARRAKEET. A name as old as Latham's time for many of the Parrakeets of the *genus Palæornis*, which contains the RING-NECKED, BLOSSOM-HEADED, MALABAR PARRAKEETS, etc. Specifically Latham's name (and also his VAR. A.) applied to the birds from India and Ceylon, the ROSE-RINGED and CINGALESE ALEXANDRINE PARRAKEETS.

His varieties of ALEXANDRINE have been identified as follows: = VAR. A., see above. VAR. B., the BANDED PARRAKEET. VAR. C., the MAURITIUS RINGNECK. VAR. D., the BLOSSOM-HEADED PARRAKEET, and VAR. E., the JAVAN PARRAKEET (*P. alexandri*).

Names given to different species are:—

ANDAMAN ALEXANDRINE PARRAKEET, see GREAT-BILLED A. P. below.

BLACK-BILLED A. P., a name given to a variety of the BANDED PARRAKEET.

CINGALESE A. P. = *Palæornis eupatria*, other names for which are: ALEXANDRINE PARRAKEET (and VAR. A.) and *GINGI PARROT (and VAR. A.) both of Latham; ? = his *BLUE-COLLARED PARROT; RING PARRAKEET (Edwards): ALEXANDRINE RING-NECKED PARRAKEET, ALEXANDRINE RING-PARRAKEET, GREAT ALEXANDRINE P., ALEXANDER PARROT (occasional); ROSE-BANDED PARRAKEET; LARGE CEYLONESE PAROQUET; "LABU GIRAWA" (Cingalese).

GREAT ALEXANDRINE PARRAKEET = the CINGALESE A. P.

GREAT-BILLED A. P. = *P. maguirostris*, also known as the ANDAMAN A. P. and as the LARGE ANDAMAN PAROQUET.

INDO-BURMESE A. P. = *P. indoburmanica*, the LARGE BURMESE PAROQUET of some authors.

JAVAN A. P., usually known as the JAVAN PARRAKEET, q. v.

LITTLE ALEXANDRINE P., another name for the MAURITIUS RING-NECKED PARRAKEET.

LONG-TAILED A. P., see MALACCA PARRAKEET.

MAURITIUS ALEXANDRINE PARRAKEET, see MAURITIUS RING-NECKED PARRAKEET.

NEPALESE A. P. = *P. nepalensis*, the ALEXANDRINE PARRAKEET of Jerdon and the LARGE INDIAN PAROQUET of Oates.

ROSE-BREASTED A. P., an occasional book name for the BANDED PARRAKEET.

ALEXANDRINE RING-PARRAKEET, ALEXANDRINE RING-NECKED P., alternative book-names for the CINGALESE A. P. or its near allies.

ALL-GREEN PARRAKEET, = *Brotogeris tirica*, the GREEN PARRAKEET of Latham; ? = his *PRASINE PARROT; "TUI-TIRICA," (Marog.).

ALPINE PARRAKEET, a name sometimes applied to the ORANGE-FRONTED PARRAKEET of New Zealand.

AMAZON, (or more fully AMAZON PARROT, occasionally AMAZONS P.) any member of the genus *Amazona* (*Chrysotis*, Sw.) several species of which are well known as "American Green Talking Parrots." Occasionally the name is popularly applied also to members of the allied genus *Pionus*.

The genus contains more than forty species, names for which are:—

ACTIVE AMAZON, q. v.

AUGUST A. = *Amazona imperialis* the IMPERIAL AMAZON. Local name in Dominica, "CICEROO."

BAHAMA A. = *A. bahamensis*.

BLUE-FACED AMAZON (or BLUE-FACED GREEN AMAZON)—*A. bouqueti* of Dominica. Other names are;—BOUQUET'S AMAZON; *BLUE-FACED GREEN PARROT (Edwards), BLUE-FACED GREEN AMAZON; probably = the *AUTUMNAL PARROT, VAR. A. of Latham and also his *RED-AND-WHITE-FACED PARROT. The name is also used for the BLUE-MASKED A.

BLUE-FRONTED A. (1) = *A. aestiva*, the most commonly imported of all the Amazons. Other names: COMMON AMAZON PARROT, (Latham) and his VARS. B., D. and H. *MAIN PARROT. Probably = *YELLOW-HEADED PARROT VAR. A., and *YELLOW CROWNED PARROT (Latham). *GREEN PARROT FROM THE WEST INDIES (Edwards); *WEST INDIAN GREEN PARROT (Latham). Now commonly known as the "BLUE-FRONTED A." or as the "COMMON A."; occasionally as the "RED-TAILED A." To an entirely yellow variety Latham gave the name *AURORA PARROT, and his *COUNTERFEIT PARROT probably meant an individual mottled with yellow, a not uncommon variety. (2) See also under BLUE-MASKED A.

BLUE-MASKED AMAZON, = *A. versicolor*, also known as the BLUE-FACED A. The *BLUE-FRONTED A. of Latham.

BODIN'S A. = *A. bodini*.

BOUQUET'S A. See BLUE-FACED A.

"BRONZE AMAZON," an occasional dealer's name for the BRONZE-WINGED PARROT and the DUSKY PARROT (*Pionus*). "VIOLET AMAZON," a variant.

"COMMON AMAZON," the BLUE-FRONTED A.

COMMON AMAZON PARROT (Latham), the BLUE-FRONTED A; also his VARS. B, D, and H. VARS. A. C. E. and F. = the ORANGE-WINGED A.

COMMON AMAZONS PARROT, VAR, G. (Latham)? = the DOUBLE-FRONTED A.

(To be continued.)

CORRESPONDENCE, NOTES, &c.

WHITE COMMON HOUSE-SPARROW.

SIR,—I think the following facts will prove of interest to some of your readers.

For several years past I had in my aviaries a White Common House-Sparrow. It was a hen, a pure Albino with pink eyes. One day in February last year an old cock Sparrow was foolish enough to walk inside the passage of one of my aviaries. I chanced to be behind him and shut the door. I then opened the door of the aviary in which the white lady was and drove him in. They had an indoor aviary 14ft. by 6ft. I provided them with a nest box, a small quantity of hay, and a few feathers. Their first nest of young consisted of two, and left the nest on May 10th, 1913. Another lot of four left the nest on June 12th. A third lot of four left the nest on July 15th, and a fourth lot left the nest on August 13th. There were thus fourteen young reared, *all* being ordinary Sparrows without a white feather. Six of these young ones became the meat of a tame stoat, and the others I turned loose. I have a high wall all round my flower garden, and one or two nest-boxes against the wall. One of these about a month ago was occupied by a pair of ordinary Sparrows. On Sunday the young left the nest,—three pure Albinos with pink eyes and two Common Sparrows. One of the Albinos was too strong on the wing to be caught, but my man caught the other two with a net, and they are now doing well. The old birds are nesting again in the same spot, so I hope to get several more Albinos.

I think this is interesting as showing that in the first place the Albino here mated to the ordinary cock produced *fourteen* young ones, *all* Common Sparrows; but one of her sons or daughters this year at the first attempt produces three pure Albinos out of five young ones.

Of course it is *possible* that both parents are the offspring of the old hen; but with the hundreds of Sparrows we have on the place I should doubt it.

I am now introducing another Common Cock Sparrow to the old hen (I let the other one go in the autumn), and I shall keep all the young ones to breed from next year and note what happens.

W. R. TEMPLE.

IMPORTATION OF RARE AUSTRALIAN BIRDS.

A member living in Australia hopes to have been able to leave, arriving towards the end of June at an English port with the following birds,—about whose permitted exportation from their native country he was doubtful:—

PARROT FINCHES—New Caledonian. New Hebrides. Fiji.

Fire-tailed Finches, and other species more commonly imported.

INSECTIVOROUS BIRDS.

Shrike Tits (*Falcunculus frontatus*).

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Scarlet-breasted Robins (*Petrioca leggei*).

Flame-breasted ,, (*P. phœnicea*).

Rose-breasted ,, (*P. rosea*).

Red-capped ,, (*P. goodenovii*).

White-shouldered Caterpillar-eaters (*Campephaga humeralis*).

White Eye-browed Wood Swallows (*Artamus superciliosus*).

Masked Wood Swallows (*A. personatus*).

Blue Wrens or Superb Warbler (*Malurus cyanocephalus*).

Red-backed Wrens (*M. melanocephalus*).

Two or three species of Honey-Eaters.

And last, but not least, either in size or quality,

Five pairs of Kagus from New Caledonia (*Rhinocetus jubatus*).

The Kagu is, so it is said, becoming extinct.

The Red-backed Wrens have never been imported, and the Blue Wrens are exquisite. Mr. R. Phillipps bred some in London some years ago. H. D. A.

P.S.—At the moment of going to press we hear from Genoa of many misfortunes through storms, and also that a number of the remaining birds were intercepted there, and taken to Germany!

THE AMETHYST SUN-BIRD (*Cinnyris amethystinus*).

MR. BROOK writes:—"I am much interested in the account of the Amethyst Sun-bird in the June Magazine. I am surprised that Mr. Ezra's do not take small insects, as mine feed greedily on them. Possibly the fact that my Sun-birds have access to the open has something to do with this.

"I am wondering whether *C. amethystinus* takes two or more moults to acquire full plumage. My birds—a pair—reached me just over a year ago. The male was obviously a young bird, but he soon assumed the coloured throat and head, also showing a few dark feathers on the breast, wings and neck; but otherwise he is still in the light-brown plumage of immaturity."

The Société Nationale d'Acclimatation of France has honoured the Editor by conferring on him a beautifully-modelled and designed silver medal for various species of birds kept and bred by him.

The Society writes:—"Nous adressons toutes nos félicitations à M. H. D. Astley en lui décernant notre Médaille d'argent, grand module."

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FLAMINGOS.

By HUBERT D. ASTLEY.

Through the courtesy of Sir Harry Johnston we are able to publish a coloured illustration of the small Flamingo (*Phænicornis minor*), which is to be found in such abundance in B. E. Africa, especially on Lake Hannington.

Sir Harry Johnston, in his book on the Uganda Protectorate, wrote:—"On Lake Hannington it is no exaggeration to say that there must be close on a million Flamingos. These birds are mainly collected round the northern end of the lake and on the submerged banks which break up the deep blue-green of its surface. The shores where they cluster, and these banks in the middle of the lake where they are above the water's edge, are dazzling white with the birds' guano.

These Flamingos breed on a flat plain of mud about a mile broad at the north end of the lake, where their nests, in the form of little mounds of mud with feathers plastered on the hollow top, appear like innumerable mole hills.

The birds having hitherto been absolutely unmolested by man, are quite tame. (Written in 1902.—ED.) They belong to a rosy species, *Phænicornis minor*, which is slightly smaller than the Mediterranean Flamingo, but exquisitely beautiful in plumage. The adult bird has a body and neck of rosy pink, the colour of sunset clouds. The beak is scarlet and purple; the legs are deep rose-pink, inclining to scarlet. Underneath the black-pinioned wings, the larger feathers are scarlet-crimson, while beautiful crimson crescents tip the tertiaries and wing-coverts on the upper surface of the wings.

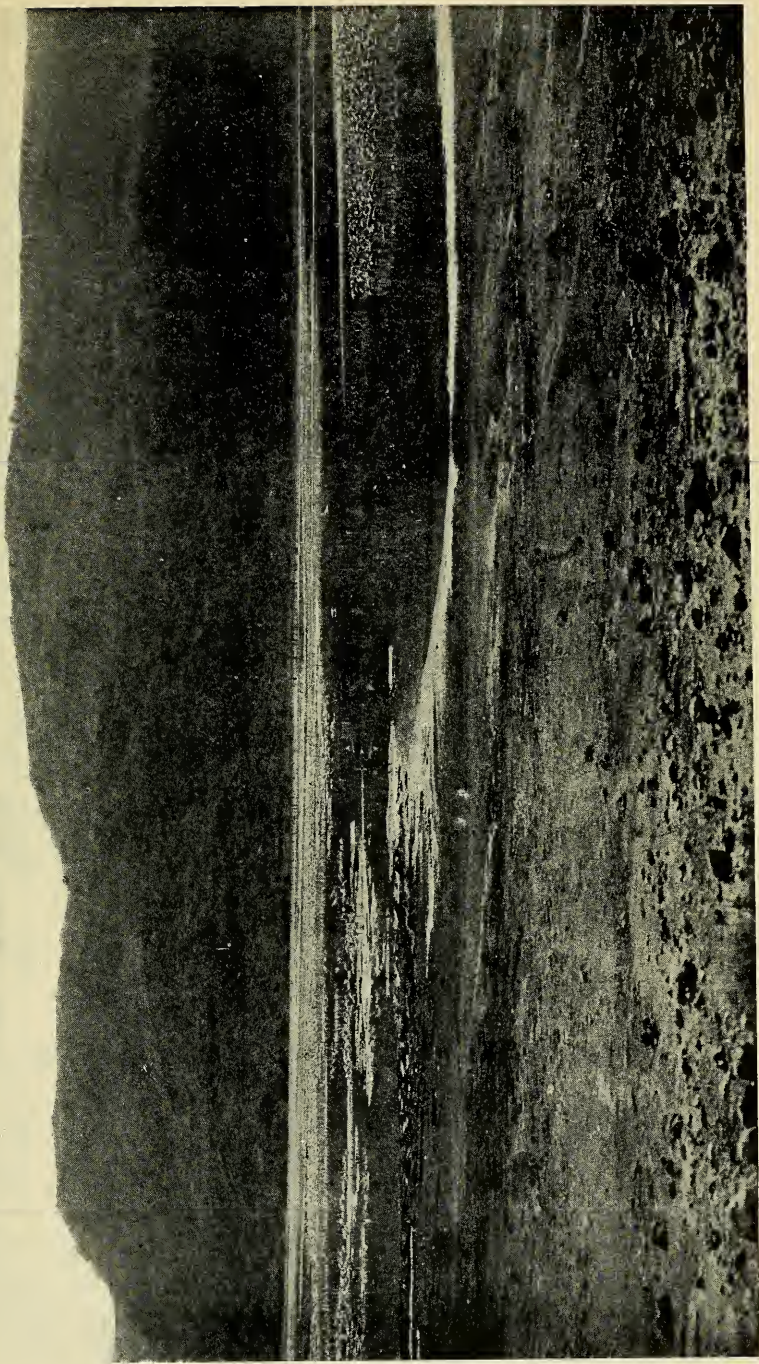
Apparently the mature plumage is not reached until the birds are about three years old. The younger Flamingos very soon attain the same size as the rosy adults, but their plumage when they are full grown is first grey-white and then the colour of a pale tea-rose before it attains its full sunset glory.

On the north coast of the lake the belt of Flamingos must be nearly a mile broad from the edge of the lake outwards. Seen from above, this mass of birds on its shoreward side is grey-white, then becomes white in the middle, and has a lakeward ring of the most exquisite rose-pink, the reason being that the birds on the outer edge of the semi-circle are the young ones, whilst those farthest out into the lake are the oldest. It is not easy to make the birds take flight. When they do so suddenly and the shallow water is stirred, the stench which arises is sickening. The noise of these birds can be heard for nearly a mile distant. The kronk, kronk, kronk of the million, mingled with hissings and splutterings and splashings and the squish, squish, squish of those who are starting on flight, combine to make a tumult of sound in the presence of which one has to shout to one's companions in order to be heard. It is curious to watch the ungainly motions of these birds when they wish to rise in the air.

Their flight has to be preceded by an absurd gallop through the mud before they can lift themselves on their wings."

Sir Harry Johnston says that as regards Lake Hannington an important fact should be noticed, namely, that right out in the middle of the lake and at intervals along its shores there are the remains still standing of a former forest. These trees appear to have been killed partly by the saltish waters of the lake, and in part by being made the eyries of innumerable birds such as storks, herons, and eagles.

Flamingos in captivity, unless they are in an enclosed aviary, or on a very small piece of water where it is easy to catch them up, should certainly be pinioned, or else sooner or later (probably sooner) they will fly away, and more probably still be shot, as is the custom in this enlightened country, just as many years ago my tame Storks (*Ciconia alba*) were done to death by a farmer, when they settled in a field near his poultry, his excuse being that he thought they were



HALF A MILLION FLAMINGOS.
NORTH END OF LAKE HANNINGTON.

From Sir Harry Johnston's
'Uganda Protectorate.'

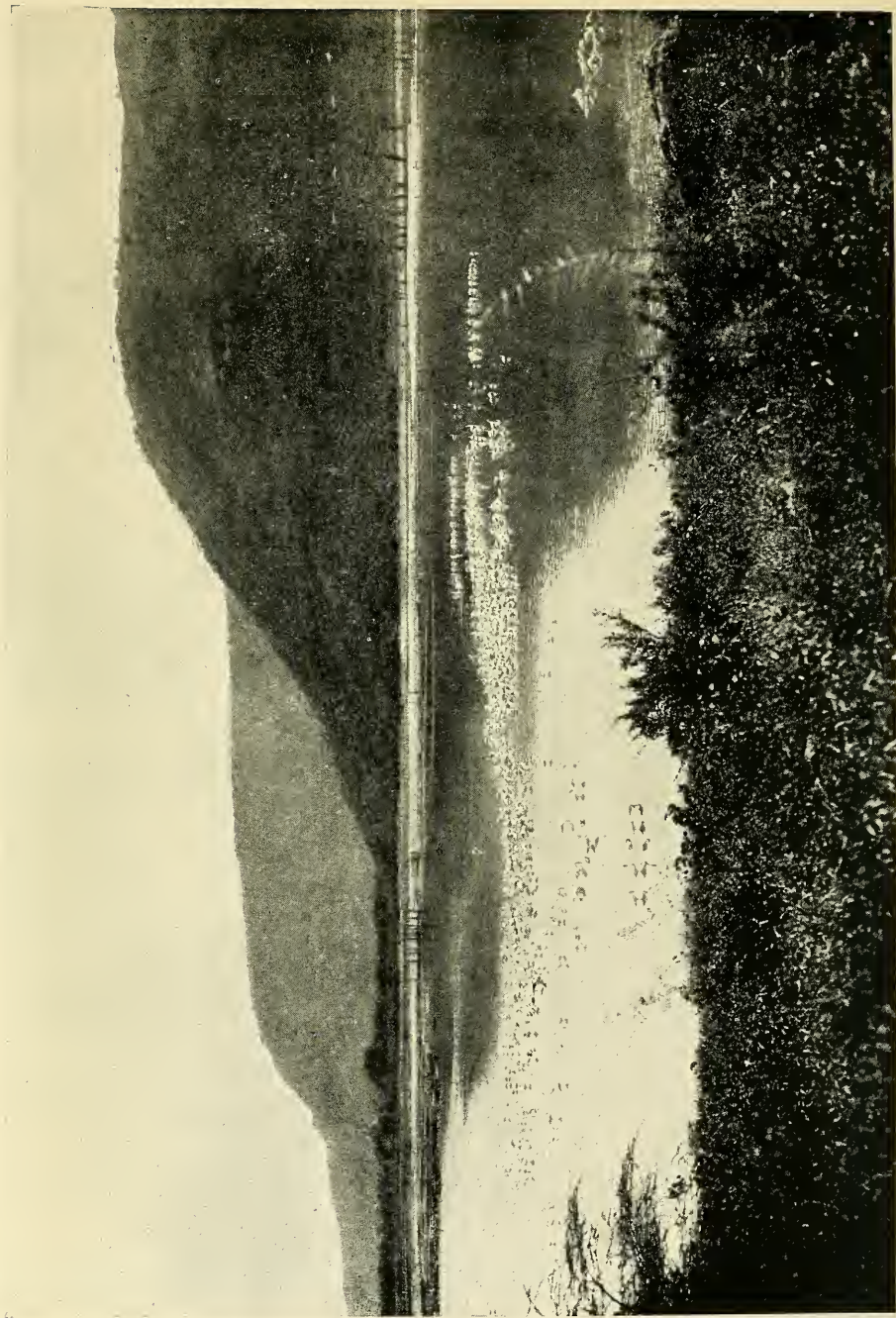


Photo by Sir H. Johnston.

“Molly urns,” which, being interpreted, is ‘Herons.’ But those sort of people would shoot anything from a Humming Bird to a Condor.

I find my Flamingos do very well on grain, wheat, oats, etc., but they are loose on a good sized pond, in the mud of which they evidently find a great deal of natural food. Once acclimatized Flamingos are fairly hardy, but care must be taken in the winter that they do not become frozen in to ice. Indeed, during very hard weather, they are best in a shed, with a flooring of sawdust or peat moss litter.

They are fond of bread, melox, etc. when once they take to it, and some of the dried fish mentioned by Mr. Sich in his notes on Wading Birds would no doubt be beneficial, mixed with the bread in a bucket of water.

My Flamingos have been busily moulting during June and July, all the black pinion feathers being shed at once, after the manner of geese. Flamingos are classified between the Storks and the Geese, and are peculiar in having most curiously shaped bills, high at the base and abruptly bent down in the middle: moreover, these birds feed with the bill upside down, the lower mandible being uppermost under the water. In the young, the beak is short and straight. As is now well known, the Flamingo sits on her nest with her legs doubled under her, though it was originally declared that the nest was a structure of mud sufficiently high for the bird to sit straddle-wise on it, with the legs down on each side!

There are at least four species of Flamingos to be found in South America:—*Phænicopterus ruber*, *P. chilensis*, *P. andinus*, and *P. jamesi*.

P. chilensis of Peru and Uruguay has green-grey legs with red joints, the black on the bill reaching above the bend.

P. andinus of the Andes of Bolivia, Chili, and Argentina is the largest of the family.

Flamingos may be looked on as one of the most extraordinary developments of evolution through untold ages.

THIRTY-TWO YEARS OF AVICULTURE.

By Dr. A. G. BUTLER.

(Continued from page 278).

Larks are soberly-coloured birds, the Shore-larks being the most attractive in colouring, but everybody with any appreciation of music loves them. I have hand-reared a fair number of the European Skylark, and one winter when the snow was thick on the ground and birds were starving to death in thousands, my man (I had one then to help me in cleaning up cages and aviaries and giving fresh water) took out my nets* and brought me home thirteen: I kept the three best and they made grand songsters: I have tried these birds both in cage and aviary and certainly they sing better in the former than the latter. I have at various times bought Skylarks from the catchers, but I am not sure that I don't prefer to hear them singing from the sky rather than from a cage: I don't believe for a moment that they are unhappy provided that they have room to run about, a nice fresh turf, and a good bed of sand to dust themselves in, with the proper food; and as to reducing the number of Larks by catching a few, one might as well talk of reducing the sand of the seashore by taking home a handful. Larks are hardy and long-lived when properly cared for, and they soon become wonderfully tame; they are quarrelsome if two birds are kept together with space to fight in.

I have had one or two Wood-larks, but did not care for them so much as for the Skylark; they sang less often and the performance was inferior to that which I have heard when produced by birds at liberty: seeing that they spend much time on perches in the day, I was at first surprised to discover that they always roosted on the floor of the cage at night; but the *Alaudidæ*, as a family, are certainly more terrestrial than arboreal in their habits. The species which pleased me most was a fine Mongolian Lark given to me by Mr. Abrahams about 1891; it was a grand songster and wonderfully tame; it always completed its song by mewling like a

* They are used now for protecting a cherry tree from Blackbirds, but they are getting very rotten.

cat : and, by imitating that beast I could always start it off : it lived to a good age and died peacefully.

I purchased a Sulphury Tyrant about 1895 which lived in a small flight for about a year. I found it chiefly of interest on account of its Kingfisher-like habits ; it would kill a minnow or a newt exactly in the same manner, slapping it from side to side against its perch before swallowing it : of course it would be risky to trust such a bird with Waxbills, no doubt it could kill a small bird with one blow of its enormous and powerful bill : it has an awful screech, nasal and prolonged, which makes anyone jump who chances to be looking at it : its colouring is pleasing but I don't want another specimen of the bird.

As previously mentioned I have tried to keep young Swifts but with little success. I have hand-reared Wrynecks and found them interesting. I only wish I could have kept them longer, the strongest only lived from July to December. I am afraid the small greenhouse in which I was then obliged to keep my birds was hardly warm enough. In 1895, to save the bird's life, I bought a hen Green Woodpecker from a catcher ; but it absolutely refused any kind of food, living or otherwise, and after severely damaging the large cage in which I had placed it, it died thirty-six hours after it came into my possession.

I hand-reared a young Cuckoo which was given to me on one occasion, but I would never take on another. Of all the stupid, insufferably dirty and greedy little beasts he was infinitely the worst. Eventually his gluttony and disinclination for proper exercise killed him and he was *not* deeply regretted.

With the solitary exception of the Grey Parrot, which makes an entertaining companion, I don't care much for the *Psittaci* : they are mostly noisy and destructive and many of them cannot be associated with other birds without great risk. Of course there are many beautifully coloured species among them and there are a few whose ancestors must have been utterly devoid of artistic taste, to produce such crude and unpleasing combinations in their plumage. I have had the following species :—I once purchased a male Slender-billed Cockatoo which I kept for exactly a week, when I sold it for just double the price I had given for it : it was perfectly gentle and

confiding, but certainly not talented, and I cannot say that I admired it. Cockatiels I have twice had and from my second pair I bred one male ; I still have his father ; this is one of the few Parrakeets which one can trust with smaller birds : it is pretty, but noisy and is very fond of vain repetitions.

I had a pair of Quaker Parrakeets in 1892, but did not much care for them and eventually sold them to somebody who took a fancy to them ; they are hard biters, but when they attempted to bite me I got hold of the lower mandible so that the bird had to bite upon my thumb-nail ; when it began to pinch too hard I pressed on the lower mandible and it left go at once. Like other Conures this species is very destructive and rather noisy, but playful and consequently rather amusing. In 1903 or 1904 I purchased a pair of Passerine Parrotlets, being tempted by their lovely colouring : the hen died shortly afterwards but the cock lived until 1906 when it was murdered by a hen Grey-headed Lovebird which I had given it as a wife : if I could be sure of keeping and breeding this species I should like to have an aviary full ; its beauty alone would be sufficient to satisfy me.

Of talking-parrots I have only kept the Yellow-fronted Amazon and the Grey Parrot, both excellent talkers and fond of me ; but the Amazon used to fly into frightful rages when it saw anybody who was inclined to tease it. These birds when acclimatized are very hardy and long-lived and for anybody who only wishes to keep a single bird, I would always recommend a Grey Parrot or Amazon, bought when quite young and taught to talk by its purchaser. Of course most of these birds are incorrectly fed from the time when they are imported, are more often than not treated as though they were human beings, offered all kinds of unwholesome table-scrap by their owners, and consequently soon get out of condition and die young. I have had two species of the genus *Palæornis*, the Rose-headed Parrakeet, of which I purchased two young pairs in 1893 ; of these one pair had been pinioned and did not live long. From the other pair I bred one female, but these pretty Parrakeets killed several smaller birds in their aviary and the young bird so persecuted her mother that I had to confine the latter in a flight cage to save her life. I sent the father and daughter to a



CUBAN FINCH.

FEMALE AND NEST.

show at the Crystal Palace where they were at once snapped up at the price which I had originally paid for the two pairs.

Two examples, both males, of the Moustache Parrakeet were sent to me anonymously in 1912 ; one of these died three months later, but the other is in splendid health and plumage as I write. I cannot get this bird to eat anything but seed ; it is very destructive to the woodwork of its aviary but is not noisy, such sounds as it utters would lead one to imagine that it was constantly discontented or in pain ; it is rather wild, but I believe tolerably happy.

I have had five Madagascar Lovebirds at various times, and I never wish to have another ; they are nervous, spiteful and murderous little wretches ; the males are ready to quarrel with any bird, though twice their own size ; and with their powerful beaks they are likely to have it pretty much their own way ; the females I found even worse. In the early days of my bird-keeping I obtained a pair of Rosy-faced Lovebirds from Mr. Abrahams hoping to breed from them. In those days they fetched a fairly high price ; however I soon regretted my purchase, for they not only spent the whole day in uttering an exasperating rattling scroopy shriek, but they attempted to kill every other bird which approached them : happily for me Mr. Abrahams consented to take them back. Years later I became possessed of two hens which I turned into a small flight cage where they lived a quiet uneventful life, occasionally laying eggs of which the majority got smashed by being dropped from the perch. Take them all round I am not smitten with Lovebirds.

The only *Platycercus* I ever had was a Rosella given to me by a gentleman who had got tired of it. I found it a quiet confiding bird, fond of a smooth caterpillar when it could get one. This was an old bird when it came into my possession and died a year or two later. Of course I have had and bred Budgerigars, but only of the normal green type : at present I have one male only. I should think that an aviary filled with the blue variety would be delightful ; lucky are those who have a chance of breeding that pretty little bird !

Doves and Pigeons always appealed to me ; although, with the exception of the African Bronzings, they are a most quarrel-

some Order of birds ; nevertheless they can be kept safely with birds of other Orders, since they usually do not interfere with them. I never had any species of Fruit-Pigeon, nor any species of *Columba* excepting one or two domesticated sports of the Rock-Pigeon ; but of Turtle-Doves I have still a hand-reared example of the British species given to me some years ago by my friend Mr. F. W. Frohawk. It is much wilder even now than a fresh-caught bird would be, rattling about the aviary and so scaring the other birds whenever a stranger (especially if a lady) passes. I have kept two species of *Zenaidinæ*, the Martinican Dove and the Bronze-necked Dove ; they are very pretty, but exceedingly quarrelsome ; at least perhaps I ought not to speak too positively about the latter, because they did agree well with Necklaced Doves, which they even assisted in incubating their eggs ; but with other species they certainly were always at war and particularly in the breeding-season.

Of typical Turtle-Doves distinct from our British species, I have naturally had plenty of both forms of the common Barbary Turtle. On one occasion I tried to cross the cock of the white variety with a white Fantail Pigeon, but she pulled out his feathers in bunches whenever he approached her, so that the attempt failed. Of the Half-collared Turtle Mr. Frank Finn gave me a pair in 1893, but as I could not give them an aviary to themselves I failed to breed them, although they laid and attempted to sit several times. In 1899 Major Horsbrugh gave me what purported to be a second pair ; about 1901 (through the carelessness of a servant) one of them escaped into the garden and was never recovered, the other died in 1902 and was identified at the Natural History Museum as a Deceptive Turtle. In 1894 I purchased, as a pair, two cocks of the Necklaced Dove, one of which killed the other. In 1897 I secured a hen for the remaining cock and bred young which were subsequently killed by a Nicobar Pigeon. In 1900 I bought another supposed pair, which proved not only to be two cocks, but to be Spotted Turtle Doves ; these I sent to the Zoological Gardens. I had one Senegal Turtle given to me by Mr. Seth-Smith in 1902 ; it is a pretty little species. I paired it with Barbary Doves, but it would not breed.

The *Geopeliinæ* are far more quarrelsome than the typical

Turtle-Doves and the Bar-shouldered Dove is especially so. I have had three examples, two cocks and one hen, the latter only lived a year, and the two cocks, some years later, escaped into the garden at the same time as what I suppose was a Deceptive Turtle-Dove (*vide supra*) and were not recovered. I heard that the servant of one of my neighbours was much scared by one of these birds flying close past her as she was walking in the garden. The Peaceful Dove is an exception in the Subfamily, for it really is a tranquil bird and not pugnacious ; consequently other Doves persecute it. I have had three pairs and found that the hens were more delicate than the cocks. I only tried them in indoor aviaries, so never bred them. The closely related Zebra Dove is a spiteful and quarrelsome little wretch and gave the Peaceful Doves a bad time, so long as the two were associated in the same aviary. I never purchased more than one pair. Of the pretty little Diamond Dove I have purchased three pairs, two pairs in 1896 and one in 1903. In an indoor aviary I found that they quarrelled incessantly but never bred ; in an outdoor aviary they breed freely, and more satisfactorily (as Mr. Seth-Smith tells us) when several pairs are associated. They do not appear to be so hardy as some Australian birds, since I lost the cock and all the young birds reared in 1907 by allowing them to spend the winter out-of-doors. At the present time one cock bird only remains alive.

Of the *Peristerinæ* I have only had two species which, in spite of their small size, I found the most quarrelsome of all Doves. The Steel-barred or Picui Dove is especially so, and when he has a chance does not scruple to barbarously mutilate members of his own species. I purchased three pairs and subsequently what proved to be two cocks ; the hens are delicate and I never succeeded in breeding the species. Of the Passerine Dove I bought a pair in 1899, but the hen and two others which I purchased subsequently all died egg-bound. Eventually I turned the cock out into an aviary with many other birds, some of them considerably larger than himself, but his impudent charges at them soon made him master of the entire community ; he fell in love with a hen Bronzewing Pigeon and always roosted beside her : in 1911 he died.

(To be continued).

SOME HINTS ON PARROT-KEEPING.

By THE MARQUIS OF TAVISTOCK.

(Continued from page 220).

NICROSIS.—An infectious disease of a rather mysterious character, which attacks many birds and occasionally causes loss among members of the parrot family: Roseate Cockatoos and Bourke's Parrakeets being the commonest victims. It is incurable and may assume either an acute or chronic form, the bird in the latter case becoming very emaciated.

EYE DISEASE.—An infectious disease of the eye, sometimes found among newly-imported King, Crimson-wing and *Polytelis* Parra-keets and certain Parrots, usually resulting in loss of sight; the eyes, in bad cases, becoming entirely closed up. The eyes may be bathed with warm water and directly afterwards with a diluted solution of rose-water and zinc. Cases of recovery are rare.

EGG-BINDING.—Usually the result of over-fatness or an attempt to breed at a low temperature. Keep the bird very warm and place a few drops of olive oil in the vent at fairly frequent intervals. Giving oil at the beak is naturally useless, but is sometimes done by those who are ignorant of avian anatomy.

WORMS.—Parrots occasionally suffer from both round and tape worms, and these parasites, if allowed to increase unchecked, may cause the serious illness and even death of the bird. A dose of from 3 to 5 grains of cina given daily in the food or water will usually effect a cure.

The subject of disease naturally leads to that of disinfection. For ordinary, everyday use, Condy's Fluid makes a harmless and satisfactory wash, but neither Condy's nor Jeyes' Fluids are of the smallest avail in dealing with the germs of the more dangerous diseases. A parrot cage, which has been occupied by a bird suffering from septic fever, for instance, should be scorched over with the flame of a painter's lamp and afterwards soaked in strong carbolic, finally receiving a wash of plain water to remove any trace of the poison which may cling to the perch or bars. A small indoor aviary should, as far as possible, be subjected to the same treatment as a

cage, but an outdoor aviary containing earth and grass is far more difficult to deal with. For the disinfection of an outdoor aviary, or indeed any large area of ground containing avian disease germs, nothing gives such satisfactory results as common salt applied at the rate of three cwt. or more to the acre. Gaslime or soot are also useful, but as the former is rather poisonous, the birds should be removed for several weeks after it has been applied, and not returned until it has become thoroughly dissolved and washed into the soil by the rain, a process which may be accelerated by digging it in. Ordinary lime is absolutely useless as a disinfectant. It does not even kill parasitic worms, and why it is so often recommended I cannot imagine.

Having so far dealt more or less generally with the parrot family, I will, in conclusion, say something about those genera and individual species of the treatment and characteristics of which I have had some personal experience. As I wish to avoid the common political (?) error of laying down the law in matters of which I am wholly ignorant, I shall say little or nothing about birds I have never myself kept, and this will I hope be some excuse for the extremely "patchy" and uneven character of the following notes.

AMAZON PARROTS (*Chrysotis*) are, as I have said once before, especially suited to cage life, for no other species keep in finer plumage in close confinement, live longer, or appear more contented. Most Amazons, with the possible exception of the magnificent large island races, have a considerable talent for learning to talk, although the cocks are usually far better performers than their mates. Amazons quickly become attached to their owners and are extremely fond of being petted, though some are a little apt to give an unpleasantly sharp nip in moments of excitement. This weakness, together with a tendency to an over liberal use of their loud and raucous voices, constitutes their chief failing. In an aviary, my rather limited experience leads me to consider them far less quarrelsome than parrakeets, and many species readily become inured to cold, the island forms being, I am told, the most delicate. When allowed complete liberty, they, as a rule, stay well, give little trouble and may often be safely released full-winged.

Amazons should be fed on hemp, canary, millet, wheat, and

oats, with fruit, dry bread and plain biscuit they are usually free bathers. The sexes are very much alike in appearance, but the cock is in most cases a larger, bolder, and brighter-coloured bird than the hen, with a larger head and heavier beak.

Amazons are less subject than most parrots to infectious disease, a great advantage to those who have to buy their birds when newly-imported.

PŒOCEPHALUS PARROTS.—The best known member of this family is the Senegal, an active, amusing little bird, with (in the case of the cocks) a fair talent for talking. Its principal failings are a tendency to bite hard in moments of excitement and unprovoked annoyance, and a thin unpleasant scream, which however some individuals do not utter. It appears doubtful whether Senegals or any of their near relatives could be wintered altogether in an unheated aviary as, like many African Parrots, they appear to dislike very low temperatures. The food should be the same as that of an Amazon.

The *Pœocephali* are very susceptible to Grey Parrot fever, and newly-imported birds often develop this fatal malady after appearing in the best of health for some days after leaving the dealer's shop.

Coracopsis PARROTS.—A small and very distinct family of hardy parrots, characterized by their remarkably sombre plumage. They do well in cages and should be fed and treated like Amazons. When acclimatized they can safely be wintered out of doors.

GREATER VASA PARROT (*Coracopsis vasa*).—An amiable and lively bird which, with a little encouragement, becomes very tame and docile. It has a fair aptitude for learning to talk and readily imitates various noises it may happen to hear, showing an especial preference for such as are of a loud and hideous nature. Its natural cry is a kind of whistle, varied by unpleasant grunts and squawks. It is trustworthy with large parrots, but is apt to be mischievous with small ones. The sexes are much alike, and I am not aware what, if any, external differences exist between them.

LESSER VASA PARROT (*Coracopsis nigra*).—Very similar to the last mentioned species, but much smaller. It is a much less noisy bird, becomes very affectionate and behaves well in mixed company.

PRASLIN PARROT (*Coracopsis berklyi*).—Very like the Lesser Vasa, but rather smaller and browner. In spite of its sober colour it is rather pretty, with a large dark eye, reminding one of the smaller falcons.

ECLECTUS PARROTS.—A family of brilliantly-coloured parrots in which the sexes present a remarkable contrast in colour, the cocks being more or less green and the hens crimson. Most of the different species resemble one another so closely that one is tempted to wonder whether they are anything more than local races of the same bird.

Eclecti should be fed on Canary, millet, oats, hemp and sunflower with nuts and plenty of fruit and green food and an occasional piece of sponge cake. When kept in cages they are, as a rule, dull and stolid, though occasionally a tame one learns to talk and becomes quite a nice pet. Eclectus Parrots are decidedly sensitive to cold and should always be carefully protected from draughts and not exposed to sudden changes of temperature. They are extremely liable to contract septic fever and should never on any account be placed in an aviary which has contained a case of this disease. In buying an Eclectus, always see that its eye is clear and bright and the feathers of the head unruffled. If the eye looks watery have nothing to do with the bird or its cage companions and do not believe the dealer's assurance that it is merely suffering from a cold in the head. In mixed company I found *Eclecti* most inoffensive birds, suffering themselves to be unmercifully bullied without making any attempt at retaliation. Their cry is very loud and harsh, but is hardly ever uttered unless they are in exceptionally good health and spirits or much alarmed. One may keep an Eclectus for months without knowing that it possesses a voice at all.

COCKATOOS.—The habits of the various species of Cockatoos and their needs in captivity differ so widely, that nothing can profitably be said of the treatment of the family as a whole.

GREATER SULPHUR CRESTED COCKATOO (*Cacatua galerita*). One of the best known members of the family. It does well in a cage, though greatly benefited in health and appearance by a certain amount of liberty. It is also very hardy and when properly acclimatized can stand any amount of cold. The food should consist of Canary, millet, hemp, wheat, oats, maize, fruit, dry bread and plain

biscuit. Sulphur-crests are readily tamed, become very affectionate and learn to talk well, but, like all their relatives, they are capable at times of producing the most ear-piercing yells. They have been successfully kept, and I believe bred in this country at complete liberty and are certainly most attractive birds when seen flying at large, though unfortunately they are very destructive. It is said that the iris of the hen's eye is much paler than that of the cock, but I must say I have never been able to observe this distinction in any White Cockatoo except the Rose-crested.

The Greater Sulphur-Crest is spiteful in mixed company and its relative the Lesser Sulphur-Crest (*Cacatua sulphurea*) is even worse.

SALMON-CRESTED COCKATOO (*Cacatua moluccensis*) a quaint and beautifully-coloured bird which should be fed like the Sulphur-crest. It is very hardy, but when kept closely confined in a cage is apt to become a feather plucker and should therefore be supplied with plenty of wood on which to exercise its powerful beak. The Moluccan Cockatoo makes a good talker and becomes absurdly tame and confidential, allowing its owner to take every kind of liberty with it. It is well able to make itself heard upon occasion, but it is not quite so noisy as some of its relatives. The hen is smaller than the cock, and has the iris of the eye very dark red instead of black.

LEADBEATER'S COCKATOO (*Cacatua leadbeateri*).—A very beautiful bird, but sometimes shy and unfriendly in disposition, It is quite hardy and should be fed like the Sulphur-crest. It is not to be trusted with weaker birds.

BARE-EYED COCKATOO (*Cacatua gymnopsis*),—A hardy bird, readily tamed, When kept in a cage it should never be given hemp or sunflower, which are most injurious to it. It stays well at liberty but is very destructive.

SLENDER-BILLED COCKATOO (*Licmetis nasica*).—Hardy and should be treated like the Sulphur-crest. It is a good talker and becomes very tame and gentle.

Roseate COCKATOO.—This well-known species becomes very tame and affectionate and is not particularly spiteful with other birds, but it is noisy and a poor talker. Talented specimens are,

however, sometimes met with and I once owned a charming tame female which never screamed at all. At liberty Roseates are very attractive and are less mischievous than White Cockatoos. They are, however, difficult to start, and it is important that the hens, at any rate, should be perfectly tame where an acclimatization experiment is attempted. The birds should be placed in an enclosure with cut wings, and it may even be necessary to keep them from flying until they breed, which they are usually quite willing to do if they have plenty of room and unlimited quantities of grass to feed on.

If the plan is successful and the birds stay when they are full-winged, it is a wise precaution to catch up the breeding hens at the end of every January and keep them in confinement for three months. Otherwise they are almost certain to attempt to nest too early and in consequence die egg-bound.

The cock Rose-breast has the iris black, the hen red or hazel.

GANG-GANG COCKATOO (*Callocephalon galeatum*). Hardy when properly acclimatized, but at first very sensitive to cold.

Gang-gangs become very affectionate pets, but are noisy and seldom learn to talk. They should never, when caged, be allowed hemp or sunflower seed. They stay and do well at liberty, but must be released cut-winged, except in the case of an adult pair, when the cock may sometimes be released full-winged and his mate not allowed to join him until he has been flying loose for some months. The head of the cock is scarlet, that of the hen grey.

BANKSIAN COCKATOO (*Calyptorhynchus banksi*).—Food:—hemp, sunflower, monkey-nuts and Brazil nuts—a diet which would kill most Cockatoos in a few weeks, but on which this splendid bird thrives admirably. Fruit, bread and green food is seldom appreciated, but smooth caterpillars are eaten greedily as well as the small white grubs found inside oak-apples. (In collecting the oak-apples reject all those which have a small round hole, marking the insect's exit). Wasp grubs, gentles and mealworms are usually refused. When buying a Black Cockatoo always be sure to find out to what diet the bird has been accustomed, for if it has ever been used to sunflower-seed it will often starve to death rather than touch hemp and *vice-versâ*. Some Banksians are imported on plain Canary

but this seed is not sufficiently nourishing and birds which will touch nothing else seldom thrive.

Banksian Cockatoos do well in cages, but are not seen to any advantage in such close confinement. When taken young they are easily tamed and made dignified and charming pets, loving to be noticed by their owner and allowed to sit on his shoulder, though they have a curious objection to being stroked or having their heads rubbed, the gentlest of them tolerating rather than enjoying such attentions. Adult Banksians which have never been tamed are extremely nervous and intractable, and even when thoroughly reconciled to captivity are terribly upset by a sudden change of surroundings, refusing food for days in a strange place and uttering a grating scream of fear whenever a person approaches them. Black Cockatoos are not so hardy as most of their white cousins, and while able to stand a certain amount of frost are very sensitive to the effects of cold fog. My experiment with these birds at liberty ended in failure, but rather owing to a series of unfortunate accidents than to their unsuitability for life under such conditions. I did not find them particularly destructive and some individuals never damaged the trees at all. The adult cock Banksian is entirely black with a scarlet bar across the tail. The hen is spotted and barred with yellow and yellowish red. Anyone who desires to attempt to breed this species should be careful not to allow his cock to become too tame. If he does, the bird will transfer his entire affection to his owner and display nothing but fear or dislike towards his intended mate.

GREAT-BILLED BLACK COCKATOO (*Calyptrorhynchus macro-rhynchus*).—A local race of the Banksian, differing in the rather larger size of the beak.

WESTERN BLACK COCKATOO (*Calyptrorhynchus stellatus*).—Much smaller than the Banksian and with a rounder crest. The cry of the male *stellatus* is much shriller than that of the male Banksian and more nearly resembles the call of the female of the latter species.

MACAWS.—Food: Canary, wheat, oats, maize, hemp, sunflower, nuts, fruit, green food, dry bread, plain biscuit and stale sponge cake. Macaws are very hardy birds, seldom ill when pro-

perly cared for, and in the case of the large species, at any rate, very indifferent to cold. They often make excellent talkers—the blue and yellow being the best—and become much attached to their owners, though they are sometimes treacherous with those they do not know. Their chief drawbacks are their destructive propensities and deafening cries. Macaws generally stay well when allowed their liberty, and if attached to their owner and familiar with their surroundings can safely be released full-winged.

The rare Blue Macaws—Lear's, Hyacinthine, etc., are as hardy as the commoner kinds, but appear more inclined to stray if allowed complete liberty. They are generally very docile and affectionate and are rather less noisy than the other members of the group. They are not particularly aggressive in mixed company, although they are well able to assert themselves. Macaws are very difficult to sex.

CONURES.—A large family of Parrakeets of small or medium size, the majority of which inhabit South America and the adjacent islands. They are easily kept, either in cage or aviary and most of the common species can be wintered out of doors. Conures are lively and intelligent birds, easily tamed and capable of learning to talk: they are, however, extremely noisy, very destructive and often quarrelsome with other birds, especially those not nearly related to them. They should be fed and treated like Amazon Parrots, but should only be allowed hemp seed in small quantities, as they sometimes suffer from fatty degeneration of the liver. The sexes are usually much alike.

QUAKER PARRAKEET (*Myopsittacus monachus*).—A very hardy bird, indifferent to cold even when newly imported and closely resembling the Conures in disposition. It is usually spiteful with Parrots and Parrakeets, but tolerably inoffensive towards birds of other orders. If allowed complete liberty it usually stays well for a time but ultimately wanders away, and it is more destructive than any other bird of its size I know.

LOVEBIRDS.—A small genus of diminutive short-tailed Parrots, which despite their popular name, are not conspicuous for amiability towards their neighbours or even for the idyllic character

of their domestic existence. They are quite untrustworthy with weaker birds of other orders.

MADAGASCAR LOVEBIRD (*Agapornis cana*).—A hardy and well known species in which the cock has the head and neck grey and the hen green. It should be fed on canary, millet and hemp seed, with grass and other green food. Madagascars stay fairly well at liberty and will sometimes breed, but with me they have sooner or later fallen victims to various ailments of which total paralysis of the legs is the most common.

BLACK-CHEEKED LOVEBIRDS (*Agapornis nigrigenis*).—A hardy and attractive little bird in which the sexes are so alike as to be practically indistinguishable. A number of breeding pairs will nest together in harmony in a large aviary, but non-breeding birds are very apt to pluck and molest their neighbour's young and should therefore be kept by themselves.

Black-cheeks are useless for turning out as they invariably migrate in August and September, after breeding.

ROSY-FACED LOVEBIRD (*Agapornis roseicollis*).—A very beautiful species but the most vicious of all its family. It should be given plenty of fruit and sponge cake in addition to seed. A pair I once tried at liberty did not stay.

PASSERINE PARROTTLET (*Psittacula passerina*).—Commonly called "Blue-winged Lovebird." Passerine Parrotlets are quite hardy when properly acclimatised, but require plenty of heat on first arrival. They should be fed on millet and canary seed with stale sponge cake moistened in water. Green food may be offered them but they often refuse to touch it. In spite of their grave and demure appearance these little birds are much given to indulging in sudden and sanguinary fracas amongst themselves and should never be overcrowded either in cage or aviary. If it should be necessary to keep a number of them for some time in a confined space, it is a wise precaution to separate the sexes. Bluewings do fairly well at liberty and where Owls are not too numerous might succeed in establishing themselves. The hen is of a nearly uniform green colour and lacks the blue rump and secondaries which adorn her mate.

PALÆORNIS PARRAKEETS.—Food: Canary, millet, hemp

and oats, with fruit and green stuff. The *Palæornidae* do well in cages and keep in far better condition than the Australian Parakeets. The cocks are not difficult to tame and make nice pets, some, such as the Indian Ring-neck, learning to talk well if taken from the nest and reared by hand. *Palæornis* Parakeets are not very susceptible to infectious diseases and the majority can safely be wintered out-of-doors, although it is not always prudent to allow them to attempt to breed at low temperatures, as the hens are rather subject to egg binding. Most species have an immature dress which they wear for a considerable period, during that time they are most puzzling birds to sex. The *palæornidæ* are not unduly quarrelsome.

MALACCAN LONG-TAILED PARRAKEET (*Palæornis longicauda*).

—Deserves special mention on account of its extreme sensitiveness to cold. It should never be exposed to a temperature below 60 deg. and 70 deg.—80 deg., would probably be necessary for the success of a breeding experiment.

GREAT-BILLED PARRAKEET (*Tanygnathus megalorhyncus*).

—Food: Canary, millet, wheat, oats, hemp, paddy-rice, fruit, and nuts. This brilliantly coloured and grotesque bird is not often imported. It certainly cannot be described as beautiful, but makes an attractive addition to a collection on account of the oddity of its appearance and its absurd actions when tame. It is generally supposed to be sensitive to cold, but some newly-imported Great-aills I turned out this spring in very rough plumage, endured a spell of cold weather (including sharp night frosts) without the slightest injury. The hen is more “dumpy” in build than the cock, with a shorter neck and smaller beak.

POLYTELIS PARRAKEET.—A small genus of Australian Parakeets bearing a strong resemblance to the *Palæornidæ* of the northern hemisphere and having nothing in common with the broad-tails. They are fairly peaceable birds and can be wintered out of doors in a sunny, sheltered aviary. The food should consist of wheat, oats, canary, millet, a little hemp, fruit and green food.

CRIMSON-WINGED PARRAKEET (*Ptistes erythropterus*).—

A very beautiful bird which has of late been freely imported. Crimson-wings should be fed on hemp, canary, millet, wheat, oats,

a little sunflower, fruit and green food, the first-mentioned seed being a necessity for them, as without it they generally fail to keep their condition. They are perfectly hardy when properly acclimatised but, like most Parrakeets, are very sensitive to cold when newly imported. They are also highly susceptible to septic fever and take the disease on the smallest provocation, even when in the best of health. In disposition, they are spiteful and cowardly, and show but little affection for even their own kind. When tame, however, they may be quite gentle with their owners. The adult cock Crimson-wing can easily be distinguished from the hen by his black mantle, but I know of no way in which young cocks can be recognised with any certainty. Among the immature birds brought over from Australia the males sometimes outnumber the females by 8 to 1, and as they are said not to assume full plumage for three or four years, one may have to wait a long time before being certain of possessing a true pair. Speaking from very limited experience I should say that Crimson-wings might do well at liberty.

KING PARRAKEET (*Aprosmictus cyanopygius*).—The King Parrakeet should be fed and treated like the Crimson-wing, which it resembles in disposition, being a great coward and bully in mixed company, although fairly friendly towards its own species, a number of cocks living together in harmony as long as there is no hen near them. The King Parrakeet is essentially an aviary bird and is very hardy. It is quite unsuited to cage life, and in close confinement generally appears dull, listless and unhappy and not infrequently falls a victim to fatty degeneration of the liver. Kings are very susceptible to septic fever and also suffer from eye disease so that in buying newly-imported birds the eyes should always be carefully examined. Hens have the head and upper breast green and appear to lack the light green wing stripe which characterizes the adult cock. Young males also have green heads for a considerable time, but light feathers appear on the wings at a fairly early age. King Parrakeets stay moderately well when allowed their freedom, being very dependent on artificial feeding. They should be turned out with cut wings.

COCKATEEL (*Cyclopsittacus novae-hollandiae*).—A very well

known bird and one of the hardiest and most amiable of the parrot family. Unfortunately they are useless for acclimatization purposes, being strongly migratory, utterly destitute of any homing instinct and quite unable to fend for themselves when deprived of artificial food during the winter months.

BUDGERIGAR (*Melopsittacus undulatus*).—What has just been said of the Cockatiel applies to a great extent to this charming little bird, as far as its behaviour at liberty is concerned. It is not quite such an inveterate wanderer when first released, but it seldom stays more than a few months and its small size renders it peculiarly liable to fall a prey to Owls.

LORIKEETS (*Trichoglossus*).—Most of the old writers condemn the Brush-tongued Parrots as a delicate and unsatisfactory family in confinement and after a series of unlucky experiences with some of the commoner kinds, I am driven to heartily endorse what they have written. Nevertheless Lories and Lorikeets have been kept with great success by a few aviculturalists who, I believe, have fed them on a sweetened mixture of unseasoned marmite (made the colour of brandy) and banana crystals, with or without the addition of Horlick's Malted Milk. I have at different times owned upwards of thirty Lorikeets, but not one of them did I succeed in inducing to partake of this mixture. Consequently I had to feed them on seed, fruit, milk, sponge cake, fig, &c. with the result that all, sooner or later, fell victims to fatty degeneration of the liver and fits. Others, I hope, will have better luck than I! Lorikeets are not very sensitive to cold, but they like a snug box to roost in. They are peaceable among themselves but intensely vicious with all other birds, attacking even those which are four or five times their size. Tame Lorikeets stay well at liberty, but wild ones usually give disappointing results. They are just as susceptible to digestive troubles when flying at large as when kept in a cage.

[There are only three species, viz. : The Barraband, or Green Leek ; the Rock Pebbler. and the Queen Alexandra, for the latter undoubtedly belongs to this genus, although dubbed *Spathopterus*, merely on account of one spatulated feather in the primaries of the male. ED.]

(To be continued).

MY BIRDS AT BRINSOP COURT.

By HUBERT D. ASTLEY.

(Concluded from page 281.)

In concluding my account I must conduct you from the bird room out of the house across the old stone bridge which spans the moat, and so along a broad flagged terrace which leads into an apple orchard where there is an aviary. Not much in it; but what there is, attractive.

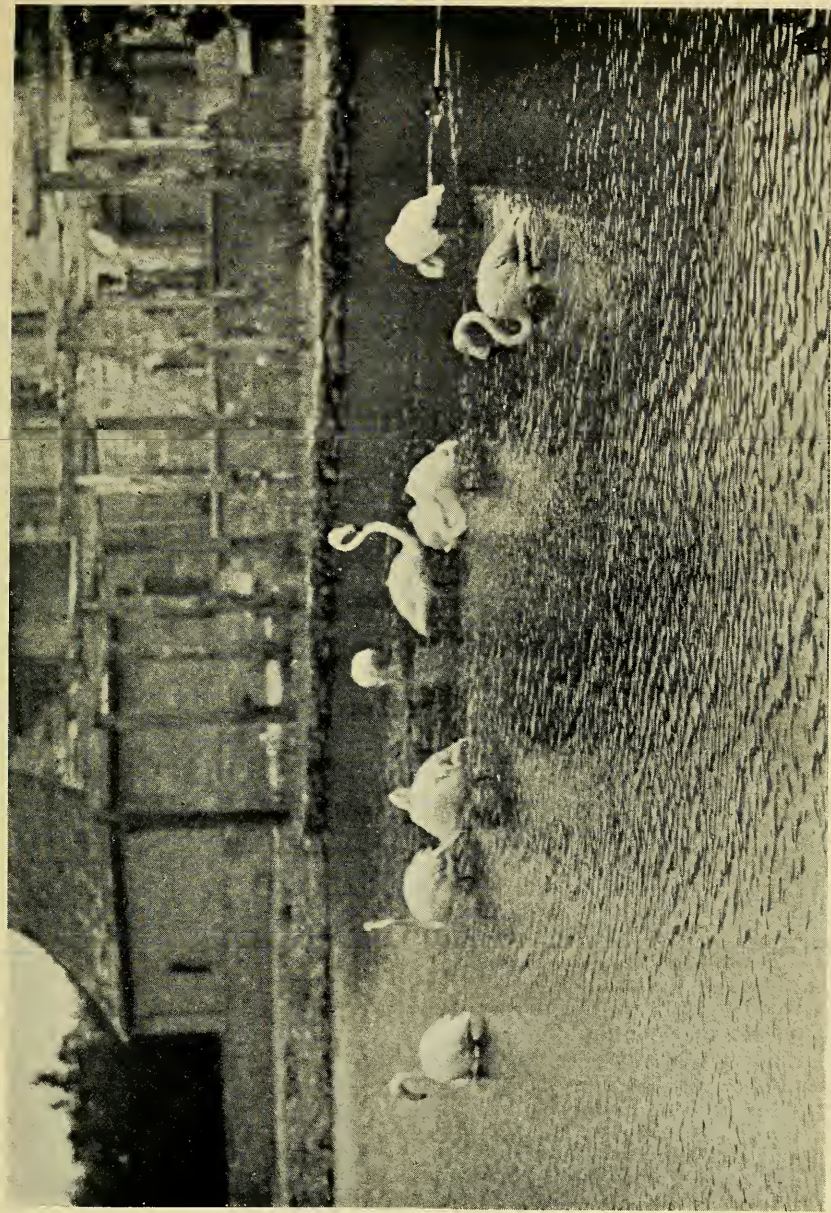
A pair of very tame Yucatan Jays (*Cissolopha yucatanica*), which used to be in the Bird Room, but evidently required more space, and moreover were dangerous there, for if any small bird was flying about and happened to settle on the bars of the Jays' cage, they would instantly do their best to catch it, and that would have been the finish. So they are in this roomy aviary with a natural floor of grass, and a snug house to go into.

These Yucatan Jays are a very beautiful unbroken ultramarine blue on back, wings and tail, the head and underparts being pure black. They are smaller than a Hunting Cissa, and of a graceful shape with longish tails. Like all their family, very mischevous, they are exceedingly tame, delighting in having their heads scratched in Parrot fashion.

A male Senegal Bustard (*Trachelotis senegalensis*) and a pair of Cuban Quails are, as yet, the only other occupants. The Bustard is small as Bustards go, looking more like a large Courser, and uttering at times a very loud note, not unlike that of a Guinea-Fowl's "Come back," but with a distinct pause between each call, and a stress on the second word.

It is a great pity that his mate, which was in poor condition when she arrived, should have died in the winter. The male's principal colouring is sandy-chestnut.

The Aviaries (proper) are close by, divided from the orchard by a stone wall, standing in their own ground, a spacious lawn, and are surrounded on three sides by a hedge of Fuchsias (*Gracilis*). The building is sheltered on the north side by old barns, and in the autumn, various shrubs will be planted between the barns and the aviaries.



FLAMINGOS AT BRINSOP COURT.

Photo by Maurice Portal.



It is to me always exceedingly difficult, as I do not specialize in any particular genus, to keep down numbers. One makes up one's mind not to overcrowd, but one's mind apparently does not brook being ordered about; something tempting is offered; one says "Just one more bird or pair of birds in that compartment" and so it goes on! And goes on against one's real inclinations, for I do not care to see one's aviaries looking like a bird shop.

It is not natural to mix too many species from various parts of the world together, and the flights of my aviaries are *not* spacious. I must weed out some: but what? Take one partition for instance. A pair of Chestnut-breasted Blue Rock Thrushes, the only *pair* probably in Europe. A pair of *Cossypha caffra*—Cape Robin Chats; again decidedly choice. A pair of Red Cardinals from Yucatan, a smaller race, the male with a longer and more sharply pointed crest than the better-known North American type, and more vermilion; yet they are not *C. phæniceus*. A pair of Blue Birds (*Sialis*). A Cat-Bird—a solitary widow who builds every year and lays gorgeous blue eggs. A pair of Orange-headed Ground Thrushes (*Geocichla citrina*). A pair of Diamond Doves and a Hooded Pitta.

None of these would I care to part with, and yet if I gave up the compartment to just three pairs of birds, say, the Blue-headed Rock Thrushes, the Blue Birds and the Red Cardinals, there would be more likelihood of successful nesting, and the effect would be better. Two many birds confuse the eye, besides the risk of their quarrelling.

Two of the six compartments are occupied by Parrakeets and Doves. Three species of the former. Queen Alexandras—five males and two females, not altogether. Hooded Parrakeets, one pair by themselves, and two males in another partition, and one pair of Barrabands (Green Leeks).

In with them are Barred-Shouldered Doves, Diamond Doves and a pair of Crested Doves, but the latter are going out, for there are already seven or eight flying about, a pair of which have had a nest in a hawthorn tree which overhangs the long paved terrace bordering the moat. These Crested Doves are very tame, walking about close to people, and paying little attention even to several Pekingeses dogs which have been taught to leave them unmolested. The flight of the

Crested Dove is very swift, more resembling that of a partridge or quail, the wings, after several rapid vibrations, being held immovable (as in soaring) for some distance until the impetus flags, when they are again used to carry the bird along. I have never seen the Crested Doves soar upwards and down again from the summit of a tree, as the Palm and other doves do, and also our Wood Pigeon when the males are displaying: and the coo of the Crested Dove is very weak; yet it carries a good distance.

The display of the male is extremely pretty, the tail being thrown up and spread out, the wings showing the beautiful metallic greens and violets, being opened out also.

But I must return to the aviaries, for the idea of turning out the one pair of Crested Doves made one wander in the garden. In another partition there are such birds as St. Helena Waxbills, Ruddy Fire-Finches, Hooded and Columbian Siskins, only a male of the latter, glossy blue-black above, brilliant daffodil-yellow below; and also a pair of Purple Sugar-birds, which seem to do very well in spite of having been out in the fickle changes of the English climate, really hot as it was during part of April, and then so chilly that one was glad of a fire to sit by.

So that I believe these Purple Sugar-birds will stand being in the aviary during the winter, when the radiators warm the roosting houses and the electric light enables them to feed up till any hour of the evening that they wish to.

Rose-breasted Grosbeaks and Black-headed (I don't think much of the latter) occupy another partition, as well as another pair of Blue Birds, always a delight; indeed there are few birds more lovely and none more cheery. A male, when first the sunshine begins to warm up in February, opening and shutting his wings, warbling softly like an English Blackbird in the distance, his upper parts coloured like the blue of the sky, his breast with the tones of the old red sandstone of Herefordshire, is most beautiful.

A pair of Seed Snipe are also with these others; tripping about on short legs and Plover-like feet. Apparently quite hardy. And also a pair of the handsome Violet-necked Doves from Jamaica, always nesting in the spring and summer, and invariably choosing some foolish site, where the eggs or the young tumble off. I should



MEADOW PIPIT AND NEST.

Photo by H. Willford.

like to turn them loose; but I think the neighbouring and never-ending woods of oaks with their carpets of blue bells, fox gloves, bracken and the like would swallow them up, although if they lived, their very distinctive coo would let one know they were there. If only they would rear their young, I would try it with the latter. "If only!" how often one says that in connection with one's birds, as well as other things!

NOTES ON MY BIRDS.

By E. G. R. PEDDIE WADDELL.

I am sending you a short account of my birds, although I really do not think that what I have to tell is of interest to anyone but myself.

I have kept foreign birds for about ten years now, beginning, as we nearly all do, with a pair of Budgerigars which I bought on a visit to the South of France, and at present I have about fifty birds of different kinds. I am quite sure that no birds belonging to any other member of our Society have as much travelling as mine have, because for five months of the year my home is in Edinburgh and the other seven months I live in Stirlingshire, and as in neither place can I leave the birds they must travel backwards and forwards with me.

In the country house I have a nice bird room, about 15 feet long by 11 feet wide, with big cages 3 feet by 3 feet by 6 feet along both sides, leaving a passage between. This room has a door window which stands always open and a frame of wire netting fitted on the outside in case of accidents. These cages or compartments contain one pair Redrumps, one pair Cockatiels, one pair Diamond Doves, one pair Black-cheeked Lovebirds, one pair Red-collared Lorikeets, four pairs Yellow Budgerigars and two large compartments for small Finches and Waxbills, which are fitted up with branch perches and cosy sleeping boxes. In smaller cages at the door end of the bird-room I have Mesias, Pekin Robins and Long-tailed Grassfinches. In another room I have, in cages, Violet-eared Waxbills, Rainbow Bunting, Nonpareil and Indigo Buntings, a Grey Parrot, a Senegal

Parrot and a Lesser Hill Mynah. The latter is a splendid talker and is most amusing. These birds are all very tame and are great pets.

Owing to the difficulty of taking my birds to and from Edinburgh I can only keep a certain number, so when I am tempted with anything new I am compelled to part with one or two of the other birds to make room for the new ones. Notwithstanding all these difficulties and drawbacks my birds give me a very great deal of pleasure, and I do not consider anything a trouble that adds to their comfort, health and happiness.

I feed them on the usual seeds, soft food and milk sop suitable to the different kinds that I have at the moment, also green food and banana.

The floor of the bird room is linoleum with a thick covering of sand. I also have a good bird room in our house in Edinburgh, but it is not so cheerful and bright as in the country. However, so long as the birds are warm and comfortable they get through the winter months very well. I generally show some of my birds at the Scottish National Cage Bird Show held in Edinburgh at New Year time and hitherto have been fairly successful.

NOTES ON GANNETS IN CONFINEMENT.

By J. H. GURNEY.

There is not much difficulty in keeping Gannets in tolerable health for a year or two if a regular supply of fish is obtainable and their feet do not get diseased. This is an obstacle which seems hard to guard against, swellings springing up on the soles, which in time make the birds lame, and nothing seems to heal them.

Gannets fight but little in captivity, whatever they may do on their native rocks, probably because the sexual impulse is dulled or lacking, and it has only once happened that a Gannet has been known to kill another Gannet, and then most likely it was because, refusing to feed, it was driven to desperation by hunger.

No amount of frost or cold seems to hurt a Gannet, that is, an old Gannet, for the young ones less inured are more delicate. The tame ones here described, would awake quite happy after a night of

twenty-two degrees of frost spent in the open, not a whit the worse for it. A small shed, open on four sides, which was put up for their benefit, they would never make use of, possibly because they were afraid of it and suspected a trap.

Great heat they cannot endure, and on a sultry day in summer the poor birds may be seen standing for hours with their mandibles apart in great distress and evidently only able to breathe with difficulty. And this may be remarked in a wild state also in very hot weather on the Bass Rock, where the cliffs get heated if exposed for long to a bright sun, and the Gannets at once suffer. A Gannet is very adept at catching a fish when thrown to it from a little distance, but they are much less clever if the fish falls into the water, or else it is some disinclination which makes them slow in picking it up.

A FEW NOTES ON WADING BIRDS.

By H. L. SICH.

My experience of keeping Waders is not very great because it only began in 1911, with various intervals, owing to rats and escapes. I do not think that there are many members who keep Wading Birds, except as a mixture for varieties' sake among their other birds; if there are they do not write much for the Magazine.

My greatest difficulty is to get hold of any birds of that kind, and when got most of them arrive in such a dreadful condition that they die before one can bring them round. Their wing feathers are cut almost to the bone and do not moult out. Their breast bone is like the edge of a knife; their feet are often very sore and ulcerous. They are only to be obtained from Autumn until early Spring; at the worst time of the year and have not seen any water for weeks, perhaps months; if they get the least chance they will soak themselves with water and shiver for the rest of the day or, worse still, get a cold or pneumonia and die.

Food I found was another difficulty. I am getting over that, but my birds are only the common species, not being able to get anything else. Turnstones I have never seen advertised. My pond

is not deep enough for swimming birds, besides it dries up in summer, so Water Rails are barred.

The aviary is 48ft. × 29ft., with a pond three or four inches deep in the middle of the aviary, which stands on stiff clay, not the best soil for the birds.

The following is a list of the species that I have tried to keep. CURLEWS. They did very well and kept down the mice and also the nestlings of a few small Finches as well.

OYSTER CATCHERS did not thrive very well, not getting enough nourishment.

GREEN PLOVER were quite a failure and only lived about seven months, though one, which was given to me after some brute had chopped off half its wing, which never healed, lived for quite a long time.

THE KNOTS always get very fat, and some are now coming into colour.

THE DUNLINS are also doing the same, but not getting too fat.

THE RUFFS come into colour and moult at the proper time, so I consider that they are thriving properly. The Reeves are difficult to get, there are now six Ruffs to one Reeve.

BLACK-TAILED GODWITS. Two, which I bought just a year ago, have very much improved since last year, though their feet are not right yet; three others which I had died soon after they arrived.

TWO GOLDEN PLOVERS never got over the dirty state in which they arrived and soon died.

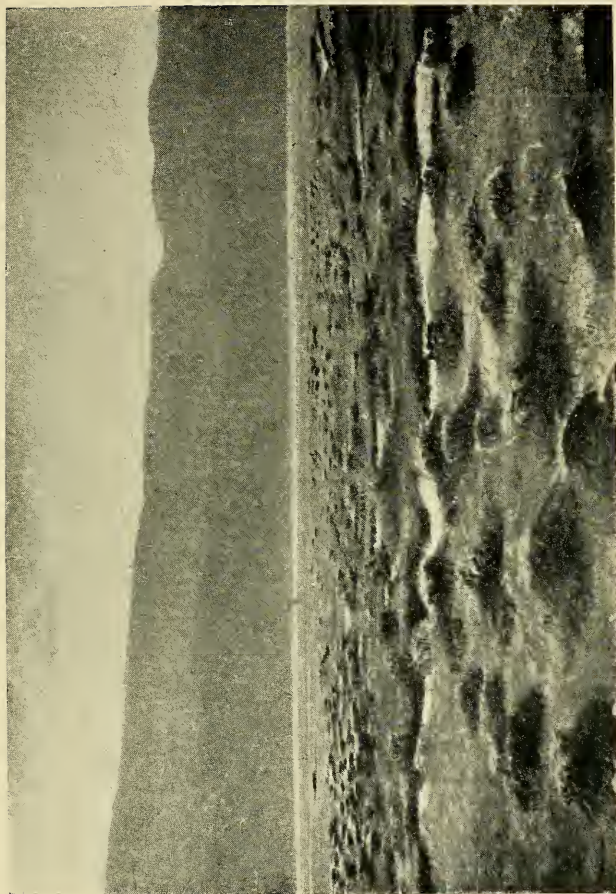
A LITTLE STINT lived for a few months, but did not get the right food.

TWO RINGED PLOVERS were doing very well when some rats got in and destroyed nearly all my Waders, but did not eat any of them.

I have one REDSHANK at present, but its legs are yellow not red.

There is a fish food which I have used for some time, it seems to be a help to these birds and makes the food more tasty. I am sending a packet to our Editor for his opinion on the matter.*

[It would seem to be a decidedly useful food.—ED.]



FLAMINGOS' NESTS, LAKE HANNINGTON.

I have written the above as some sort of answer to Mr. C. Barnby Smith's query in the May part of the Magazine.

P.S.—This flaked cod-fish can be bought at Harrod's Stores, or at the makers at 4½d. a packet, and keeps quite good for a long time.

ENGLISH NAMES FOR THE PARROTS.

By Dr. E. HOPKINSON.

(continued from page 285.)

"CUBA AMAZON," see under WHITE-FRONTED A. below.

DIADEMED AMAZON, = *A. diademata*. Sometimes known as the "KING AMAZON."

"DOUBLE - FRONTED AMAZON, = *A. oratrix*. Also known as "LEVAILLANT'S A. ? = Latham's COMMON AMAZON'S PARROT, VAR. C.

DUFRESNE'S A. = *A. dufresneana* of Guiana.

FESTIVE AMAZON = *A. festiva*; FESTIVE PARROT (Latham). Sometimes called the RED-FRONTED AMAZON or PARROT, though this name properly belongs to *A. vittata*.

FINSCH'S A. = *A. finschi*.

GOLDEN - NAPED AMAZON = *A. auripalliata*. Other names :—
YELLOW-NAPED A ; YELLOW-NECKED A. ; YELLOW-NAPED GIANT A.

GREEN AMAZON, BLUE-FACED. →

GREEN-CHEEKED AMAZON = *A. viridigena*.

GUATEMALAN A. = *A. guatemalae*.

GUILDING'S A. = *A. guildingi*, of St. Vincent.

IMPERIAL A. = AUGUST A.

"KING AMAZON," a dealer's name, which generally means the DIADEMED A., though great uncertainty prevails in the use of all such names.

LA PRETRE'S A. = *A. pretrei*.

LEVAILLANT'S A., another name of the DOUBLE-FRONTED AMAZON.

MEALY AMAZON. = *A. farinosa*. MEALY GREEN PARROT (Latham).

MERCENARY A. = *A. mercenaria* of Peru. "JURNALERO" in Peru.

NATTERER'S A. = *A. nattereri*.

ORANGE-WINGED = *A. amazonica*. Other names, mostly obsolete : COMMON AMAZON PARROT, VARS. A. C. E. and F. ; *JAMAICA PARROT, *BLUE-TOPPED PARROT ; *BRAZILIAN YELLOW-FRONTED PARROT ; *YELLOW-SHOULDERED PARROT ; all of

Latham. ?=His *YELLOW-CHEEKED PARROT. ?=*AMAZONS PARROT and *AOUROU PARROT of other early authors. "AJURUCUEUCA" Marcg.).

PANAMA A.=*A. panamensis*.

"PIGMY A." see SALLE'S AMAZON.

RED-FRONTED A.=*A. vittata* of Porto Rico. The name is also sometimes applied to the FESTIVE A., or other similar species.

RED-MASKED A.=*A. brasiliensis*, the *BRAZILIAN GREEN PARROT (Latham), *BLUE-FACED PARROT, VAR. C. (Latham), *AUTUMNAL PARROT, VAR. C. (Latham). Often known by dealers as the "RED-TAILED AMAZON," though this is one of their usual names for the BLUE-FRONTED.

RED-TAILED A., see BLUE-FRONTED and RED-MASKED A.

RED-THROATED A.=*A. collaria* of Jamaica. The JAMAICA PARROT of some authors; locally called the "YELLOWBILL" and "YELLOW-BILLED PARROT" (Gosse); "SASSABE," or "XAXABES," said also to be local names. The RED-THROATED PARROT of Latham. ? His *WHITE-HEADED PARROT, VAR. A., and his *GERINI'S PARROT.

RED-TOPPED A.=*A. rhodocorytha*.

SALLE'S A.=*A. ventralis*, the ASH-CROWNED PARROT and WHITE-FRONTED PARROT, VAR. B., of Latham. Dealer's names, "SAN DOMINGO A.," "PIGMY AMAZON" (?).

SALVIN'S A.=*A. salvini*.

"SAN DOMINGO A.," see SALLE'S A.

SINGLE YELLOW-HEADED A., see YELLOW-SHOULDERED A.

"SPECTACLED AMAZON," occasional dealer's name for the WHITE-BROWED AMAZON.

"TERRA DEL FUEGO AMAZON," a dealer's name sometimes used for some Amazon, probably the common BLUE-FRONTED. The epithet "blue-crowned" is generally added.

"TRICOLOUR A.," another's dealer name; generally means one of the commoner species, which happens to show a larger amount of yellow than usual.

VINACEOUS A.=*A. vinacea*, one of the larger species; probably Latham's *RED-HEADED BRAZILIAN PARROT.

"VIOLET AMAZON," see "BRONZE AMAZON," above.

WHITE-BROWED A.=*A. albifrons*. WHITE-CROWNED PARROT (Lath). "SPECTACLED AMAZON" or "SPECTACLE PARROT" sometimes.

WHITE-FRONTED A.=*A. leucocephala*, from Cuba. Latham's name, WHITE-FRONTED PARROT; Edwards', WHITE-HEADED PARROT. ?=Latham's *PARADISE PARROT. "CUBA AMAZON"

(E. D.). "CUBA PARROT," and WHITE-HEADED AMAZON are other names.

WHITE-HEADED A., see WHITE-FRONTED A.

YELLOW-BELLIED A.=*A. xanthops*.

YELLOW-CHEEKED A.=*A. autumnalis*. *AUTUMNAL PARROT (Latham), and his *BLUE-FACED PARROT, VAR. B. *LESSER GREEN PARROT (Edwards), ? his *BLUE-FACED GREEN PARROT. *BLUE-HEADED CREATURE (Banks).

YELLOW-FRONTED A.=*A. ochrocephala*. YELLOW - CROWNED PARROT (Latham), and his *YELLOW-HEADED AMAZONS PARROT, and VARS. A. and B.; also=his *PARTI-BILLED PARROT.

*YELLOW-HEADED AMAZONS PARROT, see YELLOW-FRONTED.

*SINGLE YELLOW-HEADED A., see YELLOW-SHOULDERED A. YELLOW-LORED A.=*A. xantholora*.

YELLOW-NAPED A., YELLOW-NAPED GIANT A., see GOLDEN-NAPED AMAZON.

YELLOW-NECKED A., see GOLDEN-NAPED A.

YELLOW-SHOULDERED A.=*A. ochroptera*, the YELLOW-WINGED PARROT (Latham), *ASH-FRONTED PARROT (Latham); *YELLOW-HEADED CREATURE (Banks); ? the *GREEN AND YELLOW PARROT FROM BARBADOES of Albin, or *CAROLINA PARROT, of Latham. Occasionally known among dealers as the "SINGLE YELLOW-HEADED AMAZON."

AMAZONS PARROT, early variant of AMAZON PARROT.

YELLOW-HEADED, see YELLOW-FRONTED AMAZON.

*AMBER PARROT, Latham's name for the RED-FRONTED LORY. See under LORY.

AMBOINA PARROT (Latham's), *Taŕygnathus gramineus*. Original name, *PARROT FROM LORD HOWE'S ISLAND, but its habitat is the Molucca.

AMBOINA PARRAKEET, see AMBOINA RED PARROT.

AMBOINA RED PARROT (Latham).=*Aprosmitus amboinensis*, sometimes known as the AMBOINA PARRAKEET.

"AMERICAN LOVEBIRD," popular name for the PASSERINE PARRAKEET, and other members of the genus *Psittacula*.

"ANACA," see BLUE-WINGED CONURE.

*ANACAN MACAW, occasional book name for the SEVERE MACAW.

"ANAKAN," said to be a native name of the SEVERE MACAW, whence presumably the book name above is derived.

ANDAMAN ALEXANDRINE PARRAKEET, see under Alexandrine Parrakeet.

ANDAMAN PARRAKEET.=*Palaeornis tytleri*. Other names, TYTLER'S P., RED-CHEEKED ANDAMAN PAROQUET.

*ANGOLA YELLOW PARROT, Latham's name (absolutely incorrect as to country of origin) for the YELLOW CONURE.

ANTIPODES ISLAND PARRAKEET. = *Cyanorhamphus unicolor*.

*AOUROU PARROT, see AMAZON, ORANGE-WINGED.

"ARAGUABY," see GREEN CONURE.

"ARARA," native name for some of the Macaws. Also sometimes used as a book name (*) for any MACAWS, and for some of the Long-Tailed CONURES, such as the PATAGONEAN and CAROLINA.

"ARARACANGA," native name (Marcgrave) for the GREEN-WINGED MACAW.

"ARARA-CATENGA," the MARAKANG MACAW.

"ARARAUNA," the BLUE AND YELLOW MACAW.

*ARATOO, obsolete book name for any of the BLACK COCKATOOS.

GOLIATH ARATOO, the GREAT BLACK COCKATOO.

*ASH-BROWN PARROT, see LESSER VAZA PARROT.

*ASH-COLOURED AND RED PARROT, see GREY PARROT.

*ASH-COLOURED PARROT, see GREY PARROT.

*ASH-CROWNED PARROT, see SALLE'S AMAZON, under AMAZON.

*ASH-FRONTED PARROT, one of Latham's names for the YELLOW-SHOULDERED AMAZON.

AUCKLAND ISLAND PARRAKEET, see under NEW ZEALAND PARAKEET. AUGUST AMAZON.

*AURORA PARROT, see BLUE-FRONTED AMAZON.

AUSTRALIAN LORY, see PENNANT'S PARRAKEET.

"LOVEBIRD," see BUDGERIGAR.

GRASS PARRAKEET, the BUDGERIGAR.

RED-CROWNED LORIKEET, see VARIED LORIKEET.

(To be continued)

EDITORIAL.

The Editor still asks for donations towards the *Illustration Fund*. Will not many of the members send half-a-crown each, if nothing more?

Articles are also needed in order to maintain the Magazine. Members may possibly have friends in different countries, who could send them notes.

* * *

Lord Tavistock writes that a brood of young Pennant's Parrakeets have left the nest at Woburn Abbey, and, with the exception of a few green feathers in the wings, are of the same colour as the parents. This is surely unusual.

NEW MEMBERS.

Miss R. WHITLAW, Amerden, Taplow.

Mr. A. F. WACHSMANN, "Maitai," Murray Road, Beecroft, N.S.W.,
Australia.

CANDIDATES FOR ELECTION.

Mrs. CHRISTIE, Newton House, By Elgin.

Proposed by MAJOR W. TWEEDIE.

Mrs. R. W. WALLACE, Moelwyn, Inglis Road, Colchester.

Proposed by Mr. R. I. POCOCK.

ILLUSTRATION FUND.

Mr. Reginald B. Astley	..	..	..	£1 0 0
Mr. W. Shore Baily	..	..	..	0 10 6
Major G. A. Perrean	..	..	..	0 8 0
Miss E. Chawner	..	..	..	1 1 0

MEMBERS' PRIVATE SALE AND EXCHANGE COLUMN.

The charge for private advertisements is SIXPENCE FOR EIGHTEEN WORDS OR LESS, and one penny for every additional three words or less. TRADE ADVERTISEMENTS ARE NOT ALLOWED IN THIS COLUMN. Dealers who are members, wishing to advertise, should apply to the Publisher for terms. Advertisements must reach the EDITOR on or before the 26th of the month. The Council reserve the right of refusing any advertisement they may consider undesirable.

Two pairs White-Eye Pochard, 60/- pair; ten pairs Carolina, 30/- pair; two pairs Tufted, 25/- pair; two pairs Chili Teal, 35/- pair; all hand-reared.
M. PORTAL, High Sandhoe, Hexham.

WANTS.

The charge for members' advertisements under this heading is FOUR PENCE FOR TWELVE WORDS or under, and one penny for every additional three words or less.

Wanted, Cock Nonpariel Bunting; would exchange for hen, 15 months in outdoor aviary. B. C. THOMASSET, Ashmansworth, Newbury.

Wanted, Two hen Cockateels, or would exchange three cocks for them, latter in excellent condition.

Mr. BUCK, The Lodge Gate, Earl Soham, Framlingham.

Wanted, Female Bar Shouldered Doves (Australian).

H. D. ASTLEY, Brinsop Court, Hereford.

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AVICULTURAL MAGAZINE.

*J. H. Kiley
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RED-BREADED MERGANSER (*Mergus serrator*).

THE

AVICULTURAL MAGAZINE,

BEING THE JOURNAL OF THE

AVICULTURAL SOCIETY.

Third Series.—Vol. V.—No. 11.—*All rights reserved.* SEPTEMBER, 1914.

THE RED-BREASTED MERGANSER.

Mergus serrator.

By HUBERT D. ASTLEY.

The length of this duck is twenty-four inches. The male in full dress is very handsome, with his double crest, head and upper part of neck black, glossed with green; against which the bright crimson beak and eyes (the legs being of the same colour) make a conspicuous contrast. The middle of the neck is white, and the base of the fore-neck, buff with dusky striations. The patch of white feathers, margined with black at the sides of the fore-neck at once attract the eye. Back, black; wing coverts white with two narrow black bars. The flanks grey, with narrow pencillings of black and white.

The female's head and neck is dull brownish red, and is altogether paler, lacking the distinctive markings of her mate. There is an eclipse plumage after the breeding season.

During the latter period the Red-breasted Mergansers are found along the coasts and rivers of Scotland in many parts, and it is common on the Orkneys and also breeds in the Shetlands, as well as the Inner and Outer Hebrides. It does not breed in England, but it occurs in Ireland, in Ulster, Connaught, and Munster. Beyond the British Isles it nests in Iceland and Southern Norway, in Sweden, Finland, Russia and North Germany, and also in Denmark. In America too, Labrador, Greenland, etc.

To England, it is a winter visitor; a bird of passage in the autumn and the spring. As a rule the nest is placed on the ground

amongst rank vegetation, heather, etc., sometimes amongst cairns of stones, or even in a hollow in an old stone wall.

Mergansers are great eaters. Eleven good-sized salmon-parr have been taken from one bird. Small eels and coarse fish of all kinds, as well as shrimps and little crabs swell the list of their varied menu.

They will live well in captivity, provided they have fish or flesh, but they can subsist, when accustomed to it, very largely on greaves, melox, etc., but of course the larger the piece of water stocked with natural food, the better.

NOTES FROM THE ZOOLOGICAL GARDENS.

By D. SETH-SMITH, F.Z.S.

Our Editor has appealed to me to send him some notes for the September Magazine, and so, on a wet day on my holiday far from London I am writing a few notes, though as I have not my note-book with me, it is possible I may have omitted some points of interest, and as I left a week ago these notes may not be quite up to date.

Amongst the most interesting of recent arrivals may be mentioned a specimen of the Great Courlan (*Aramis giganteus*) a bird that may be described as something between a Crane and a Rail, with a superficial resemblance to, and about the same size as, an Ibis, but with a less curved bill. It is brown, with each feather centred with white, giving it a very speckled appearance. It walks with an upright carriage and a peculiar jerky motion of the body. *A. giganteus* or *pictus* occurs in reedy swamps in Central America and the Southern States of North America as well as some of the West Indian Islands. To the south of its range occurs the closely allied form, which is probably merely a local race known as the Scolopaceous Courlan. These two are the only representatives of this genus and form a distinct Family of birds.

This is the only example ever received of *Aramus giganteus*,

though one specimen of *A. scolopaceus* was obtained in 1874, which lived but a few days.

The pair of Cotton Teal, given to us by Mr. Ezra some months ago and already mentioned in this journal by Mr. Astley, appear to be thriving well in the small aviary at the end of the Diving Bird House. Mr. Astley very kindly gave us a second pair, but they were some that had been delayed for some weeks on the Continent, and the long close confinement resulted in their contracting tuberculosis, from which they soon succumbed.

An example of the Black-necked Stork (*Xenorhynchus asiaticus*) received on July 28th is an important addition to the collection as it is a good many years since a specimen was represented in the collection. It is a large and handsome Stork with greenish black head and neck, black wing-coverts and white body and a most formidable bill. It is locally distributed in suitable localities throughout India, Ceylon, Burma, and right away to Australia.

The Small Bird House and Summer Aviaries contain just now a very interesting collection, as a good many new birds have been added recently. Mr. Heumann brought home a fine collection of Australian birds at the beginning of July, and of these the Zoological Society acquired several, and a number were most generously presented by Mr. Alfred Ezra. Foremost among these may be mentioned the charming Blue Wren, one of the most familiar of the birds of the Eastern State of Australia. The male when in colour has the crown and back of a most brilliant enamel-like blue, relieved by jet black, his long tail, which is carried erect, being of a dull indigo blue. The little hen is his exact counterpart in shape and carriage but of a mouse-brown, with a reddish tinge round the eyes. In Australia these little birds go about in family parties, generally consisting of a male in colour, one or two out of colour, distinguished from the female by the bluish tail and absence of red round the eyes, and several females. They occur in almost every garden where there is plenty of cover, frequently coming out of the low bushes and hunting tiny insects in the grass or flower beds. It will be remembered by the older members of the Avicultural Society that Mr. Reginald Phillipps actually bred this species in his garden in London about ten years ago.

Another very charming bird, of which we have a pair, is the Black and White Fantail (*Rhipidura tricolor*). It is a most familiar bird and a great favourite in most parts of Australia where it is called "Wagtail," "Willie Wagtail," or "Shepherd's Companion." Its long, fanlike tail is constantly swayed from side to side, as it settles on a post, branch or the ground with a fly or other insect in its bill which it has captured in the air. Its head, neck, chest, back and tail are black, its underparts and a streak above the eye, white. A cock and two hens of the White-browed Wood-Swallow (*Artamus superciliosus*) are also very desirable additions to our collection, for they too are most attractive birds and very handsome. But of more interest, because we have never had them before, are a pair of White-shouldered Caterpillar-eaters (*Lalage tricolor*), the male of which is black and white and the female brown. There are five species of Honey-eaters in the collection of Australian birds, namely the Wattle-bird, the Spiny-cheeked, the White-cheeked, the Yellow-tufted and the Lunulated Honey-eater. Of these the White-cheeked is the most beautiful, a singularly handsome bird, black and white with conspicuous white cheek-tufts and yellow on the wings.

The Australian Robins (*Petroica*) are amongst the most striking of all the Australian birds, and we are very glad to have on deposit from Mr. Ezra a pair of the Scarlet-breasted Robin (*P. leggi*) the male of which has the breast of flaming scarlet; the forehead, underparts and a patch on the wings white, and the head and back black. The female is brownish in colour with a tinge of scarlet on the breast. These and a hen of the Flame-breasted Robin (*P. phoenicea*) are the first specimens of the genus that have ever been exhibited in the Zoological Gardens.

The Sunbirds are becoming very popular just now with aviculturists, since a few enthusiasts, notably Mr. Alfred Ezra have shown that they are by no means difficult birds to keep, some species being apparently hardy in fact. I have no doubt that before long these lovely birds will be imported freely. At the Zoological Gardens we have a very fine male of the Southern Malachite Sunbird (*Nectarinia famosa*) recently purchased. It is a common species in South Africa and an extremely beautiful one.

Four other rarities which have been presented to us by Mr.

Ezra, are a Velvet-fronted Nuthatch (*Sitta frontalis*), four Red-headed Bullfinches (*Pyrrhula erythrocephala*), a Blue-headed Rock-thrush (*Petrophila cinclorhyncha*) and a Golden-throated Barbet (*Cyanops franklini*), the first three of these are new to the collection, and of the latter we have only had one specimen before. All are from the Himalayas.

Still one other rarity, new to the collection, is a very beautiful little Hawk (*Gampsonyx swainsoni*), from Central America, received by purchase from a dealer. It is about the size of a Hobby, very dark blackish brown above, with whitish forehead and chest with a complete whitish chestnut collar surrounding the neck and chestnut flanks and underparts.

Breeding results this year have not been great. Since we took up the breeding of pheasants four or five years ago we have done fairly well on the whole, but each succeeding year has brought with it certain unforeseen diseases, a state of things which I fear is unavoidable where the same ground has to be used year after year for rearing.

Our rare Douglas Quails laid a number of eggs which we hatched in an incubator and the chicks are being reared in a foster-mother and appear to be thriving well. Eggs laid by some hybrid quails, which we bred last year between the Douglas and Californian Quails, two closely allied species, have proved to be quite sterile.

Last winter a pair of Crowned Pigeons hatched out a young bird in the Western Aviary, and it was not surprising that at that inclement season the young bird was not reared. Now they have bred again, and when I left a week ago the pair were brooding a newly-hatched squab which we hope may be successfully reared.

Green Cardinals, Ruddy and Madagascar Turtle-doves have all reared young, but the most interesting event, should it come to a successful conclusion, will be the breeding of the New Guinea Rifle-bird. In the spring, Mr. Brook kindly lent us a hen of this species which had previously laid eggs in his aviary. She was put out with one of our cock birds in the summer aviaries. No sign of nesting was noticed for a long time, but the day before I left, July 31st, the keeper Bailey discovered the hen sitting tightly upon a well-made nest of twigs and dead leaves. Of course we did not disturb her

and do not know how many eggs she has, but she took no notice of our presence in the aviary, sitting as though glued to her nest, which promises well.

GLIMPSES OF SOUTH AMERICAN ORNITHOLOGY.

By LORD BRABOURNE.

In a well-known novel by a well-known and popular author the following passage occurs :—" In the shadow overhead flew and chattered crowds of Green Paroquets and glossy Crows, while here and there we could see a Bird of Paradise drooping its smart tail-feathers amid the foliage. A little further and deep in the forest the ear caught the tap-tap of the Woodpecker, the snap of the Toucan's beak or the deep trumpeting of the elephant. Once we startled a leopard that gazed a moment at us with flaming eyes, and then was gone with a wild bound into the thicket." All this along a jungle track in Ceylon, frequented by religious votaries and sight-seers. Having no acquaintance with eastern bird-life the reference to Birds of Paradise left the writer comparatively unmoved, but the "snapping of the Toucan's beak" sent cold shivers down the back.

A few flocks of " brightly-plumaged screaming birds flitting their way from bough to bough, etc., etc.," present flashes of warmly picturesque local colouring, which both novelist and traveller alike seem unable to resist; especially is the second an offender in this respect. And while he may make a delightful book, he fixes in the mind of his reader an impression doomed to a certain disappointment, should he ever visit the scenes described. The reason is obvious.

Imagine an observant traveller arriving at an Estancia in middle Argentina about the end of September. He might possibly notice, perched on the fencing of the garden of that Estancia, two recent arrivals from the north; a small livid, red bird (*Pyrocephalus*) and one of the same family, but widely different in its style of beauty; grey and white with a jet-black

head, a concealed yellow crest and with two greatly elongated tail feathers, the well-known Scissor Tail Tyrant ; a third might be added to the picture ; a snowy white bird with black tips to the wings (*Taenioptera irupero*). A month later he might be travelling by rail through the same country ; he would certainly see from the railway carriage small flocks of Roseate Spoonbill and Wood Ibis, collected here and there by the occasional lagunas, on their way to spread themselves over the Province and the Argentine Pampas.

Such pictures of bird-life are not easily forgotten, so that they group themselves in the memory to form a blur of coloured recollection. The traveller may never visit that country again, but assuredly in the forthcoming book ("Six Months Impressions of a Continent" or some such name) he will casually refer in glowing terms to the brilliant nature of the Argentine bird-life.

Still undoubtedly the haphazard traveller does occasionally have wonderful ornithological sights thrust upon him, unsought for. And it is my intention to relate a few of these from South America.

Everyone must have his own particular idea of what the general effect of Tropical bird-life should be. The writer has only once seen his for a few hours in the Delta of the Orinoco. There is no great river here, but countless small mangrove and palm-fringed channels with sluggish currents. The steamer takes the Macareo, the principal and least tortuous of these, to port of Spain. Occasional pairs of both Blue and Yellow and Red and Blue Macaws flew over ; not "soaring like huge Hawks," as one writer puts it, but moving in quick-flapping trailing flight as if they knew that particular palm, where most fruit grew and meant to arrive as quickly as they could. "Soaring Hawks" were however represented by perhaps the most graceful of all the family, the Swallow-tail Kite. An occasional Cooi Heron was there ; and the small Blue Heron (*Butorides striata*) in rather greater numbers would rise and fly croaking across the water. Some exigency of river navigation takes the steamer rather closely and suddenly round a bend, and from almost under the bows rises a living streak of fire, as a flock of a dozen or so of Crimson Ibis flap quickly away. The fauna of that region has been graphically described by Mr. Beebe in "Our Search for a Wilderness."

There was no great variety of bird life ; nor were there great numbers of any one kind ; but those, that were seen, seemed to fit with the general atmosphere and surroundings—intensely tropical in appearance. In fact the lack of bird-life on the large South American rivers has been the subject of frequent comment. The distances are too great.

Still one beautiful species is always present : the Blue and Chestnut Kingfisher (*Ceryle torquata*), a bird about the size of a Pigeon, is seen on all the South American waterways from Caracas to Magellan (the Southern Argentine and Chilian form *C. stellata* is slightly smaller). Indeed the bird seems to prefer the larger rivers to those backwaters and sheltered “riachos,” where the generality of waterfowl congregate in swarms ; and is equally abundant on the Paraguay River about Asuncion, as on the Orinoco below Ciudad Bolivar.

A scene from the Island of Trinidad was memorable for the numbers of one particularly gaudy species. From the town of Siparia in the southern part of the Island runs a road through the tropical forest to the coast. And all along this road at frequent intervals were nesting-colonies of the Yellow and Black Cassique (*Cassicus cela*, *Persicus*). Their lively spluttering, bubbling notes and the long nests swinging from the trees gave this road a peculiarity of its own. The birds actually had a noisy colony in the Church-yard of Sipari. Here and there were to be seen the single nests of the larger and non-gregarious Cassique (*Ostinops decumanus*). The nature of the vegetation is that of the “High Woods” described by Charles Kingsley in “At Last” ; and the birds had probably all deserted the surrounding district, to avail themselves of the isolated trees, incident upon partial forest-clearing by man, from which to hang their nests.

Birds of the Hawk family, though some species occur in flocks especially on migration, cannot be considered as generally gregarious. But sometimes hundreds may be seen together. The scene is on the Paraguay River a few miles above Asuncion and on one of those stretches of water hundreds of miles inland, the straitness and breadth of which give the effect as of the river itself merging into the horizon ; the glory of the great South American rivers. On the

west is the low-lying palm and bamboo-edged bank of the marshy Chaco ; on the east the slightly higher shore of Paraguay proper. Very far ahead is seen a line of birds continually passing singly, in pairs, in sixes and in twenties, a never-ending stream flying steadily from west to east. Not for an instant is there a break of more than a few yards in the chain. Only when the river steamer is right upon them, and they rise in their flight to top it, are they seen to be the Sociable March Hawk (*Rostrhamus sociabilis*), a bird of that deep blue-black colouring, peculiar to certain genera of Hawks (*Urubitinga*, *Leucopternis*, etc.), with a salmon-orange cere and feet and a bright crimson iris. The steamer passes, the birds sink again to the original level of their flight ; and as far as the eye can watch them over the stern the stream continues.

Nor is it necessarily mere numbers or gaudy colouring, that hold most readily the attention or are best remembered. The writer was once in the Llanos of Venezuela in February. From all accounts the Llanos would appear half the year to be a swamp and the other to be parched almost to desert dryness. This was towards the end of the desert season. The word "bish" accurately conveys an impression of the vegetation of that part of the Llanos. There are no trees larger than the English oak ; and the narrow road is edged on each side by dense scrub, which gradually gives place to the south to scattered clumps of trees and more open country. A glance at the map gave one the idea of a country well-watered by several rivers : but these appeared at that season mere sandy beds. A few mud-holes still remained and at one of these rather more deeply sunk in the ground, and not more than a few feet square, a strange quartet of birds was discovered. A Wood Ibis and a Roseate Spoonbill rose heavily from under the mule's very nose and perched in a tree near by ; whilst on a small bush overhanging the water sat two large Black Buzzards (*Urubitinga urubitinga*). These remained perched, merely curious at the sight of a human animal persuading another animal to drink slush. The writer had been familiar with all these three species 2,000 miles or more further south in Argentina ; one of the forms of the Ruby Tyrant (*Pyrocephalus*), a common Argentine bird, was abundant ; and it needed little imagination to transfer the whole scene to that country.

And let it be said, that on that occasion during thirteen days continual riding not once was the snapping of "the Toucan's beak" heard. He was not even seen. Probably they were all on their vernal migration to the Island of Ceylon.

As a comfort to those, who fear the rapid and total extinction of all Egrets, it may be stated, that on the morning after arriving at Ciudad Bolivar (the centre of the export trade in Egrets, and from which during the preceding year plumes to the value of £49,705 had been exported) over 60 of the larger kind (*Egretta Egretta*) was seen flying eastward over the town of Soledad on the opposite bank; to the Laguna Mamo, a swamp about 40 miles away, as the native boatman, who seemed to be in their confidence, said. The same man pointed out a rookery of Wood Ibis about a mile up stream from Soledad. There were several scores which could be seen with glasses from Ciudad Bolivar. He said that he knew of no other rookery of the kind, to which the birds habitually resorted for many miles either up stream or down.

To the Ornithologist the first shot fired in a bird-thronged marsh must ever present a novelty, similar to that of the lifting of the curtain on a transformation scene to the expectant child. In general scenic effect there can be little variation the world through: but to the bird-watcher there will be abundant difference of detail in each district; differences perhaps more of sound than of sight, since the confused scurrings of the startled wildfowl, make the singling out of individuals difficult, unless very well marked.

To those acquainted with the Wealdon country, imagine the North and South Downs; imagine all the angles, breaks and irregularities immeasurably distorted and exaggerated. Here and there on the sky-line are copses; replace these by jagged snow-peaks; in the middle of the plain is the rush-margined Lake Junin or Chinchaycocha about 22 miles long by 7 wide, the largest of the Andean Lakes except Titicaca and Poopoo. Here and there grow coarse, strong, scrubby grasses, but the pasture is generally beaten flat by the bleak wind and hail or else cropped close by flocks of Llamas and weedy sheep. The Amazon conjures up visions of tropical heat and steaming damp. Yet the Amazon is there. Inasmuch as the Mantare, one of its countless tributaries of a

tributary, rises in Lake Junin, it is permissible to regard anyone of the peaty rills, that fell into the Lake, as lesser tributaries themselves. The whole scene is at an altitude of over 14,000 feet, is unspeakably bleak and miserable but is typical of the great Andean Plain ; the Puna country of Peru and the Paramo of Equador.

The pale pinky smudge against the brown rushes not many hundred yards away is a long line of Flamingoes. Nearer at hand are the dark forms of small parties of Glossy Ibis (*Egathaus ridgwayi*), the bird of the neighbourhood most in evidence. An Andean Gull (*Larus serranus*), or a Carrion Hawk (*Ibycter megalopterus*) in search of prey sails into view. The lake is not a mile away. But the distance is too far for the would-be collector laid low by mountain sickness. The nausea of the sportsman at that altitude has again saved the lives of many birds ; and all the Duck, Rails, Waders and larger fowl, that throng the rushes and the edges of the lake remain undisturbed.

Notes of this nature penned in Peru can scarcely be left without some reference to the great feature of Peruvian bird-life—the “ guano ” producing birds. These actually number but five species : Three Cormorants (*Phalacrocorax cirriger*, *Bougainwillii* and *Vigua*) ; one Gannet (*Sula variegata*), and a Pelican (*Pelecanus thagus*).

The Peruvian Coast is 1,400 miles in length. There are 44 narrow valleys and the rest is the most arid, sterile desert. Generally the coast is a straight, surf-beaten, sandy shore ; here and there the Andes or an isolated spur rise abruptly from the ocean. Throughout this length of coast all day and every day pass and re-pass, keeping just outside the breakers, solemn flocks of Pelicans ; larger flocks of Gannet, vanishing every now and then with a dart and a splash upon some victim. In the winter come high hordes of Gulls (chiefly *Larus modestus* and *dominicanus*) and small flocks of the beautiful Inca Tern (*Larosterna inca*). The Gulls rest by day and roost by night in vast masses on the flat sand stretches immediately behind the sea shore, and on near approach rise up with “ hoarse pelagic cries ” and confusing wing-flappings in all directions. The great body of Cormorants keep farther out to sea or around the islands. Long lines are to be seen in the near

and middle distance, great clouds of them far out and low above the horizon. Often a steamer will pass for an hour at a time through straggling flocks of sea-fowl.

The above is no exaggeration ; it is no picture of some far off coast or island, inaccessible, sea girt and little known. Except for the Gulls, of which only a few remain during the summer, it is to be seen with little variation for 365 days in the year ; and is to be seen equally from the uninhabited sands of the Sechura Desert, as from the shore, less the one hour's walk from the most southerly point served by the Lima tram cars.

The foregoing notes refer to a period of slightly over six years actual residence in South America, during which no opportunity was lost of observing birds and their ways ; the writer has jotted down incidents that depict spectacular Ornithology likely to attract the attention of the least observant ; so that it may be seen that in that region of the world most richly endowed with bird-life—" the Great Bird Continent "—how few and far between these wonderful sights really are.

THIRTY-TWO YEARS OF AVICULTURE.

By Dr. A. G. BUTLER.

(*Concluded from page 295*).

Few of the Doves and Pigeons can surpass the Bronzewings for beauty and brilliance of colouring, and none excel the African species for amiability towards their associates : to this general rule however the quaint little Cape-Dove is an exception ; since males of that species, and especially in the breeding-season, fight each other. I have only had two males, so that I never was in a position to attempt to breed it ; a feat which the late Dr. Russ considered difficult of accomplishment. With the Tambourine Dove, after some years of failure I was at last successful, as already recorded in this Magazine. Mr. T. L. Bonstow gave me a pair in 1902 which bred in 1906, 7, and 8 : the male of this pair is still in good health as I write.*

* This species was bred shortly afterwards in this country, but I doubt whether even now it has been bred on the Continent.

Of the Blue-spotted Dove I have had two males only, one which I purchased in 1903 which died towards the end of 1913, and a second given to me shortly afterwards by Mr. Allen Silver, which is still in good health. Of the lovely little Emerald Dove Mr. Bonstow gave me a South African female in 1902 and in 1903 I purchased a West African male; they differ a good deal in the size and tint of the metallic green wing-patches, those on the Southern bird being much larger and less golden than those on the Western form, the colouring of the whole of the plumage in the former is also darker: whether these differences are constant or not is a point only to be satisfactorily decided after a careful comparison of many individuals, but it seems probable that the West African form is typical and that the Southern one is Reichenow's *C. chalcospila, caffra*: or is it *volkmanni*? These subspecific names are a nuisance: if the birds are constant in their differences why not call them species? The very beautiful Maiden Dove seems to be rarely imported, but in 1905 nearly a dozen arrived in the London market, and of these I believe I received the first pair. Unhappily the Maiden Dove is certainly more delicate when first imported than most members of its group and my hen died nearly four months after she came into my hands, the other birds of that species also died in a disappointing manner, so that it was impossible to breed the species: my male bird lived until nearly the end of November 1908: it was a charming bird living in perfect friendliness with its two relatives the Blue-spotted and Emerald Doves and I was very sorry to lose it. This consignment of Maiden Doves had the metallic wing-spots of a glittering crimson colour: the green-spotted and crimson-spotted forms were at one time considered at least subspecifically distinct, but recent travellers have pretty well disproved that notion: to what purpose then is the naming of the far less distinct local variations of the Emerald Dove?

Of the far less peaceful typical Bronzewings I have had one male and two females of the Australian Green-winged Dove, one pair of the gorgeous Australian Bronze-wing and one pair of the common Australian Crested Pigeon: none of them ever bred successfully in my aviaries, though I tried the two first both in indoor and outdoor aviaries: they are very hardy and long-lived birds and

I really cannot see why the Crested Pigeon which breeds freely in our parks when turned loose should not be as competent to find food to sustain it during the winter months as our English birds, if turned into woods well away in the country. One can hardly speak correctly of the acclimatization of a foreign species if food has to be provided for it during the winter months.

Of the *Geotrygoninæ* or so-called "Ground-doves" I received a supposed pair (two hens) of Wells' Ground-dove in 1898, one of which was killed in 1900 by my Crested Pigeons, the second died early in 1906: they are quite nice birds, but the name Ground-Dove is not applicable to them more than to any other doves. I purchased a fine pair of that delightful bird the Bleeding Heart Pigeon in 1897, and had I then possessed a suitable outdoor aviary I might have succeeded in breeding it, but indoors it would neither build nor lay; the hen died in 1899 and the cock in 1900 to my great sorrow: they really are ground-birds, since they spend the greater part of the day upon the earth. In 1905 I bought a pair of Wonga-wonga pigeons and soon had cause to regret it on account of the awful monotonous noise which the cock kept up from morning to night; the hen died towards the end of the same year and I got rid of the cock by exchange.

Of that magnificently coloured but Vulturine bird the Nicobar Pigeon I bought a pair in 1897, which I found rather a nuisance on account of their absurd nervousness and murderous spitefulness: in themselves they are singularly stupid and uninteresting as pets, spending hours sitting motionless on a branch even when out of doors in a heavy fall of snow: they seemed quite indifferent to cold and would spend a winter night in the open part of the aviary and in the morning I used sometimes to see them sitting contentedly with a little pile of snow on their backs. The female died in 1902 and the male I think in 1904.

I have kept both the Californian and the Chinese Painted Quail; I purchased a pair of the former about 1896 or 7, and turned them into an outdoor aviary where the hen laid many eggs in corners, but never incubated them: these birds were so frightfully wild that I willingly sold them again at the end of six or eight months. I secured two pairs of Chinese Quails in 1897 and was

much pleased with them, they made nests in corners and laid, but were disturbed by other birds so that none were reared: I found these birds quarrelsome in the breeding-season, they are hardy and long-lived, the last survivor of my birds was unhappily killed by my man, who blundered into the aviary to change the drinking-water one evening when it was growing dark and trod upon the poor little mite, completely flattening it.

In 1899 I purchased a "pair" of the Barbary Partridge which proved to be two cocks: their plumage was very handsome, but they were stupid nervous birds: one of them went blind and died in about a week, the other seemed healthy enough but died about five weeks later. A British Red-legged Partridge which was caught in Beckenham was brought to me some years ago and I turned it out into my larger garden aviary: it was rather wild and only lived for about a month after it came into my hands.

I never purchased any Hemipodes, but years back my colleague Mr. W. R. O. Grant asked me to take care of some Black-necked Hemipodes which he had obtained from Mr. Abrahams until he had a place ready to turn them into. I had them for about three weeks, keeping them in a long runner: they were pretty active little birds and I was sorry when the time came for me to part from them: I think they would have done well in an aviary.

This completes the list of the species which have been in my possession since I first began to keep living birds: it may perhaps be some use to those beginning aviculture by indicating the dispositions of various species, thus enabling them to decide what birds to associate in the same aviary and what to keep alone or in pairs; but it must be borne in mind that as individual human beings differ from their fellows in disposition, so in birds also one occasionally meets with a saint in a family of sinners and *vice versa*: therefore one must not judge of the nature of a species by the behaviour of a single example; but, in the case of notoriously predacious birds, one need not hesitate about keeping them apart from all weaker than themselves.

DUCKS NESTING AT DEREHAM.

By HUGH WORMALD.

This has been on the whole a good nesting season here, but there have been too many infertile eggs in some species; a complaint common among several of my friends who keep ducks, and I am quite at a loss to account for the failure of many of the eggs, though I believe that in Cinnamon Teal eggs, which have hatched indifferently, the trouble is inbreeding in the parents, there never seem to be any *wild caught* Cinnamons on the market. But from two pairs of the nearly-allied Blue-winged Teal I have had a wonderfully good percentage of fertility, every egg in the first nest of each pair was fertile, and only two failed to hatch, the second nests were also very good; the last lot of ducklings for the year hatched this morning (July 23rd), these were a late nest of Bluewings, augmented by one horrid looking egg which I found in a nest box up a tree on June 15th, and which I did not set for over a week as I had no others to go with it at the time, and also because I had no hope of it hatching, since it had a deformed shell, rather crinkled and discoloured in patches and very pointed at both ends, yet to my amazement a beautiful little Ringed Teal emerged from it. This was the only egg which the Ringed Teal laid to my knowledge, she probably dropped the rest of her clutch in the water.

I am not aware that Ringed Teal have nested previously in this country, though they appear to breed freely on the Continent. Next year I hope to get a full clutch from them. Other interesting hatchings have been a silvery grey Shoveller, which unfortunately died when ten days old, and a pure white American Wigeon with normal eyes, which is at present doing very well and should be reared bar accidents.

Mr. Alec. Duncan kindly sent me nine White-faced Tree Ducks' eggs, from a pair which nested with him in 1912 and 1913, but he failed to rear the young, so this year he asked me to try. All the eggs hatched, and seven are at present doing well, they are nearly a fortnight old but look rather delicate little things and grow slower than most ducks, but I hope to rear some of them.

Altogether twenty-one species have nested with me this year,

THE ILLUSTRATIONS OF THE GARDNER



GADWALL (*Anas strepera*).

H. Wornald del.



FEMALE TUFTED DUCK ON NEST.
(*Fuligula cristata.*)



WHAT SHE HAD IN IT.

Photos by Oxley Grabham.

and I have a fine lot of ducklings, many full-grown, composed of the following—Ruddy Shell-duck, Ruddy-headed Bernicle Goose, Carolina, Mandarin, Gadwall, Shoveler, Tufted, Pochard, Red-crested Pochard, White-eyed Pochard, Rosybill, Bahama, Common Teal, Cinnamon Teal, Blue-winged Teal, Chilian Teal, Ringed Teal, American Wigeon, Chiloe Wigeon, Common Pintail and Chilian Pintail. The Garganey Teal unfortunately had her nest flooded out and destroyed.

A TAME BULLFINCH.

By KATHARINE CURREY.

My pet Bullfinch, "Cherry," is so clever and tame that I think a little account of him might be interesting. If he were sure to remain I would release him and let him clear the rose-bushes of invisible (to us) insects and blight, but I cannot risk losing him. He soon made himself at home in a 'waggon' cage, that has done duty for many predecessors, with a wooden shelter at one end, and here he pipes and whistles in the sunshine till I let him out in the lawn cage to fly among boughs and enjoy his large shallow bath. On cold wet days I let him out in the room to fly about and tease the Red Tanager to his heart's content, who, in his turn, when loose in the room, 'goes for' the Bullfinch who is in his cage.

Cherry soon became tame, and came flying into my hand for a hemp-seed, and if in a naughty mood (for he is very wilful) he refuses to go to bed, he hides under a chair or in the folds of a curtain, where he crouches quite still, but letting me catch him. One day he flew out into the hall, but soon returned. From that day he watches for the door of the room to open, and has been several times all over the house, doors and windows having hastily to be shut. The house has two wings connected by an old landing lit by a skylight. This is a world of delight and mystery to him, and calling joyfully he explores every corner, perching on old presses, hiding in china bowls and cups when he hears my footsteps, and sitting up on a ledge in the skylight where it is impossible to reach him. If he was lost *pro. tem.* all I had to do was to call

"Cherry," and a loud whistle came in answer. He looked most fascinating at Christmas-time on a mistletoe bough hanging in the hall, where he sat among the berries singing his cheery little song. One day an upstairs room door was left open when he was loose and of course he flew in and on to the window sill. I entered by another door, close to the window, and called him. By good luck it was raining and a big drop splashed from the eaves on to the window sill just in front of him. This frightened him away and back into the room, whence he flew downstairs and into his own room.

Another day the door was left ajar, and he seized the opportunity, flew out over the hall, along a passage and out at the garden door. There he sat on a hawthorn and sang his little song in triumph. There was a pair of Bullfinches in a large cage on the lawn, so the only way to get him back was to leave him alone and pretend not to care if he came back or not (for little birds, like children, are apt to do exactly the opposite to what they think they are wanted to do). I merely placed his waggon cage against the other bullies' cage with the door open, and hemp seeds in it with his other food. Then I went about my usual morning avocations, gardening, bird-tending, etc., and took no more notice of him. He flew into a white cluster rose-bush and sat there feasting on invisible insects; thence he flew on to a yew-hedge, getting tit-bits, and lastly on to a juniper tree, where he found delicacies in the old bark. Suddenly, there he was on the bullies' lawn-cage, swearing at the cock and bowing to the hen. I called "Cherry," and off he was again on the rose-bush. Birds, like animals, are for ever making precedents; if they have done anything once they do it again. So with Cherry. First the rose-bush had to be scoured for insects, then the hedge, lastly the juniper. Then again, there he was on the cage. He caught sight of his own cage on the ground and hemp seeds in it. He peered in sideways, whistled, and flew off again. The same round as before had to be gone through, but he had discovered the hemp-seeds, and, moreover, must now surely be needing a little grain after all those insects. Again and again he came and peered into his cage, and then, as the day wore on, all at once he swung round and in. Next day the dog pushed open the door of the room he was at large in, whereupon, having tasted the sweets of liberty, he flew out and upstairs,

where again the room door was open and all the windows. Out he flew over to the orchard, but he only stayed out an hour or two and came back to his cage. Did he remember the hemp-seeds? I am now getting him a mate, as his marked attentions to the hen of the other bullies have excited the wrath and jealousy of the cock so that he bullies his wife, and it will be interesting to see if he transfers his admiration or prefers single blessedness.

He has a curious little habit, which seems to proceed from a nervous sort of shyness, of turning his back on one and pretending to be very much occupied with his own affairs if he thinks he is wanted to come, say for a hemp-seed or to go to bed, and then suddenly darting round and taking the hemp, or whisking into his cage when he thinks you no longer care. The other day he thought himself aggrieved because he had no more seed left at the end of the day, and flew into a rage with me, swearing and pecking at my fingers when I held them up to his cage.

THE WAR.

We do not know how many of our members have, or may be going, to the front.

Sir Roland Corbet has gone with his regiment, the Coldstream Guards, and no doubt there may be others whom the Society will especially think of in this time of trial and suspense. It is calamitous and infamous that not only peace-loving nations should be forced into a stupendous war, but also that thousands of Germans who must hate and loathe it should have to be involved, and become our enemies. The Germans are great bird-lovers; everywhere in Germany there are signs of this in the numerous nesting-boxes for the benefit of the wild birds. Long ago, when aviculture was in its infancy in England, in Germany many foreign birds had been bred in captivity, and insectivorous foods had been studied. The vileness of the plots of the Prussian War Party, with the inflated vanity of the Kaiser to back it up, is completely outside our experiences of and dealings with German bird lovers.

The late Herr Carl Hagenbeck was a fine type of a Christian

spirit, a great enthusiast for the wonderful collection of animals and birds which he made, a man brimming over with kindly courtesy, gentleness, and hospitality. To Germans like his sons, Herr August Fockelmann, and many many others whom we trust will, if they cannot now, eventually know and realize the whole truth of the scandalous mode of German warfare; their estrangement from England (apart from the great loss to their trade), with the appalling upheaval brought about by their Kaiser and his war-party must come as a great shock and sorrow.

We look forward to the day when, with these blood-thirsty and covetous invaders and their leader crushed down for ever, we can once more resume friendly relations and correspondence with our bird-loving friends and acquaintances, who will we trust no longer be units of the German Empire, but peaceful citizens of a better and a smaller country, able to pursue their various studies and trades in calmer and brighter years.

In the meanwhile one fears that many bird-dealers in England will inevitably suffer: indeed we have already heard of one with a wife and six children who through August was unable to sell his birds unless it were at very low prices, one who is invariably honest and upright in all his dealings, and to whom the war will, as to many others, come as a hard task master.

Another result in detail was that a magnificent collection of live Humming Birds arrived safely from South America at Havre, imported by one of our members, when in the great excitement of finding that there was war between France and Germany, the poor birds were neglected and all died on board ship, before they could reach Paris, much to the chagrin of their owner, as well as to all bird lovers who have heard about it.

Articles and Photographs, &c.

The Editor hopes that in spite of the distraction and manifold employment of abnormal kinds in connection with the war, members will do their *utmost* to send him "copy," advertisements, &c., remembering that if the writing of an article takes up what may be considered precious time, how *much* more of such time has the Editor himself to make use of to keep the Magazine going.

HUBERT D. ASTLEY.—*Ed.*

POWERS OF RESUSCITATION IN HUMMING BIRDS.

By HUBERT D. ASTLEY.

Not long ago Herr August Fockelmann imported in July, six or seven of the beautiful little Emerald Green Humming Bird (*Sporadinis ricordi*), which Mr. A. Ezra took charge of, as they were unfit to continue the voyage from London to Hamburg, having been improperly fed so that all were almost in a dying condition, their feathers sticky [not blest !] with milk and honey. After constant nursing, not only by day but also by night, Mr. Ezra successfully brought one of these lovely little things back to health and strength, it having been a living skeleton when he received it. I saw it last month, figuratively falling on my knees to it. When the cage door is opened, this little "Hummer" darts out looking like an emerald dragon fly, whirring and hovering close to one with complete fearlessness, and the next moment away across the room to sip honey from flowers in a vase. Back again close to one's head, such a loud Br-r-r from its pointed swift-like wings, up towards the ceiling, and in another moment by one's side, it's throat glittering like the most vivid emerald. Absolutely a gem, and causing the 10th Commandment to be broken to smithereens ! Well ! if a tiny thing like that can be brought back from the jaws of death, where many another species looked upon as far more robust would have succumbed, it gives one just cause to look forward to Humming Birds being kept quite easily, so long as they are imported properly and can be kept in a temperature not *lower* than 65 degrees.

What was very amusing to watch in Mr. Ezra's little Emerald Humming Bird was it's evident intelligence, for it would hum back into its cage and there take up its position on a perch, or hang in the air with tremulous wings sipping its food (which is the same given to the Sunbirds). If, however, one approached and showed that it was the intention to shut the cage-door, it was out like a flash of lightning, with absolute steady deliberateness, plainly saying "No you don't," and still preserving its calmness of deliberate movements here and there all over the room, hovering and hum-

ming in front of a looking glass, never knocking against it, but defying the other bird it thought it saw in front of it. It is a fairy bird beyond one's wildest dreams and desires in the bird line!

NOTICES.

CERTIFICATES FOR CAGE-BREEDING.

To encourage aviculturists who are unable to keep birds in aviaries, it was decided at the meeting of the Council, on July 19th last, to give a certificate for priority in breeding birds in cages. The conditions of the award are to be the same as those for the Society's Medal and the dimensions of the cage must not exceed one cubic yard.

OFFICERS FOR THE YEAR 1914-1915.

In accordance with Rule 9, the Council recommends the election of Mr. Alfred Ezra and Mr. A. Trevor-Battye as members of the Council to succeed Mr. W. R. Ogilvie-Grant, retired by seniority, and Mr. H. Wormald retired for non-attendance, and the appointment of Mr. Wormald as Scrutineer and Mr. Ogilvie Grant as Auditor.

THE NEW HONORARY BUSINESS SECRETARY.

In accordance with Rule 8, Mr. R. I. Pocock, the Hon. Business Secretary, having served in that capacity for five years tendered his resignation to the Council. The appointment of a successor was left to the Executive Committee, who nominated Mr. T. H. Newman, and he has kindly undertaken the post.

The Society tenders its grateful thanks to Mr. Pocock for his work as Hon. Business Secretary, at the same time regretting that he should feel the necessity of resigning the post through stress of other work which must be put first.

NEW HONORARY MEMBER.

In recognition of his valuable services to aviculture Mr. Frank Finn has been elected an Honorary Member of the Society.

ENGLISH NAMES FOR THE PARROTS.

By Dr. E. HOPKINSON.

(continued from page 285.)

- *AUTUMNAL PARROT, see AMAZON, YELLOW-CHEEKED. Vars. ,see BLUE-FACED and RED-MASKED AMAZONS.
- AZTEC CONURE=*Conurus aztec*.
- AZURE-BELLIED PARROT (Latham).=*Triclararia cyanogaster*. Also known as the BLUE-BELLIED PARROT and (with more correct reference to the colour), VIOLET-BELLIED PARROT.
- *AZURE-HEADED PARRAKEET, *———— PARROT, see BLOSSOM-HEADED PARRAKEET.
- BAHAMA AMAZON.=*A. bahamensis*.
- BANDED PARRAKEET (1).=*Palaeornis fasciata*, also known as the MOUSTACHE PARRAKEET, and less commonly as the RED-BREASTED PARRAKEET. Other book names are : ROSE-BREASTED ALEXANDRINE PARRAKEET ; *PURPLE-RINGED PARRAKEET (Latham) ; *ROSE-RINGED PARRAKEET, VAR. A. (Latham) ; *ALEXANDRINE PARRAKEET, VAR. B. (Latham) ; *BLOSSOM-HEADED PARRAKEET, VAR. B. (Lth) ; MOUSTACHO-E. PARROT (and VAR. B.) (Latham) ; *BORNEAN PARRAKEET (Latham) ; *BRACELET PARROT FROM EAST INDIA (Albin) ; *COCHIN CHINA PARROT ; BLACK-BILLED ALEXANDRINE PARRAKEET, =a variety. (2) Name used by Gould for BAUER'S PARRAKEET.
- *BANDED PARROT, an obsolete name for the BROWN-EARED CONURE.
- "BANK PARROT," Argentine vernacular for the PATAGONIAN CONURE.
- BANKSIAN BLACK COCKATOO.=*Calyptorhynchus banksi* ; other names, BANKSIAN COCKATOO, and VARS. A. and C. (Latham), *COOK'S C. (Latham).
- BANKSIAN C., see BANKSIAN BLACK C., and under BLACK C. (1).
- *———— VARS., see under BANKSIAN BLACK C., BLACK C., WESTERN BLACK C., and LEACH'S C.
- BARE-EYED COCKATOO.=*Cacatua gymnopsis*. "CORELLA," an occasional dealer's name, but incorrect ; this name properly belongs to the SLENDER-BILLED C.
- BARNARD'S BROADTAIL, see BARNARD'S PARRAKEET.
- BARNARD'S PARRAKEET.=*Barnardius barnardi*. Other names, BARNARD'S PARROT (Latham) ; BARNARD'S BROADTAIL (books) ; *FALCON-BREASTED PARRAKEET (obs. Bk-n.) ; "BULLA-BULLA," native name in use among Australian dealers, also "BULLA-BULLA PARRAKEET."
- BARNARD'S PARROT, see BARNARD'S PARRAKEET.
- BARRABAND'S PARRAKEET.=*Polytelis barrabanda*, of Australia, the "GREENLEEK," and "GREENLEEK PARRAKEET," of Australian

dealers. Other book names : *SCARLET-BREASTED PARROT (Latham), BARRABAND'S RING-PARRAKEET. "CUTTHROAT PARRAKEET" is an occasional dealer's name.

BARRABAND'S RING-PARRAKEET, see above.

BAUDIN'S COCKATOO (Gould).=*Calyptorhynchus baudini*. Also called the WHITE-TAILED C. and WHITE-TAILED BLACK C.

BAUER'S PARRAKEET.=*Barnardius zonarius*. BANDED PARAKEET (Gould), BAUER'S PARROT (Latham), YELLOW-BANDED PARRAKEET (auctt.), "PORT LINCOLN," and "PORT LINCOLN PARRAKEET" (dealers). Russ gives BOA PARRAKEET as one of the English names; obviously a *lapsus calami*.

BAUER'S PARROT, see above.

BAVANA'S PARRAKEET, QUEEN OF, an occasional book name for the GOLDEN CONURE.

BEARDED PARAKEET, see LUCIAN PARRAKEET.

*BEAUTIFUL LORY (Latham), see PENNANT'S PARRAKEET.

BEAUTIFUL PARRAKEET (Gould) (1).=*Psephotus pulcherrimus*. Also known as "PARADISA and PARADISE PARRAKEET." (2) Gould also used this name for BROWN'S PARRAKEET.

"BETCHERRYGAH," see BUDGERIGAR.

"BETTET," see JAVAN PARRAKEET.

"BILJANG," see BUDGERIGAR.

BLACK COCKATOO. (1) The generally used name for *Calyptorhynchus funereus*, the YELLOW-EARED BLACK COCKATOO of Gould, *Funereal* C. (Latham), and *BANKSIAN COCKATOO, VAR. C., VARS. I AND 4 (Latham). Australian native name, "WY-LA" (Gould).

The name BLACK COCKATOO also applies to the other members of the genus; these are: BAUDIN'S COCKATOO, the BANKSIAN BLACK C., the GREAT-BILLED BLACK C., the WESTERN BLACK C., and LEACH'S COCKATOO. Other less used names for all these birds are RAVEN COCKATOOS and BANKSIAN COCKATOOS.

(2) More widely the name covers any member of the two genera *Microglossus* (the GREAT BLACK COCKATOOS) and *Calyptorhynchus*.

(3) *One of the names bestowed by Latham on the GREAT BLACK C.

BLACK LORY (Latham).=*Chalcopsittacus ater*.

BLACK PARROT, see LESSER VAZA PARROT under Vaza.

"BLACKBILL," see ACTIVE AMAZON.

BLACK-BILLED ALEXANDRINE PARRAKEET, see under BANDED PARRAKEET.

"BLACK-BILLED PARROT," same as "BLACKBILL."

*BLACK-BILLED GREEN PARROT, JAMAICA, see ACTIVE AMAZON.

- *BLACKBONNET LORY, see PURPLE-CAPPED LORY.
- *BLACK-CAPPED LORY, one of Latham's names for the THREE-COLOURED LORY.
- *BLACK-CROWNED PARROT, a name of Latham's which probably referred to *L. lory*, the THREE-COLOURED LORY.
- "BLACK-FACED CONURE," an occasional dealer's name for the NANDAY C.
- BLACK-HEADED CAIQUE, see under CAIQUE.
- BLACK-HEADED CONURE, an alternative name for the NANDAY CONURE.
- BLACK-HEADED PARROT, an occasional book name for the BLACK-HEADED CAIQUE. See CAIQUE.
- BLACK-SHOULDERED PARROT, see GREAT-BILLED ECLECTUS.
- *BLACK-SPOTTED PARRAKEET, see GROUND-PARRAKEET.
- "BLACK-TAILED LORY," an occasional dealer's name for the BLACK-TAILED PARRAKEET.
- BLACK-TAILED PARRAKEET. = *Polytelis melanura*, the "ROCK PEP-LAR," (occ. "ROCK PEBBLE"), or "ROCK PEPLAR PARRAKEET," of dealer's. Sometimes miscalled the "BLACK-TAILED LORY." Australian vernacular, "MOUNTAIN PARROT"; Australian native names, "WOOK-UN-GA," "JULU-UP." *BLOSSOM-FEATHER PARRAKEET (Leach).
- BLACK-THROATED LORIKEET. = *Trichoglossus nigrigularis*.
- BLACK-WINGED PERROQUET (or PARRAKEET), Brown and Latham. = *Urochroma cingulata*, of Venezuela.
- *BLEW AND YELLOW PARROT, ETC., GREAT, see BLUE AND YELLOW MACAW.
- *BLEW MACAW, see BLUE AND YELLOW MACAW.
- BLOOD-STAINED COCKTOO (Gould). = *Cacatua sanguinea*, sometimes called the RED-FACED WHITE COCKATOO.
- "BLOODWING," BLOOD-WINGED PARRAKEET, see CRIMSON-WINGED P.
- "BLOODRUMP," "BLOODRUMPED PARRAKEET," see RED-RUMPED PARRAKEET.
- *BLOSSOM-CHEEKED PARRAKEET, see MALACCAN PARRAKEET.
- *BLOSSOM-FEATHER PARRAKEET, see BLACK-TAILED P.
- "BLOSSOMHEAD," see BLOSSOM-HEADED PARRAKEET.
- BLOSSOMHEADED PARRAKEET. = *Palaeornis cyanocephala*, the "BLOSSOMHEAD" (occasionally "PLUMHEAD") of dealers. Other names: BLUE-HEADED PARROT (Latham); PLUMHEAD PARRAKEET (Jerdon); ROSE-HEADED PARRAKEET (Jerdon); *YELLOW-COLLARED PARRAKEET (Latham); WESTERN BLOSSOM-HEADED PAROQUET (Oates); (for EASTERN, see below). Other old book names are *JONQUIL PARRAKEET, the name which Latham bestowed on an entirely yellow variety; BLUE-HEADED PARRAKEET (Edwards); *ALEXANDRINE PARRAKEET, VAR. D., *AZURE-HEADED PARRAKEET, *AZURE-HEADED

PARROT (Latham), applied to a variety with yellow spots on the wing.

BURMESE BLOSSOM-HEADED PARRAKEET.=*P. rosa*, the more Eastern form of *P. cyanocephala*. Other names: ROSA'S PARRAKEET, ROSY PARRAKEET, ROSY-HEADED PARRAKEET, ROSE-HEADED-RING PARRAKEET (Edwards and Latham); EASTERN BLOSSOM-HEADED PAROQUET (Oates). The popular names, "BLOSSOMHEAD," "PLUMHEAD," also are applied to this species.

BLOSSOM-HEADED PARRAKEET, BURMESE, see above.

BLOSSOM-HEADED PAROQUET, EASTERN, see above, under BURNESE.

BLOSSOM-HEADED PAROQUET, WESTERN, see above.

*BLOSSOM-HEADED PARRAKEET, VAR. B., see BANDED PARRAKEET (1).

*BLOSSOM-HEADED PARRAKEET, VAR. C., see MALACCAN PARRAKEET.

BLUE AND BUFF MACAW, see BLUE AND YELLOW MACAW.

BLUE AND YELLOW MACAW.=*Ara ararauna*. "ARARAUNA," native name according to Marcgrave. Other names: *BLEW MACCAW (Albin and Latham); *GREAT MACCAW (Sloane); *GREAT BLEW AND YELLOW PARROT, MACHEO OR COCKATOON (Charleton); BLUE AND BUFF MACAW (auctt.).

BLUE BUDGERIGAR.

"BLUE PARROT," popular name in Australia for the PILEATED PARRAKEET.

"BLUE ROSELLA," see PALE-HEADED PARRAKEET.

BLUE-BANDED GRASS-PARRAKEET.=*Neophema venusta*. BLUE-BANDED PARRAKEET, BLUE-WINGED GRASS-PARRAKEET. Obsolete names: *VENUST GRASS-PARRAKEET; *BLUE-HEADED PARRAKEET (Latham); *BLUE-BANDED NANODES. Shares with *N. elegans* the popular name, "ELEGANT PARRAKEET."

*BLUE-BANDED NANODES.

BLUE-BANDED PARRAKEET, } see BLUE-BANDED GRASS-PARRAKEET.

BLUE-BELLIED LORIKEET, another name for SWAINSON'S LORIKEET.

BLUE-BELLIED PARROT (1) see AZURE-BELLIED PARROT. (2) see SWAINSON'S LORIKEET.

*BLUE-BELLIED PARROT, VAR. C. (Latham) ?=the RED-COLLARED LORIKEET, under LORIKEET.

"BLUE-BONNET."

"BLUE-BONNET PARRAKEET."=*Psephotus haematorhous*. "BLUE-BONNET," English and Australian vernacular. Other names: RED-VENTED PARRAKEET (Gould); RED-VENTED BLUE-BONNET PARRAKEET; CRIMSON-BELLIED PARRAKEET. Sometimes advertised by dealers under the name "RED-VENTED PARROT."

A close ally is the YELLOW-VENTED BLUE-BONNET PARRAKEET, the YELLOW-VENTED PARRAKEET of Gould.

- BLUE-BREASTED LORY. (1) An occasional book name for the BLUE-TAILED LORY. See under Red Lory (2). A name of Latham's, ?= the female of the CERAM ECLECTUS.
- BLUE-CHEEKED LORY.=*Eos cyanogenys*.
- BLUE-CHEEKED PARRAKEET (Gould).=*Platycercus amathusiæ*.
- *BLUE-COLLARED PARROT, see CINGALESE ALEXANDRINE P., under ALEXANDRINE.
- *BLUE-CRESTED PARROT, one of Latham's names for the SAMOAN LORY.
- BLUE-CROWNED CONURE.=*Conurus haemorrhous*; *BLUE-CROWNED MACAW (Latham). Other book names: BLUE-HEADED PARROT, BLUE-FRONTED PARRAKEET.
- BLUE-CROWNED ECLECTUS.=*Tanygnathus luzoniensis*. Another and better name is BLUE-CROWNED PARRAKEET. The imported members of this genus are often popularly known as "ECLECTI," but this name properly should be confined to the *genus* ECLECTUS. Latham gave the names: *MANILA GREEN PARROT, *VARIED-WINGED PARROT, and *LACE-WINGED PARROT to this species.
- BLUE-CROWNED HANGING PARRAKEET.=*Loriculus galgulus*. SAPPHIRE-CROWNED PARRAKEET (Latham and Edwards); SAPPHIRE-CROWNED PSITTACULE (*bkn.); *PHILIPPINE PARRAKEET, VAR. A. (Latham); "BLUE-CROWNED PARRAKEET" (E. D.).
- *BLUE-CROWNED MACAW, see BLUE-CROWNED CONURE.
- BLUE-CROWNED PARRAKEET, see (a) BLUE-CROWNED ECLECTUS, (b) BLUE-CROWNED HANGING PARRAKEET.
- "BLUE-CROWNED TERRA DEL FUEGO AMAZON," see under AMAZON. Needless to say no Amazon actually comes from such a place.
- BLUE-DIADEMED LORY, an occasional book name for the BLUE-TAILED LORY. See under RED LORY.
- BLUE-EYED COCKATOO, another name for the SPECTACLED C.
- BLUE-FACED AMAZON, see under AMAZON.
- BLUE-FACED GREEN AMAZON.=BLUE-FACED A.
- *BLUE-FACED GREEN PARROT, see (a) BLUE-FACED AMAZON, (b) YELLOW-CHEEKED A., under AMAZON.
- BLUE-FACED LORIKEET.=*Trichoglossus haematodes*. *RED-BREASTED PARROT (Latham); RED-BREASTED PARRAKEET (Edwards).
- BLUE-FACED LORILET, see under LORILET.
- *BLUE-FACED PARROT, VAR. B., see YELLOW-CHEEKED A., under AMAZON.
- *BLUE-FACED PARROT, VAR. C., one of Latham's names for the RED-MASKED AMAZON, see under AMAZON.
- *BLUE-FRINGED LORY, see RED LORY.
- BLUE-FRONTED AMAZON, see under AMAZON.

(To be continued).

CORRESPONDENCE.

BREEDING BUDGERIGARS, &C.

SIR,—It may interest some of your readers to hear that from two pairs of Budgerigars I have already reared 32 young ones and both have nests now, one brood already fledged. About March one cock died and I did not get another for some weeks but the hen nested and much to my astonishment reared a family. The first brood reared was seven, but I have been unable to count the later ones as there seemed to be a regular supply of a young bird about every three days or so. They have all been strong birds except one which had its feathers gnawed as if by mice, but it lived all right until a cat got it. I cannot keep out the mice but they don't seem to disturb the nests.

In the same aviary I have a pair of Madagascar Lovebirds which reared four young ones. Cutthroats which have reared one and would have reared many more but for accidents. I think it must be one of the other birds which throws out their young ones and should like to know which. I suspect Java Sparrows; mice never seem to go near the nest and I doubt if they could get to it.

In the same aviary I have a Rufous-necked Weaver, pair of Pekin Robins, pair of Java Sparrows, pair of Popes and lately added a Black-cheeked Lovebird. The Popes and Robins seemed to wish to nest but were too crowded. The young Budgerigars, they are all the common green ones, are put into another aviary when old enough. I find the old ones are very fond of a little cheese and indeed most of my birds are. They also get bread soaked in sugar and water, dry bread, cake and the usual seeds and green stuff. One pane of the sitting room window opens into the aviary so that they can have bits of afternoon tea put through. I intend turning a pair of Red-faced and Bluewing Lovebirds into this aviary soon. It is about 16 ft. long and 6 ft. wide in a snug corner but short of sun in winter. Ivy, rose and clematis grow up the wall, but only the ivy is allowed to grow many leaves until it passes through the wire top, when the rose spreads out and forms a nice shelter.

The wood work was painted red to go with the red sandstone wall but has gone an ugly purplish colour as usual with iron reds. The other aviary is done with "stop rot," which gives the woodwork a pretty sort of fumed oak look and is in every way much nicer.

A pair of Bluewing Lovebirds were put in recently by mistake and both got pecked (the hen to death) before next morning, but probably that was because they had clipped wings and were new. Birds hate a new bird, with a "failing" especially, but I am going to put the cock bird back shortly as he can now fly a little. The Red-faced Lovebirds will also be put in shortly.

ALFRED A. THOM.

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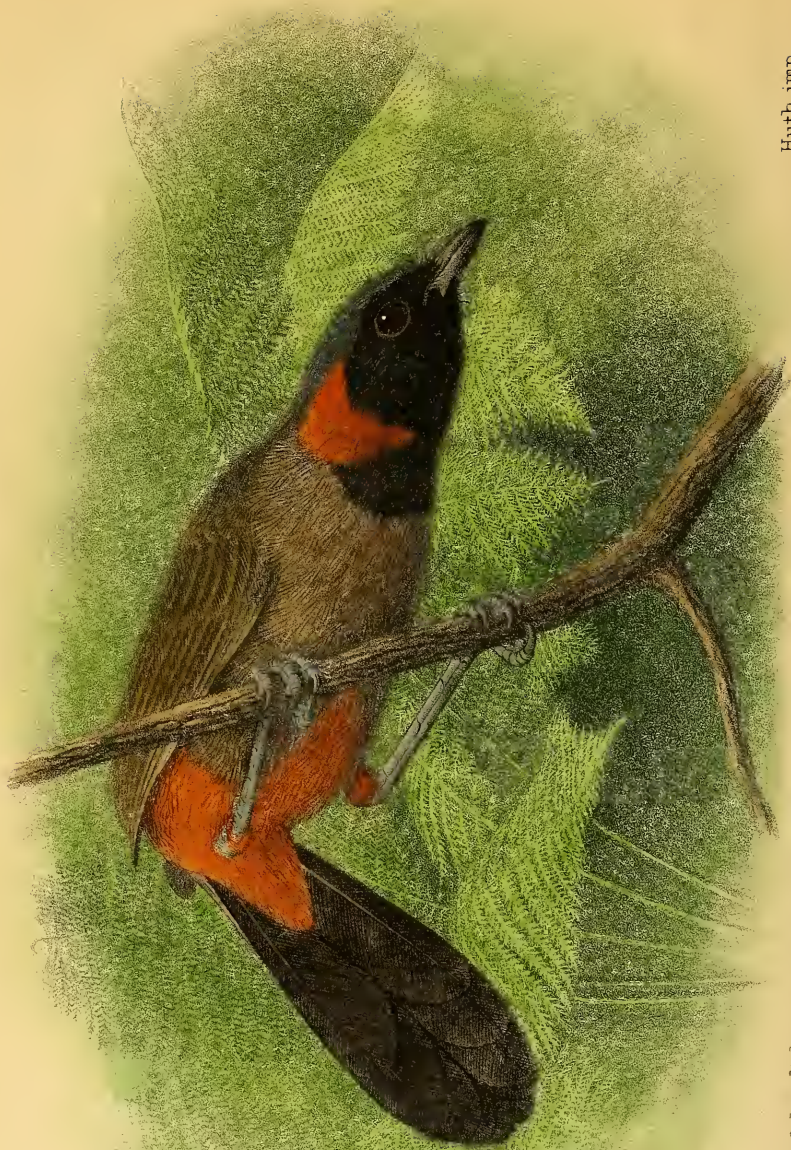
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THE
RUFIOUS-NECKED LAUGHING THRUSH.

Dryonastes ruficollis.

By D. SETH-SMITH, F.Z.S.

Amongst the many beautiful and interesting birds brought home from India by Major Perreau in the spring of last year (1913) were several specimens of the handsome Rufous-necked Laughing Thrush (*Dryonastes ruficollis*), of which he most kindly presented four to the Zoological Society, which proved to be the first of their kind ever represented in the collection. The others went to private aviculturists, and it is possible that some of these may have some interesting notes that they can send our Editor regarding them. Those at the Zoological Gardens have proved to be hardy, tame and most attractive birds, and I have no doubt that they would have made an attempt at breeding if a pair could have been given a suitable aviary to themselves. But none of the group of Babbling Thrushes are safe with smaller companions, and so ours had to rough it with a mixed collection in one of the compartments of the Western Aviary where I have often seen them picking up sticks and leaves as if wishing to build. If all goes well we shall try to find them better accommodation next spring.

Mr. Goodchild's successful plate gives a very good idea of the appearance of this fine species and renders any detailed description unnecessary.

In a wild state *D. ruficollis* occurs at the lower elevations of not more than 4,000 feet in the Himalayas. It is said to frequent thick reedy jungles, constructing its nest in bushes near the ground, and laying from three to four eggs of a pale bluish green colour.

SOME CANADIAN BIRDS.

By HENRY B. RATHBORNE.

It may seem strange to our readers, on observing the heading of these notes, to find themselves suddenly conveyed in thought to Philadelphia, but as a result of the discovery that, when visiting Canada, I could also manage a glimpse of the United States without any extra charge on my ticket, I found myself one evening in the Delaware Bay and the first thing I observed was a fine Osprey fishing; he gave the steamer a wide berth, but I noticed him make several stoops at fish, which proved unsuccessful, after which he returned to land.

It was a Sunday night, the 21st July (after the usual troubles with the Customs) that we landed at Philadelphia. The weather was warm and summer-like and with high temperatures something like 95° in the shade; every one seemed in a hurry and rush as if life depended on their keeping their watches in their hands. The town was suffocatingly hot, so I immediately made inquiries and discovered a place much more suited to my tastes. This was Fairview Park, which I reached by trolley car: it was beautifully laid out in flower beds, and European Sparrows together with immature bronze Grackles seemed in possession, the latter waddling about on the grass and staring up with their impertinent little grey eyes in a most daring way.

Again taking the trolley car which runs round the park I alighted at a miniature forest called Belmont Glen. It was now late in the afternoon, a large number of Chimney Swifts (*Chatura pelagica*) were circling round the buildings and garden Kiosk, much as our own birds do in the old world, but these birds are much shorter in the wing, with hardly any tail and a habit of distending their primaries, which gives them a ragged appearance; their wing motions are quick and their flight bat-like.

I followed the path to Belmont Glen where there was quite a nice little brook running through a forest of huge trees; by this time the shades of evening were fast falling, but I saw some birds moving about with all the appearance of going to roost: a closer acquaintance proving them to be a hen Virginian Cardinal and some grown-up young ones.

A little further on a small party of Cat Birds were also in search of sleeping quarters, making a ferocious din which at first had puzzled me not a little. As it was now too dark to see I reluctantly turned home, determined to renew my exploration the following morning, which I did, and very lovely it was. The air so fresh, the sun so bright, the best time in these southern latitudes. The first thing I heard was the old familiar notes of the Scarlet Cardinal "whit, whit, whit, chow, chow, chow." I soon saw a fine male bird amorously flying after the hen, but she did not seem the least attracted, possibly thinking more of her grown-up sons and daughters than of her husband. I imitated his song and he was furious, alighting in the tree just over my head, looking beautiful, tail stretched out and crest moving up and down. He was not going to put up with what he thought was another cock Cardinal, but I stood my ground although simply charged at. Moving a little onwards I heard some bird turning over the leaves, so crept quietly and beheld a brown Thrasher (*Tonostoma rufum*) searching for worms in the true Thrush-like way; these Mock-Thrushes have a longer and more hooked bill than the true *Turdidæ*, and are highly appreciated by Uncle Sam for their song.

Returning to the road I saw another Thrush feeding, which was either a Wood or Wilson's, I could not quite make out, possibly a Wood Thrush, as it was well-marked with spots on the breast. Wandering along I came across a fresh spring in a dell surrounded with brambles, and this was simply a bird paradise; all around was a perfect chorus of Song Sparrows, their notes sweet and melancholy. A large brown Warbler kept about the spring, Swainson's Warbler (*Helinaia swainsonii*) a good imitation of our Reed Warbler. The chipping Sparrows were also numerous here, and as I remained quiet, two birds flew into a tree over my head: brown and about the size of Mistletoe Thrushes. I could not think what they were, but on studying their motions it dawned on me that they were Cuckoos: on closer inspection I recognised them as the Yellow-billed Cuckoo; most graceful creatures. As they hopped about they caught the moths that they themselves disturbed.

I returned for supper to the Kiosk, around which there were boxes of Cannas and Geraniums; whilst refreshing the inner man

to my joy I saw my first humming bird, a male Ruby Throat. It was like a dream. For a few moments it went round the flowers, like our well-known Hawk moth of the same name, and then away. My next experience of this lovely bird was in Canada.

Numerous fowls were kept about this Kiosk. This was a great attraction for American Crows and Grey Squirrels, so well known in the London Parks, and flocks of young Cow Birds which contained parties of twenty or thirty.

In the wood at the back I saw a gorgeous Woodpecker clinging to some pine trees and quite tame; the Red-headed Woodpecker (*Melanerpes erythrocephalus*) bright red, back black with white bands across the wings and a snowy white breast.

Robins were scarce here (*Turdus migratorius*) and I did not meet them in plenty until I visited the Zoological Gardens in Bronx Park, New York. There they were numerous, hopping over the grass lawns and feeding in any trees where there were berries. Another very tame bird was the Flicker, a Woodpecker (*Colaptes auratus*). The first I saw was hopping over the grass, and when I approached it did not stir. I poked it with the end of the stick before it would move. The collection of birds in these gardens is about the best I have ever seen and the North American species well represented.

Very few birds were seen travelling North up the Hudson. A few belted Kingfishers, Bank Swallows and Sandpipers feeding on the river banks. Reaching Niagara, birds became more plentiful, and Belted Kingfishers on the river were numerous. Here I observed the first American Goldfinch (*Astragalinus tristis*). I had a walk on Goat Island, densely wooded with vines twisting through the trees with thick undergrowth. The thermometer stood over 90° Fahr. in the shade and the atmosphere humid and sultry, except by the margin of the river's blue-green torrent where there was a gentle breeze. Numerous Warblers flitted about through the trees; they were timid, but I collected some round me by a ruse, imitating the screech of a caught bird; six gathered round close to my head, so that I could see them very plainly: four were the Parula Warbler (*Compsothlypis americana*), the other two, American Redstarts (*Setophaga ruticilla*). I enjoyed watching their movements and they remained around me for some considerable time and reminding

me of our genus *Philoscopus*, only of course they are of very bright colouring as most of the New World Warblers are. They spend the winter in the Southern States and migrate northward in April and May. I spent some time at the Experimental Farm at Ottawa, and there I found the well-kept lawns quite a paradise for bird life. Quantities of Robins (*Turdus migratorius*) in search of worms; Baltimore Orioles feeding on the berries of the Mountain Ash tree, as well as crowds of other birds such as Cedar Birds, Mock Thrushes, Flickers, &c.

The Baltimore Oriole feeds in quite a peculiar way, extracting the juice of the berries with its bill without removing them from the stalk. They are hard birds to approach and dodge away at the back of the trees; the males look gorgeous in their liveries of black and orange. There is a certain tree at the apiary where at least a dozen of their pensile nests can be seen; these are so well constructed that they weather for years the winter storms. Another beautiful bird that I just got a glimpse of was the Rose-breasted Grosbeak. This species keeps to the deep solitude of the woods, the black and white with the rose colour makes a great contrast against the green of the trees, but once they know they are seen they mysteriously vanish into the thickets. These birds were at one time imported into the London market, but have disappeared of later year since the exportation of birds has been stopped from the United States.

I noticed the King Bird, plentiful everywhere on posts and palings and wire fences, flying down to the ground and catching passing insects. It is quite a graceful bird, but its beautiful golden crest is not visible except when held in the hand and the feathers of the head set apart, for instead of a raised crest like most varieties of birds it is in a hollow on the crown. I have kept its allied species the Fork-tailed Tyrant (*Milvus turanus*) in captivity. The bird I had in my possession was from Trinidad. All these Tyrants are bullies in an aviary: here I saw them follow in pursuit of Hawks and Crows or any of the large birds that may intrude into their domain. I saw one on the plains of Katabazna, Quebec province, beat a Hawk until I lost sight of it, stooping down upon it making the Hawk's feathers fly.

Around the suburbs of Ottawa there were some Indigo birds, a particular pair frequenting some scrub, the little cock looked so nice in his bright blue dress beside his slim brown mate. Purple Finches were along the little creek that flows here, the male is beautiful and quite a good singer, more purple than the European *Carpodacus*, and many are kept in cages here in Canada.

A peculiarly attractive bird of the New World is the Night Hawk. When first I saw them I mistook them for black Terns; they appear quite early in the evenings and at times in the day during thunder showers: they have a particular fancy for the city and feed over the chimney pots in company with Swifts.

Whip-Poor-Wills made most uncanny sounds after dark and were very plentiful on the plains of Katabazna in Northern Quebec. All these creatures used to collect round the Sheek which was near a water hole, but their cries usually stopped before midnight.

In August I could observe some signs of return migration to the South. Cedar Birds appeared in flocks and Purple Martins lined the telegraph poles; flocks of Bobolinks passed over with a swift flight, Red-winged Blackbirds were in quantities among the reeds, perhaps the long continued drought shortened their stay in Northern latitudes.

One day, as I strolled up a lane in Hull, one of the suburbs of Ottawa, I came across a wooden hut; here, hung up, were many trap cages with decoy birds, chiefly Goldfinches (*Astragalinus tristis*) and a few Purple Finches, so I enquired within for their owner. An old lady answered the door, who proved to be the mother of the bird-catcher, who was not within, so I sent for him. After some time a wild-looking youth appeared and I at once arranged for a bird-catching expedition, but in the meantime started him to work. Two days passed before I again re-visited the place; on my return I found he had trapped five Goldfinches, several Purple Finches and a Bobolink.

We started off with call-birds and trap cages up a hot and dusty lane, way off the main road. His traps he set on piling posts in a weed-covered common, chiefly thistles in seed and huge clumps of Solidago, Golden-rod. Many of the weeds in Eastern Canada are from the old country. One of the trap cages contained

a hen, the other a cock Goldfinch. These little birds are very beautiful in their black and gold livery; the male when wild has a delicate shell pink bill, which I find is lost after moulting in captivity. The call-birds were soon hard at work attracting one wild bird after another, which after capture were placed in an extra cage brought for the purpose. We got about a dozen in all and some Bobolinks also. I had a special cage made to convey them back with me to Ireland. Shortly after this I had to leave for home, being recalled by an urgent wire on account of the labour troubles. The voyage home was uneventful with the exception of seeing the grand sight of twenty-two icebergs together at the same time. Our ship was visited by a female red-breasted Nuthatch (*Sitta canadensis*) in the gulf of St. Lawrence.

Birds of all kinds are plentiful as well as tame both in the United States and in Canada, (and it is a most enjoyable place for field study for any ornithologist) from the lively little Chickadee to the great blue Heron on the silent marsh, with the full feeling of freedom which in Canada alone we can grasp in its overwhelming vastness.

SOME HINTS ON PARROT-KEEPING.

By THE MARQUIS OF TAVISTOCK.

(Continued from page 307).

Platycterinae.—A large family of AUSTRALASIAN PARRAKEETS which includes among its representatives many of the most graceful and beautiful of living birds.

Platyterci (TRUE BROADTAIL PARRAKEETS).—Food: Canary, millet, wheat, oats, a little hemp or sunflower, fruit (especially apple) and green food. All the true Broadtails can be wintered out of doors when properly hardened off, but all are sensitive to cold when newly imported and few can stand, in winter, a damp or draughty aviary which gets little sun. They will live in cages but are not really suited to cage life, as their beautiful plumage is very apt to lose its brilliance after a year or two of close confinement. As pets, too, they are a failure, having no talent for talking, and being difficult to tame, and when tamed excitable and treacherous and usually

destitute of any affection for their owner. During the breeding season and often at other times, paired birds fight savagely with all members of their own and allied species, although they may tolerate the presence of Parrakeets of other orders. Unmated cocks, however, agree fairly well together, and it is sometimes possible to pair two hens to one cock and breed from both at the same time, provided the hens are on reasonably friendly terms, as is often the case with a mother and daughter who have never been separated. During incubation and for some time after the young are hatched, the hen seldom or never leaves the nest. Hen Broadtails have smaller heads and narrower beaks than cocks. The young often breed when a year old, but do not obtain full plumage for eighteen months.

ROSELLA PARRAKEET (*Platycercus eximius*).—The commonest and one of the most beautiful of the family. The adult hen has the red area on the head and neck smaller than in the cock and with much more ragged edges and behind the eye the red has a greyish, washed out, tint. The presence or absence of a green spot on the nape is not a very useful guide to sex, for while it is probably true to say that it is never found on an adult cock, it is certainly absent in the case of many adult hens. Young birds have a narrow green bar running from the back of the neck to the centre of the crown and show very little blue on the closed wing. For turning out, it is absolutely necessary to get tame, or half-tame adult cocks—the tameness of the hens does not matter so much. Newly imported or young birds are inveterate wanderers when given their liberty.

YELLOW-MANTLED PARRAKEET (*Platycercus splendidus*).—A local race of the Common Rosella with a yellower neck and wings and brighter coloration generally. It is very rarely imported.

MEALY ROSELLA (*Platycercus pallidiceps*). — Requires careful treatment until it has completed its first moult in this country, after which it is as indifferent to cold as any other *Platycercus*. It is a satisfactory bird at liberty, wandering less than many of its allies, and nesting readily either in barrels or in natural holes in trees. It is very spiteful in disposition, showing a special aversion to its cousin the Red Rosella and also to the

Blue-bonnet Parrakeet. The hen is rather smaller than the cock and has a narrower head.

BLUE - CHEEKED PARRAKEET (*Platycercus amathusiae*).— A local variety of the Common or "Moreton Bay" Mealy Rosella, differing from the southern form in the bluer colouring of the cheeks. Blue-Cheeks often show a few red feathers on the crown of the head, a peculiarity which sometimes occurs in the ordinary form.

BROWN'S PARRAKEET (*Platycercus browni*).— Requires warmth and care until well through the first moult following importation, but afterwards perfectly hardy. Brown's Parrakeet is unfortunately a less good stayer at liberty than the Mealy Rosella, but it is by no means a hopeless bird to try. Like *P. pallidiceps* it has an intense aversion to Bluebonnets and it would be most unwise to attempt to keep the two species in the same aviary. The cock Brown's has a decidedly larger head and heavier beak than the hen. Among imported birds the proportion of cocks is usually very small and the number of large, bright-coloured hens, sold as cocks, is correspondingly great.

STANLEY PARRAKEET (*Platycercus icterotis*).—The smallest of the *Platycerci* and a free breeder in captivity. The hen is readily distinguishable by her dull and patchy tints, the Stanley being the only typical Broadtail in which the sexes differ markedly in colour. Stanley's are not to be recommended for turning out, as they are bad stayers and are too small to defend themselves against the attack of Owls

YELLOW-RUMPED PARRAKEET (*Platycercus flaveolus*).— Formerly quite common, but now rarely imported. The sexes are much alike and are often very difficult to distinguish. It appears to stay well at liberty, but I may say that my experience of Yellow-rumps has been very limited.

YELLOW-BELLIED PARRAKEET (*Platycercus flaviventris*).— Easily distinguishable from the last-mentioned species by its dark green back. The Yellow-belly is a savage and aggressive bird, the hens being quite as quarrelsome as the cocks and a great nuisance in mixed company. They are readily distinguishable by the small size of their heads and beaks. Yellow-bellies are not very good stayers when allowed their freedom.

PENNANT'S PARRAKEET (*Platycercus elegans*).—Sexes are alike in colour, but hens very readily distinguishable by the small adult size of the head. Young birds on leaving the nest are a dark leaf green with a little red on the throat and forehead, blue cheek patches and some blue in the wings and tail. In securing a pair of Pennants for turning out make sure that the cock is a steady old show bird well used to cage life and the ways of the world generally. Newly-imported, immature or out-door aviary birds, are a vexation of the spirit as they stay well for many months and then depart on the approach of the breeding season. When in poor condition, Pennants are very susceptible to septic fever.

ADELAIDE PARRAKEET (*Platycercus adelaidæ*).—Sexes much alike, but very red birds are nearly always hens. The young are decidedly smaller than young Pennants of the same age and of a more golden olive colour. Adelaides do fairly well at liberty.

BARNARDIUS PARRAKEET.—Closely allied to the typical *Platycerci* their food and treatment should be the same.

BARNARD'S PARRAKEET (*Barnardius barnardi*).—A very beautiful bird and not particularly dangerous in mixed company. Beak of the hen much smaller than that of the cock and her colours, usually, though not invariably, duller and showing less blue. Barnard's do well at liberty but the young are apt to stray to great distances from their birth place and eventually fail to return.

BAUER'S PARRAKEET (*Barnardius zonarius*). — Typical specimens have the lower breast almost entirely yellow and have no red on the forehead. The hens are easily distinguished by the small size of their head and beak. Bauer's are most dangerous neighbours for other quarrelsome Parrakeets likely to fight with them and even at liberty will often inflict fatal injuries by biting deeply into the upper mandible of an adversary and sometimes tearing it completely off. Half-tame birds are best for turning out.

YELLOW-COLLARED OR PORT LINCOLN PARRAKEET (*Barnardius semitorquatus*).—Typical examples have the lower breast pale green and some red feathers at the base of the upper mandible, but intermediate forms between this species and *P. zonarius* are very common and are of no fixed type. The hen Port Lincoln is less easy to tell from the cock than the hen Bauer and the sexes

are alike in colour. Port Lincoln's stay fairly well at liberty and their loud whistling calls, unpleasantly noisy in a room, are most beautiful when heard at a little distance in the open air. Unfortunately *B. semitorquatus* is a murderous fighter and just as expert as the Bauer in inflicting beak injuries.

PILEATED OR RED-CAPPED PARRAKEET (*Porphyrocephalus spurius*).—This curious, aberrant *Platyercine* is, in spite of the fact that it is lively, striking in appearance and amiable in disposition, liable to bring its owner more anxiety and disappointment than satisfaction. Of all Parrakeets it is the most intensely nervous, and catching and handling it in the most gentle manner will often reduce it to such a state of prostration through sheer terror, that its life may be seriously endangered. It also possesses in captivity an absolute unrivalled capacity for catching fatal chills on the smallest provocation. It is therefore a wise precaution to remove it from the aviary in autumn and keep it in a roomy cage in a warm room until spring is well advanced when it may be very cautiously hardened off. At the same time Pileateds are under certain circumstances capable of withstanding cold, as is proved by the fact that I had a fine cock at liberty during the greater part of the winter of 1912 which kept in perfect health. Unfortunately in February he strayed in search of a mate, lost his way and quickly starved. Pileated Parrakeets would probably do well at liberty as they are very dependent on artificial feeding, but the process of cutting their wings is so likely to prove fatal that one hesitates to try it with such valuable birds. *Porphyrocephalus spurius* is one of the very few Australian Parrakeets which will eat banana with any relish.

PSEPHOTUS PARRAKEET.—A family of rather small Parrakeets of extreme grace and beauty, which spend a good deal of their time on the ground. The sexes usually present a striking difference in colour. The food should be the same as that provided for the *Platyercini* and green stuff is most important. When tame they make gentle and affectionate pets.

REDRUMP PARRAKEET (*Psephotus hæmatonotus*).—The best known member of the family. Very hardy when properly acclimatized but not at other times, Redrumps would be charming birds at liberty were it not for the fact that owing to their small size they

almost invariably fall victims to Owls before they have time to establish themselves. They stay remarkably well when released in pairs, but directly a cock or hen is lost its mate will invariably go clean away within two or three days if a substitute is not provided. Redrumps are very dependent on artificial feeding and unlike many of the true *Platycerci* starve directly their supply of seed is beyond their reach. They may either be turned out with cut wings or if a pair in breeding condition are obtained, the cock may be released full-winged and his mate (who must be kept within sight and hearing) allowed to join him after a few days. Adult Redrumps fight savagely with members of their own and nearly allied species. They are highly susceptible to septic fever.

MANY-COLOURED PARRAKEET (*Psephotus multicolor*). Like the Redrump, able to stand cold when properly hardened off. Old writers describe this bird as a hopeless one to keep on account of its liability to die suddenly and without apparent reason from cerebral hæmorrhage. There is no doubt that Many-colours do sometimes succumb to this ailment on very insufficient provocation, but they certainly do not do so to such an extent that anyone need be deterred from trying them. They are however given to developing septic fever in the most inexplicable fashion and the greatest care must be taken to safeguard them from possible infection. Like Redrumps they are very quarrelsome.

HOODED PARRAKEET (*Psephotus cucullatus*).—This beautiful bird has been described as very sensitive to cold, but I have found that, provided it is well protected from draughts and cold winds, it is by no means impossible to winter it without artificial heat. It is, however, fatal to allow it to nest at a low temperature as the hens are very subject to egg-binding and many are lost from this cause. On leaving the nest the young of both sexes resemble the female in their sober coloration, though the young cocks always show a trace more blue on the cheeks and breast. Adult plumage is assumed during the course of the first moult when the birds are about ten months old. Hooded Parrakeets are not quite so susceptible to septic fever as are their near relatives. *Psephotus chrysopterygius*, the Golden-shouldered Parrakeet, described by Gould, appears to differ from the Hooded in the presence in the adult male

of a yellowish frontal band and a greyish mantle without any trace of black. It is a rare bird of which hardly anything is known.

BLUE-BONNET PARRAKEET (*Psephotus xanthorrhous*).—A very aberrant *Psephotus* which really deserves to be placed in a genus of its own. Why this bird should be classed with species to which it has a very remote affinity, and that most typical *Polytelis* the Queen Alexandra Parrakeet separated from its two near relatives for the very insufficient reason that the adult cock possesses one primary feather somewhat peculiarly shaped at the tip, is one of the mysteries of scientific classification which are most difficult to account for. Cock and hen Blue-bonnets are alike in colour, but the latter have rather smaller heads and are less perky and assertive in their demeanour. Blue-bonnets are the hardest of all Australian Parrakeets and can safely be turned out of doors at any time of year. They are, however, highly susceptible to septic fever and grey parrot fever, the germs of which they cannot resist even when in the most perfect health and condition. In disposition they are excessively spiteful both towards parrakeets and birds of other orders. When tame they make nice pets but usually bestow their affections on one person only. When given their liberty they are apt to stray during the first few weeks, but after that they generally stay well. They seldom fall victims to owls and are able to live for many days even during the winter on what they pick up for themselves in the woods and fields. Blue-bonnets should be fed like the other *Psephoti*, but it is not wise to allow them much hemp unless they are flying at large.

RED-VENTED BLUE-BONNET (*Psephotus hæmatorrhous*).—Differs from the common variety in the possession of red feathers under the tail and a reddish chestnut or maroon patch on the wings. Both kinds have a red patch on the abdomen. *P. hæmatorrhous* has little claim to be considered anything but a local variety of the common Blue-bonnet, and birds showing intermediate characteristics are often met with.

NEOPHEMAS PARRAKEET.—These beautiful little grass parrakeets are now rarely imported and it appears only too likely that some of the most lovely species are nearly or quite extinct. They should be fed on white and spray millet, grass seed and canary seed.

A few of the larger seeds will do no harm, but they seldom seem to care for them. Grass-parrakeets are very peaceable with other birds, but are rather more sensitive to cold than the *platycerci*.

ELEGANT GRASS PARRAKEET (*Neophema elegans*).—The largest of the group, like all its relatives, highly susceptible to septic fever. It is very fond of grass and other green food. The hen has less blue on the forehead than her mate.

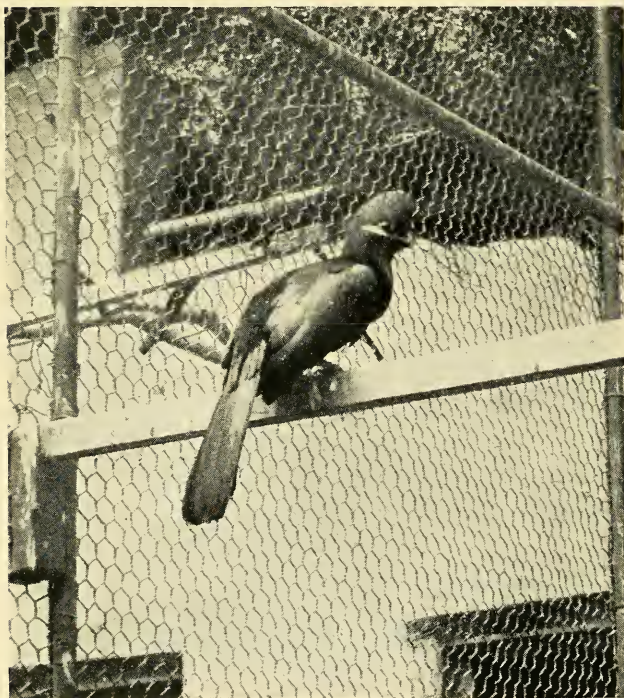
BLUE-WINGED GRASS-PARRAKEET (*Neophema venusta*), also called 'Blue-banded Grass-parrakeet.' Very like the Elegant but of a duller, darker and less golden green and with more blue on the wing. The hen has much less blue on her forehead than the cock—often only the merest trace—and young birds are less blue on the wing than old ones. Gould asserts that in *N. elegans* the blue frontal band extends behind the eye and in *N. venusta* it does not, but the distinction only applies to adult cocks, as I have seen no hen *elegans* in which the frontal band did not stop on reaching the eye.

TURQUOISINE GRASS-PARRAKEET (*Neophema pulchella*).—A very distinct species in which the markings are different from those of its commoner green relatives. The cock is readily distinguishable from the hen by the possession of a small chestnut patch on the wings. The Turquoise appears to be on the verge of extinction, a lamentable circumstance for which aviculturalists both in England and on the Continent are much to blame, as the bird was at one time freely imported and bred so readily in captivity that it might easily have been preserved in a state of semi-domestication.

BOURKE'S PARRAKEET (*Neophema bourkei*).—A fairly hardy little bird, rather less subject to septic fever than others of the genus. Some adult cocks have a broad blue band across the forehead, but in others this is nearly or entirely absent, and the sexes may be most difficult to distinguish as they are of exactly the same size. Bourkes, especially when young, are very apt to dash themselves violently against the sides of their aviary in moments of sudden panic and all glass and wire netting affording facilities for this method of suicide should be protected by string netting or sacking. Bourkes are not so fond of green food as their near relatives and a constant supply is not necessary when they are not breeding. Nesting pairs are best kept separate as I have had birds killed through fighting.



GREAT-BILLED TOURACO (with crest lowered).



GREAT-BILLED TOURACO.

Photos by Graham Renshaw.

NEW ZEALAND PARRAKEET (*Cyanorhampus novæ-zealandiæ*).

A gentle and beautiful bird, now hardly ever imported. It should be treated like an ordinary Broadtail, but should not be exposed to too much cold.

PYRRHULOPSIS PARRAKEETS.—A small genus of large, brilliant Parrakeets, all of which are rare in captivity. They should be fed and treated like the *Aprosmicti* and a large supply of fruit is indispensable to their health. The sexes are much alike in colour. The Masked, Tabuan, and shining Parrakeets are the best known if not the only members of the genus, the two latter being much alike, but while the Tabuan Parrakeet has a maroon head and breast, in the Red-shining Parrakeet the maroon is replaced by bright crimson.

THE GREAT-BILLED TOURACO.

By GRAHAM RENSHAW, M.D., F.R.S.E.

It is unfortunate that the handsome birds known as Touracos or Plantain-eaters are but little known to aviculture: for, although somewhat delicate in confinement, their curious ways and quaint yet lovely plumage render them eminently desirable as pets. Imported at long and irregular intervals, the total number arriving in a year can be reckoned on the fingers of one hand: even the commonest are rarities, though several species have been shown from time to time at the Zoo.

The writer has in his possession a Great-billed Touraco (*Turacus macrorhynchus*). This fine species has the head, throat and chest dark shining green, the wings are crimson, mantle and tail violet. The stout beak is yellow anteriorly, but the upper mandible has a crimson spot immediately in front of the nostril, and the posterior two-thirds of the lower mandible are almost entirely crimson. The feathers of the head are produced into a crest, and this is faintly tipped with white, as if a paint-brush had been lightly passed along it: a smart white streak also runs below and behind the eye. The eyelids are bright crimson, the legs and feet black. This charming and harmonious colour-pattern is well adapted to conceal an arboreal, forest-haunting bird such as

the present; it is further remarkable that these hues also occur in the flower, fruit and leaves of the bananas on which it feeds!

The writer's Touraco lives in an unheated aviary with a spacious outdoor flight. For companions it has a Tucai Toucan (*Rhamphastos dicolorus*), three Cape Mouse-birds (*Colius striatus*) and a Delalande's Fruit Pigeon (*Vinago delalandei*). It agrees well with all of them, though at meal times the Toucan's big beak ensures the respect of the others. The Touraco is fed on cut-up apples and bananas, and does not appear to care for mealworms, which these birds are said to take in captivity. On coming to the ground to feed, the Touraco utters a short croak and runs smartly to the food-pan. The stout beak acts like a pair of pincers, gouging out pieces of banana pulp and swallowing them whole: pieces of apple also swiftly disappear down the wide, distensible throat. The upper beak is but loosely articulated to the skull, and can be moved up and down with a hinge-like action, thus permitting the passage of morsels which would choke many birds.

Touracos are adepts at hiding, keeping concealed behind objects (such as posts or boughs) which would have been thought much too slender for the purpose. When alarmed the bird stretches out its head and neck, at the same time elevating its crest. The writer's specimen is most active in the morning and evening, spending the middle of the day in sleep. Besides the croaking sound already mentioned, Touracos utter barking cries, and also a curious sound like the winding of a clock, hence the name "clock bird" often applied to them.

BIRDS IN AUTUMN.

By A. R. WILLIAMS.

The West or Herefordshire side of the Malvern Hills is more beautiful than the Eastern, Worcestershire, side. The country is more varied, better wooded, and undulates slightly, with small ranges of hills, giving the interest of variety to the landscape.

Standing on a tree-clad ridge some three or four miles westward, one gets a magnificent view of the whole range of hills. On the left, northward, are the bare and regular peaks of the North

Hill and the Beacon. Sweeping along the line, the eyes perceive gorse and fern clad slopes, with houses dotted about in places. Straight in front the top of one hill is covered with pine trees, whilst lower down is a considerable wood of mixed trees, through which the high road runs. A few cottages and some large white houses border the road at intervals, and occasionally vehicles pass along. To the right, southward, looms the British Camp, square and angular and entrenched, a grim relic of the days when our ancestors alternated war with the chase, sometimes for pleasure, often as a vital necessity of life, to prevent slaughter or enslavement. From there a number of small hills slope down, through one of which, Dog Hill, the railway runs to Ledbury.

About there a huge obelisk stands ever-visible, a monument to some past Lord Somers.

It is a peaceful scene. The only disturbances it gets are when a train rushes with roar and rattle between the Malvern and Ledbury tunnels, and, in autumn and winter, the wild career of hunters and hounds in pursuit of a fox. For the rest it is quiet enough. The ill-paid labourer pursues his useful work unobtrusively, and the great white-faced "Herefuds" stand contentedly grazing, or stare at the passer-by with large, soft, fearless eyes.

About half-a-mile below us stands a church, a gray building with a square ivy-clad tower, typical of so many in this country. A few sombre yews and tall elms stand round it. This is the resort of the rooks. In the elms they have their loosely-built nests, and at all seasons they wheel round the tower, or perch flapping on its summit.

In the tower itself a number of jackdaws have taken up their abode, and can be seen popping in and out through numerous holes at the top of the tower. In the Spring the noise of the rooks can be heard for miles. Now in October they are quieter. They have not the weighty matters of nesting and rearing young to call forth "caws," and food is so plentiful, in the shape of acorns and refuse from harvest, that they are at peace with themselves and the world.

The rook is an omnivorous feeder. He is a destroyer of pests as well as a partaker in what man has grown, ranging over the

animal and vegetable kingdom for his food. Of slugs, grubs, worms, and other creatures of the earth he eats an enormous quantity, as he does also of acorns.

Coming up a bank suddenly to a sloping field, we disturbed a rook. He flew up with a rush, bearing something between his claws. In his haste he had not secured his prize, and it dropped. I went and picked it up. It was a big potato. In it there were two or three holes pecked and claw marks. My companion, a local countryman, informs me that rooks are very partial to potatoes.

Talking of acorns brings us to the subject of wild pigeons, "quiests" or "quises" as they are called about here.

The pigeon is the farmer's *bête noir*. The pigeon has no word said in its favour. It takes toll of everything vegetable, prefers crops and leaves pests strictly alone. So it is shot whenever possible, but flourishes nevertheless, and seems to be increasing, although it is exempted from the Wild Birds' Protection Acts, as is also the sparrow.

"Quiests" eat large quantities of grain, peas, and beans. They have a still more culpable weakness. It is for young clover. They bite it off close to the ground, often so closely as to prevent further growth. In fact, they will eat anything green and tender, and any kind of seeds. Their voracity for acorns is astonishing. My friend assures me that he has taken as many as nineteen acorns from the crop of one pigeon.

This part of the country is a perfect birds' paradise. The prevalence of large farms, the fertility of the soil, the abundance of woodland, covert, and hedge row, and the sparsity of population, all favour birds, and they take full advantage of these opportunities.

Man, as farmer, curses many of the birds, and tries to reduce their numbers, but with little success. The two he hates most, the sparrow and the wild pigeon, are the commonest, and their numbers seem to increase.

Pigeons have some peculiar habits. They are very fond of larch trees, and will spend hours in them, perched cooing and preening, but never build there. The nests are usually in woodland trees, beech being shown a preference.

The sparrows are ubiquitous. They swarm everywhere, and

shooting, trapping, and even nest and egg destroying fail to make any appreciable reduction in their flocks.

Game-keeping has made considerable difference to the incidence of birds, as it has done in the case of animals, just as in the same way trout and salmon preserving has affected the other fish and the riverside creatures. A visit to a gamekeeper's "gallows" will testify to this—a gruesome row of birds and beasts shot or trapped and nailed to a post as common malefactors. Jays have been much reduced this way. The jay is inordinately fond of eggs, especially pheasant and partridge eggs. So the gamekeeper fixes up a pole in or near the wood, places a small platform on top, and secures there a steel trap. This is baited with an empty egg shell.* The jay swoops down and pecks hard at it, thus losing his life in the trap. In some parts jays are getting comparatively scarce. The magpie is a much persecuted bird, being shot as it flies out from the hedge or copse. But it is still fairly common, and may often be seen taking its low undulating flight over the meadows. This bird is remarkable for its long tail, and the use it makes of it while flying, raising and depressing it as a sort of plane, the result being a rising and falling, switch-back sort of progression.

The large birds are the chief sufferers in modern England. Some have been quite exterminated, though many would return and the present species increase numerically were they but given some encouragement and protection.

But most of the common small birds have multiplied greatly, thereby occasioning much grumbling from those on whose ground they feed, particularly fruit-farmers.

There is no bird for which the fruit-grower has a word of praise: the most credit he will give to the best-intentioned bird is a grunt of disdain or uncertainty. Considering the varieties of birds which feed on insects and creeping things, most of which are a menace to the cultivator, a strong case can be made out for the birds, and a little bud and fruit-eating might be forgiven them.

This increase of the common birds is rather curious and its causes not quite definitely assigned. They are mostly small birds,

* This form of trap is illegal, and extremely cruel.—ED.

to whom improvement of cultivation is no bar, but rather encouragement, for it simplifies feeding. The destruction of birds of prey may be a contributory cause. Hawks are becoming rare in this part of England. A kestrel is sometimes seen, but not often. The sparrowhawk and kestrel used to destroy numbers of small birds, as well as small animals and vermin. Now their deterrent influence is not felt.

Above us was a small wooded hill. The farmer informed me that it was a few years ago frequented by a kestrel. It used to soar to a great height from the far side of the wood, hover, and take short flights, darting down with lightning rapidity on to its prey. But it disappeared; shot no doubt.

Owls are plentiful, both the barn or screech-owl, and the brown wood-owl, with its "tu-whit, tu-who," curiously resembling at a distance a forlorn human voice.

Flocks of wild geese sometimes pass over in autumn. This is said to portend a severe winter, as is also a plentitude of berries. Both statements lack proof, there being no reliable data to support either belief.

We moved up towards the house. Below us lay a large pond, overhung with elms, alders and water-loving bushes. It was rapidly filling with the Canadian pond-weed, and has to be raked at intervals or it would be completely choked up. A number of gold-fish were swimming about. These fish attain an amazing size in a large pond. Some of them were well over a foot long.

Trout were kept here at one time, and then a heron used to visit the pond. It was often seen leaving at daybreak. But the heron does not confine itself to fish: it eats frogs and any aquatic creatures obtainable. Herons are now protected by many country gentry, who take great pride in possessing a "heronry," and so these interesting birds are increasing.

In ten years the owner had seen only one kingfisher here, and then only on one occasion. They are shy birds and somewhat localised. On parts of the Severn one can often see them, and a little patience is rewarded by seeing the bird dive, or rather dip and catch, after which it perches and works the fish along through its beak. Why is this? Is it to kill the fish or break its bones or to soften it for the young?

A few water-hens, mis-called moor-hens, were paddling about, but rapidly disappeared under cover at our approach.

Woodpeckers are common, and their quick rhythmical tap may often be heard.

If disturbed, partridges flap noisily away from where they have been squatting in the long grass. A pheasant, when suddenly startled, will often rocket with tremendous force straight up and through the tree-tops.

Away in a large distant meadow countless black specks were bobbing busily up and down.

"Look at those Starlings worming," remarked my cicerone. A wagoner's boy passing along the road shouted "Shoo." Instantly the whole flock rose in a cloud and flew to the tops of the elms close to us. There must have been thousands of them. Not one was still or quiet for a moment. The whole lot were on the move incessantly, hopping from bough to bough, bobbing and bending and turning and flapping unendingly, with quick jerky movements.

Their noise was deafening. Each starling kept up a sibilant, half-whistling call, a sort of catch or round on two or three ascending notes. After watching and listening for a few minutes, we clapped our hands and shouted, and the flock went off at top speed to another field. They continue like that all through the winter, pairing off finally about February or March.

The Starling always builds in a hole, or anything that the least resembles one, making a rough untidy nest, and has a preference for straw.

At the back of the house is an old brick-built shed, used as a store by the carpenter. In one gable-end is an opening, two feet square, through which the carpenter pushed his ladders. About two years ago this shed was disused and the door was locked all through the winter. One day, about the beginning of April, the carpenter went in to have a look round to see if the place could be used again. He had cleared everything out. Inside, at the bottom of the wall, below the ladder opening, he found a big heap of straw, nearly a barrowful. He could not understand how it came there. A careful watch revealed two starlings at work. They carried straws from the pig-styes and laid them on the lower ledge of the

opening. Before they got much there it was blown inside by the wind. But the starlings persisted, and the result was the heap of straw, all of which had been carried by this pair of birds. The carpenter using the shed again put an end to the birds visits, or it would be interesting to know how long they would have kept on in this way.

The Pied Wagtail is a resident about here, but the yellow wagtail is scarce, only being seen occasionally.

The early-setting sun was now low in the west. The robin had ceased his little bursts of autumn melody. The call of birds were lessening. The starlings flew off with a great rush to the woods to roost. Round the church-yard elms the rooks were gathering and giving a final chorus of "caw" before retiring. The small fowl were all seeking their resting-places for the night. From the low-lying meadows came the faint "pee-wit" of the plover, an eerie sound through the oncoming darkness.

A slight mist began to rise from the country, and a fading pearly-gray light disappeared from the hills, as the lights began to twinkle from the houses.

Then the faint silvery yellow of the crescent moon peeped above the hills, and the stars crept out, whilst all the country-side was hushed to silence.

BIRDS OF NEW SOUTH WALES I HAVE CAUGHT AND KEPT.

By G. A. HEUMANN.

(Continued from page 272).

THE SMALL AND MORE DELICATE SOFTBILLS.

At the present time I have sixty-five species of native birds in my aviaries. Amongst them is the Crested Shrike Tit (*Fulcunculus frontatus*) my favourite bird. In appearance it is a little like the Coal Tit of Europe, only much brighter and twice the size, with a fine black comb-like crest. Strange to say, contrary to other birds so ornamented, it raises the crest when excited, but when in the act of fighting it lowers it flat on to its head and stretches the

body, generally bulky, into a straight and slender line. In that posture the bird is a lovely sight. The call note is a sweet plaintive whistle, whereas the young, even when three months old and more, attract one's attention by their peculiar quacking noise, just like little ducklings. They fly and feed high and with their powerful beaks rip the bark off the trees to find cocoons and small beetles. Their nest is a lovely little structure built in trees up to a height of 50 to 100 feet high, fastened on the outer edge of a branch of a gum tree. Some years ago I was offered and bought a pair for thirty shillings, but the pleasure was a short lived one. Now, however, I have a few doing well, very tame and ready to come on to my finger whenever I call them. Next to them in my affection come the White-shouldered Caterpillar Eater (*Lalage tricolor*). A real regal bird: brown hind neck, upper back shining metallic blue, shoulders white, likewise underside and band across wings. But its beauty lies in the lovely shape. Compared to other birds this bird is what a race-horse is to a draught-horse. They are at home in large paddocks with a few big trees, singing even when sitting on the nest. As soon as incubation is over the male bird takes little further notice of its offspring. I have noticed this seeming neglect to their families in numbers of breeding birds, but catching one day the mother from three young already well on the wing I was surprised to see later on the father take charge of and lead the young about. In June the cock changes to grey, the colour of the female. Their nests are high up and difficult of access. Very shy at large; in captivity they soon become delightfully tame: they are birds I am never without.

The Robin species (*Petroica*): Scarlet, Flame-breast, Rose-breast, Red-capped, Yellow and Hooded Robins are one and all the most gorgeous birds we have, especially the four first named ones. Formerly they must have been very plentiful here, but what with rabbit poison, catapults, air and pea rifle, they are now very scarce, especially near the populated centres, where every boy—defender of the country—must kill something, and the shining red breast of the robins make a fine target. They are not hard to catch as one of their characteristics is their guilelessness. No bird will come so easily into a trap or on to a limestick as these robins: but the

keeping of them is a different matter and few birds will want such care and attention as these. Another drawback is that they will lose colour after moulting, though I have had them to go through it and come out as bright as the best of them in nature. The loveliest amongst them is no doubt the Rosebreast, and the species from the north of N.S.W. is the brightest: chest a deep rose pink, the rest a pearly silver grey. A glorious little bird. The few I have had of them have given me untold pleasure.

The Red-capped comes next. It is the smallest of the robin tribe and oh so delicate, but most lovely! Crown of head scarlet also breast, abdomen white, rest black with white bar across the wings. The hen is greyish brown with a maroon patch on the top of the head, the young are like her. They like flat brush country, Tee tree or other low scrub; like all robins they only live in pairs or singles! It takes a long time to locate a pair of this species. The Scarlet-breasted Robin is I think the brightest, the most gorgeous of them, being larger and therefore showing more red. To see them sit on a sunny morning on stumps out in the open flat, they remind one of soldier sentinels in their black uniform, the shining red breast-plate and the white patch on the forehead for a helmet. His relation, the Flame-breast, is dark silver grey with a light brick reddish-pink chest and abdomen. To see these birds in their native state is worth a trip to Australia. They are just too lovely for words. I am sure if they could be got to England they would do well out in the open, since they are cold climate birds, as it were, coming during the colder months only and returning towards the snowy mountains during the hot summer months. During cold winters I have fed them personally in the Blue Mountains when snow was on the ground with crumbs which they took greedily. Yet try them that way in captivity and they will surely die the first day.

The Black and White or Hooded Robins are the largest of the Robin tribe in N.S.W. They are very handsome birds, similar to the White-shouldered Caterpillar eater, but they remained always wild with me and I cannot say that they are amongst my favourite birds. Robins of any kind, in spite of their gorgeous plumage, even in their wild state, do not impress me as being so buoyant in spirit as some birds. Their feathers are never as sleek and trim as those

of other Softbills. They have a discontented look about them and are certainly anything but amiable in the aviary. They often build their nest close to human habitation, and several I have found under the thatch roof over corn-stacks.

Close to Sydney only the Yellow Robin is met with, generally called "Yellow Bob," a plain grey bird with light sulphur-yellow breast. His relation up north is larger and of an intense yellow, a bird one looks at twice. Robins breed easy enough in confinement, but the rearing of the young is I think still a problem not yet solved. Rufous Crested and Yellow Thickheads (*Pachycephala*) are not only handsome birds but also exceedingly fine whistlers. Unfortunately they are still in the experimental stage with me and so far I am sorry to say I have not been able to keep them longer than a year at a stretch. To listen to these birds early in the morning gladdens the heart of any bird-lover. A plain but attractive bird and one I like to always have round me is the Willy Wagtail (*Motacilloides*): head, throat and breast black, eyebrows and under white and fan-like tail. They love sitting on the cattles' backs catching flies, always wagging their tail and once in a way letting out their melodious song which sounds like "sweet pretty creature." During moonlight nights they are often a real nuisance, whistling all night long. They breed every year in my orchard and I have often taken the young. They thrive in captivity. A close relation of theirs is the so-called Scissor Grinder or Frog bird: so-called on account of their peculiar grinding noise, when, as is their habit, they hover like a Hawk in the air before swooping down to get the insect they have been searching for. A slender and very graceful bird, much tighter in feather than the Wagtail, and more handsome. The white on the breast comes right up to the base of the bill, the rest is a bluish green-black. Some years ago I sent to England a dozen or so of three kinds of Wood Swallows, lovely birds all of them. The White-eye-browed one (*Artamus*) light slate grey and maroon breast and a white brow, the "dusky" dark grey with black markings on edge of tail and wing and the "mask" dark grey, half the head black, mask-like, tail tipped white. All of them birds I would not care to be without. They are easily kept on bread and milk, and readily feed and rear their young with this diet. They are very

hardy and live for many years in the aviary, always being first to fly on one's hand or shoulders when entering the flight. I had hoped to make some exchanges with them, but the man who took them told me on his return that he could not exchange or sell them in England and got rid of them only on the return voyage in Italy. Needless to say I have not made another such experiment.

The Wren (*Malurus*) species are of course every one's favourites because every one knows them. To see them hop through the low bushes with their long tails carried almost straight, or to notice the cock bird in his blue and black costume sitting on the top of a rail or branch calling and singing to his flock is certainly a fine picture. They are always travelling in families with one coloured out cock bird to lead them; the Blue Wren is the most common and found almost everywhere around Sydney. There is an impression that because they have been landed once in a way in England they are hardy birds and easy to keep. This is a fallacy. Generally speaking they are as soft as Robins, but during the winter months will take more readily to food. Once, however, they are used to the new surroundings and food they live well and breed easily, they will then feed their young on almost anything soft. They seldom get a meal-worm from us and yet the young thrive quite well on cake, bread and milk, mixed food with plenty of ants' eggs, raw minced beef, flies, &c. Of course in our aviaries they catch a lot of flying insects which naturally help to prolong their lives. During certain times in the year they lose their bright plumage, generally between April and July, but in captivity they often never change. A good Blue Wren is a fine little bird, but a Lambert Wren with its chestnut-coloured back and wings and its royal purple face and saddle is even more brilliant. This bird wants to be seen by artificial light, it shows off the colours magnificently. The Lamberts are much rarer, in fact very scarce birds and inhabit mountainous slopes. I once watched a nest of them with two young and to my surprise I noticed two coloured cock birds and only one hen feeding the babies. Up north, on the Brunswick and Tweed river, I get my Scarlet-backed Wrens. These like marshy country and they take some finding, though fairly abundant. Driving along the road towards dusk I used to watch for them going to their roosting place, generally a thick

thorny bush of the Acacia species, called by the children "cock-spurs" Here the old cock bird would sit on the highest branch, singing his song of love and delight, perhaps to call to straggling members of his family to come home. If you discover their roosting place it is then no trouble to catch father, mother and their feathery children. A remarkable observation I made on several occasions with this species is that the wrens love to resort to clearings where the scrub has been felled and lies to be burnt off. I have seen the Blues, Lamberts and Reds all mixed up in one flock of say two-three dozen and watched them through the glass for some time. Going near them, they immediately separated into their respective families. The Blues remained in the low bushes near, the Lamberts fled up the hill and the Red-backed ones towards the creek. All wrens build low into the long grass or low bushes and a great number of young are thereby destroyed by ants alone. I may perhaps some later day relate some of the tragedies in bird-life through ants and other causes which I witnessed in the bush.

Another lovely Wren—though not so gorgeous—is the Emu Wren, with its scraggy tail like "Ospreys" sticking up (and also the Striated Wren) but both these species I only kept for a short time, as they are very hard to get and then very hard to keep going. A bird resembling the Pied Wagtail of the Continent is the White-fronted Chat (*Epethianura*) commonly called "Ringlet," a great favourite of mine, almost like a double-barred finch, only with one bar only and the creamy white of the finch replaced by pure milk white. Their walk is so graceful and dainty that I placed them among the *élite* in my aviaries. They inhabit the swampy places about Sydney and respond readily to artificial feeding, whereas the Orange-fronted Chat from the West I never succeeded in bringing alive as far as Sydney. I have never seen the European Bee-eaters, but I should say by their description that there is little difference from ours (*Merops ornatus*). Taking a boat at Penrith, about 40 miles from Sydney, at the foot of the Blue Mountains and rowing down the Nepean river, one sees these lovely birds sitting high up an overhanging branch. Once in a way, when an insect appears and is seen, they will swoop down and catch it, returning with a graceful glide to the place they vacated, seldom will they fly

elsewhere. They are lazy, uninteresting birds, in spite of their lovely plumage and graceful flight. Old birds I have never been able to get on to artificial food, probably on account of being too used to catch their food on the wing. They absolutely refuse to pick up from the ground and only stuffing will save them for a little time, but it is useless. With the young taken from the nest I have been much more successful. As is well known, they build in the banks of the river, burrowing holes about two to three feet deep and about four to five inches in diameter. I must admit that, though not afraid of snakes when I see them, having kept them as pets before my marriage and only giving them up in deference to my wife's wishes, I yet have an uncanny feeling creeping through me when I put my hand into one of these doubtful holes. The nest is kept very dirty and wings of butterflies and beetles are there in thousands, blowfly maggots are all over the nest and I often wondered if the young birds live on them before emerging from the nest. It is not difficult to get these young birds to eat. I use fine raw beef, covered with crushed flies (to give the coating to the pellets they eject) and a few mealworms per day. These birds reared by hand become very tame, mine would fly away and return regularly to a whistle they learnt and remembered. The migrating season alters all these pleasant relations and one day they do not respond to the whistle; they have gone away! I tried to find out why they would eat bees in some districts and not in others, but so far I have not discovered any satisfactory solution. Also it is said—I saw it too in a German bird-paper—that Bee-eaters do not drink. I admit that I never took notice of this as I took it for granted that they do drink, and being birds that live near water they always have a plentiful supply. I have none of these birds at present, but on my return from the Continent shall get them again and then settle that question.

Flycatchers, Cuckoos and Pardalotes I have tried and am still experimenting with, but so far they have but lived a short while with me, especially the Pardalotes or "Ground Diamonds" as the boys call them. Sweet little birds, worth all the trouble to try and keep them alive. It is amusing to read some of the answers given to inquiries as how to keep Bee-eaters, Pardalotes, &c. Well, I

suppose one expects too much at times of scientists or theorists, as it were; but for their own sakes it would be as well for them to acknowledge at times when in a fog "I don't know myself."

Other birds I have kept are the twelve Apostles, so-called on account of generally flying, jumping, and running along the ground in a dozen or so. They are a dull, brown-black bird and are very plentiful out west. When picnicing they will come quite close to eat the crumbs. In the aviary they are butchers. The same applies to the Grey-crowned Babbler (*Pomatorhinus*) or Happy Family. Rather a pretty bird and very companionable to the traveller. They will follow you through the lonely Bush for a long time, jumping from scrub to scrub and log to log chattering away to themselves. They are for ever building nests and it is hard to find the one they mean for raising a family in.

The Black-faced Cuckoo-Shrike is a bird I like to have with me; rather large, but gentle and tame, silver grey with forehead, face and throat black. Soldier-birds are also very pretty but troublesome in the aviary. Being short of rations one day out in the Bush we tried these Soldier-birds as a dish, but the sweetness of their flesh—the flavour of bad honey—saved them at once from further slaughter. Recently I sent a pair of Mistletoe birds to the Zoo. in London. Exquisite little fellows, steel blue with dark scarlet breast, the hen grey. They fly very high, feeding on mistletoe berries; their swallowing capacity is enormous, since they can gulp down a berry almost the size of a briar berry. Living so high up and drinking the nectar of the flowers on the high trees, it is but rarely one can catch them. If one succeeds they are worth their weight in gold.

Out in the open and allowed the run on my lawns I have the Stone Plover or Curlew, the Spurwing and Black-breasted Plovers, which all breed with me very freely year by year. Then there is the White-backed and Black Magpie and the Kagus, which of course are not Australian; also Johnny, the Laughing Jackass and Billy the Kestrel, a great friend of my pair of Black and White Butcher Birds, which sleep with him on his perch at night. A strange friendship! The Curlews were once friends of Johnny the Jackass, but since he once inspected their nest too

closely and was nearly scalped by them in consequence there is enmity between them. When Johnny laughs the Curlews will come to the dividing fence and screech, being followed by a dozen Plovers and Sea-gulls, and one wonders at the volume of row they can create, each one trying to outscreech the other. Johnny has been many years with me and bye-the-bye is a lady which, in spite of her years, still indulges in a flirt during spring-time. The gentleman comes from goodness knows where and tries in his own way to persuade his love "to come and fly with me." But Johnny cannot, being pinioned, and so they sit and laugh at one another, the lover on the fence, the lady on the ground! Romeo and Juliet reversed!!

For a time I had a Native Companion Crane, "Peter the Great." Peter was supposed to stand on his head at four a.m. and whistle "God save the King!" I cannot vouch for the truth as to whether he did it, as I do not rise quite so early and of course might have missed it. Peter, like the Magpies, had a habit of pulling out all small plants and newly-planted shrubs, so that eventually we had to part with him. He met his death at Mrs. Roberts' place in Hobart, being killed, if I remember rightly, by a Kangaroo.

This concludes my articles on the birds of N.S.W. which I kept and, with but few exceptions, caught myself. I might say that the catching of especially the rarer birds is one of the many pleasures I got out of life. First to locate the birds one wants, often necessitating long distances of travel and entailing inconveniences and even hardships, which seems foolish to those not sufficiently enthusiastic. Then comes the necessity of studying their habits and of considering the likely places where they might be caught. To catch birds is not so easy as it looks, it requires more patience even than fishing: plenty of really unlimited time and often plenty of cash if you want to get the rarer species. But the delight and satisfaction, when after days and weeks of trying, one has succeeded in outwitting the bird one wants and has it in one's possession, more than compensates for all the trouble in obtaining it.*

[Mr. Heumann, to whom we are much obliged for his most interesting articles, has unfortunately, owing to the war, been de-

* A hair on the head is worth two in the brush. This doesn't sound quite the correct quotation, but it is perhaps near enough!—ED.

tained in Germany where he was paying a visit, after having brought from Australia, where he lives, a collection of rarely imported birds, some of which were landed in England at the end of June.—ED.

ENGLISH NAMES FOR THE PARROTS.

By Dr. E. HOPKINSON.

(Continued from page 285.)

BLUE-FRONTED PARRAKEET, see BLUE-CROWNED CONURE.

*BLUE-FRONTED PARROT, see BLUE-MASKED A., under AMAZON.

*BLUE-GREEN PARRAKEET (Latham), *BLUE-GREEN PARROT (Shaw), names of the BLUE-RUMPED PARRAKEET.

*BLUE-HEADED CREATURE, one of the earliest names under which one of the Amazons is mentioned, probably the YELLOW-CHEEKED A. BLUE-HEADED LORIKEET. = *Trichoglossus caeruleiceps*.

BLUE-HEADED LORY, an occasional name for the PURPLE-CAPPED-LORY.

*BLUE-HEADED PARRAKEET. (1) A name of Edwards' for a Var. of the BLOSSOM-HEADED PARRAKEET. (2) An occasional book name for the BLUE-RUMPED PARRAKEET. (3) One of Latham's names for the BLUE-BANDED GRASS-PARRAKEET.

BLUE-HEADED PARROT. (1) See BLUE-CROWNED CONURE. (2) The original name of the RED-VENTED PARROT (*Pionus*). (3) See BLOSSOM-HEADED PARRAKEET. (4) See BLUE-RUMPED PARRAKEET.

BLUE-MASKED AMAZON, see under AMAZON.

"BLUE MOUNTAIN LORY," a very commonly used popular name for SWAINSON'S LORIKEET.

*BLUE MOUNTAIN PARROT, SWAINSON'S LORIKEET.

BLUE-NAPED CONURE, see BLUE-WINGED C.

BLUE-NAPED LORY. = *Lorius cyanauchen*. For allies see under PURPLE-CAPPED LORY.

BLUE-NECKED LORY, see under Red Lory (2).

BLUE-RUMPED PARRAKEET. = *Psittinus incertus* of Malaya. Other names, LITTLE MALAYAN PARROT (Oates); BLUE-GREEN PARRAKEET (Latham); BLUE-GREEN PARROT (Shaw); BLUE-HEADED PARROT, BLUE-HEADED PARRAKEET, early book names.

BLUE-STREAKED LORY. = *Eos reticulata*. See under RED LORY (2).

BLUE-STRIPED LORY, see under RED LORY (2).

BLUE-TAILED LORY, the name generally used for *Eos histrio* (see under RED LORY, 3). Also one of the names given to the RED LORY b

Latham, and an occasional book name for the THREE-COLOURED LORY (*Lorius Lory*).

BLUE-THIGHED LORY.=*Lorius tibialis*; see under PURPLE-CAPPED LORY (11).

*BLUE-TOPPED PARROT, one of Latham's names for the ORANGE-WINGED AMAZON.

BLUE-VENTED CONURE, see PEARLY CONURE.

"BLUE-WING," see "Blue-Winged Lovebird."

BLUE-WINGED CONURE.=*Pyrrhura picta*. Latham gave three names: *CHESTNUT-CROWNED PARRAKEET, *WAVE-BREASTED PARRAKEET, *SCALY-BREASTED PARRAKEET; another book name is BLUE-NAPED CONURE. Marcgrave's name is "ANACA"; Guiana native name, "TUMIH-TUMIH."

BLUE-WINGED GRASS-PARRAKEET, an alternative name for the BLUE-BANDED GRASS-P.

"BLUE-WINGED LOVEBIRD," "BLUEWING," the usual dealer's name for the PASSERINE PARRAKEET.

BLUE-WINGED PARRAKEET, (1) a name of Latham's, by which he probably meant the GUIANA PARRAKEET, but possibly the PASSERINE; (2) An occasional book name for the latter; (3) Jerdon's name for MALABAR PARRAKEET.

BLUE-WINGED PARROTLET, a modern book name for the PASSERINE PARRAKEET.

BLYTH'S NICOBAR PAROQUET.=*Palaeornis caniceps*.

BOA PARRAKEET, an obvious mistake for BAUER'S PARRAKEET.

BODIN'S AMAZON.=*A. bodini*.

*BORNEAN PARRAKEET, see BANDED PARRAKEET.

BOUQUET'S AMAZON, see under AMAZON, BLUE-FACED.

BOURKE'S GRASS-PARRAKEET.=*Neophema bourkei*; also BOURKE'S PARRAKEET.

*BRACELET PARRAKEET, from East India, see BANDED PARRAKEET.

BRAZILIAN GREEN MACCAW, Latham's name for the SEVERE MACAW.

BRAZILIAN GREEN PARROT, see RED-MASKED A., under AMAZON.

"BRAZILIAN LOVEBIRD," a common popular name for the PASSERINE PARRAKEET.

*BRAZILIAN PARROT, RED-HEADED, see VINACEOUS AMAZON, under AMAZON.

*BRAZILIAN YELLOW-FRONTED PARROT (Latham), see ORANGE-WINGED AMAZON, under Amazon.

*BRAZILIAN YELLOW PARROT, Latham's name for the GOLDEN CONURE.

*BRAZILIAN YELLOW PARROT, VAR. B., his name for the YELLOW CONURE.

*BROAD-CRESTED COCKATOO, an obsolete name for the GREATER SULPHUR-CRESTED C.

BROADTAIL (BROADTAIL PARRAKEET), a book name for the Australian Parrakeets of the *genus Platycercus*, of which PENNANT'S BROADTAIL is a typical example (see PENNANT'S PARRAKEET). Other species are the ADELAIDE BROADTAIL, BARNARD'S B., PALE-HEADED B., ROSELLA, STANLEY, YELLOW-BELLIED, and YELLOW-RUMPED B.

"BRONZE AMAZON,"
 "BRONZE PARROT,"
 "BRONZE PIONUS PARROT,"

} Dealer's names for both the BRONZE-WINGED PARROT, and the DUSKY PARROT (*Pionus*), of South America.

BRONZE-WINGED PARROT.=*Pionus chalcopterus*. Often popularly known under the names "BRONZE AMAZON," "BRONZE PARROT," "BRONZE PIONUS PARROT," "VIOLET PARROT," "VIOLET AMAZON," names which also are often applied to its near ally, *P. fuscus*, the DUSKY PARROT, LITTLE DUSKY PARROT (Edwards, Latham).

"BROWN PARROT," New Zealand vernacular for the KAKA. (2) *One of Latham's names for the LESSER VAZA.

BROWN PARROT, SOUTHERN, see KAKA.

BROWN-CHEEKED CONURE.=BROWN-EARED CONURE.

BROWN-FRONTED MACAW, see SEVERE MACAW.

BROWN-HEADED PARROT.=*Poeocephalus fuscicapillus*.

BROWN-NECKED PARROT.=*Poeocephalus fuscicollis*, of West Africa, *AFRICAN PARROT (Latham).

BROWN'S PARRAKEET, BROWN'S PARROT (Latham).=*Platycercus browni*. BEAUTIFUL PARRAKEET (Gould); "SMUTTY PARROT," "SMUTTY PARRAKEET" (Australian Vernacular); "MOON-DARK," native name.

BROWN-THROATED CONURE.=*Conurus aeruginosus*, the BROWN-THROATED PARRAKEET of Latham.

BROWN-THROATED PARRAKEET, see above.

BROWN-THROATED PARRAKEET VAR. (Latham), see DWARF CONURE.

BRUSH-TONGUED LORIKEETS, sometimes BRUSH-TONGUED PARROTS.= Birds of the *genus Trichoglossus*, SWAINSON'S LORIKEET and its allies. Sometimes more widely used to include all LORIES and LORIKEETS.

"BUDGERIGAR," the "GRASS-PARRAKEET," of Australia, *Melopsittacus undulatus*. The name is occasionally spelt "BETCHERRYGAH." Other popular names are "CANARY PARROT" (Australia), "AUSTRALIAN LOVEBIRD," "ZEBRA PARRAKEET," "ZEBRA GRASS-PARRAKEET," "SCOLLOP-PARROT," "SHELL-PARROT," "SINGING PARRAKEET," the last three but rarely used nowadays. Book names: *UNDULATED PARRAKEET (Latham), *UNDULATED GRASS-PARRAKEET, *UNDULATED NANODES; WARBLING GRASS-PARRAKEET (Gould), AUSTRALIAN GRASS-PARRAKEET. "BILJANG," native name in West Australia.

BUDGERIGAR, BLUE, a rare variety recently (1911) introduced.

BUDGERIGAR, YELLOW, a much commoner cage-bred variety.

*BUENOS AYRES PARROT, see LUCH'S PARRAKEET.

*BUFF-CROWNED PARROT, see GOLDEN-CROWNED PARRAKEET.

*BUFF-FRONTED PARRAKEET, see GOLDEN-CROWNED CONURE.

"BULLA-BULLA" (native name), "BULLA-BULLA PARAKEET," Australian dealer's names for BARNARD'S PARRAKEET.

BURMESE BLOSSOM-HEADED PARRAKEET, see under BLOSSOM-HEADED P.

BURMESE PAROQUET, LARGE, see INDO-BURMESE ALEXANDRINE P., under ALEXANDRINE.

BURMESE SLATY-HEADED PARRAKEET.

"CACATU IDUI," Malay name for MULLER'S ECLECTUS.

CACTUS CONURE.=*Conurus cactorum*. Old book names: *CURASSOW PARRAKEET, *MACCAWLE PARRAKEET.

CAICA PARROT, the HOODED PARROT.

(To be continued).

CORRESPONDENCE, NOTES, ETC.

BREEDING IN CAGES.

SIR,—It is a very good move to offer medals for birds bred in cages; but I should like to plead for a considerable extension of a system of prizes.

Why should the medals be limited to the first time a bird is bred? It is very nice to be first, but it may be just as great an achievement to be tenth. The first will probably be one who has a long purse, because naturally they are the ones who get the rarest birds.

Why not divide the birds into several Classes, say Class I. True Finches; Class II. Mannikins; Class III. Waxbills; and so on. And offer in each Class one or more prizes for the most meritorious breeding results, of not less than perhaps three species. In this way we should get some competition and be encouraged to do our best.* There might be an entrance fee for each Class.

Is not a cubic yard rather large for a cage? It might be 6 ft. 9 in. long. 4 ft. high and 1 ft. deep and still come under the yard.

I hope others will give their views on this subject.

H. A. SOAMES.

* If aviculturists keep birds for the love of the thing, one wonders *why* they need encouragement by means of prizes in order to be successful in breeding different species. The birds bred would not fetch more money in the market, as in the case of Poultry and Pigeons. But let us have the opinion of members upon the suggestion of Mr. Soames.—ED.

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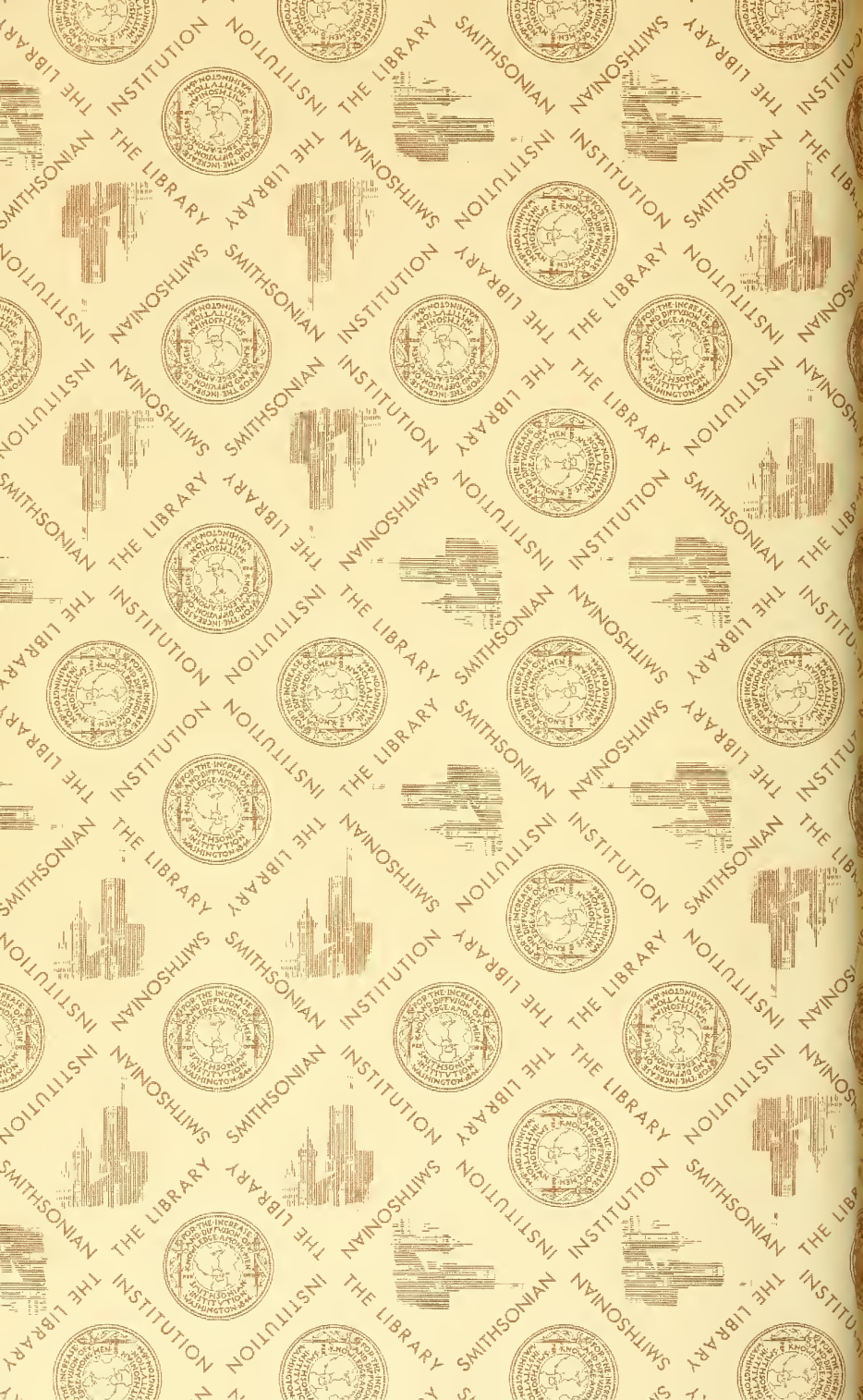
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